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Xerox® Printer Access Facility (XPAF)
User Guide

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Changes are periodically made to this document. Changes, technical inaccuracies, and typographic errors will be corrected in subsequent editions.

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Section One: Introduction to XPAF

Xerox Printer Access Facility (XPAF) software is a host-resident software product that enhances the capabilities and use of Xerox printers in the IBM z/OS environment. XPAF retrieves data streams from JES, a third-party spool, or Xerox Direct Print Services (XDS) and prepares them for printing on a Xerox printer.

Xerox only supports the XPAF features and functions described in the user documentation that accompanies the software. Do not assume support is provided if it is not explicitly documented.

This document provides the information you need to install, manage, and print documents with XPAF. Additional sections found in the documentation include a complete list of the parameters and keywords used, error messages generated by XPAF, guides for operators and page format editor users, a glossary, and an index.

XPAF documentation is delivered in PDF format. It is designed to be viewed online; however, page layouts have been maintained so that you can duplex print all or part of the documentation as necessary.

Section One: Introduction to XPAF

1. Getting started

This chapter provides a brief description of the documentation and the conventions used.

XPAF User Documentation

When you use this document online you will find that cross references (in light blue text) within the document are active links to the referenced areas of the documentation, and that the index and table of contents also provide active links directly to the subject matter.

This document is divided into the following sections:

- *Section One: Introduction to XPAF* provides an overview of this document and XPAF.
- *Section Two: Installing and Customizing XPAF* describes how to install the XPAF software on your system and tailor it to meet your site's specific requirements. It also describes how to set up your printers and perform an installation verification. This section is designed for the systems programmer responsible for installing and customizing the XPAF software.
- *Section Three: Managing Resources with XPAF* describes how to load, create, convert, and update XPAF resources. This section is intended for the system administrator who will be responsible for managing and maintaining XPAF system resources.
- *Section Four: Printing Documents with XPAF* describes how to print line-mode, DJDE, XES, page-formatted, AFP, pass-through, and VIPP documents. This section is intended for the systems programmer, application programmer, or anyone who needs to print documents with XPAF.
- *Section Five: XPAF Parameter and Keyword Reference* describes the initialization parameters, printer profile parameters, and JCL keywords available to tailor an XPAF system, printer, or job to your specific needs. This section is intended for the systems programmer, application programmer, or anyone who needs to print documents with XPAF.

- *Section Six: XPAF Messages* explains the informational, warning, and error messages that XPAF issues. This section is intended for systems programmers or application programmers who must reference messages sent to the XOAF or XOSF log files.
- *Section Seven: XPAF Operator Guide* describes the JES2, JES3, XPAF-exclusive, and XDS-exclusive commands available to a host console operator when printing with XPAF. This section is intended for console operators, system administrators, systems programmers, and any other personnel interested in the operator commands for XPAF.
- *Section Eight: Xerox Page Format Editor User Guide* describes how to create and maintain page formats using XPAF facilities. This section is intended for anyone who wants to format line-mode data streams that are printed through XPAF.
- *Section Nine: Appendices* provides instructions on using the LDMUTIL utility to define and initialize your native resource libraries and sample JCL to use for uploading resources from a file to the host system. It also identifies the initialization and printer profile parameters related to managing resources.
- *Section Ten: Glossary* provides a glossary of the terms used within the documentation as they relate to XPAF.
- *Index* contains indexed information to help you locate specific topics.

Conventions used

General conventions are used for these elements:

- Notes
- Cautions
- Messages
- JCL
- Screen panels
- Parameters, keywords, and commands
- Library, dataset, and DD names
- Sample data

Each element is described below.

Notes

A note is a hint that assists you in performing a task or understanding the text.

NOTE: For greater emphasis, notes appear in blue text.

Cautions

A caution notifies you that an action or omission may result in damage to your equipment, software, or data.

CAUTION: For greater emphasis, cautions appear in red text.

Messages

Messages displayed on the console are presented in uppercase, nine-point Monotype.com font. For example:

```
XDI3514I  XOSF SYSTEM SMF RECORDING TURNED OFF
```

JCL

JCL listings and console displays longer than five lines are enclosed in shaded frames similar to this example:

```
//job-name JOB job-information
//LDMINIT    EXEC PGM=LDMUTIL,REGION=2048K
//STEPLIB    DD   DSN=library-name,DISP=SHR
//SYSPRINT   DD   SYSOUT=A
//LDMPRINT   DD   SYSOUT=A
//LDMPARM    DD   *
INITIALIZE   library-name
```

These conventions are used in JCL definitions:

- Constant data is shown in uppercase type. You must code constant data exactly as shown.
- Variable data is shown in lowercase, italicized type. Replace the italicized variables with your site's values.

Screen panels

Information displayed on an ISPF panel is enclosed in a frame similar to this example:

```
                    Xerox Output Administrative Facility
                    Load Centralized Forms to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     Member Name:
```

Partial panels that show sample field entries appear between double lines similar to this example:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT	PRINT					
OPTION	START	LENGTH	ACROSS	DOWN	DIR	FONT	COLOR	CONSTANT
_	1___	6___	.3_____	1.1____	A	_____	DEF	N
_	1___	6___	.7_____	8.92___	A	_____	DEF	N
_	9___	29__	1.0____	1.1____	A	_____	DEF	N
_	9___	29__	1.8____	8.4____	A	_____	DEF	N

Parameters, keywords, and commands

These conventions are used in the syntax definitions for initialization parameters, printer profile parameters, IBM JCL keywords, XPAF extended JCL keywords, TSO/batch commands, and operator commands.

NOTE: Commas and parentheses are part of a statement's definition and must be included exactly as indicated.

Table 1-1. Syntax conventions

Convention	Description	Example
Required text	Uppercase indicates text that must be entered exactly as shown.	FONTLIB=CFONTLIB
Variable text	Lowercase italics represent an entry for which you must supply a value.	OPHLQ=*prefix*
Numeric variable	A lowercase italicized "*n*" indicates a numeric variable. The number of *n*'s shown represents the maximum positional value of the numeric variable.	CONROUTE=*nnn*
Abbreviation	Characters in small capital letters are optional and can be abbreviated. In this example, the value EBCDIC can be abbreviated as E.	MODE=EBCDIC
No entry needed	The word "blank" indicates that a blank (that is, no value) is an acceptable value.	IMAGEOUTIMP=blank
Select an entry from a list	Braces { } indicate that one of the enclosed vertically-stacked items is required.	DEFLINE={LINE | DJDE | PAGE}
Optional entry	Square brackets [ ] indicate that the enclosed text is optional.	OPWRITER=(DISK[,ONLY])
Multiple values	An ellipses (...) indicates that the preceding item can be repeated. In this example, as many as eight colors can be specified.	COLORIMG=(*color1*[,...,*color8*])

Library, dataset, and DD names

Library names are referenced by their low level qualifier only, not their full dataset name (for example, XPFSAMP). Add the high level qualifier used at your site to determine the full dataset name of a library reference.

Dataset names can be 1- to 44-characters long. Unless otherwise noted, dataset names and member names must follow standard z/OS naming conventions.

XPAF uses several initialization and printer profile parameters that name DD statements in your XOSF start-up proc. These parameters' default values match the low level qualifier names for the datasets to which they point. For example, by default the PAPTBLDD initialization parameter names the TABLELIB DD statement that points to the *prefix*.TABLELIB dataset.

You may change any of the supplied DD names and dataset names in your XOSF start-up proc. However, when describing a native library, the XPAF documentation references the default name. So, if you have changed the default dataset name, substitute your library name for the library name in the XPAF documentation. Refer to *Section Five: XPAF Parameter and Keyword Reference* for detailed description of these parameters.

Sample data

Sample JCL, messages, reports, and IVPs shown within this document reference a fictional company, Rainbow Office Supplies, its employees, and its customers. Rainbow Office Supplies, its logo, the names of its employees and customers, and any data used in the examples are fictitious. Any similarity to actual companies or persons is purely coincidental.

Supported printers

XPAF supports these printer types:

- Centralized printers are high-volume printers, which are either channel-attached or remotely attached to the host. Channel-attached printers are directly attached to a host computer by input/output channels. Remotely-attached printers are physically connected to a host computer via TCP/IP or a telecommunications line.Centralized printers also are referred to as LCDS, DJDE, or Metacode printers.
- PCL-capable printers are mid-volume printers, which are generally remotely-attached to the host via TCP/IP.
- VIPP-enabled printers are print devices on which VIPP software resides. VIPP documents must be sent to a VIPP-enabled print device.

Table 1-2. XPAF-supported Xerox printers

Printer Model	
Centralized	**PCL-capable**
DP 4890 LPS DP 4850 LPS DP 4650 LPS DP 4635 LPS DP 4635MX LPS DP 4135 LPS DP 4090 LPS DP 4050 LPS DP 180 EPS DP 180 LPS DP 96 LPS DP 92C LPS DocuSP Family with the LCDS Decomposer Free Flow Print Server with the LCDS Decomposer	DocuSP or FreeFlow Print Server family of products Phaser Family WorkCenter Family DT 6180 DT 6155 DT 6135 DT 6115 DT 6100

Creating PDF Documents

XPAF can also convert Linemode, LCDS, XES and AFP documents into PDF files which can then be e-mailed to a recipient, stored on a server or sent to a printer.

Limitations of support

XPAF supports up to 64 printers per functional subsystem (FSS). The capabilities of XPAF are limited to the functional abilities of the printer. For example, if a printer does not support duplex printing, XPAF cannot duplex a document sent to that printer.

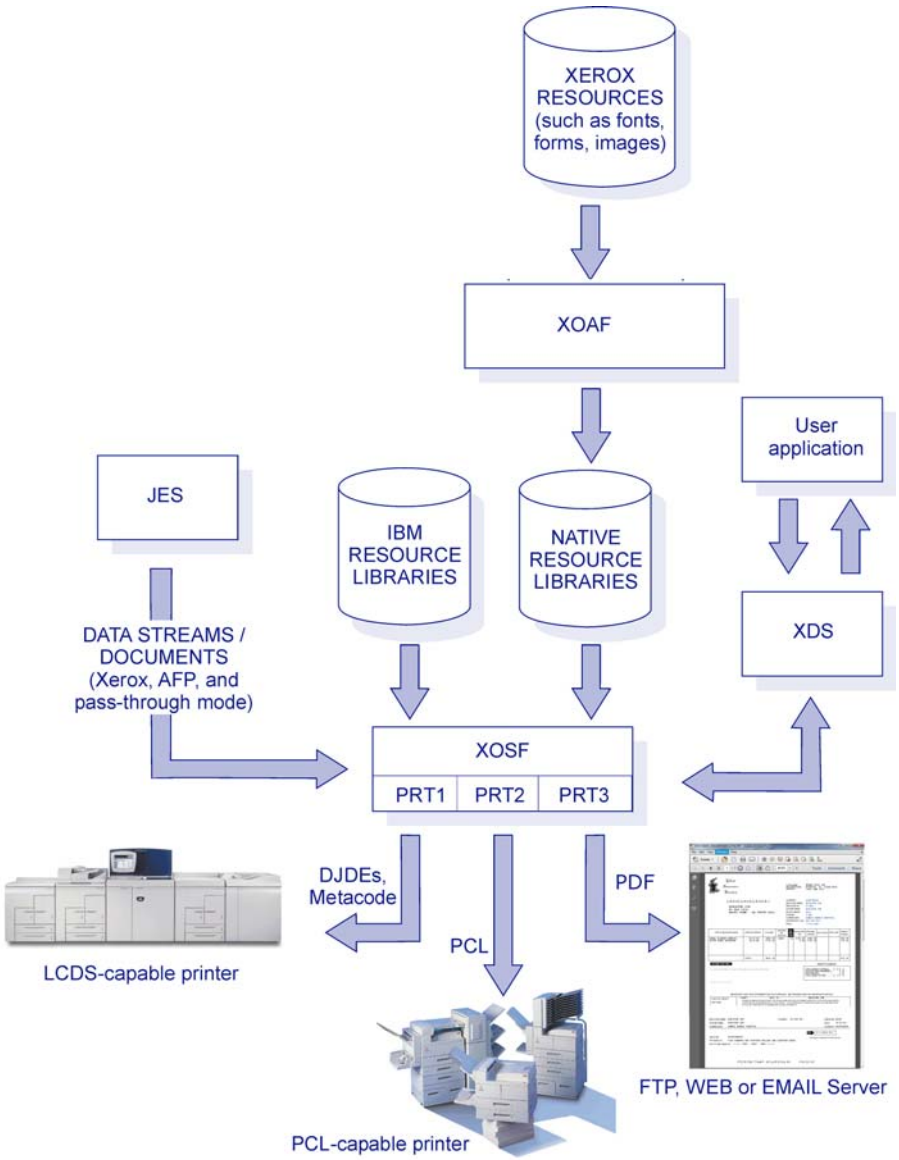
XPAF subsystems

XPAF is composed of two subsystems:

- Xerox Output Administrative Facility (XOAF)
- Xerox Output Services Facility (XOSF)

Figure 1-1 provides an overview of the relationship of the two subsystems.

Figure 1-1. XPAF subsystems



Xerox Output Administrative Facility

XOAF contains the functions and utilities that you use to prepare the resources and supporting lists and tables needed during the printing operation. Resources are fonts, forms, images, or logos that are required, in addition to data, to print a document. A resource can be stored either on the printer, in a library on the host, or inline in the data stream.

For more information about using XOAF utilities, refer to *Section Three: Managing Resources with XPAF*.

Xerox Output Services Facility

XOSF interfaces with z/OS to accept documents from JES, convert them into a format suitable for the intended printer, and transmit them to the printer.

XOSF provides these functions:

- Host system interface
- Document processing
- Document transmission and printing

Host system interface

XOSF interfaces with the host-resident z/OS operating system to accept documents from JES. XOSF operates as an z/OS-based functional subsystem (FSS) to obtain a data stream from the JES spool and maintain control of the printer. Additionally, you can install XDS to invoke XOSF directly without JES or any other spooling subsystem.

For the host console operator, the interface to Xerox printers through XOSF remains the same as JES-controlled printers. For example, an operator can start, stop, and interrupt a printer. The operator also can use operator commands unique to XPAF to make inquiries to the system for status, state, and activity levels. For more information refer to *Section Seven: XPAF Operator Guide*.

Document processing

XOSF document processing is governed by the type of data stream and the type of printer selected for printing. The supported data streams are discussed later in this chapter. The supported printers are discussed in *Section Two: Installing and Customizing XPAF*.

In most cases, XOSF performs a process called resource conditioning. This process ensures that all resources required to print the document are available before sending the data stream to the printer.

During XOSF processing, some data streams may require a conversion of the print commands to a format recognized by the Xerox printer. Depending on the data stream type being processed and the printer being used, a data stream may be converted into one of the following kinds of Xerox data streams:

- Metacode data streams for printing on centralized printers. A Metacode data stream consists of ASCII print records that include carriage control commands, along with special codes known as

metacodes, to define absolute positioning, orientation, and font indexing.

- XES data streams for printing on decentralized printers. XES control codes are prefixed by a user-defined key which signals the printer to recognize the character or characters that follow it as an escape sequence.
- PCL data streams for printing on PCL-capable printers. PCL data streams contain characters called escape sequences which signal the printer to recognize the character or characters that follow it as a print command.
- PDF data streams for printing on PDF printers or sending via e-mail. PDF is a portable document open standard that contains a complete description of the document that includes text, fonts, and images.

If a document already is formatted for the data stream type required by the printer, conversion is not required. XPAF can send this type of data stream directly to the printer after resource conditioning is complete. This is known as native mode processing.

Other data streams can be sent to the printer without conditioning or conversion. This is called pass-through processing. For example, a PCL document can be sent directly to a PCL-capable printer without XPAF altering the data stream.

For more information about document processing, refer to *Section Four: Printing Documents with XPAF*.

Document transmission

After XOSF performs any necessary conversions and resource conditioning, XOSF sends the document and tailored printer instructions to the printer.

Supported data streams

XPAF accepts these types of data streams:

- Line-mode
- DJDE
- XES
- Page-formatted
- AFP
- VIPP
- Other (in pass-through mode)

XPAF's data stream support is summarized by printer type in the table below and discussed on the pages that follow. Refer to *Section Four: Printing Documents with XPAF* for detailed information about how XPAF processes each data stream type.

Data stream type	Centralized printers	Decentralized printers	PCL-capable printers	PDF printers
Line-mode	YES	YES	YES	YES
DJDE	YES	YES[1]	YES[1]	YES[1]
XES	NO	YES	YES[1]	YES[1]
Page-formatted	YES[1]	YES[1]	YES[1]	YES[1]
AFP	YES[1]	YES[1]	YES[1]	YES[1]
VIPP	NO	NO	YES[2]	NO
Other (in pass-through mode)	NO	YES[3]	YES[3]	YES[3]

1 Requires conversion.
2 Requires a VIPP-enabled printer.
3 Pass-through data streams are neither converted nor conditioned.

NOTE: You can enhance the look of your data streams by using XPAF extended JCL to add print formatting commands and selecting XPAF options at the time that your print job executes. XPAF provides extended JCL keywords for use with most of the supported data streams. For detailed information about the extended JCL keywords available, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Line-mode data streams

Line-mode (or 3211) data streams consist only of carriage control commands and data. You can send line-mode data streams through XPAF to any supported centralized, PCL-capable or PDF printer.

If you enhance the look of your line-mode data streams by using extended JCL keywords, XPAF no longer considers the data stream as a line-mode data stream. XPAF will process it as the relevant data stream type.

DJDE data streams

DJDEs are control statements that specify how a document should be printed on a centralized printer. DJDE processing enables certain printer parameters to be changed from one job, page, or record boundary to the next. For example, you can use the COPIES DJDE to specify the number of copies of a report to be printed.

You can generate DJDE data streams in one of two ways:

- Format a line-mode data stream using standard IBM and XPAF extended JCL.
- Code DJDEs directly in a data stream or use an application to produce a data stream containing DJDEs. In addition, you can modify the initial DJDE packet using standard IBM and XPAF extended JCL.

You can print DJDE documents on centralized, decentralized, PCL-capable, and PDF printers. During document processing, XPAF uses extended JCL keywords to insert DJDEs. The document is then conditioned and processed as follows:

- If the document is sent to a centralized printer, no further processing is required.
- If the document is sent to a PCL-capable printer, XPAF converts the DJDE commands to XES commands, then converts the XES commands to PCL commands.
- If the document is sent to a PDF printer, XPAF converts the DJDE commands to XES commands, then converts the XES commands to PDF commands.

XES data streams

XES data streams contain printer commands prefixed with user-defined keys which dynamically change parameters for decentralized printers. You can print XES documents on PCL-capable and PDF printers.

- If the document is sent to a PCL-capable printer, XPAF converts the XES commands to PCL commands before sending the document to the printer.
- If the document is sent to a PDF printer, XPAF converts the XES commands to PDF commands before sending the document to the printer.

Page-formatted data streams

Page-formatted data streams are line-mode data streams that have been formatted using a Xerox page format. You can print page-formatted documents on centralized, decentralized, PCL-capable or PDF printers.

- If the document is sent to a centralized printer, XPAF converts the page format settings to Metacode commands.
- If the document is sent to a PCL-capable printer, XPAF converts the page format settings to XES commands, then converts the XES commands to PCL commands.
- If the document is sent to a PDF printer, XPAF converts the page format settings to XES commands, then converts the XES commands to PDFcommands.

AFP data streams

AFP data streams can consist of:

- Sequences of variable-length records called structured fields
- Fixed- or variable-length records that contain both line-mode data and structured fields
- Line-mode data formatted using AFP JCL keywords

You can print AFP documents on centralized, decentralized, PCL-capable or PDF printers.

- If the document is sent to a centralized printer, XPAF converts the AFP commands to Metacode commands.
- If the document is sent to a PCL-capable printer, XPAF converts the AFP commands to XES commands, then converts the XES commands to PCL commands.
- If the document is sent to a PDF printer, XPAF converts the DJDE commands to XES commands, then converts the XES commands to PDF commands.

VIPP data streams

Variable Intelligent PostScript Printware (VIPP) data streams are line-mode data streams that have VIPP commands inserted at the beginning of the application. VIPP applications are sent to a VIPP-enabled printer for processing.

Data streams in pass-through mode

You can send a data stream specifying pass-through mode to any XPAF-supported decentralized, PCL-capable or PDF printer if the printer supports the printer command language of the data stream. For example, the data stream for a PCL document does not require a print command conversion by XPAF before being sent to a PCL-capable printer.

XPAF does not perform any conversion, conditioning, or validation on resources included in a pass-through document. All of the information required to print the document must be contained within the data stream because the data stream is sent directly to the printer without being altered.

CAUTION: Unpredictable results may occur when:

- printing a pass-through document through XPAF to a non-Xerox printer
- a pass-through data stream contains commands that are not supported by the target printer.

Parameter and keyword processing hierarchy

XPAF allows you to tailor your printing environment by providing control at three levels: system, printer, and job.

Level	Description
System	XPAF provides control at the system level through the use of required initialization parameters. Initialization parameters specify z\OS and JES information, DD statement names, DJDE formats and defaults, and other processing options.
Printer	XPAF provides control at the individual printer level through the use of printer profile parameters.
Job	XPAF provides control at the job level through the use of two types of keywords: • Standard IBM JCL keywords that are supported by XPAF • Extended JCL keywords that are unique to XPAF and establish job- and output-specific values

During XPAF processing, printer profile parameters override initialization parameters, and extended JCL keywords override initialization and/or printer parameters.

Processing also can be affected by printer settings, specified JDL, and settings in the JES parameters or XOSF start-up proc. For more information refer to *Section Five: XPAF Parameter and Keyword Reference*.

Section Two: Installing and Customizing XPAF

This section is a programming guide for installing XPAF in an IBM z/OS environment. Written for systems programmers, it provides step-by-step instructions for installing and customizing the XPAF system.

XPAF installation procedures are described in sequential order. Whether you are installing XPAF for the first time or reinstalling XPAF, you should start at the beginning and proceed sequentially.

As the systems programmer responsible for installing and customizing the XPAF system software, you should have experience installing host software products. You also should have experience using Xerox printers.

2. Installation requirements

This chapter describes the hardware and software required to install and use XPAF successfully. It addresses these topics:

- Installation materials
- SMP/E level
- Hardware
- Printer support
- IBM host requirements

Installation materials

The XPAF installation materials include an installation file in TSO Transmit format.

Refer to "Checklist for installing resources" in chapter 4, "Installing resources" for a list of the resource files and their contents.

Media

The XPAF 7.0 software is downloadable from the Xerox corporate website,

http://www.support.xerox.com/support/xpaf/software/enus.html

Content

The installation file is TSO Transmit output dataset of a single PDS, referred to as the XMTPDS. The XMTPDS contains all the necessary files to install the base product, latest maintenance and all resources.

SMP/E level

You must install XPAF using SMP/E Release 5 or higher.

Hardware

XPAF operates on any processor capable of running z/OS.

Disk allocation

If you load both the centralized and decentralized libraries onto your system, XPAF needs approximately 640 cylinders on single density 3380 disk drives. XPAF uses the storage as follows:

XOAF/XOSF	1220	
SMP/E files	621	
Resources	7759	(AFP and native mode)
Total tracks	9600	(640 cylinders)

Tables 2-1 through 2-3 show the approximate minimum space requirements for all of the files created and used during XPAF installation. The space figures shown in these tables reflect installation on single density 3380 disks and may vary according to your DASD type. You may increase any of these values based on your site's installation and environment.

Table 2-1. XPAF SMP/E installation library requirements

Dataset name	DSORG	Tracks (approx.)	RECFM	LRECL	BLKSIZE
CSI	VSAM	63	V	24 – 143	22528 (CISZ)
SMPLOG	PS	60	VB	510	3200
SMPLOGA	PS	20	VB	510	3200
SMPMTS	PO	26	FB	80	27920
SMPPTS	PO	402	FB	80	27920
SMPSCDS	PO	60	FB	80	27920
SMPSTS	PO	20	FB	80	27920

Table 2-2. XPAF target, distribution, and operational library requirements

Dataset name	DSORG	Tracks (approx.)	RECFM	LRECL	BLKSIZE
AXPFCLIB	PO	28	FB	80	27920
AXPFLOAD	PO	377	U	—	6144
AXPFMAC	PO	60	FB	80	27920
AXPFMLIB	PO	8	FB	80	27920

Table 2-2. XPAF target, distribution, and operational library requirements

Dataset name	DSORG	Tracks (approx.)	RECFM	LRECL	BLKSIZE
AXPFPLIB	PO	64	FB	80	27920
AXPFSAMP	PO	132	FB	80	27920
AXPFSLIB	PO	8	FB	80	27920
INSTLIB	PO	45	FB	80	27920
STAGE2	PO	30	FB	80	27920
XINPARM	PO	4	FB	80	27920
XOAFLOG	PS	3	VB	256	27998
XOSFLOG	PS	5	VB	256	27998
XPFCLIB	PO	28	FB	80	27920
XPFLOAD	PO	221	U	—	23200
XPFLPA	PO	14	U	—	23200
XPFMAC	PO	15	FB	80	27920
XPFMLIB	PO	8	FB	80	27920
XPFPLIB	PO	64	FB	80	27920
XPFSAMP	PO	132	FB	80	27920
XPFSLIB	PO	8	FB	80	27920
XPFTOOLS	PO	11	FB	80	27920

Table 2-3. XPAF resource file requirements

Dataset name	DSORG	Tracks (approx.)	RECFM	LRECL	BLKSIZE
AFPFONTS	PO	78	VBM	8205	27998
CFONTLIB	VSAM[1]	2925	N/A	4089	4096 (CISZ)
CFORMLIB	VSAM	30	N/A	4089	4096 (CISZ)
CIMGLIB	VSAM	135	N/A	4089	4096 (CISZ)
CLOGOLIB	VSAM	7	N/A	4089	4096 (CISZ)
DFONTLIB	VSAM	2925	N/A	4089	4096 (CISZ)

Table 2-3. XPAF resource file requirements (Continued)

Dataset name	DSORG	Tracks (approx.)	RECFM	LRECL	BLKSIZE
DFORMLIB	VSAM	28	N/A	4089	4096 (CISZ)
DIMGLIB	VSAM	120	N/A	4089	4096 (CISZ)
FFONTLIB	VSAM	1260	N/A	4089	4096(CISZ)
FIMGLIB	VSAM	30	N/A	4089	4096(CISZ)
IVPDATA	PO	10	FBA	172	27864
IVPRESC	PO	7	VBM	8205	27998
IVPXOAF	PO	3	FB	128	27904
PAGEFORM	PO	14	VBM	8205	27998
PDLLIB	VSAM	13	N/A	2041	2048 (CISZ)
PFONTLIB	VSAM	1260	N/A	4089	4096 (CISZ)
PFORMLIB	VSAM	4	N/A	4089	4096 (CISZ)
PIMGLIB	VSAM	30	N/A	4089	4096 (CISZ)
TABLELIB	VSAM	255	N/A	4089	4096 (CISZ)
XWRLIB	VSAM	6	N/A	2041	2048 (CISZ)

[1] IDCAMS allocation for native VSAM files, used to store native resources, must meet these requirements:

VSAM files must be allocated in records.
The maximum number of records allowed in a VSAM file is 524,280.
VSAM files may span multiple volumes and extents.
Once a VSAM file is initialized, no secondary extents or additional candidate volumes can be acquired.
The CISZ must be one of these values: 512, 1024, 2048, or 4096.
The RECSIZ must be 7 less than the CISZ: 505, 1017, 2041, or 4089.

A sample IDCAMS allocation statement is shown in figure 2-1. For additional information concerning IDCAMS, refer to your IBM DFP product guides.

Printer support

XPAF supports centralized, decentralized, and PCL-capable printers. The tables in this section provide the minimum supported software release levels for centralized printers, decentralized printers, PCL-capable printers, and interface devices.

The capabilities of XPAF are limited to the functional abilities of the printer. For example, if a printer does not print duplex, XPAF cannot duplex a document sent to that printer.

Centralized printers

This table lists the minimum supported release levels for centralized printers.

NOTE: Throughout this document, references made to highlight color printers refer to the 4890 and 4850 printers. Note that the 4890 NPS and 4850 NPS printers do not support highlight color when printing from XPAF.

Printer	Minimum software levels
4890/4850	V3.7/V4.0
4650/4090/4050	V2.1 (with the HIP52.TSK file and required XPAF patches) V3.5 (latest patch level) plus any XPAF-specific patches V3.0 (without XNS support)
4635	V3A
4635MX	V3A
4135	V3.6
180 EPS	V1.10
180 LPS	V3C2 Release 1.4
96 LPS	V3A
92C LPS	V5.4
DocuSP with the LCDS decomposer	Any supported release
Free Flow Print Server with the LCDS decomposer	Any supported release

Image requirements for centralized printers

To print images such as line art and photographs, centralized printers must be equipped with the Xerox Graphics Handling Option subsystem or Graphics Video Generator.

To print AFP and Xerox images such as page segments, overlays with shading, and .IMG resources, all centralized printers must be equipped with additional graphics processing memory. Depending on printer model and operating system, centralized printers must be equipped with one of three Xerox graphics processing memory options:

- Graphics Handling Option (GHO)
- Graphics Video Generator (GVG)
- Graphics Video Generator II (GVGII)

The extra graphics memory is required because of the way XPAF processes and transforms data streams that contain AFP and Xerox images.

GHO, GVG, and GVGII consist of hardware, accompanying firmware, and software. These options enable centralized printers to store, merge, and print AFP and Xerox images in a text document at 300 dpi. Different memory options are available, depending on your printer model:

- Two GHO memory options are available for the 9790, 9700, 8790, 8700, 4090, and 4050: either 2 or 8 megabits.
- Two GVG memory options are available for the 4650, 4135, and 4090: either 32 (option package 38P) or 256 megabits (option package 39P).
- Two levels of GVGII memory are available for the 4850: either 32 or 256 megabits.

The larger memory options are recommended for printing documents that contain complex images or large numbers of images per page.

The printer's operating system provides support for the various graphics memory options. For detailed information about graphics memory options for a specific printer, contact your local Xerox representative.

If your printer is equipped with any of the three graphics memory options, you must specify GHO in the FEATURE printer profile parameter to indicate that the printer has additional graphics memory. For information about the FEATURE printer profile parameter defaults, refer to *Section Five: XPAF Parameter and Keyword Reference.*

PCL-capable printers

This table lists the minimum supported release levels for PCL-capable printers.

Printer	Minimum software levels
6100	V1.3
6115	V1.3

Printer	Minimum software levels
6135	V1.3
6155	V1.3
6180	V1.3
4900	V2013.115
4050 NPS	V1.4
4090 NPS	V1.4
4635 NPS	V1.4
4850 NPS	V1.4
4890 NPS	V1.4
180 EPS	V1.10
180 NPS	V1.4
155 NPS	V1.7
115 NPS	V1.7
100 NPS	V1.7
96 NPS	V1.5
92C NPS	V5.4
DocuSP enabled printer	Any supported level
Free Flow Print Server enabled printer	Any supported level

Software emulation modes

For all PCL-capable printers, XPAF supports PCL emulation mode. For PCL-capable printers that also support HPGL, PostScript, and XES, XPAF supports those emulation modes only when printing pass-through documents.

For more information on the various printer command languages supported by each printer, refer to chapter 10, “XPAF printer support.”

IBM host requirements

To install and run XPAF, your host operating environment must include specific software products at supported release levels.

Operating environments and JES levels

XPAF operates in all IBM-supported z/OS JES2 and JES3 environments. When new host operating environments are released, XPAF will be updated to ensure compatibility. Conversely, when IBM withdraws support for a software release level, Xerox also will withdraw support for that release level. Contact your local Xerox representative or review the bulletin accompanying your latest maintenance file to verify specific supported release levels.

IBM host products

These IBM host software products may be installed on your system.

Printer application products

XPAF can print applications created by these products at the specified minimum release levels:

- DCF Version 1.3.1
- GDDM Version 2.1
- PMF Version 1.1.0
- PPFA Version 1.1.0

System application products

XPAF can coexist with these products at the specified minimum release levels:

- DFP Version 2.3.0
- ISPF Version 2.3
- NCP Version 2
- NTO BSC 3780 Version
  (required to use XPAF with VTAM bisynchronous printers)
- TCP/IP Version 3.2.0
- TSO/E Version 1.4
- VTAM:
  - Version 2.1:
    PTF — UZ71704 (APAR OZ77159)
    PTF — UZ75791 (APAR OZ80058)
    PTF — UZ79846 (APAR OZ83529)
  - Version 2.2:
    PTF — UZ71705 (APAR OZ77159)
  - Version 3.3

Resource protection

If your site uses multiple operating systems with global resource sharing (such as shared DASD), you should provide some type of resource protection such as IBM's Global Resource Serialization (GRS) when using XPAF.

Installation service macro worksheets

Use these worksheets to build your installation service macro (ISM) definitions. ISMs are used to install the XPAF base product, XPAF resources, user exits, and XPAF maintenance software. All applicable parameters are required unless identified as optional.

Before you begin installing XPAF, record your site-specific values in these worksheets.

#GENDFLT worksheet

The #GENDFLT macro allows you to specify default values and other information that is used for various parameters of other installation service macros. The values you enter for the parameters in this macro become the default values when you leave those same parameters blank in other macros.

Macro	Parameter	Description	Site values
#GENDFLT	DUNIT	Default UNIT value for installation	
	DVOLSER	Default VOLSER of DASD device	
	EIHLQ	High level qualifier for the installation XMTPDS	
	HLQ	Optional. Default high-level qualifier for other ISM macros	
	LOADSIZE	Block size of execution libraries	
	OCLASS	Stage 2 print output class for statements sent to the printer	
	OPTIONS	Specify default options to use for installing XPAF	
	SMS	Optional. Default SMS Storage and/or Management Class for non-VSAM datasets	
	SMSVSAM	Optional. SMS Storage and/or Management Class for non-VSAM cluster definitions	
	SRCLIB	Optional. Dataset name of user-modifiable source	

#GENJBCD worksheet

The #GENJBCD macro specifies job card values and optionally a JES2 JOBPARM card on all stage 2 jobs generated. This macro is optional and, if not included, the @JOBCARD member is used to generate job cards at the beginning of each stage 2 job.

All JOBCD and JOBPARM entries must begin and end with a single quote. If a quote is required within the text, it must be entered as two single quotes.

Macro	Parameter	Description	Site values
#GENJBCD	JOBCD1	Optional. Job card parameters for first job card	
	JOBCD2	Optional. Continued job card parameters from JOBCD1	
	JOBCD3	Optional. Continued job card parameters from JOBCD2	
	JOBNAME	Optional. JOB name for all job cards generated during stage 1	
	JOBOPT	Optional. Stage 1 macro options for generating JCL on stage 2 jobs	
	JOBPARM	Optional. JOBPARM card parameters for installation /*JOBPARM card	
	JOBVARY	Optional. Use a variable JOBNAME on each job of generated stage 2 JCL?	

#GENJES worksheet

The #GENJES macro generates the JES values (if applicable) used to create JES-specific samples and allocate installation SMP/E datasets.

Macro	Parameter	Description	Site values
#GENJES	JESFSSID	Optional. JES functional subsystem ID	
	JESMAC	Optional. Name of the IBM-supplied macro library name for JES	
	JESPROD	JES product used to install XPAF	
	JESUMAC	Optional. Library used to assemble JES source or exits	
	JESLVL	JES level being run on host operating systems	

#GENPROD worksheet

The #GENPROD macro assigns values to required parameters to install XPAF. The values you enter for this macro are used to generate SMP/E jobs, XPAF sample parameters, and sample JCL.

Macro	Parameter	Description	Site values
#GENPROD	DUNIT	UNIT value for non-VSAM datasets	
	DVOLSER	VOLSER of DASD device	
	HLQ	Optional. Prefix for non-VSAM datasets	
	HLQLPA	Optional. XPFLPA high-level qualifier in Master Catalog	
	HLQMST	Optional. XPFLOAD and XPFLPA high-level qualifier in Master Catalog	
	OPTIONS	Specify installation options for XPAF	
	PRODUCT	Name of product being installed	
	PRODVRM	Version, release, and modification level for this product	
	SMS	Optional. Default SMS Storage and/or Management Class for non-VSAM datasets	
	SMSVSAM	Optional. SMS Storage and/or Management Class for non-VSAM cluster definitions	
	UMODJOFT	Optional. SMP/E name used to install JES offset table	

#GENSMP worksheet

The #GENSMP macro supplies the stage 1 SMP/E processing with user-specified values. These values help define and initialize the SMP/E structure and are used to maintain XPAF and its associated function.

Macro	Parameter	Description	Site values
#GENSMP	DUNIT	UNIT value for non-VSAM datasets	
	DVOLSER	VOLSER of DASD device	
	DWORK	UNIT value used for DWORK file allocation during SMP/E execution	
	HLQ	Prefix for non-VSAM datasets	
	HLQVSAM	Prefix for VSAM datasets	
	MTS	Include SYSTEM MTS in all MTS DD concatenations?	
	RELEASE	Current SMP/E release version	
	SMS	Optional. Default SMS Storage and/or Management Class for non-VSAM datasets	
	SMSVSAM	Optional. SMS Storage and/or Management Class for non-VSAM cluster definitions	
	USERHLQ	Prefix used for generation of SMP dataset names of USEROPT option 2 or 3 is selected	
	USEROPT	Level of allocation for required SMP/E datasets	
	VSMVOL	Use specified volume serial number for generated VSAM file definitions	

#GENUXIT and #UEXIT worksheets

The #GENUXIT and #UEXIT macros create stage 2 jobs that use SMP/E to assemble and link your user-exit source code into the load library you specify that is accessible by XPAF. All information pertaining to your exits is entered in parameters of these macros.

Macro	Parameter	Description	Site values
#GENUXIT	UMPFX	Default SYSMOD ID prefix	
	USEC	Optional. Generate stage 2 for this exit?	
	USECLNKLB	Optional. Load library name linked by SMP/E to user security module	
	USECSMID	Optional. SYSMOD ID	
	UXLNKLB	Optional. Load library linked by SMP/E to exit modules	
	UXMAC	Optional. Defines user macro library	
	UXPFX	Optional. Default source member and load module name prefix	
	UXSRCLB	PDS library for exit source code	
#UEXIT			(01,)
			(02,)
			(03,)
			(04,)
			(05,)
			(06,)
			(07,)
			(08,)
			(09,)
			(10,)
			(11,)
			(12,)
			(30,)
			(31,)
			(32,)

#GENEND worksheet

The #GENEND macro specifies generation variables for XPAF, resource installation, and maintenance.

Macro	Parameter	Description	Site values
#GENEND	STAGE2	Optional. Place stage 2 jobs and control statements in INSTLIB?	
	TYPE	Type of stage 2 jobs to generate	

#GENRSC worksheet

The #GENRSC macro supplies the stage 1 processing with values needed to define, initialize, and load the XPAF resource files.

Macro	Parameter	Description	Site values
#GENRSC	DUNIT	UNIT value for non-VSAM datasets during resource allocation	
	DVOLSER	VOLSER of DASD device used to allocate XPAF resource files	
	HLQ	Prefix for all XPAF resource datasets during file allocation	
	HLQfile	Prefix for dataset names from resource files	
	HLQVSAM	Prefix used for all VSAM resource datasets during resource file allocation	
	IVP	Offload IVP datasets with other resource datasets	
	OPTIONS	Identify resource installation options	
	SIZCFONT	Specify the size of the CFONTLIB allocated by the resource allocation job	
	SIZCFORM	Specify the size of the CFORMLIB allocated by the resource allocation job	
	SIZCIMG	Specify the size of the CIMGLIB allocated by the resource allocation job	

Macro	Parameter	Description	Site values
#GENRSC (continued)	SIZDFONT	Specify the size of the DFONTLIB allocated by the resource allocation job	
	SIZDFORM	Specify the size of the DFORMLIB allocated by the resource allocation job	
	SIZDIMG	Specify the size of the DIMGLIB allocated by the resource allocation job	
	SIZFFONT	Specify the size of the FFONTLIB allocated by the resource allocation job	
	SIZFIMG	Specify the size of the FIMGLIB allocated by the resource allocation job	
	SIZLOGO	Specify the size of the CLOGOLIB allocated by the resource allocation job	
	SIZPDL	Specify the size of the PDLLIB allocated by the resource allocation job.	
	SIZPFONT	Specify the size of the PFONTLIB allocated by the resource allocation job	
	SIZPFORM	Specify the size of the PFORMLIB allocated by the resource allocation job	
	SIZPIMG	Specify the size of the PIMGLIB allocated by the resource allocation job	
	SMS	Optional. Default SMS Storage and/or Management Class for non-VSAM datasets	
	SMSVSAM	Optional. SMS Storage and/or Management Class for non-VSAM cluster definitions	
	VSMVOL	Use specified volume serial number for generated VSAM resource file definitions	
	VSMVOLCF	Optional (if SMSVSAM or DVOLSER specified). VOLSER of the DASD volume used to allocated native centralized font library	

#GENMNT worksheet

The #GENMNT macro generates SMP/E jobs to install product maintenance, which is performed only when you receive a preventive or corrective maintenance file. Information from other macros also is used for installing maintenance software.

Macro	Parameter	Description	Site values
#GENMNT	HOLDFILE	Optional. Generate SMPHOLD controls in the stage 2 RECEIVE job?	
	SMPSRCID	Optional. Specify the SMP/E SOURCEID assigned to all PTFs and APARs received	
	EIHLQ	Highlevel qualifier of the downloaded SMPPTFIN data set	

3. SMP/E installation

This chapter lists the different SMP/E installation procedures required for installing XPAF, including steps for installing:

- The base product
- Product maintenance
- User modifications
- User exits
- Adding the PCL Transform to an existing XPAF-Lite installation
- Adding the PDF Transform to an existing XPAF or XPAF-Lite installation

Use the checklists supplied to record your progress as you perform each step.

Installing the base product

The procedure for installing the base product file for XPAF 7.0 is listed here. These steps explain how to:

- Complete the pre-installation worksheets
- Perform a system backup of all XPAF related libraries
- Unload the installation library
- Set up and execute the stage 1 job
- Generate and execute stage 2 jobs
- Perform the SMP/E installation

Perform these steps in sequential order.

Before you begin

Before you begin the XPAF installation, review these items.

Experience level

To install XPAF you should have systems programming experience and a working knowledge of z/OS, JES2 and/or JES3, SMP/E, VSAM, and ISPF/PDF. If you encounter any unfamiliar terms, refer to the appropriate IBM reference manual for more information. If you need further help installing this product, contact your local Xerox service representative.

Required security access levels

These security levels are required:

- Have either update access to the LPA library or authority to create new libraries in the Master Catalog.
- Have alter access to LDM files based on how your security system handles VSAM control interval processing. For example, RACF security requires CONTROL authority to access files managed by control interval processing.
- Have update access to SYS1.PARMLIB, SYS1.PROCLIB, the VTAMLST dataset, and the XOSF log datasets.
- Have update access to the JES2 and/or JES3 parameters library.
- Have read access to any datasets required by XPAF.

You must also be able to issue z/OS and JES operator commands.

System modifications

Ensure that no local usermods are applied that alter z/OS or JES control blocks and/or JES processing flow. JES control blocks can have user-added fields without affecting the operation of the system. However, if you remove fields in JES control blocks or alter their field lengths, XPAF may not function properly.

Checklist for installing the base product

As you complete each step, enter the completion date in the checklist table to track and record your progress. Each step is explained later in this chapter.

NOTE: Review the maintenance bulletin accompanying the most current maintenance file to determine if you need to run any special procedures before installing the base product.

Step	Action		Date completed
1	Complete the pre-installation worksheets		
2	Perform a system backup		
3	Download and restore the installation PDS		
4	Allocate stage 2 library		
5	Set up stage 1 job		
	A	Edit the #GENDFLT parameters in GENINST	
	B	Edit the #GENJBCD parameters in GENINST	
	C	Edit the #GENJES parameters in GENINST	
	D	Edit the #GENPROD parameters in GENINST	
	E	Edit the #GENSMP parameters in GENINST	
	F	Edit the #GENEND parameters in GENINST	
6	Print installation service macros (optional)		
7	Generate stage 2 jobs		
8	Submit SMP/E installation jobs		
	A	Submit IJOB101	
	B	Submit IJOB102	
	C	Submit IJOB103	
	D	Submit IJOB104	
	E	Submit IJOB105	
	F	Submit IJOB106	
	G	Submit IJOB107	
	H	Submit IJOB108	
9	Perform post-installation steps		
	A	Convert CLIST files (optional)	
	B	Refresh LLA address space for XDS (optional)	

Step 1 – Complete the pre-installation worksheets

Before you begin the installation process, you and your Xerox service representative or systems analyst will participate in a site-planning visit. During this visit, you will help the service representative complete the pre-installation worksheets for the installation service macros, which help define your site's environment to XPAF. These worksheets and a description of the parameters associated with the installation service macros can be found at the end of this chapter.

Step 2 – Perform a system backup

Before you unload the installation library, you should perform normal backup procedures for:

- Any previous versions of XPAF
- System libraries such as PARMLIBs, PROCLIBs, LPALST libraries, and ISPF libraries

Step 3 – Download and restore the installation PDS

Step 1. Download the file XPAF70EI.FULL.XMTPDS.XMT from the Xerox website at http://www.support.xerox.com/support/xpaf/software/enus.html

Note: If you are installing XPAF-Lite, download the XPAF-LITE installation kit and use the XPAF70EI.FULL.XMTPDS.XMT dataset instead.

Step 2.Allocate a dataset, referred to in the following steps as 'xmit.in', to receive the XPAF70EI.FULL.XMTPDS.XMT file using the following specification:

```
RECFM=FB LRECL=80 SPACE= (CYL, 350, 35)
```

Step 3.Binary transfer the XPAF70EI.FULL.XMTPDS.XMT file into the 'xmit.in' dataset created in step 1

Step 4.Issue the 'TSO RECEIVE' command on the 'xmit.in' dataset to restore the XMTPDS PDS. Due to the large file size, this step may take several minutes to complete.

```
TSO RECEIVE INDA(xmit.in)
 INMR901I Dataset XEROX.XPAF70.XMTPDS from MKEAN on NJEXE01
 INMR906A Enter restore parameters or 'DELETE' or 'END' +
da('yourhlq.XPAF70.XMTPDS')
                                        IEBCOPY MESSAGES AND CONTROL
IEB1135I IEBCOPY  FMID HDZ1A10  SERVICE LEVEL UA46465  DATED 20090319
IEB1035I MKEAN    $$$X40   $$$X40   07:59:51 FRI 12 MAR 2010 PARM='WO
 COPY INDD=((SYS00100,R)),OUTDD=SYS00098
IEB1013I COPYING FROM PDSU  INDD=SYS00100 VOL=DATA02 DSN=SYS10071.T07
IEB1014I           TO PDS  OUTDD=SYS00098 VOL=DATA01 DSN=yourhlq.XPAF70
IEB167I FOLLOWING MEMBER(S) LOADED FROM INPUT DATA SET REFERENCED BY
IEB154I @RESTORE HAS BEEN SUCCESSFULLY LOADED
IEB154I AFPFONTS HAS BEEN SUCCESSFULLY LOADED
IEB154I BASEPTFI HAS BEEN SUCCESSFULLY LOADED
IEB154I CFONTLIB HAS BEEN SUCCESSFULLY LOADED
                          ...
IEB154I XPDLMSG  HAS BEEN SUCCESSFULLY LOADED
IEB1098I 27 OF 27 MEMBERS LOADED FROM INPUT DATA SET REFERENCED BY
IEB144I THERE ARE 390 UNUSED TRACKS IN OUTPUT DATA SET REFERENCED BY
IEB149I THERE ARE 18 UNUSED DIRECTORY BLOCKS IN OUTPUT DIRECTORY
IEB147I END OF JOB - 0 WAS HIGHEST SEVERITY CODE
INMR001I Restore successful to dataset 'yourhlq.XPAF70.XMTPDS'
***
```

Step 5.Edit XMTPDS(@RESTORE), to insert a valid job card and specify the correct names and high level qualifiers, then submit the job

```
//MYJOB JOB  <INSERT A VALID JOB CARD>
//*
//* JCL TO RUN THE REXX EXEC TO RESTORE THE XPAF 7.0 INSTALLATION FILES
//*
//* THE RESTORE REXX TAKES TWO PARAMETERS
//*   - THE FULLY QUALIFIED DSN OF THE XMTPDS
//*   - THE HIGH LEVEL QUALIFIER FOR THE XPAF INSTALATION
//*
//*
//INFO     EXEC PGM=IKJEFT01,DYNAMNBR=25
//ISPPROF  DD DUMMY
//ISPPLIB  DD DUMMY
//ISPMLIB  DD DUMMY
//ISPTLIB  DD DUMMY
//ISPSLIB  DD DUMMY
//SYSPRINT DD SYSOUT=Z
//SYSPROC  DD DISP=SHR,DSN=YOURHLQ.XMTPDS     <== THIS DATASET
//SYSTSPRT DD SYSOUT=*
//SYSTSIN  DD *
    XRESTORE YOUR.HLQ.XMTPDS YOUR.HLQ
//
```

Step 4 – Allocate stage 2 library

All output from stage 1 is considered the stage 2 library. Xerox recommends using a separate stage 2 library instead of INSTLIB because it offers these advantages:

- The names of installation macros are not displayed when you view the directory during stage 2 processing.
- The INSTLIB member has fewer members.

Allocate the stage 2 library using either TSO or the $STG2ALO member in INSTLIB. The library must have the same high-level qualifier(s) as the INSTLIB.

- If you use TSO, allocate the stage 2 library with these attributes:

RECFM	FB
LRECL	80 bytes
BLKSIZE	any multiple of 80
Directory blocks	30
Space	40 tracks of 3380 space or equivalent

- If you use the $STG2ALO member to allocate the stage 2 library, make these changes:
  - Add a valid job card to the start of the job.
  - Go to the end of the job and change the HLQ parameter to reflect your site's dataset high-level qualifier for INSTLIB.

For further information on allocating your stage 2 library, refer to “Step 7 – Generate stage 2 jobs” later in this chapter.

Step 5 – Set up stage 1 job

Stage 1 consists of setting up the installation service macros (ISMs) to reflect your site's dataset naming conventions, operating system specifics, and dataset placements for generating stage 2 jobs.

The $GENINST member of the INSTLIB dataset contains the macro call for each ISM used to install the base product. Edit this member to specify your site-specific values for the parameters in each macro call.

NOTE: Each parameter in $GENINST is in Assembly Language Macro format. You must include continuation characters in column 72 and commas between parameters. If the value you specify contains commas, periods, equal signs, or other special characters, you must enclose the string in single quotation marks. If you need to code a single quotation mark within a string, they must be coded as two single quotation marks.

CAUTION: Do not edit the actual macro members in the INSTLIB dataset. Edit only the $GENINST member in INSTLIB.

GENINST contains the specifications used by the various ISMs when generating the stage 2 jobs via ASMUPD. This job then generates the stage 2 jobs, which you submit to install the base product.

Step 5A – Edit the #GENDFLT parameters in $GENINST

In the $GENINST member of INSTLIB, locate the parameters used in calling the #GENDFLT macro. Enter your site's values for each parameter.

The #GENDFLT macro allows you to specify default values and other nonspecific values required for installation. Throughout this installation process, you have the option to fill in a parameter or leave it blank, in which case the default value is used. This macro sets the default values for the parameters that you leave blank in other macros.

Example:

```
#GENDFLT
       DUNIT=,                                                  X
       DVOLSER=,                                                X
       EIHLQ=prefix,                                            X
       HLQ=prefix,                                              X
       LOADSIZE=23200,                                          X
       OCLASS=,                                                 X
       OPTIONS=,                                                X
       SMS=,                                                    X
       SMSVSAM=,                                                X
       SRCLIB=prefix.SOURCE
```

#GENDFLT parameter definitions

This table provides a description for each parameter in the #GENDFLT macro.

Parameter	Description
DUNIT	Specifies the default UNIT value for allocating non-VSAM datasets during installation. Default: None
DVOLSER	Specifies the default volume serial ID of the DASD device on which product datasets will be allocated. Default: None
EIHLQ	The high level qualifier of the XMTPDS installation file Default: None
HLQ (optional)	Identifies the default high-level qualifier used by other installation macros which require a high-level qualifier. For example, if you leave the HLQ parameter blank in the #GENPROD macro, it defaults to the high-level qualifier you specify here. Default: None
LOADSIZE	Specifies the user-designated block size of the installation-generated execution libraries (XPFLOAD and XPFLPA). Defaults: XPFLOAD Uses DCB attributes of SYS1.LINKLIB XPFLPA Uses DCB attributes of SYS1.LPALIB If you specify ABLK in the OPTIONS parameter, these defaults are overridden by the user-specified system defaults.
OCLASS	Specifies the print output class that is generated on all stage 2 SYSOUT DD statements.

Parameter	Description
OPTIONS	Identifies which default options to use when installing XPAF. Valid values: ABLK Specifies whether to use the Automatic Blocking feature available with DFP V3 and higher. This feature allows you to allocate non-VSAM datasets without specifying a block size. When a dataset is allocated, a default block size will be assigned based on its record format. The default is set by the technical staff at your site. ASUB Indicates whether installation jobs are submitted automatically or manually. For example, if you specify this option, XPAF automatically submits the next job in a series of jobs when the current job has completed with a successful return code. This option applies to installation jobs (IJOB*nnn*), maintenance jobs (MPJOB*nnn*), resource jobs (RJOB*nnn*), and user modification jobs (UMJOB*nnn*) generated by the installation process. PQ Generates the product qualifier in dataset names during the installation process. This qualifier consists of the values found in the PRODUCT and PRODVRM parameters in the #GENPROD macro. Example: OPTIONS=(ABLK,ASUB,PQ)
SMS (optional)	Specifies the default SMS Storage and/or Management Class used for all non-VSAM allocated datasets generated by the installation process. Using this parameter signals the generation of SMS keywords in the DD statements. This allows your system to place the datasets in user-defined storage areas controlled by the operating system. The default class assignments can be overridden by specifying the SMS parameter in the macro responsible for the dataset generation (#GENSMP or #GENPROD). Valid values: YES SMS uses the system ACS routines for allocation of datasets. *storclass* SMS uses the user-defined storage class for allocation of datasets. *mgmtclass* SMS uses the user-defined management class for allocation of datasets. Default: None Examples: SMS=*storclass* SMS=(*storclass*,*mgmtclass*) SMS=(,*mgmtclass*)

Parameter	Description
SMSVSAM (optional)	Specifies the SMS Storage and/or Management Class used for all SMP VSAM cluster definitions generated by the installation process. Using this parameter signals the generation of SMS keywords in the DEFINE statements. This allows your system to place the datasets in user-defined storage areas controlled by the operating system. The default class assignments can be overridden by specifying the SMS parameter in the #GENSMP macro. Valid values: YES — SMS uses the system ACS routines for allocation of datasets. *storclass* — SMS uses the user-defined storage class for allocation of datasets. *mgmtclass* — SMS uses the user-defined management class for allocation of datasets. Default: None Examples: SMSVSAM=*storclass* SMSVSAM=(*storclass*,*mgmtclass*) SMSVSAM=(,*mgmtclass*)
SRCLIB (optional)	Specifies the fully qualified dataset name of the PDS used for user-modifiable source supplied with XPAF. If this parameter is specified, all installation-supplied sample members that you must edit and change are copied into this library by the installation process. Using this optional library eliminates the risk of overlaying a user-modified source member with product maintenance. Default: None

Step 5B – Edit the #GENJBCD parameters in $GENINST

In the $GENINST member of INSTLIB, locate the parameters used in calling the #GENJBCD macro. Enter your site's values for each parameter.

The #GENJBCD macro allows you to specify either a job card name and parameters that will be generated on the stage 2 job cards or an alternate method of supplying this information. Use either of these options:

- To generate job cards on each stage 2 job with your site-specific information, enter the data in the parameters contained in the $GENINST member.
- To supply JCL to be generated at the beginning of all stage 2 jobs, edit the @JOBCARD macro in INSTLIB, and create the prototype JCL exactly as it is required with a REPRO statement ahead of each JCL card (refer to the @JOBCARD macro in INSTLIB for an example). To invoke this action, specify JOBOPT=REPRO in the #GENJBCD section of the $GENINST member of INSTLIB. All other parameters for this macro are then ignored.

  You also can specify that no job card JCL is generated on stage 2 jobs. To invoke this action, specify JOBOPT=NOJBCD in the #GENJBCD section of the $GENINST member in INSTLIB. All other parameters for this macro are then ignored.

NOTE: If you do not specify values for any of the #GENJBCD parameters, no job card will be generated.

Example:

```
#GENJBCD
       JOBCD1='(E475,9901),''INSTALL'',CLASS=X,',              X
       JOBCD2='MSGCLASS=X,NOTIFY=BRODR',                       X
       JOBCD3=,                                                X
       JOBNAME=USERJB,                                         X
       JOBOPT=,                                                X
       JOBPARM='LINECT=50',                                    X
       JOBVARY=
```

Result:

```
//USERJB JOB (E475,9901),'INSTALL',CLASS=X,MSGCLASS=X,
//   NOTIFY=BRODR
/*JOBPARM LINECT=50
```

To include a single quote for the job card output, you must code two single quotes.

#GENJBCD parameter definitions

This table provides a description for each parameter in the #GENJBCD macro.

Parameter	Description
JOBCD1 (optional)	Specifies the job card parameters you supply to be placed on the first job card. If the job parameters are continued on another card, a comma must be placed at the end of the last parameter on the card. The // and JOB statement are supplied by installation macros. Default: None
JOBCD2 (optional)	Specifies continued job card parameters from JOBCD1. The // and JOB statement are supplied by installation macros. Default: None
JOBCD3 (optional)	Specifies continued job card parameters from JOBCD2. The // and JOB statement are supplied by installation macros. Default: None
JOBNAME (optional)	Specifies the JOB name that is placed on all job cards generated during stage 1. The maximum parameter length is eight characters and, if the JOBVARY option is used, the name must be less than eight characters. Default: None
JOBOPT (optional)	Specifies options to the stage 1 macros that control the generation of the JCL on stage 2 jobs. Valid values: NOJBCD — Suppresses all job card JCL generation on stage 2 jobs. REPRO — Instructs stage 1 processing to use the @JOBCARD facility described in the installation procedure to generate the stage 2 job card JCL. Default: None (A job card will be generated using the values specified on the other #GENJBCD options)
JOBPARM (optional)	Specifies JOBPARM card parameters you supply to be placed on the installation /*JOBPARM card. If you omit this parameter or leave it blank, no /*JOBPARM is generated. The /*JOBPARM is supplied by installation macros. Default: None
JOBVARY (optional)	Varies the JOBNAME on each job of the stage 2 JCL generated by the stage 1 macros. Valid values: YES — Each JOBNAME will have a unique suffix in the stage 2 JCL. If the job name supplied by the JOBNAME parameter is eight characters, no name variance occurs. NO — The job name you supply in the JOBNAME parameter is used as is for all stage 2 jobs. Default: NO

Step 5C – Edit the #GENJES parameters in $GENINST

In the $GENINST member of INSTLIB, locate the parameters used in calling the #GENJES macro. Enter your site's values for each parameter.

The #GENJES macro supplies stage 2 jobs and sample members with information about your JES environment. Some information in this macro is also used in conjunction with the #GENSMP macro in setting up the SMP/E installation jobs.

Example:

```
#GENJES
       JESFSSID=XOSF,                                          X
       JESMAC=,                                                X
       JESPROD=JES2,                                           X
       JESUMAC=,                                               X
       JESLVL=
```

#GENJES parameter definitions

This table provides a description for each parameter in the #GENJES macro.

Parameter	Description
JESFSSID (optional)	Specifies the JES functional subsystem ID. You should allow this parameter to use its default value. Default: XOSF
JESMAC (optional)	Allows you to override the IBM-supplied macro library name for the version of JES you are using. Enter the name you want to use. Default: SYS1.SHASMAC (JES2) SYS1.SIATMAC (JES3)
JESPROD	Identifies the JES product under which you are installing XPAF. Refer to "Defining XPAF to JES" in chapter 5, "Customizing your system" for instructions concerning activating XPAF with JES. Valid values: JES2 JES2 support is generated. JES3 JES3 support is generated. Default: None

Parameter	Description
JESUMAC (optional)	Defines the library used when you assemble your JES source or exits. If you are using a modified version of the JES macro library, enter that library's dataset name as the value for this parameter. Default: None
JESLVL	Indicates the JES level being used for systems running the z/OS host operating system. If specified, this value will be used as the mid-level qualifier for the JES macro names generated by #GENJES. Valid values: A 1 to 8-character value indicating the version, release, and modification level of the JES software. Default: None Example: JESLVL=V1R1M0

Step 5D – Edit the #GENPROD parameters in $GENINST

In the $GENINST member of INSTLIB, locate the parameters used in calling the #GENPROD macro. Enter your site's values for each parameter.

This macro assigns values to installation parameters used to generate SMP/E installation jobs.

Example:

```
#GENPROD
        DUNIT=,                                                 X
        DVOLSER=,                                               X
        HLQ=prefix,                                             X
        HLQLPA=master-prefix,                                   X
        HLQMST=,                                                X
        OPTIONS=,                                               X
        PRODUCT=XPAF,                                           X
        PRODVRM=700                                             X
        SMS=,                                                   X
        SMSVSAM=,                                               X
        UMODJOFT=XUM0001
```

#GENPROD parameter definitions

This table provides a description for each parameter in the #GENPROD macro.

Parameter	Description
DUNIT	Specifies the UNIT value for allocating non-VSAM XPAF datasets during installation. This parameter is required unless SMS is used for allocating product datasets or you specify the DUNIT parameter in the #GENDFLT macro. Default: None
DVOLSER	Specifies the volume serial ID of the DASD device used for allocating XPAF target and distribution libraries. This parameter is required unless you use SMS for allocation or you specify the DVOLSER parameter in the #GENDFLT macro. Default: None
HLQ (optional)	Specifies the high-level qualifier for all non-VSAM XPAF datasets allocated during installation. These libraries consist of target and distribution libraries for executing and maintaining XPAF. The HLQLPA or HLQMST, if specified, override HLQ for XPFLOAD and XPFLPA. Default: The value specified for the HLQ parameter in the #GENDFLT macro. If you do not specify the HLQ parameter in the #GENDFLT or #GENPROD macros, an error message is issued and the assembly terminates.
HLQLPA (optional)	Specifies a high-level qualifier that will be used to catalog the XPFLPA dataset in the Master Catalog of your system during XPAF installation. This high-level qualifier is assigned to the XPFLPA to expedite installation and customization. If you specified HLQMST, this parameter is ignored. Default: None
HLQMST (optional)	Specifies a high-level qualifier that will be used to catalog the XPFLPA dataset in the Master Catalog of your system during XPAF installation. This high-level qualifier is assigned to the XPFLOAD and XPFLPA to expedite installation and customization. Default: None **CAUTION:** Both HLQMST and HLQLPA specify high-level qualifiers that are cataloged in the Master Catalog. If you have multiple systems with multiple catalogs, these datasets must be cataloged in all Master Catalogs for all systems on which XPAF or on which jobs containing XPAF extended JCL are submitted.

Parameter	Description
OPTIONS	Indicates that one or both of these options be used: • Install Xerox Direct Print Services (XDS) elements as part of the XPAF LPA library. If not specified, the XDS FMID will not be installed and XDS will not be available for use. • Bypass running the SMP/E APPLY and ACCEPT CHECK jobs IJOB105 and IJOB107. If you specify this option, you also must specify **ASUB** in the #GENDFLT macro. Valid values: XDS — Installs the XDS FMID. NOCHK — Does not submit installation jobs IJOB105 and IJOB107. Default: None Examples: OPTIONS=XDS OPTIONS=(XDS,NOCHK)
PRODUCT	Identifies the software product you are installing. Enter XPAF to generate XPAF installation jobs. Valid values: XFG — The XPAF Forms Generator. XPAF — The base XPAF product including the AFP, PCL and PDF transforms XPAFLITE — Install XPAF-Lite, a version of XPAF that does not include any transforms, but will process LCDS and Linemode datastreams to LCDS capable printers XPAFLPDF — XPAF-Lite with the additional DJDE to PDF transform XPAFLPCL — XPAF-Lite with the additional DJDE to PCL transform Default: XPAF
PRODVRM	Identifies the version, release, and modification level of the base product. This field is a maximum of 3 bytes. If the value ends in zeros, they may be omitted. The file volume serial number of the base file being installed is generated from this value. Default: 700

Parameter	Description
SMS (optional)	Specifies the SMS Storage and/or Management Class used for all SMP non-VSAM allocated datasets generated by the installation process. Using this parameter signals the generation of SMS keywords in the DD statements. This allows your system to place the datasets in user-defined storage areas controlled by the operating system. This parameter overrides any default class assignment specified in the #GENDFLT macro. Valid values: YES — SMS uses the system ACS routines for allocation of datasets. *storclass* — SMS uses the user-defined storage class for allocation of datasets. *mgmtclass* — SMS uses the user-defined management class for allocation of datasets. Default: None Examples: SMS=*storclass* SMS=(*storclass*,*mgmtclass*) SMS=(,*mgmtclass*)
SMSVSAM (optional)	Specifies the SMS Storage and/or Management Class used for all SMP VSAM cluster definitions generated by the installation process. Using this parameter signals the generation of SMS keywords in the DD statements. This allows your system to place the datasets in user-defined storage areas controlled by the operating system. This parameter overrides any default class assignment specified in the #GENDFLT macro. Valid values: YES — SMS uses the system ACS routines for allocation of datasets. *storclass* — SMS uses the user-defined storage class for allocation of datasets. *mgmtclass* — SMS uses the user-defined management class for allocation of datasets. Default: None Examples: SMS=*storclass* SMS=(*storclass*,*mgmtclass*) SMS=(,*mgmtclass*)
UMODJOFT (optional)	Specifies the name SMP/E uses to install the JES offset table. This usermod supplies XPAF with the correct JES control block offsets required for JES communication. Default: XUM0001

Step 5E – Edit the #GENSMP parameters in $GENINST

In the $GENINST member of INSTLIB, locate the parameters used in calling the #GENSMP macro. Enter your site's values for each parameter.

The #GENSMP macro supplies stage 2 SMP/E jobs with all the necessary information for the successful installation of XPAF.

You have several SMP/E options available for installing XPAF. For more information on these options, refer to "#GENSMP parameter definitions" later in this chapter.

Example:

```
#GENSMP
        DUNIT=3380,                                              X
        DVOLSER=VOL004,                                          X
        DWORK=SYSDA,                                             X
        HLQ=prefix,                                              X
        HLQVSAM=,                                                X
        MTS=,                                                    X
        RELEASE=5,                                               X
        SMS=,                                                    X
        SMSVSAM=,                                                X
        USERHLQ=,                                                X
        USEROPT=1,                                               X
        VSMVOL=
```

#GENSMP parameter definitions

This table provides a description for each parameter in the #GENSMP macro.

Parameter	Description
DUNIT (optional)	Specifies the UNIT value used for allocating non-VSAM SMP/E datasets and the SMPTLIB during installation. This parameter is required unless the DUNIT parameter in the #GENDFLT macro is specified. If you omit this parameter, a value of SYSALLDA is assigned to facilitate allocation of the SMPTLIB. Default: SYSALLDA
DVOLSER	Specifies the volume serial ID of the DASD device used for allocating the XPAF SMP/E files. If an SMS or DUNIT value is specified, this value is used for VSAM file allocation only. This parameter is required unless the DVOLSER parameter in the #GENDFLT macro is specified. Default: None
DWORK (optional)	Specifies the UNIT value used for SMP SYSUT*x* and SMPWRK*x* file allocation during SMP/E execution. This parameter is optional only if you specify a value for either the #GENDFLT parameter DUNIT or the #GENSMP parameter DUNIT. Default: If you omit this parameter, the value you specified for DUNIT is used. If you leave this parameter blank, it defaults to SYSDA.

Parameter	Description
HLQ (optional)	Specifies the HLQ for all SMP/E non-VSAM datasets allocated during XPAF installation. Default: The value specified for the HLQ parameter in the #GENDFLT macro.
HLQVSAM (optional)	Specifies the HLQ for all SMP/E VSAM datasets allocated during XPAF installation. Default: The value you specified for the HLQ parameter in this macro or its default if you did not specify one.
MTS (optional)	Instructs the installation process to include the SYSTEM MTS in all MTS DD concatenations. Use this parameter if you are installing XPAF on a system that frequently contains JES changes in an APPLY status. Valid values: YES — Concatenates the default name (SYS1.SMPMTS) to MTS DD statements. NO — Does not concatenate SYS1.SMPMTS to MTS DD statements. *dataset-name* — Identifies the fully qualified name of the system SMPMTS dataset to be concatenated to MTS DD statements. Default: YES ***CAUTION:*** Use caution if XPAF is installed on a test system with JES changes APPLYd but not ACCEPTed and then moved to a production system where the changes have not been introduced. If the test system has introduced a change to the JES control block, you must reassemble XDIOFTAB before executing the product.
RELEASE (optional)	Specifies the current release of SMP/E your system is using to install XPAF. SMP/E release levels 5 and higher are supported by XPAF. If you change release levels after your initial XPAF installation, this value does not need to be changed. Default: 5

Parameter	Description
SMS (optional)	Specifies the default SMS Storage and/or Management Class used for all non-VSAM allocated datasets generated by the installation process. Using this parameter signals the generation of SMS keywords in the DD statements. This allows your system to place the datasets in user-defined storage areas controlled by the operating system. This parameter overrides any default class assignment specified in the #GENDFLT macro. Valid values: YES — SMS uses the system ACS routines for allocation of datasets. *storclass* — SMS uses the user-defined storage class for allocation of datasets. *mgmtclass* — SMS uses the user-defined management class for allocation of datasets. Default: None Examples: SMS=*storclass* SMS=(*storclass*,*mgmtclass*) SMS=(,*mgmtclass*)
SMSVSAM (optional)	Specifies the SMS Storage and/or Management Class used for all SMP VSAM cluster definitions generated by the installation process. Using this parameter signals the generation of SMS keywords in the DEFINE statements. This allows your system to place the datasets in user-defined storage areas controlled by the operating system. This parameter overrides any default class assignment specified in the #GENDFLT macro. Valid values: YES — SMS uses the system ACS routines for allocation of datasets. *storclass* — SMS uses the user-defined storage class for allocation of datasets. *mgmtclass* — SMS uses the user-defined management class for allocation of datasets. Default: None Examples: SMS=*storclass* SMS=(*storclass*,*mgmtclass*) SMS=(,*mgmtclass*)
USERHLQ	Specifies the HLQ used for the generation of SMP dataset names if USEROPT option 2 or 3 is selected. This parameter is required only if USEROPT is set to a value other than 1. This entry is ignored if USEROPT=1. The HLQ specified is then appended to the standard IBM SMP low level qualifier name where it is used throughout the installation process. Default: None

Parameter	Description
USEROPT (optional)	Specifies the level of allocation for required SMP/E datasets. Depending on the option specified, all, some, or none of these datasets will be allocated by the installation process. Valid values: 1 All SMP datasets required for product installation and maintenance will be allocated by the installation process. 2 User-specified CSI and SMPPTS datasets will be used and all other required SMP datasets will be allocated by the installation process. The HLQ for the CSI and SMPPTS is specified by the USERHLQ parameter. 3 All SMP required datasets are supplied by the user and will not be allocated by the installation process. The HLQ for all SMP datasets is specified by the USERHLQ parameter. All SMP dataset names in the installation process will be generated with the IBM standard low level qualifiers (such as SMPLOGA, SMPMTS, and SMPSCDS). Default: 1
VSMVOL	Indicates whether to use the volume serial number specified here as the SMPCSI dataset for the VSAM file definitions generated by the #GENSMP macro. This parameter is required unless you specify the SMSVSAM or DVOLSER parameters. Default: None

Step 5F – Edit the #GENEND parameters in $GENINST

In the $GENINST member of INSTLIB, locate the parameters used in calling the #GENEND macro. Review the default values specified for each parameter.

The #GENEND macro specifies generation variables. The TYPE parameter in this macro specifies the type of stage 2 output you want to generate. Refer to “Step 7 – Generate stage 2 jobs” later in this chapter for more information on this parameter.

Example:

```
#GENEND
       STAGE2=YES,                                          X
       TYPE=INSTALL
```

If you need to recreate a portion of the TYPE=INSTALL output, you can specify the UMOD subset parameter of the INSTALL command. This parameter recreates the UMJOB*xxx* jobs for installing usermods.

#GENEND parameter definitions

This table provides a description for each parameter in the #GENEND macro.

Parameter	Description
STAGE2 (optional)	Specifies whether the stage 2 jobs and control statements will be placed by stage 1 into a library other than INSTLIB. Valid values: YES — The stage 1 processing will place the stage 2 jobs and control statements into a dataset with the same high-level qualifier as the XPAF INSTLIB. The low-level qualifier is STAGE2. NO — All stage 2 jobs and control statements will be placed into the XPAF INSTLIB by stage 1 processing. Default: YES
TYPE	Specifies the type of stage 2 jobs that are generated as output from stage 1 installation jobs. Valid values: INSTALL — Generates stage 2 jobs to install XPAF. This value is used with the #GENINST macro. MNT — Generates stage 2 jobs to install product maintenance using SMP/E. This value is used with the #GENMNT macro. RSC — Generates stage 2 jobs to install resources. UXIT — Generates stage 2 jobs to install user exits you create. This value is used with the #GENUXIT macro. Default: None

Step 6 – Print the installation service macros (optional)

After you enter your site-specific values for the ISMs in GENINST, you can print the file so you have a record of those value(s).

Use the IEBGENER utility to print GENINST, as shown in this sample job:

```
//job-name JOB job-information
//*
//*               PRINT MEMBER FROM PDS
//*
//PRINTMEM PROC NAME=
//PRINTMEM EXEC PGM=IEBGENER
//SYSUT1   DD DISP=SHR,DSN=prefix.INSTLIB(&NAME)
//SYSUT2   DD SYSOUT=X
//SYSPRINT DD DUMMY
//SYSIN    DD DUMMY
//PRINTMEM PEND
//PRDETAL  EXEC PRINTMEM,NAME=$GENINST
```

Step 7 – Generate stage 2 jobs

Use the $ASMUPD member in INSTLIB to generate the jobs used to install the base product. When you submit ASMUPD, it generates stage 2 jobs and sample parameters based on your entries in stage 1. You can direct these jobs and sample parameters into a separate stage 2 library (the default) or into INSTLIB.

To generate stage 2 jobs, follow the procedure in one of these two options.

Option 1: Using a separate stage 2 library

1. Specify STAGE2=YES in the #GENEND macro section of the $GENINST member in INSTLIB. This indicates you are setting up the stage 2 jobs to process with a stage 2 library named prefix.STAGE2.

2. Edit the $ASMUPD member in INSTLIB:

   a. Add a valid job card to the start of the job.

   b. Go to the end and change the HLQ parameter on the EXEC card to reflect your site's dataset high-level qualifier for INSTLIB.

   c. Note that the STAGE2 parameter defaults to ‘STAGE2’. This is the low-level qualifier for the stage 2 library and should not be changed.

   d. SAVE the member before submitting it as a job.

3. Submit ASMUPD to generate the stage 2 jobs.

Valid return code: 00

If you receive a return code other than 00, review the MNOTES in the assembly output listing for further information. A return code of 01 through 04 is considered a warning, which you may review before continuing. A return code of 08 is considered an error, indicating that you must perform an action before continuing.

After stage 1 has completed successfully, stage 2 installation jobs and sample parameters are available in the stage 2 library.

Option 2: Using INSTLIB

1. Specify STAGE2=NO in the #GENEND macro section of the $GENINST member in INSTLIB. This indicates you are setting up all stage 2 jobs to use INSTLIB.

2. Edit the $ASMUPD member in INSTLIB:

   a. Add a valid job card to the start of the job.

   b. Go to the end of the file and change the HLQ parameter on the EXEC card to reflect your site's dataset high-level qualifier for XPAF INSTLIB.

   c. Change the STAGE2 parameter from the default value ‘STAGE2’ to ‘INSTLIB’.

   d. SAVE the member before submitting it as a job.

3. Submit ASMUPD to generate the stage 2 jobs.

Valid return code: 00

If you receive a return code other than 00, review the MNOTES in the assembly output listing for further information. Return codes 01 through 04 are warnings; return code 08 indicates an error.

After the ASMUPD job has run and completed successfully, stage 2 installation jobs and sample parameters are available in INSTLIB.

Step 8 – Submit SMP/E installation jobs

You can find the JCL for each job listed below in the stage 2 library after stage 1 is complete. Submit the SMP/E jobs in the specified order to ensure XPAF is properly installed. IJOB101 through IJOB108 require no JCL modifications for proper execution and should be submitted as is.

If you have to reinstall XPAF from the beginning, first use job DJOB101 (supplied in the stage 2 library) to delete all the datasets allocated by the XPAF installation.

NOTE: Some of these installation jobs can generate more than 10,000 lines of output. Therefore, choose an appropriate SYSOUT class.

Also, some of these installation jobs have a long run time. Therefore, choose an appropriate job CLASS.

Step 8A – Submit IJOB101

IJOB101 performs these functions:

- Allocates non-VSAM SMP/E datasets needed to install and maintain XPAF and associated functions.
- Allocates the SMPCSI needed to install and maintain XPAF and associated functions. This allocation occurs only if the #GENSMP parameter USEROPT=1.
- Copies GLOBAL definitions to the stage 1 library when a separate stage 2 library is used. This step is generated if you specified STAGE2=YES in the #GENEND parameter.

Valid return code: 00

Step 8B – Submit IJOB102

IJOB102 performs these functions:

- Generates a dummy job if the #GENSMP parameter USERSOPT does not equal 1.
- Initializes the SMPCSI by copying the GIMZPOOL data from your system macro library.
- Defines and initializes a target and distribution library zone for XPAF and associated functions.
- Adds the OPTION member to the global zone to be used when installing or maintaining XPAF and associated functions.
- Adds DD definitions to these zones.

Valid return code: 00

Step 8C – Submit IJOB103

IJOB103 allocates the target and distribution libraries needed to install and maintain XPAF.

Valid return code: 00

Step 8D – Submit IJOB104

IJOB104 RECEIVEs XPAF functions from the base product distribution file.

Valid return code: 00

Step 8E – Submit IJOB105

IJOB105 runs an APPLY CHECK on XPAF functions.

Valid return code: 00

Step 8F – Submit IJOB106

IJOB106 APPLYs XPAF functions.

Valid return code: 00

Step 8G – Submit IJOB107

IJOB107 runs an ACCEPT CHECK on XPAF functions.

Valid return code: 00

Step 8H – Submit IJOB108

IJOB108 runs ACCEPTs on XPAF functions.

Valid return code: 04

Step 9 – Perform post-installation steps

After you submit the last installation job, continue with your installation process:

- If you received XPAF software maintenance (preventive, level set, or corrective files) with your base product file, install that software at this point in the installation procedure. For instructions, refer to "Installing maintenance" later in this chapter.
- If you did not receive a maintenance file with the base product file, install the XPAF usermods. For instructions, refer to "Installing usermods" later in this chapter.

Also, you may need to perform the steps described here. Review these steps before continuing with the installation and perform any necessary tasks.

Step 9A – Convert CLIST files (optional)

When you customize your system, you can convert CLIST files in the XPFCLIB dataset from FB to VB format. After copying any CLIST members you must edit and remove line numbers if they are present.

Step 9B – Refresh LLA address space for XDS (optional)

To install XDS elements, you must refresh the z/OS Library Lookaside address space after the installation is complete. To refresh this address space, enter this command:

```
MODIFY LLA,REFRESH
```

This command updates the z/OS lookaside list with the addresses of the most current XDS modules.

Installing maintenance

Periodically, Xerox distributes XPAF software maintenance in the form of a preventive or corrective SMPPTFIN file. These files provide enhancements and/or fixes to problems reported against XPAF between releases of the product.

This section contains the basic procedures for installing maintenance software, which you must repeat each time you receive a maintenance file. The maintenance bulletin that accompanies the maintenance file describes any procedures you may need to perform before or after installing the file. You should review the maintenance bulletin before performing the procedures in this section.

If conflicts exist between the instructions in this section and those in the maintenance bulletin, use the information in the maintenance bulletin.

The most recent XPAF maintenance can be downloaded from:

http://www.support.xerox.com/support/xpaf/software/enus.html?fileLanguage=en

Applicability of instructions

When installing software maintenance, you can be categorized as one of three types of customers:

- NEW customers are installing the base XPAF software for the first time.
- CURRENT customers have previously installed XPAF and have installed the latest preventive maintenance on their system.
- NOT CURRENT customers are existing XPAF customers who may have installed some corrective or preventive maintenance on their system but have not yet installed the latest preventive maintenance.

The heading for each maintenance installation step indicates to which type of customer the step applies. When reviewing the maintenance installation steps, refer to the section heading to determine whether the step applies to your site.

Scheduling and tracking your installation

This table lists the activities to be performed during the maintenance process. Perform these procedures in the order shown.

As you complete each step, enter the completion date in the checklist table to track and record your progress. Each step is explained later in this chapter.

Step		Action	Date completed
1	Perform pre-installation steps		
	A	Review maintenance bulletin for special instructions	
	B	Verify contents of the maintenance package	
	C	Verify software levels	
	D	Perform SMP/E housekeeping	
	E	Install maintenance to modules in the LPA	
2	Set up stage 1 job		
	A	Verify previous maintenance	
	B	Update $GENMNT in INSTLIB	
3	Generate stage 2 jobs		
4	Code the SYSTEM HOLD bypass JCL		
5	Execute stage 2 jobs		
	A	Edit and submit MPJOB101	
	B	Edit and submit MPJOB102	
	C	Edit and submit MPJOB103	
	D	Edit and submit MPJOB104 (optional)	
	E	Edit and submit MPJOB105 (optional)	
6	Perform post-installation procedures		
	A	Complete applicable post-installation instructions	
	B	Perform an IPL, if necessary	
	C	Verify the maintenance installation	

Step 1 – Perform pre-installation procedures

Perform these steps to prepare your system before installing a corrective or preventive maintenance.

Step 1A – Review the maintenance bulletin (New, Current, Not Current)

The maintenance bulletin contains information that relates specifically to the maintenance you are installing. Before you begin, read through the bulletin to determine if there are any steps that must be performed before installing the maintenance.

Step 1B – Verify software levels (New, Current, Not Current)

You must have the XPAF V7R0M00 base product installed on your system before you apply XPAF 7.0 maintenance.

Step 1C – Perform SMP/E housekeeping (New, Current, Not Current)

Before you install XPAF maintenance, complete these additional steps.

1. Back up all XPAF SMP/E, target, and distribution library datasets.
2. Perform an SMP/E Query with List to determine if the XPAF base software and any previous XPAF maintenance have been accepted.
   - If you have already accepted the base product and previous maintenance, skip this step.
   - If you have not accepted previous maintenance, run MPJOB104 and MPJOB105 to accept previously applied PTFs. You must specify BYPASS(HOLDSYSTEM) on the ACCEPT.
3. Compress all SMP/E, target, and DLIB partitioned datasets.
4. Back up all XPAF datasets again.
5. If you have modified any members within XPFSAMP and are using the members as source, save that source in a library other than XPFSAMP.

Step 1D – Install maintenance to modules moved to LPA (New, Current, Not Current)

If you receive maintenance that updates one or more modules which have been moved to the LPA, you have two options:

- Install that maintenance directly to the LPA, as described below.
- Move the LPA-eligible module(s) to the LPA after you install the maintenance, as described in “Step 6 – Perform post-installation procedures” later in this chapter.

Refer to “Tuning your system” in chapter 5, “Customizing your system” for a list of the modules which can be moved to the LPA.

Change the target library for LPA-eligible modules

Before you RECEIVE and APPLY the maintenance, use the SMP/E UCLIN facility to inform SMP/E that the modules will be moved to a new target library. Use the SMP/E control statements provided in this example:

```
SET BOUNDARY (XPFTLIB) .
UCLIN .
/*  REPEAT THE NEXT STATEMENT ONE TIME FOR EACH MODULE MOVED
    TO XPFLPA, SUBSTITUTING THE MODULE NAME FOR lmodname */
REP LMOD (lmodname) SYSLIB (XPFLPA) .
ENDUCL .
```

Ensure that the dataset pointed to by the XPFLPA DD is large enough to contain all the LPA-eligible modules. If you allocate a dataset the same size as XPFLOAD, you will have sufficient space.

Step 2 – Set up stage 1 job

You generate the jobs to install XPAF software maintenance and its associated functions in the same manner you generated the installation jobs for the base file. The stage 1 procedure requires you to complete the #GENMNT macro parameters in the $GENMNT member to generate the stage 2 jobs for software maintenance processing.

Complete these steps to execute the stage 1 job to generate the stage 2 maintenance jobs. Refer to the information in the maintenance bulletin that accompanies the maintenance for more file-specific instructions.

Step 2A – Verify previous maintenance (Current, Not Current)

Verify that all previous maintenance except APARs has been ACCEPTED by SMP/E with MPJOB105.

Step 2B – Edit $GENMNT in INSTLIB (New, Current, Not Current)

Edit the GENMNT member in the INSTLIB dataset. This member contains the parameters used in calling two macros: #GENMNT and #GENEND.

The #GENMNT macro parameters supply stage 2 maintenance jobs with information required for successfully installing maintenance to XPAF and its associated functions. All members containing stage 2 jobs created by this macro begin with the prefix MPJOB.

Example:

```
#GENMNT                                                          X
       HOLDFILE=YES,                                             X
       SMPSRCID=,                                                X
       EIHLQ=
```

In this sample of the #GENMNT macro, replace the volser variable with the VOLSER of the maintenance file you are installing.

The TYPE parameter in the #GENEND section of $GENMNT specifies TYPE=MNT to instruct the installation service macros to generate the stage 2 jobs that will apply maintenance to XPAF. Do not change this value.

For more information on the #GENEND macro parameters, refer to "#GENEND parameter definitions" earlier in this chapter.

#GENMNT parameter definitions

This table provides a description for each parameter in the #GENMNT macro.

Parameter	Definition
HOLDFILE (optional)	Used when a HOLDDATA file is supplied on the maintenance file. Refer to the maintenance bulletin that accompanies the maintenance file for instructions on using this parameter with the file. Valid values: YES Generates an SMPHOLD DD statement and the HOLDDATA SMP/E keyword in the stage 2 maintenance file RECEIVE job. NO Does not generate SMPHOLD controls on the stage 2 RECEIVE job. Default: NO
SMPSRCID (optional)	Specifies the SMP/E SOURCEID to be assigned to all PTFs or APARs received from the software maintenance file and is used by SMP/E for maintenance selection. Default: None (no SOURCEID is generated).
EIHLQ	Defines the dataset high level qualifier for the SMPPTFIN dataset. Default: None

Step 3 – Execute stage 1 job (New, Current, Not Current)

Edit the $ASMUPD member in INSTLIB as necessary. Then, complete these steps:

1. Specify $**GENMNT** for the INSTYPE parameter.
2. Submit this job to generate stage 2 jobs. When stage 1 has completed successfully, all stage 2 installation jobs and sample parameters have been placed in the stage 2 library.
3. If you used INSTLIB for stage 2, reedit the library to refresh the directory and display the new members. If you used a separate library for stage 2, edit that library to display the member list.

Step 4 – Code the SYSTEM HOLD bypass JCL (New, Current, Not Current)

When installing software maintenance, you should use the system hold bypass feature. If you do not use system hold bypass, any fixes that have a ++HOLD, and any fixes associated with those on hold, will not be APPLYd. The valid return codes are 08 or less.

To bypass a system hold, perform these steps:

1. Examine the maintenance bulletin for special instructions relating to fixes in HOLD status.
2. Depending on the installation step you are performing, edit the MPJOB102 (APPLY CHECK) or MPJOB103 (APPLY) member to remove the /* and */ characters from this line:

   ```
   /*  BYPASS(HOLDSYSTEM)  */
   ```

3. Execute the stage 2 jobs to install the software maintenance. The fixes you removed from system hold bypass will be APPLYd along with the other fixes.

NOTE: If you do not remove the /* and */ characters in the file, a return code of 12 is issued to indicate that fixes in SYSTEM HOLD were bypassed. If you do remove the characters, a return code of 04 is issued to indicate that fixes in SYSTEM HOLD were applied.

Step 5 – Execute stage 2 jobs

After you complete the stage 1 maintenance jobs, the jobs to RECEIVE, APPLY, and ACCEPT XPAF maintenance are located in the stage 2 JCL library and can be submitted for execution as is. The jobs are located in member names MPJOB101 through MPJOB105.

For MPJOB102 through MPJOB105, if you receive a return code of 08, examine the messages from SMP/E to confirm that the return code was caused by missing prerequisite maintenance.

NOTE: To ensure the integrity of interrelated fixes, Xerox recommends that you RECEIVE and APPLY all fixes on a maintenance file. Ensure that any previous maintenance has been ACCEPTed before APPLYing a maintenance file.

If you experience a problem with your software, you must APPLY all fixes on the current maintenance level before reporting the problem to Xerox Technical Support.

Step 5A – Edit and submit MPJOB101 (New, Current, Not Current)

This job RECEIVEs PTF maintenance for XPAF functions.

Valid return code: 00

Step 5B – Edit and submit MPJOB102 (New, Current, Not Current)

This job runs an APPLY CHECK on software maintenance for functions received in step 1.

Valid return code: 00 and 04. A return code of 04 indicates that a system hold bypass was encountered.

Step 5C – Edit and submit MPJOB103 (New, Current, Not Current)

This job APPLYs the software maintenance to the functions for which maintenance was RECEIVEd in step 1.

Valid return code: 00 and 04. A return code of 04 indicates that a system hold bypass was encountered.

Step 5D – Edit and submit MPJOB104 (New, Current, Not Current)

This job runs an ACCEPT CHECK on software maintenance for functions RECEIVEd in step 1. This job is optional.

Valid return code: 00 and 04. A return code of 04 indicates that a system hold bypass was encountered.

Step 5E – Edit and submit MPJOB105 (New, Current, Not Current)

This job ACCEPTs the software maintenance to the functions for which maintenance was RECEIVEd in step 1. This job is optional.

Valid return code: 00 and 04. A return code of 04 indicates that a system hold bypass was encountered.

Step 6 – Perform post-installation procedures

After you have installed the maintenance file, review this section to determine which of the procedures applies to your site.

Step 6A – Complete applicable post-installation instructions

This section contains instructions for special procedures that you may need to perform, depending on which XPAF options you use. After you install maintenance, review this information to determine if any of the procedures apply to your site.

Convert CLIST files (New, Current, Not Current)

When you customize your system after applying a maintenance file, you may convert CLIST files in the XPFCLIB dataset from FB to VB format. After copying any CLIST members you must edit and remove line numbers if they are present

Update sample source code (Current, Not Current)

If you have made changes to any sample source distributed in XPFSAMP, examine the new samples for changes that affect your source. If there are differences, you must recustomize, reassemble, and link-edit the sample source code.

Update sample macros (Current, Not Current)

If the maintenance file includes updates to any of the sample macros, perform these tasks:

1. Change the macro you are currently using to match the new sample.
2. Reassemble and link-edit your user exits.

Also, review any other new macros in the sample macro library for applicability to your environment.

Update JES offset table (Current, Not Current)

If the maintenance includes updates to the JES offset table (XDIOFTAB), before you start printers that use XPAF, run UMJOB101 to reassemble and link-edit XDIOFTAB. If you have applied usermod XUM0001, you must reapply it.

Update TABLELIB (Current, Not Current)

If the maintenance file includes updates to the TABLELIB, unload the appropriate file from the file. For customers defaulting to letter size paper, unload the file that contains the letter size TABLELIB updates. For customers defaulting to A4 size paper, unload the file that contains the A4 TABLELIB updates.

For complete instructions on unloading these files, refer to the bulletin accompanying the maintenance file.

Update PROFILES member (Current, Not Current)

If you have made changes to the PROFILES member in XPFSAMP and have stored those changes in your sample library, perform these steps:

1. Examine the new sample for changes that affect your system.
2. Recustomize your printer profiles as required.
3. Store the profiles in the dataset specified by the PROFDD initialization parameter.

Update user exits (Current, Not Current)

If you have made changes to any of the user exits and have stored those changes in XPFSAMP:

1. Examine the new samples for changes that affect your system.
2. Recustomize the sample exits in XPFSAMP as required.
3. Submit the appropriate UXJOB*nn* to reassemble and link-edit the user exits.

NOTE: If you are using the JES2 user exits XRXJ2X4 and XRXJ2X6, you must restart the JES2 MAS system with a WARM START for the new exits to take effect.

Move modules to the LPA (Current, Not Current)

After you install the maintenance, select the ISPF option to MOVE (not COPY) LPA-eligible modules from XPFLOAD to an LPALST library that has been previously defined and authorized for use.

Update JDT modules (Current, Not Current)

The JDT modules in the LPA may have been modified by the maintenance. After you have dynamically loaded the JDT modules into the MLPA, implement the changes to the JDTs by specifying the REDO option on the PARM parameter of the EXEC statement in the extended JCL proc. Otherwise, you must IPL with a CLPA.

Use XJCF simulation (Current, Not Current)

If you use XJCF simulation processing, be sure to perform the following step:

- Reassemble and link-edit the XJCFSIM table into the XPFLOAD library.

Install maintenance for XDS (New, Current, Not Current)

All software maintenance for XDS is shipped on the maintenance files for XPAF. After you apply maintenance to XDS modules, you must refresh the z/OS Library Lookaside address space using this command:

```
MODIFY LLA,REFRESH
```

This command updates the z/OS lookaside list with the addresses of the most current XDS modules.

Step 6B – Perform an IPL (New, Current, Not Current)

Once the software maintenance is installed, you may need to perform an IPL with CLPA on your system. An IPL will:

- Add required modules to the LPA
- Authorize required XOSF libraries
- Update the z/OS link list
- Update the PPT
- Update the Subsystem Name Table
- Define printers to z/OS
- Invoke updated JES parameters
- Make extended JCL support available, if requested

If you are familiar with the procedure for restarting JES and/or z/OS without performing an IPL, you may use that procedure.

Step 6C – Verify the maintenance installation (Current, Not Current)

If you have applied maintenance to an existing XPAF system, you can verify the accuracy of your software maintenance installation by executing an IVP. For more information about performing an IVP, refer to chapter 17, “Performing an installation verification procedure.”

If you are installing a new XPAF system, do not execute the IVPs at this time. Continue with the remaining installation steps, then perform the IVP as explained in chapter 17, “Performing an installation verification procedure.”

Adding the PCL transform to an existing XPAF-Lite installation

This section describes how to upgrade an existing XPAF-Lite installation to use the PCL transform to convert LCDS documents to PCL.

To add the PCL transform, you will do the following:

- Ensure the LCDS resources are loaded in to the CxxxxLIBs and JSL has been loaded into PDLLIB.
- Define and initialize the intermediate DFONTLIB, DFORMLIB and DIMGLIB
- Reload required shading fonts into DFONTLIB from the offload dataset provided with the installation kit.
- Define and initialize the PCL resource libraries PFONTLIB, PFORMLIB and PIMGLIB
- Update the XOSF PROC to refer to the new libraries
- Add the new license string
- Define a new printer profile to enable PCL printing
- Test the updates

Step 1 - Ensure the LCDS resources are loaded into XPAF Libraries

If you have not previously transferred your LCDS resources to the mainframe, refer to the “Loading LCDS resources from a FreeFlow Print Server” section.

Step 2 - Define and initialize the intermediate resource libraries

To define and initialize the intermediate resource libraries, DFONTLIB, DFORMLIB and DIMGLIB, review and submit STAGE2(RDLB100).

Note: Job RDLB100 loads default fonts from the offload library, ‘yourhlq.DFONTLIB.OFF’, created during the initial installation of the XPAF software. If you no longer have this offload library on your system, you will need to download and receive the XPAF Upgrade kit from the Xerox website.

Step 3 - Define and initialize the PCL resource libraries

To define and initialize the PCL resource libraries PFONTLIB, PFORMLIB and PIMGLIB, review and submit STAGE2(RPCL100)

Step 4 -Update the XOSF started task procedure

Update the XOSF PROC to add DD statements for the new libraries

Example:

```
//XOSF00  PROC
//XOSF00  EXEC PGM=XINMAIN,REGION=0M
//STEPLIB  DD  DISP=SHR,DSN=your.hlq.XPFLOAD
//*
 ...
//*
//* ******************************************************
//*             FONT LIBRARIES                           *
//* ******************************************************
//CFONTLIB DD  DISP=SHR,DSN=your.hlq.CFONTLIB
//DFONTLIB DD  DISP=SHR,DSN=your.hlq.DFONTLIB
//PFONTLIB DD  DISP=SHR,DSN=your.hlq.PFONTLIB
//*
//*
//* ******************************************************
//*             FORM LIBRARIES                           *
//* ******************************************************
//CFORMLIB DD  DISP=SHR,DSN=your.hlq.CFORMLIB
//DFORMLIB DD  DISP=SHR,DSN=your.hlq.DFORMLIB
//PFORMLIB DD  DISP=SHR,DSN=your.hlq.PFORMLIB
//*
//*
//* ******************************************************
//*             IMAGE LIBRARIES                          *
//* ******************************************************
//CIMGLIB  DD  DISP=SHR,DSN=your.hlq.CIMGLIB
//DIMGLIB  DD  DISP=SHR,DSN=your.hlq.DIMGLIB
//PIMGLIB  DD  DISP=SHR,DSN=your.hlq.PIMGLIB
//*
```

NOTE: After adding the new DD statements, you must shutdown and restart the FSS to pick up the changes

Step 5 - Update the license string

Add the XPAF_LPCL license string to XINAPRM(XINSLSTR)

The example given below is to demonstrate what the XINSLSTR member will look like. The example will not work on your system.

```
Cpuid=FF01565A2066, ExpDate=10-Mar-2015, Feature=XPAF
LicenseString=BF5E1B28860BDE368606D9481B6F
Cpuid=FF01565A2066, ExpDate=10-Mar-2015, Feature=XPAF_LPCL
LicenseString=AF5E1B28860ADE36860AD948CB6F
```

Step 6 - Add/update a printer profile for the PCL printer

The following example shows a printer profile for a monochrome PCL printer, which is capable of edge-to-edge printing and has a duplex module installed.

```
DEVICE=PCL,
AUTOREV=Y,                      Auto revision of resources
BANSTYLE=JES,                   Style of separator pages
FEATURE=(EDGE2EDGE,DUPLEX,NOCOLOR)
IPADDR=xxx.xxx.xxx.xxx,         Printer IP address
TCPMODE=TCPLPR,                 Use the LPR protocol
LPRQNAME=qqqqq,                 Queue name on the printer
TCPLPRDSN=DELETE,               Delete temp dataset after LPR
XTCPJNAM=JESINFO,               Display JES info on printer GUI
```

Step 7 - Test the new printer

Start the new printer via JES and print a test job

Adding the PDF transform to an existing XPAF or XPAF-Lite installation

This section describes how to upgrade an existing XPAF or XPAF-Lite installation to use the PDF transform to convert documents to PDF.

To add the PDF transform, you will do the following:

- Ensure the LCDS resources are loaded in to the CxxxxLIBs and JSL has been loaded into PDLLIB.
- Define and initialize the intermediate DFONTLIB, DFORMLIB and DIMGLIB
- Reload required shading fonts into DFONTLIB from the offload dataset provided with the installation kit.
- Define and initialize the PDF resource libraries FFONTLIB and FIMGLIB
- Update the XOSF PROC to refer to the new libraries
- Add the new license string
- Define a new printer profile to enable PDF printing
- Test the updates

Step 1 - Ensure the LCDS resources are loaded into XPAF Libraries

If you have not previously transferred your LCDS resources to the mainframe, refer to the “Loading LCDS resources from a FreeFlow Print Server” section.

Step 2 - Define and initialize the intermediate resource libraries

To define and initialize the intermediate resource libraries, DFONTLIB, DFORMLIB and DIMGLIB, review and submit STAGE2(RDLB100).

Note: Job RDLB100 loads default fonts from the offload library, ‘yourhlq.DFONTLIB.OFF’, created during the initial installation of the XPAF software. If you no longer have this offload library on your system, you will need to download and receive the XPAF Upgrade kit from the Xerox website.

Step 3 - Define and initialize the PDF resource libraries

To define and initialize the PCL resource libraries FFONTLIB and FIMGLIB, review and submit STAGE2(RPDF100)

Step 4 -Update the XOSF started task procedure

Update the XOSF PROC to add DD statements for the new libraries

Example:

```
//XOSF00  PROC
//XOSF00  EXEC PGM=XINMAIN,REGION=0M
//STEPLIB  DD  DISP=SHR,DSN=your.hlq.XPFLOAD
//*
 ...
//*
//* ******************************************************
//*             FONT LIBRARIES                           *
//* ******************************************************
//CFONTLIB DD  DISP=SHR,DSN=your.hlq.CFONTLIB
//DFONTLIB DD  DISP=SHR,DSN=your.hlq.DFONTLIB
//FFONTLIB DD  DISP=SHR,DSN=your.hlq.FFONTLIB
//*
//*
//* ******************************************************
//*             IMAGE LIBRARIES                          *
//* ******************************************************
//CIMGLIB  DD  DISP=SHR,DSN=your.hlq.CIMGLIB
//DIMGLIB  DD  DISP=SHR,DSN=your.hlq.DIMGLIB
//FIMGLIB  DD  DISP=SHR,DSN=your.hlq.FIMGLIB
//*
```

NOTE: After adding the new DD statements, you must shutdown and restart the FSS to pick up the changes

Step 5 - Update the license string

Add the XPAF_PDF or XPAF_LPDF license string to XINPARM(XINSLSTR)

Note: The example given below is to demonstrate what the XINSLSTR member will look like. The example will not work on your system.

```
Cpuid=FF01565A2066, ExpDate=10-Mar-2015, Feature=XPAF
LicenseString=BF5E1B28860BDE368606D9481B6F
Cpuid=FF01565A2066, ExpDate=10-Mar-2015, Feature=XPAF_PDF
LicenseString=AF5E1B28860ADE36860AD948CB6F
```

Step 6 - Add/update a printer profile for the PDF printer

The following example shows a printer profile to generate color PDF documents and send them as e-mail attachments.

```
DEVICE=PDF
XMAILADR=EMAILADR                    EMAIL Address list member name
Email_body_text_member=EMAILTXT
Email_body_HTML_member=HTM162A
TCPMAIL=MAILONLY                     Send the PDF as an e-amil attachment
LPRDSN=ISV.XPAF.XINPARM              Dataset containing EMAIL members
```

NOTE: For more information on setting up XPAF for e-mailing PDF documents, refer to the “configuring e-mail” section in chapter 16

Step 7 - Test the new printer

Start the new printer via JES and print a test job

Installing usermods

A user modification (usermod) is supplied with XPAF to allow you to customize the tables used by XPAF; for example, the JES offset table. You must install the usermod for the JES offset table to make XPAF operational.

The JCL required to install usermods is generated during stage 1 of the base XPAF installation. The generated JCL can be submitted without change. All usermod JCL members in the stage 2 dataset have a prefix of UMJOB. Each usermod is set up specifying REDO, so you can resubmit the original SMP/E APPLY JCL to reinstall the usermod.

CAUTION: If you make any modifications to your JES system, such as installing maintenance to JES, you must resubmit the job to APPLY with a REDO the JES offset table. Failure to resubmit this job may cause XOSF to abend or create unpredictable results.

When applying software maintenance to your system, refer to the accompanying maintenance bulletin to find out whether you need to resubmit a usermod installation job. Follow any special instructions in the user instructions.

Checklist for installing usermods

As you complete each step, enter a check in the checklist table to track and record your progress.

Step		Completed
1	Submit UMJOB100	
2	Submit UMJOB101	
3	Review and optionally install usermods XUM0007-XUM0010	

Step 1 – Submit UMJOB100

UMJOB100 uses SMP/E to RECEIVE all XPAF-required usermods.

Submit UMJOB100 as is.

Valid return code: 00

Step 2 – Submit UMJOB101

UMJOB101 performs an SMP/E APPLY of the JES offset table. This table supplies XPAF with the correct JES control block offsets for processing at your site. Do not make any changes to this table.

Submit UMJOB101 as is.

Valid return code: 00

Any time you upgrade your operating system or apply maintenance to your system that changes this table, you must submit this job to REDO the usermod. You must also modify your existing UMJOB101 JCL to include the correct JES2 or JES3 dataset name. Refer to the bulletin accompanying the maintenance file for the correct dataset names.

CAUTION: The stage 1 assembly is performed without the SMPMTS dataset, which is used for JES maintenance, included in the SYSLIB statement. If JES maintenance has been APPLYd but not ACCEPTed, the JES offsets in this USERMOD module may be incorrect. Incorrect JES offsets may cause XPAF to fail or abend upon initialization or at document print time.

If such a failure occurs, add the SMPMTS dataset that contains the JES maintenance to the SYSLIB concatenation for the system on which XPAF is running. Then resubmit UMJOB101.

Changing the default USERMOD name

You can change the default USERMOD name (XUM0001) using the UMODJOFT parameter of the #GENPROD macro, which you completed during base product installation. If you change the name of the default usermod after it has been installed, you must perform these steps:

1. Regenerate the stage 1 output.
2. RESTORE and REJECT the default usermod using SMP/E.
3. Resubmit UMJOB100 and UMJOB101.

Step 3 – Review and optionally install XUM007-XUM0010

Additional usermods are provided to allow customers to disable the IBM DUPLEX extended JCL keyword and rename the Xerox XDUPLEX extended JCL keyword to DUPLEX. This is primarily for existing customers that were using the original Xerox DUPLEX extended JCL keyword, prior to IBM releasing their DUPLEX extended JCL keyword (which prompted the rename of the Xerox keyword to XDUPLEX).

Use the following zaps, supplied as usermods, to disable the DUPLEX IBM JCL keyword and rename the Xerox XDUPLEX keyword to DUPLEX extended JCL keyword:

XUM0007 - IBM zap

XUM0008 - Xerox zap #1

XUM0009 - Xerox zap #2

XUM0010 - Xerox zap #3

NOTE: The usermods are supplied in the XPFSAMP library and must be edited to change all occurrences of ‘%%’ to ‘++’.

The installation STAGE2 library contains jobs UMJOB108 to UMJOB110 to receive and apply XPAF usermods XUM0008 to XUM0010.

You must manually modify and apply the IBM zap, XUM0007, before installing the modified XPAF extended JCL.

Installing user exits

This section lists the available XOAF and XOSF optional user exits and describes the procedure used for installing them.

- For XOAF, XPAF uses an administrative security exit.
- For XOSF, XPAF uses 10 different FSA exits, a message exit, a command exit, and a refresh security exit.

The procedure for coding these exits is described in chapter 7, "Coding the XPAF user exits."

Available user exits

Table 3-1 identifies the available sample user exits and exit installation jobs. Enter a check in the Installed column for each user exit that you install successfully.

NOTE: There are multiple versions of the source code for user exits 02, 03, and 05. However, you can only install one version of each exit on your system.

Table 3-1. Available user exits

Exit point	Source member name	Function	Stage 2 member name	Installed
01	XUXIT01	FSA initialization	UXJOB01	
02	XUXIT02	Dataset begin	UXJOB02	
02	XUXIT02A	Dataset begin	UXJOB02	
02	XUXIT02C	Dataset begin	UXJOB02	
03	XUXIT03	JES record read	UXJOB03	
03	XUXIT03A	JES record read	UXJOB03	
03	XUXIT03C	JES record read	UXJOB03	
03	XUXIT03D	JES record read	UXJOB03	
04	XUXIT04	XOSF dataset open	UXJOB04	
05	XUXIT05	Separator page	UXJOB05	
05	XUXIT05A	Separator page	UXJOB05	
05	XUXIT05B	Separator page	UXJOB05	
06	XUXIT06	Resource access	UXJOB06	

Table 3-1. Available user exits (Continued)

Exit point	Source member name	Function	Stage 2 member name	Installed
07	XUXIT07	Resource download begin	UXJOB07	
08	XUXIT08	Resource download end	UXJOB08	
09	XUXIT09	SMF record	UXJOB09	
10	XUXIT10	FSA termination	UXJOB10	
11	XUXIT11	XOSF dataset close	UXJOB11	
12	XUXIT12	Writer data option	UXJOB12	
30	XUXIT30	Message suppression	UXJOB30	
31	XUXIT31	Operator command suppression	UXJOB31	
32	XUXIT32	Refresh security	UXJOB32	
—	XOAFUSEC	XOAF security exit	UXJOBSEC	

User exits for XDS

There are no user exits specific to XDS. All valid XOSF user exits in the XDS data stream are honored as the data stream passes through XOSF.

Checklist for installing user exits

After you have coded your user exits, you are ready to install them by following the procedures in this chapter. As you complete each step, enter the completion date in the checklist table to track and record your progress.

Step	Action		Date completed
1	Set up stage 1 job		
	A	Edit $GENUXIT in INSTLIB	
	B	Edit the UEXIT parameters in GENUXIT	
2	Generate stage 2 jobs		
	A	Edit ASMUPD	
	B	Submit ASMUPD	
3	Execute stage 2 jobs		
	A	Submit UXJOB00	
	B	Submit the user exit APPLY jobs	

Step 1 – Set up stage 1 job

Use the #GENUXIT macro parameters in the $GENUXIT member of INSTLIB to generate stage 2 jobs that use SMP/E to assemble and link your user exit source code into a load library you specify. This load library must be accessible to XPAF.

The stage 2 member names are generated with UXJOB as the prefix and the exit number as the suffix. For example, the name of the stage 2 member that contains the JCL to install user exit 05 is UXJOB05.

Complete the steps in this section to set up and execute stage 1 jobs for user exits.

Step 1A – Edit $GENUXIT in INSTLIB

Edit the $GENUXIT member in INSTLIB and complete the parameters used in calling the #GENUXIT macro. Enter the parameter values you predefined in your pre-installation worksheets.

If you need to access a private macro library that was not defined to SMP/E during XPAF installation, you must specify the UXMAC parameter in the #GENUXIT section. This causes a SYSLIB DD statement to be generated in each stage 2 user exit SMP/E job that contains all the required macro libraries. It also overrides the standard SYSLIB defined by the DDDEF statement when you installed XPAF.

Example:

```
#GENUXIT                                                        X
       UMPFX=,                                                  X
       USEC=,                                                   X
       USECLNKLB=,                                              X
       USECSMID=,                                               X
       UXLNKLB=,                                                X
       UXMAC=,                                                  X
       UXPFX=,                                                  X
       UXSRCLB=
```

#GENUXIT parameter definitions

This table provides a description for each parameter in the #GENUXIT macro.

Parameter	Description
UMPFX (optional)	Specifies a 5-character name that is used as the default SYSMOD-ID prefix generated to install user exits. The number of the exit you request is appended to this character string to create a unique SYSMOD ID for each user exit you request. The character string XUX00 is generated as a default if you do not assign a value to this parameter. Default: XUX00
USEC (optional)	Specifies whether the XOAF TSO user security exit will be installed. The name of this exit must be XOAFUSEC. XPFSAMP contains a sample of this exit. You should copy the sample to the library specified in the UXSRCLB parameter before you make any changes to it. Valid values: YES — The stage 2 JCL is generated to install this user exit. Member name is UXJOBSEC. NO — Stage 2 JCL is not generated to install this user exit. Default: NO

Parameter	Description
USECLNKLB (optional)	Specifies a fully qualified load library name into which SMP/E links the user security module after assembly. You may specify any load library, LLA or LPA, that TSO accesses. ***NOTE:*** For security, Xerox strongly recommends that you use a secured LNKLST library for this module. Default: XPAFLIB
USECSMID (optional)	Specifies the SYSMOD ID to SMP/E for processing. The XOAFUSEC exit will be RECEIVEd and APPLYd under this SYSMOD ID. If you omit this parameter, the SYSMOD ID defaults to XUX0100. Default: XUX0100
UXLNKLB (optional)	Specifies the load library to which SMP/E links your exit modules after assembly. You may specify any load library, LLA or LPA, that XPAF is able to access. ***NOTE:*** If this library is not in the LLA or LPA, it must be authorized and added to the XPAF start-up proc STEPLIB. Default: XPFLOAD
UXMAC (optional)	Defines a user macro library that is required for assembling the user exits. Each stage 2 job generates a SYSLIB DD statement that contains all macro libraries, and overrides the DDDEF SYSLIB statement defined to SMP/E during installation. If you do not specify this parameter, no overriding SYSLIB DD statement is generated. Default: None
UXPFX (optional)	Specifies a 1- to 6-character name that is used as the default source member and load module name prefix generated to install user exits. The number of the exit you request is appended to the end of this character string to create a unique source and load module name for each exit you request. This parameter is overridden for any user exit generated that has a value specified for the source name in the #UEXIT macro. The character string XUXIT is generated as the default if you do not assign a value to this parameter. Default: XUXIT
UXSRCLB	Specifies a PDS library that contains your exit source code. Source member names in this library must match source module names as defined by the UXPFX parameter or the #UEXIT macro. This library is not distributed with XPAF. Default: None

Step 1B – Edit the UEXIT parameters in $GENUXIT

Edit the $GENUXIT member in the installation library dataset to complete the parameters used in calling the #UEXIT macros. This sample member contains one default #UEXIT entry for every XPAF user exit.

You must code a separate #UEXIT macro within $GENUXIT for each user exit you install. To install one or more user exits, remove the asterisk (*) from the beginning of the line defining the user exit you will install. If necessary, add any additional #UEXIT statements needed for your site.

#UEXIT parameter definitions

This table provides a description for each parameter in the #UEXIT macro.

Macro	Description
#UEXIT	Defines the user exit to be generated. Valid values: *nn* — The 2-digit number of the exit for which you want to generate a stage 2 SMP/E installation job. *mmmmmmm* — The 7-character name you want to call the SMP/E-installed SYSMOD. This value is optional. *ssssssss* — The 1- to 8-character name of the source module used to generate the user exit. This is the name of the member that SMP/E will assemble and link into a load library. This value is optional. When using a source library other than the XPFSAMP library, the user exit name specified cannot be the same as any of the sample source members in XPFSAMP. Default: The numbers for the XOAF user exits. Examples: This example generates user exit #01 with default SYSMOD and source names. #UEXIT 01 This example generates user exit #01 with a SYSMOD ID of UXMOD01 and the default source name. #UEXIT (01,UXMOD01) This example generates user exit #01 with a SYSMOD ID name and a source/load module name of UXSRCE01. #UEXIT (01,,UXSRCE01) This example generates user exit #01 with a SYSMOD ID of UXMOD01 and a source/load module name of UXSRCE01. #UEXIT (01,UXMOD01,UXSRCE01)

Step 2 – Generate stage 2 jobs

To generate the stage 2 jobs used for installing user exits, perform these steps.

Step 2A – Edit $ASMUPD

Edit the $ASMUPD member in INSTLIB. Specify **GENUXIT** for the INSTYPE parameter.

Step 2B – Submit $ASMUPD

Submit the $ASMUPD job to generate stage 2 jobs for installing user exits.

Step 3 – Execute stage 2 jobs

You can find the JCL for each job listed below in the stage 2 library after stage 1 is complete. Submit the jobs in the specified order to ensure the user exits are installed properly.

Within each stage 2 member, the job name is generated by the #GENJBCD macro that you completed during the installation of XPAF. For instructions on completing the #GENJBCD macro, refer to "Installing the base product" earlier in this chapter.

Step 3A – Submit UXJOB00

This job RECEIVEs the XPAF user exits generated in stage 1.

Valid return code: 00

Step 3B – Submit the user exit APPLY jobs

An SMP/E APPLY job is generated for each user exit you requested in the #UEXIT macros. Submit all APPLY jobs and make sure you receive a condition code of 00 for all jobs. If an assembly error occurs for a particular exit, correct the code and resubmit the appropriate APPLY job.

User exit installation examples

This section contains examples of completed user exit macros to illustrate the effects of definitions you apply during exit installation. This section does not contain any procedures you need to perform; it is for reference only.

Example 1 of #GENUXIT

This example macro generates stage 2 JCL to install user exits 01, 05, and 30:

```
#GENUXIT                                                          X
       UMPFX=USM00,                                               X
       USEC=YES,                                                  X
       USECLNKLB=,                                                X
       USECSMID=,                                                 X
       UXLNKLB=,                                                  X
       UXMAC=,                                                    X
       UXPFX=USRMOD,                                              X
       UXSRCLB=SYS4.USEREXIT.SOURCE
       #UEXIT 01
       #UEXIT (05,USXIT05,UEXIT5)
       #UEXIT (30,UXT0030)
```

These are the specifications that will result for each user exit generated by the above example:

- Stage 2 JCL is generated to install user exits 01, 05, and 30 (member names UXJOB00, UXJOB01, UXJOB05, and UXJOB30).
- Source for all exits is contained in SYS4.USEREXIT.SOURCE.
- Load modules are link-edited into user.XPFLOAD.
- No user-specific macro library is used.
- SYSMOD ID for exit 01 is USM0001.
- SYSMOD ID for exit 05 is USXIT05.
- SYSMOD ID for exit 30 is UXT0030.
- Source and load module name for exit 01 is USRMOD01.
- Source and load module name for exit 05 is UEXIT5.
- Source and load module name for exit 30 is USRMOD30.

Example 2 of #GENUXIT

This example macro will generate stage 2 JCL to install user exits 03, 09, 10, and 31:

```
#GENUXIT                                                          X
       UMPFX=USM00,                                               X
       USEC=,                                                     X
       USECLNKLB=,                                                X
       USECSMID=,                                                 X
       UXLNKLB=SYS3.USER.LINKLIB,                                 X
       UXMAC=SYS4.USER.MACLIB,                                    X
       UXPFX=USRMOD,                                              X
       UXSRCLB=SYS4.USEREXIT.SOURCE
       #UEXIT 03
       #UEXIT 09
       #UEXIT 10
       #UEXIT 31
```

These are the specifications that will result for each user exit generated by the above example:

- Stage 2 JCL is generated to install user exits 03, 09, 10, and 31 (member names UXJOB00, UXJOB03, UXJOB09, UXJOB10, and UXJOB31).
- Source for all exits is contained in SYS4.USEREXIT.SOURCE.
- Load modules are link-edited into SYS3.USER.LINKLIB.
- All stage 2 APPLY jobs have a SYSLIB DD statement containing all macro libraries used for user exit assembly with SYS4.USER.MACLIB being first in the concatenation.
- SYSMOD ID for exit 03 is USM000003.
- SYSMOD ID for exit 09 is USM000009.
- SYSMOD ID for exit 10 is USM000010..
- SYSMOD ID for exit 31 is USM000031.
- Source and load module name for exit 03 is USRMOD03.
- Source and load module name for exit 09 is USRMOD09.
- Source and load module name for exit 12 is USRMOD12.
- Source and load module name for exit 31 is USRMOD31.

4. Installing resources

XPAF uses a variety of resources for printing depending upon the types of jobs you print. Resources include fonts, forms, images, and logos.

This chapter provides instructions for installing the XPAF resources. For instructions on loading or converting resources, refer to *Section Three: Managing Resources with XPAF*.

Checklist for installing resources

Follow the procedures shown in this checklist to install the resources distributed with XPAF. As you complete each step, enter the completion date in the checklist table to track and record your progress. The steps for each procedure are explained later in this chapter.

NOTE: Review the maintenance bulletin accompanying the most current maintenance file to determine if you need to run any special procedures before installing the resource file.

Step		Action	Date completed
1	Set up stage 1 job		
	A	Calculate the size of your resource libraries	
	B	Edit $GENRSC in INSTLIB	
2	Generate stage 2 jobs		
	A	Edit $ASMUPD	
	B	Submit $ASMUPD	
3	Submit resource installation jobs		
	A	Submit RJOB101	
	B	Submit RJOB102	
	C	Submit RJOB103	
	D	Submit RJOB104	
	E	Edit and submit RJOB105 (optional)	

Step 1 – Set up stage 1 job

Stage 1 consists of setting up the resource installation macro to reflect your site's resource library requirements. Before completing the macro parameters, calculate the size of your resource libraries using the formulas provided in this section.

Step 1A – Calculate the size of your resource libraries

When setting up your stage 1 job, you must define specific block sizes for your resource libraries in the #GENRSC macro. Follow these steps to calculate the size of your form, image, and PDL libraries:

1. Determine the number of resources you will be storing in each native resource library.
2. Multiply the number of resources by the average number of records required for each resource type:

Resource type	#GENRSC parameter	Average # of records
Centralized forms	SIZCFORM	2
Centralized images	SIZCIMG	4
Decentralized forms	SIZDFORM	2
Decentralized images	SIZDIMG	6
PCL fonts	SIZPFONT	6
PCL forms	SIZPFORM	3
PCL images	SIZPIMG	8
PDLLIB	SIZPLIB	2[1]/10[2]
PDF fonts	SIZFFONT	6
PDF images	SIZFIMG	8

[1] This value is difficult to calculate since one PDL file will contain many members. For example, one JSL file may contain several PDEs, and each PDE will result in a PDLLIB member using an average of 2 records. For a rough calculation, assume that three lines of PDL will create one member.

[2] Include an additional 10 records for each 3 lines of PDL if you will be using PDL object management.

NOTE: These averages may vary from site to site.

3. Add an additional amount for future expansion. For example, you may add an additional 20%.

4. Enter the values into the appropriate #GENRSC parameters.

Example

Rainbow Office Supplies currently has 200 centralized forms and 50 centralized images and 120 lines of PDL. They will not be using the PDL object management feature. They print their documents on decentralized and PCL-capable printers as well as converting them to PDF. The calculations for their native resource libraries would be:

CFORMLIB = 200 x 2 = 400 + 20% = 480
CIMGLIB = 50 x 4 = 200 + 20% = 240
DFORMLIB = 200 x 2 = 400 + 20% = 480
DIMGLIB = 50 x 6 = 300 + 20% = 360
F/PFONTLIB = 100 x 6 = 600 + 20% = 720
F/PIMGLIB = 50 x 8 = 400 + 20% = 480
PDLLIB = 120/3 x 2 = 80 + 20% = 96
PFORMLIB = 200 x 3 = 600 + 20% = 720

Step 1B – Edit the $GENRSC in INSTLIB

Edit the $GENRSC member in the INSTLIB dataset and complete the parameters used to call the #GENRSC macro with your site-specific values.

The parameters in this macro supply:

- Resource dataset names required by stage 1 installation service macros for generating XPAF execution samples.
- Information required by the stage 2 resource download jobs to install XPAF resources successfully. The TYPE=RSC parameter in the #GENEND macro instructs the installation service macros to generate stage 2 jobs that allocate and offload resources from the installation XMTPDS. Do not change this parameter.

To print a record of the values you specified for the #GENRSC macro parameters, follow the instructions provided in "Step 6 – Print the installation service macros (optional)" in chapter 3, "SMP/E installation." Substitute $GENRSC for $GENINST.

Example:

```
#GENRSC
        DUNIT=,                                                 X
        DVOLSER=volser,                                         X
        HLQ=resource-prefix,                                    X
        HLQfile=,                                               X
        HLQVSAM=,                                               X
        IVP=,                                                   X
        OPTIONS=,                                               X
        SIZCFONT=,                                              X
        SIZCFORM=,                                              X
        SIZCIMG=,                                               X
        SIZDFONT=,                                              X
        SIZDFORM=,                                              X
        SIZDIMG=,                                               X
        SIZFFONT=,                                              X
        SIZFIMG=,                                               X
        SIZLOGO=,                                               X
        SIZPDL=,                                                X
        SIZPFONT=,                                              X
        SIZPFORM=,                                              X
        SIZPIMG=,                                               X
        SMS=,                                                   X
        SMSVSAM=,                                               X
        VSMVOL=,                                                X
        VSMVOLCF=,                                              X
        VSMVOLDF=
```

#GENRSC parameter definitions

This table provides a description for each parameter in the #GENRSC macro.

Parameter	Description
DUNIT (optional)	Specifies the UNIT value used for non-VSAM resource files during resource file allocation. This parameter is required unless the DUNIT parameter of the #GENDFLT macro is specified. Default: None
DVOLSER	Specifies a specific volume serial number of the DASD device used for allocation of the XPAF resource files. If you do not specify a value for DVOLSER, the value specified for DUNIT is used, and no VOLSER DD card parameter is generated. Default: None
HLQ (optional)	Specifies the high-level qualifier used for all XPAF resource datasets during file allocation. Default: The value you specified for the HLQ parameter in the #GENDFLT macro.
HLQVSAM (optional)	Specifies the high-level qualifier used for all VSAM resource datasets during resource file allocation Default: The value you specified for the HLQ parameter in this macro or its default if you did not specify one.

Parameter	Description
IVP (optional)	Specifies whether the IVP datasets are offloaded with the rest of the resource datasets and IVP jobs are created as batch jobs. Valid values: YES — The IVP datasets are offloaded from the resource file onto a storage unit specified by this macro. IVPJOB01 through IVPJOB06 are created as batch jobs and placed into the stage 2 library. The IVP output print class defaults to the class specified for the SYSOUT parameter in the #GENDFLT macro. (YES,*class*) — The IVP datasets are offloaded the same as when you specify YES only. IVPJOB01 through IVPJOB06 are created as batch jobs and placed into the stage 2 library. The IVP output print class is specified by *class*, a one-byte value. ***NOTE:*** If you do not specify a class, the value specified for OCLASS in the #GENDFLT macro is used. NO — The IVP datasets are not offloaded from the resource file. No IVP test jobs are created. Default: YES ***NOTE:*** To print IVPs on A4 paper, you must specify **A4** for the OPTIONS parameter in this macro, or enter **Y** in the 'Using A4 paper?' field in the XOAF Installation Verification Procedure option.

Parameter	Description
OPTIONS	Specifies the options available when you install resources. You may specify more than one option for this parameter. Valid values: A4 Use A4 as the default paper size for IVPs and paper-related tables. B Install base resources (forms, images). C Install centralized fonts (standard format). D Install decentralized fonts (standard format). T Install TABLELIB. CI Install core interchange fonts. NOPCL Do not allocate PCL resource libraries (PFONTLIB, PFORMLIB, PIMAGELIB). NOPDF Do not allocate PDF resource libraries (FFONTLIB, FIMGLIB). Default: (B,C,D,T) (install each option). ***NOTE:*** If you specify B, C, D, or T individually, the other default options are not automatically installed. For example, if you change the value from (B,C,D,T) to C, only the centralized fonts will be installed. Examples: OPTIONS=C Installs centralized fonts only. OPTIONS=(D,CI) Installs decentralized core interchange fonts. OPTIONS=(B,C,D,T,NOPCL) Installs base resources, centralized and decentralized fonts, and TABLELIB, but does not allocate PCL resource libraries. OPTIONS=(B,C,T,A4) Installs base resources, centralized fonts, and TABLELIB, generates IVPs to print on A4 paper, and sets the default paper name to A4 for the varying paper size tables and cluster mapping tables.
SIZCFONT (optional)	Specifies the size of the CFONTLIB allocated by the resource allocation job. Use this parameter if your library needs to be a size other than the defaults generated by this installation. Default: 35000 records (standard font installation). 100080 records (if you specified OPTIONS=CI).

Parameter	Description
SIZCFORM (optional)	Specifies the size of the CFORMLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 6000 records. 2 9000 records. 3 18000 records. *value* The actual number of records to allocate. Default: 1
SIZCIMG (optional)	Specifies the size of the CIMGLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 1500 records. 2 2000 records. 3 5000 records. *value* The actual number of records to allocate. Default: 1
SIZDFONT (optional)	Specifies the size of the DFONTLIB allocated by the resource allocation job. Use this parameter if your library needs to be a size other than the defaults generated by this installation. Default: 35000 records (standard font installation). 100160 records (if you specified OPTIONS=CI).
SIZDFORM (optional)	Specifies the size of the DFORMLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. Valid values: 1 3000 records. 2 6000 records. 3 9000 records. *value* The actual number of records to allocate. Default: 1
SIZDIMG (optional)	Specifies the size of the DIMGLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 1200 records (or 120 3380 tracks). 2 3600 records (or 360 3380 tracks). 3 7500 records (or 750 3380 tracks). *value* The actual number of records to allocate. Default: 1

Parameter	Description
SIZLOGO (optional)	Specifies the size of the CLOGOLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 1000 records. 2 2000 records. 3 3000 records. *value* The actual number of records to allocate. Default: 1
SIZPDL (optional)	Specifies the size of the PDLLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 1000 records. 2 2000 records. 3 3000 records. *value* The actual number of records to allocate. Default: 1
SIZPFONT (optional)	Specifies the size of the PFONTLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 8000 records. 2 16000 records. 3 32000 records. *value* The actual number of records to allocate. Default: 1
SIZPFORM (optional)	Specifies the size of the PFORMLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 500 records. 2 1000 records. 3 2000 records. *value* The actual number of records to allocate. Default: 1

Parameter	Description
SIZPIMG (optional)	Specifies the size of the PIMGLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 1000 records. 2 2000 records. 3 3000 records. *value* The actual number of records to allocate. Default: 1
SIZFIMG (optional)	Specifies the size of the FIMGLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 1000 records. 2 2000 records. 3 3000 records. *value* The actual number of records to allocate. Default: 1
SIZFFONT (optional)	Specifies the size of the FFONTLIB allocated by the resource allocation job. Use this parameter if you need more space than the default size for this dataset. These options represent minimum recommended values. Valid values: 1 8000 records (or 667 3380 tracks). 2 16000 records (or 1334 3380 tracks). 3 32000 records (or 2667 3380 tracks). *value* The actual number of records to allocate. Default: 1

Parameter	Description
SMS (optional)	Specifies the default SMS Storage and/or Management Class used for all non-VSAM allocated datasets generated by the resource installation process. Using this parameter signals the generation of SMS keywords in the DD statements. This allows your system to place the datasets in user-defined storage areas controlled by the operating system. This parameter overrides any default class assignment specified in the #GENDFLT macro. Valid values: YES — SMS uses the system ACS routines for allocation of datasets. *storclass* — SMS uses the user-defined storage class for allocation of datasets. *mgmtclass* — SMS uses the user-defined management class for allocation of datasets. Default: None Examples: SMS=*storclass* SMS=(*storclass*,*mgmtclass*) SMS=(,*mgmtclass*)
SMSVSAM (optional)	Specifies the SMS Storage and/or Management Class used for all SMP VSAM cluster definitions generated by the resource installation process. Using this parameter signals the generation of SMS keywords in the DEFINE statements. This allows your system to place the datasets in user-defined storage areas controlled by the operating system. This parameter overrides any default class assignment specified in the #GENDFLT macro. Valid values: YES — SMS uses the system ACS routines for allocation of datasets. *storclass* — SMS uses the user-defined storage class for allocation of datasets. *mgmtclass* — SMS uses the user-defined management class for allocation of datasets. Default: None Examples: SMS=*storclass* SMS=(*storclass*,*mgmtclass*) SMS=(,*mgmtclass*)
VSMVOL	Specifies the volume serial number to use for VSAM resource files. This parameter is required unless you specify the DVOLSER or SMSVSAM parameters. Default: None

Parameter	Description
VSMVOLCF (optional)	Specifies the volume serial number of the DASD volume used for allocating the native centralized font library during resource installation. This parameter is optional if you have specified a value for SMSVSAM or DVOLSER. Default: The same value used for VSMVOL.
VSMVOLDF (optional)	Specifies the volume serial name of the DASD volume used for allocating the native decentralized font library during resource installation. This parameter is optional if you have specified a value for SMSVSAM or DVOLSER. Default: The same value used for VSMVOL.

Step 2 – Generate stage 2 jobs

To generate the stage 2 resource installation jobs, perform these steps.

Step 2A – Edit $ASMUPD

Edit the $ASMUPD member in INSTLIB. Specify **$GENRSC** for the INSTYPE parameter.

Step 2B – Submit $ASMUPD

Submit the **$**ASMUPD job to generate stage 2 jobs.

When stage 1 has completed successfully, all stage 2 installation jobs and sample parameters have been placed in the stage 2 library. If a separate library was used for stage 2, edit that library to display the member list. If INSTLIB was used for stage 2, reedit the library to refresh the directory and display the new members.

Step 3 – Submit resource installation jobs

Submit the resource installation jobs for execution as is.

Step 3A – Submit RJOB101

RJOB101 deletes any existing product resource datasets, and on the first execution results in an internal condition code of 08, reset to 0. The job then defines and allocates all required resource datasets.

Valid return code: 00

Step 3B – Submit RJOB102

RJOB102 initializes native datasets defined by RJOB101.

Valid return code: 00

Step 3C – Submit RJOB103

RJOB103 loads the XPAF resource libraries with the default set of resources.

Valid return code: 00

Step 3D – Submit RJOB104

RJOB104 copies the skeleton XINSXOAF and XINSXOSF members from the stage 2 library to the XINPARM dataset and initializes the XOAF and XOSF logging datasets. After this job is complete, you can edit the members from XINPARM to tailor the parameters to meet your site's needs.

Valid return code: 00

Step 3E – Edit and submit RJOB105 (optional)

RJOB105 creates or modifies the XPAF font tables to correspond to AFP fonts. Edit and submit RJOB105 if you plan on running AFP data streams through XPAF. You will need to rerun RJOB105 any time changes are made to the AFP or PSF font libraries.

Edit RJOB105

Edit RJOB105:

- Change the user ID in the statement PARM=(userid) to your TSO user ID or a single qualifier prefix for which your ID is authorized to access a dataset.
- Using the CONVERT statements under SYSIN as an example, place a CONVERT statement for each dataset that was defined in the IBMFONT DD statement found in the XOSF start-up proc. You must place the CONVERT statements in the reverse order that they appear in the DD specification of the XOSF start-up proc.

Because this job issues many informational messages, you may want to set SLOG=N in the XINSXOAF member of XINPARM before submitting this job. To check for errors during conversion, view the messages in the XOAFLOG or the SYSLOG, whichever is applicable.

Submit RJOB105

RJOB105 creates or updates the CPGID, FGID, XPAFCFN, XPAFIFW, XPAFIFW3 tables and updates the XPAFE2A and XPAFEFW tables.

Valid return code: 00 or 04

5. Customizing your system

This chapter describes the steps required for customizing your XPAF system. The procedure for each step is discussed within a separate section of this chapter.

Overview

This section provides three diagrams which relate to the various steps required for customizing your system. Each diagram includes samples of the members which you must modify to customize XPAF for your site.

Customizing XPAF for use with Xerox printers

The figures shown on the following pages show sample JCL and datasets used when you customize XPAF for use with your Xerox printers:

- Figure 5-1 shows how the various JES and z/OS procedures and definitions relate to XPAF procedures and definitions for centralized printers. The example shown is based on a JES2 installation.
- Figure 5-2 shows many of the same elements as the previous figure, but is tailored for setting up decentralized printers. The elements key to setting up decentralized printers are highlighted with a bold border. You must also configure a communications interface/protocol converter for the specified printer (not shown in this figure).
- While figure 5-2 looks like figure 5-1, it shows the mapping for PCL resource libraries instead of decentralized libraries. You also must configure a communications interface/protocol converter for the specified printer (not shown in this figure).

NOTE: The letters shown on the figures do not imply processing order, but provide a reference between the various text boxes and the item descriptions.

For all figures, the JES and z/OS procedures are shown in white, while the XPAF procedures and definitions are shaded. For instructions on setting up your Xerox printers, refer to the relevant printer chapter later in Section Two.

Figure 5-1. XPAF customization for centralized printers

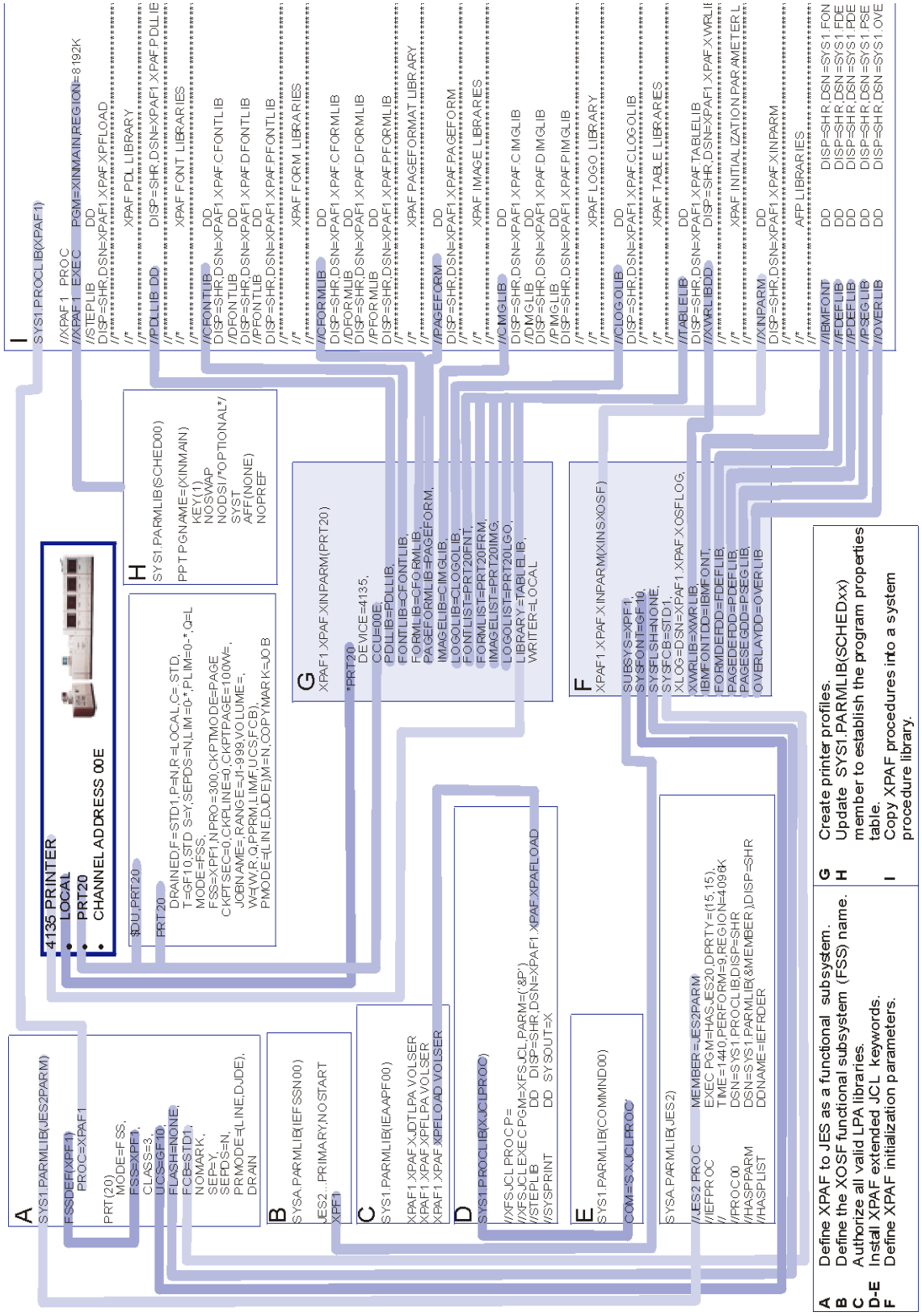
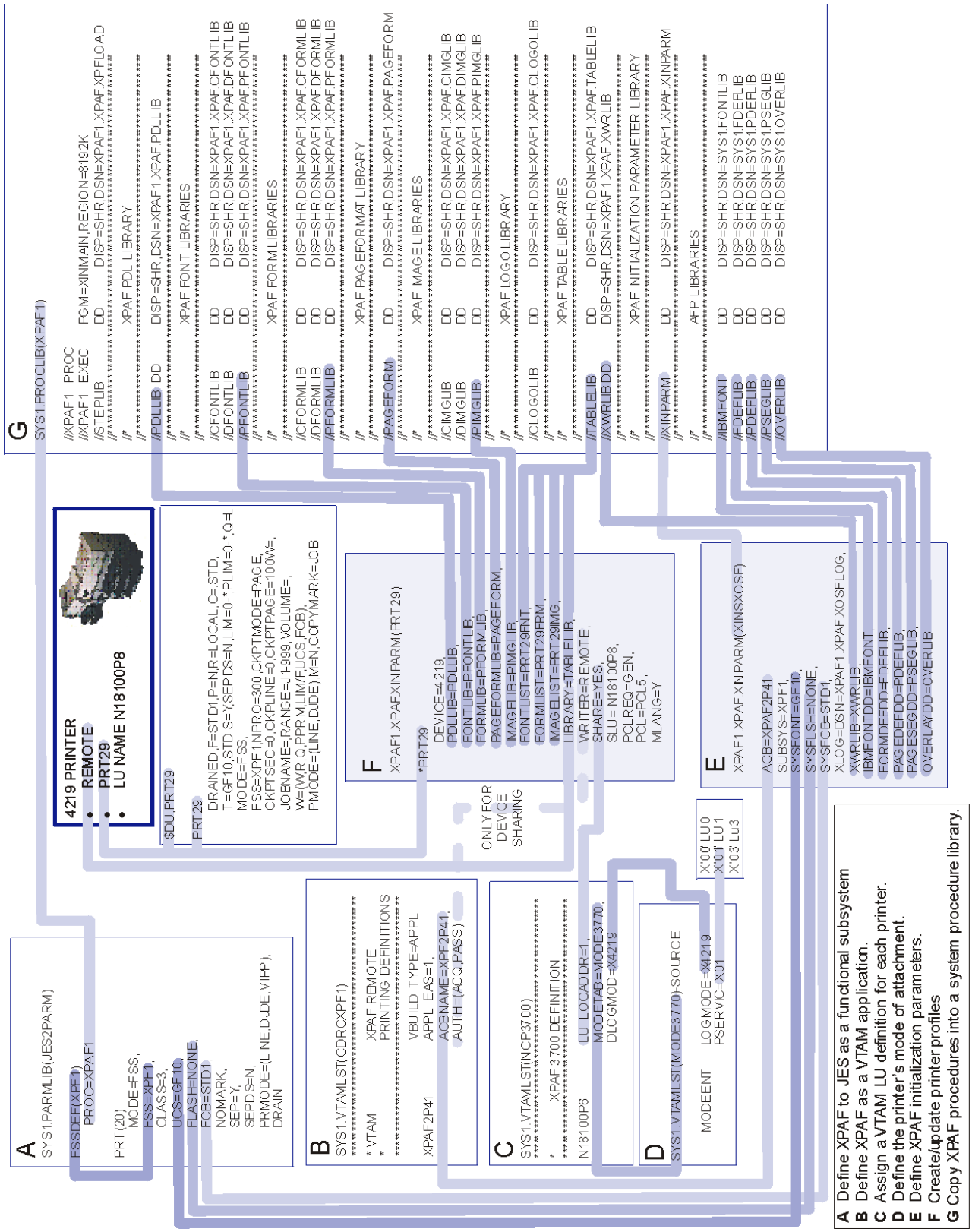


Figure 5-2. XPAF customization for PCL-capable printers



Procedures

After you have completed all previous installation steps, you must customize your system to run with XPAF. Before you begin to print documents, perform the steps shown for the standard customization procedure. If you are running other software packages with XPAF, you also may need to perform the optional customization procedures.

Standard customization procedure

To customize your system for use with XPAF, complete these tasks in the order listed:

1. Prepare the operating system.
   a. Define local printers to z/OS.
   b. Modify SYS1.PARMLIB members.
   c. Update system procedure library.
   d. Update TSO logon procedure.
   e. Perform an IPL.
   f. Set VTAM definitions.
2. Perform system tuning.
   a. Define z/OS performance groups and dispatching priorities.
   b. Move module(s) to the LPA.
3. Install XPAF extended JCL.
4. Define XPAF to JES as an FSS and associate it with Xerox printers.
5. Edit initialization parameters (optional).
6. Code the XPAF user exits (optional, described in chapter 7, “Coding the XPAF user exits”).
7. Edit distributed PDL files (optional).
8. Create/Modify paper-related tables.
9. Set up printers.
10. Create printer profiles.
11. Install multiple copies of XOSF (optional).
12. Verify the installation (described in Chapter 17, “Performing an installation verification procedure”).

Optional customization procedures

In addition to the standard customization options, you also may perform these options:

- Enable TCP batch printing. To support the various third-party TCP stacks, XPAF uses a batch implementation that allows you to customize TCP support for your site.
- Enable Xerox Job Control Facility (XJCF) simulation processing. This facility uses your XPAF system to simulate XJCF processing.
- Set up the Xerox Direct Print Services (XDS) subsystem. XDS allows you to invoke XOSF directly without accessing the JES spool or any other spooling subsystem.

Instructions for setting up TCP batch printing, XJCF, and XDS are described in chapter 38, “Using XPAF extended features.”

Preparing the operating system

This section addresses the operating system setup of PARMLIB members, procedures, JES parameters, security, and VTAM.

Checklist for preparing the operating system

When preparing your operating system, perform these steps in the order that they are listed. As you complete each step, enter the completion date in the checklist table to track and record your progress. The steps for each procedure are explained later in this chapter.

Step		Action	Date completed
1		Define local printers to z/OS (optional)	
2		Modify SYS1.PARMLIB members	
	A	Update SCHED*xx* in SYS1.PARMLIB	
	B	Update IEFSSN*xx* in SYS1.PARMLIB	
	C	Authorize the XPFLOAD library	
	D	Update IEASYS in SYS1.PARMLIB	
3		Update the system procedure library	
4		Update the TSO logon procedure	
5		Perform an IPL (optional)	
6		Set VTAM definitions (optional)	
	A	Define XPAF as a VTAM application	
	B	Define the VTAM LU definition for remotely-attached printers	

Step 1 – Define local printers to z/OS

Use the z/OS I/O configuration program to define each local Xerox printer to z/OS as a 3211-type device. The 3211 device emulates a connection protocol used to connect to printers.

Step 2 – Modify SYS1.PARMLIB members

The following sections provide instructions for updating various members of the SYS1.PARMLIB library. Perform each step in the order listed.

Step 2A – Update SCHEDxx in SYS1.PARMLIB

Copy this XPAF FSS PPT entry from the SCHED*xx* member in stage 2 to the end of your existing SCHED*xx* member in SYS1.PARMLIB:

```
/*********************************/
/*     XPAF SUBSYSTEM (LOCAL)    */
/*********************************/
PPT   PGMNAME(XINMAIN)
KEY(1)
NOSWAP
SYST
NODSI      /* OPTIONAL */
NOPREF
AFF(NONE)
```

NOTE: NODSI is an optional parameter that provides the maximum amount of flexibility for updating resources of active FSSs from a batch environment. If you experience problems with DFHSM and NODSI specified, then change NODSI to DSI (which is the z/OS system default).

When you add this entry to the SCHED*xx*, the z/OS PPT is updated with an entry for the program XINMAIN so that the XPAF FSS can communicate properly with JES.

Also, you must specify the SCHED*xx* member in your start-up IEASYS*nn* member. Check for the SCH=*xx* parameter in IEASYS*nn*. Ensure the SCH=*xx* value matches the suffix for the SCHED*xx* member you plan to use. If the SCH=*xx* parameter is not listed, add it to IEASYS*nn*.

To dynamically add the new entry use the SET SCH z/OS command:

SET SCH=nn

For more information about the z/OS PPT, refer to IBM's *System Programming Library: Initialization and Tuning Reference*.

Step 2B – Update IEFSSNxx in SYS1.PARMLIB

Update the IEFSSN*xx* member in SYS1.PARMLIB to define the subsystem name of the XOSF FSS.

To dynamically add the subsystem name use the SETSSI z/OS command:

SETSSI ADD,S=XOSF

The SUBSYS initialization parameter, found in the XINSXOSF member of XINPARM, names the FSS. The default value for the parameter is XOSF. If you want to change this parameter's value, refer to the SUBSYS parameter in *Section Five: XPAF Parameter and Keyword Reference* for more information. Make sure the SUBSYS value matches the FSS name in IEFSSN*xx*.

In a JES3 environment, the XPAF subsystem name you specify in SYS1.PARMLIB(IEFSSN*xx*) must not be the same as the procedure name on the JES FSSDEF parameter. If those names match, the started task is initialized with the master scheduler subsystem rather than the JES3 subsystem, as it should be. As a result, XPAF will issue a message indicating that the named subsystem is not supported.

Step 2C – Authorize the XPFLOAD library

Authorize the XPFLOAD library for execution.

NOTE: To authorize other libraries at this time, such as the LPALIB, you may add the library name(s) to the IEAAPFxx or PROGxx member while performing any of these options.

SETPROG

APF, ADD, DSNAME=hlq.XPFLOAD,SMS

If you specified the HLQMST parameter in the #GENPROD macro, first verify that the XPFLOAD library is cataloged in the Master Catalog. Next, set up your system to run XOSF from a STEPLIB, a LNKLST library, or an LPALST library. Each of these options is described here.

Option 1: Running XOSF from a STEPLIB

You can use the installation-generated XPFLOAD as a STEPLIB, or you can create your own STEPLIB:

- If you use the installation-generated XPFLOAD as a STEPLIB, add the XPFLOAD library name and VOLSER to the IEAAPF*xx* member in SYS1.PARMLIB. If you are running z/OS/ESA version 4.3.0 or higher or any version of OS/390, you optionally may be using the PROG*xx* member.
- If you create your own STEPLIB:
    1. Allocate a dataset large enough to contain all the modules in XPFLOAD.
    2. Copy all the modules from XPFLOAD to the new dataset.
    3. Add the new dataset name to the IEAAPF*xx* or PROGxx member in SYS1.PARMLIB to authorize the library.

4. Change the dataset name in the STEPLIB statement in the XOSF00, XOAFBAT, and XJCLPROC sample procedures in the stage 2 library to the new dataset name.

Option 2: Running XOSF from a LNKLST library

You can use a new LNKLST library or an existing LNKLST library.

- If you use a new LNKLST library:

  1. Allocate a dataset large enough to contain all the modules in XPFLOAD. Make sure the dataset has a high-level qualifier that is cataloged in the Master Catalog.

  2. Copy all modules from XPFLOAD to the new dataset.

  3. Add the new dataset name to the LNKLST*xx* member in SYS1.PARMLIB.

  4. Perform either of these options:

     - Set the APF, LNK, and LNKAUTH=LNKLST parameters of IEASYS*xx* in SYS1.PARMLIB.

     - Add the new dataset name to the IEAAPF*xx* member in SYS1.PARMLIB to authorize the library. If you are at z/OS/ESA version 4.3.0 or higher or any version of OS/390, you optionally may be using the PROG*xx* member.

  5. Remove the STEPLIB from the XOSF00, XOAFBAT, and XJCLPROC sample procedures in the stage 2 JCL library.

- If you use an existing LNKLST library:

  1. Copy all modules from XPFLOAD to an existing LNKLST library.

  2. Verify that the dataset name is in the IEAAPF*xx* member or that you have specified LNKAUTH=LNKLIST in IEASYS*xx*.

  3. Remove the STEPLIB from the XOSF00, XOAFBAT, and XJCLPROC sample procedures in the stage 2 library.

Option 3: Running XOSF from an LPALST library

You can use a new LPALST library or an existing LPALST library.

- If you use a new LPALST library:

  1. Allocate a dataset large enough to contain all the modules in XPFLOAD. Make sure the dataset has a high-level qualifier that is cataloged in the Master Catalog.

  2. Add the new dataset name to the LPALST*xx* member in SYS1.PARMLIB.

  3. Add the new dataset name to the IEAAPF*xx* or PROGxx member in SYS1.PARMLIB to authorize the library.

- If you use an existing LPALST library:

  1. Move all LPA-eligible modules from XPFLOAD to the new dataset. For a list of the LPA-eligible modules, refer to "Moving modules to the LPA" later in this chapter.

  2. Verify that the dataset name is in the IEAAPF*xx* member or that you have specified LNKAUTH=LNKLIST in IEASYS*xx*.

Step 2D – Update IEASYSxx in SYS1.PARMLIB

Review the parameters MAXUSER, RSVSTRT, and RSVNONR in SYS1.PARMLIB member IEASYS*xx*. Then perform these functions:

- Make sure RSVSTRT is set at a level sufficient to support your site's required number of XOSF started tasks to be run concurrently with all other started tasks.
- Make sure RSVNONR is set at a level sufficient to support your site's required number of XOSF started tasks to be run concurrently with all running address spaces that use z/OS cross-memory services.
- If you are running z/OS versions 1.10 or higher, the IEF352I Address Space Unavailable message is issued for informational purposes every time XPAF is terminated. This message indicates normal operation.

  If one or more of the following situations occurs:

  — No new started tasks can be started
  — No new batch initiators can be started
  — No additional users can use their TSO logons

  you must IPL the system to clear the unavailable address space vector table. To circumvent this problem, determine the maximum number of XPAF starts and stops between IPLs and define at least twice that number of address spaces in the RSVNONR parameter. For example, if you start and stop XPAF a maximum of 40 times between IPLs, you should define at least 40 additional address spaces, for a total of 80.

For complete information about setting appropriate levels for these parameters, refer to the applicable IBM publication:

- *z/OS System Programming Library: Initialization and Tuning Reference*
- *z/OS Conversion Notebook*

Step 3 – Update the system procedure library

Copy the XOSF00 and XOAFBAT procedures from the stage 2 library into a system procedure library accessible by JES at start-up. The XOSF00 procedure is known as the XOSF start-up proc. Review these actions and perform any that are necessary for your site:

- If you are not converting IBM AFP documents, remove the DD statements that reference PSF dataset names from the XOSF00 procedure. These dataset names are identified in the sample XOSF00 member in stage 2.
- If you are converting IBM AFP documents, edit XOSF00 in the PROCLIB, and make sure that all the IBM resources (FONTLIB, PSEGLIB, FDEFLIB, and so on) used in your AFP jobs are in the resource DD name concatenation.
- If a system security package such as RACF is installed, it may be necessary to contact your security administrator to authorize the procedure name for execution.

  NOTE: Depending on how your security system handles VSAM control interval processing, the XOSF started task may require control access to LDM files.

- ACF authorizes the XOSF started task for TCP/IP. The XOSF started task needs ACF authority to use the OMVS segment as well as the relevant authority to read the resource datasets. Ensure that the USERID associated with the XOAF Started Task has an OMVS segment defined to it. You must also be sure that this Started Task is in the STARTED Class or in ICHRIN03. If you intend to use the TCP/IP LPR protocol or BATCH facility, XOSF will also need authority to create datasets using the high level qualifier defined in the OPHLQ XINSXOSF Initialization parameter.
- In a JES3 environment, the XPAF subsystem name you specify in SYS1.PARMLIB(IEFSSN*xx*) must not be the same as the procedure name on the JES FSSDEF parameter. If those names match, the started task is initialized with the master scheduler subsystem rather than the JES3 subsystem, as it should be. As a result, XPAF will issue a message indicating that the named subsystem is not supported.
- Specify 0M for the region size of your procedure library to maximize the virtual storage available, especially when running more than one printer per XOSF task.

Step 4 – Update the TSO logon procedure

In the SAMPTSO stage 2 library member, update the TSO logon procedure with the DD statements. These DD statements instruct the system to set up the XOAF environment, which includes providing access to the initialization parameters and TABLELIB.

Update your ISPF primary panel with an option to invoke XOAF:

- By PGM(XOASPF00) NEWPOOL. Use the XRX@PRIM member in XPFSAMP as a sample. You may need to increase the size of the DYNAMNBR parameter of the logon procedure. It must be large enough to accommodate the number of datasets that XOAF allocates. The size of this parameter is site dependent.

Do not use the TSO logon procedure until after you have installed the XPAF resources.

NOTE: When you customize your system after initially installing XPAF or after applying a maintenance file, you may convert CLIST files in the XPFCLIB dataset from FB to VB format. After copying any CLIST members you must edit and remove line numbers if they are present.

NOTE: Xerox provides CLIST files in the XPAF Custom Library, these CLIST files can be accessed and loaded from the XOAF Systems Services Menu. For information on using the XOAF Systems Services Menu refer to *Section Three: Managing Resources with XPAF*.

Step 5 – Perform an IPL (optional)

If you have updated the system parameters dynamically, you do not need to IPL the system. The PARMLIB changes will take effect during your next scheduled IPL.

Perform an IPL with CLPA to complete XPAF installation. You can perform this IPL now or at any time before you finish customizing your system. An IPL will:

- Add required modules to the LPA.
- Authorize required libraries.
- Update the PPT.
- Update the Subsystem Name Table.
- Define printers to z/OS.
- Invoke updated JES parameters.
- Make extended JCL support available, if requested.

Step 6 – Set VTAM definitions

If you do not need to define any VTAM connected printers, you may skip this section.

Consult with your VTAM administrator before performing these steps to verify that the necessary VTAM definitions have been added.

Step 6A – Define XPAF as a VTAM application

XPAF uses VTAM services to communicate to remote printers. Therefore, it must be defined as a VTAM application. Each XPAF started task requires a separate VTAM application definition. Use this sample application definition statement as a skeleton:

appldef APPL AUTH=(ACQ)

For more information on running multiple copies of XOSF, refer to "Installing multiple copies of XOSF" later in this chapter.

The *appldef* value assigned to the name of the application definition statement is the value you should use for the ACB initialization parameter in XINPARM.

XPAF does not need mode tables or USS tables, so you can omit these APPL definition parameters. Since the VTAM writer must have authority to acquire printers, the AUTH=(ACQ) parameter is required.

Step 6B – Define the VTAM LU definition for remotely-attached printers

Each remotely-attached printer must have a corresponding VTAM LU definition. The definition varies according to the printer's mode of attachment. You must know the mode of attachment to make the correct VTAM LU definition name.

The name specified for the VTAM LU is also specified for the SLU in the printer profile. Refer to "Setting up printer profiles" later in this chapter for more information about printer profile parameters.

Tuning your system

This section provides suggestions for tuning the performance of your XPAF system.

Defining z/OS performance groups and dispatching priorities

For more efficient XPAF performance, you may want to define one or more separate z/OS performance groups for XOSF. XOSF should run at a lower dispatching priority than response- intensive online systems such as IMS, CICS, and TSO but at a higher dispatching priority than batch.

The general guidelines for setting up performance groups and dispatching priorities are:

- XPAF should have the same type of performance group as the subsystem with which it communicates.
- XPAF should have a dispatching priority that is equal to or slightly lower than the subsystem with which it communicates.

If you run multiple FSSs on the same system, mean-time-to-wait dispatching may yield better overall performance than fixed dispatching.

For more information about defining z/OS performance groups, refer to the IBM publication *z/OS System Programming Library: Initialization and Tuning Reference*.

Moving modules to the LPA

As a performance enhancement, if you run multiple FSSs, use a single copy of XOSF in the LPA. This will reduce the working set size of each XOSF.

NOTE: You cannot run different versions of XOSF from the LPA. To override the LPA concatenation, you must use a STEPLIB statement in the XOSF start-up proc to point to a different version of XOSF.

Eligible modules

You may move any or all of the following modules to the LPA to improve the performance of your system:

LDMDIRBL	XDIOPER	XEIINPUT	XRDIMG
LDMMAIN	XDIPARSE	XEILOAD	XRDOVLAY
MSFDAIR	XDIPINIT	XEIMAIN	XRDPSEG
MSFMAIN	XDIPRINT	XEIOPEN	XRFAEG
MSFPRNT	XDIPTERM	XEIOPER	XRFBUFMG
MSFTBLD	XDIPUTRQ	XEIOTPUT	XRFFDEF
PAL#XPAF	XDIRDATA	XEIPFIX	XRFFREE
THMEXEC	XDIRELRQ	XEIPFREE	XRFIMGDC
UFTIFLEW	XDIRFTSK	XEIPUTMN	XRFPDEF
UFTIFLIW	XDIRSTAT	XEIRSV	XSLBLOCK
XAMFRM	XDIRTIAS	XEIRTM	XSLEXCP
XAMMAIN	XDISBTSK	XEISLOG	XSLMAIN
XAUMAIN	XDISDATA	XEISMFLG	XSLNERT
XBPAM	XDISJF	XEISNAP	XSLSEPR
XCCMAIN	XDISMS	XEITIME	XTBINIT
XCDMAIN	XDISSI	XEITRACE	XTF$HOOK
XCNMAIN	XDITIMER	XEIXLOG	XTFCMDP
XDIAUTO	XDITRMTK	XINKEYS	XTFEVENT
XDICKPNT	XDIVALN	XJCMAIN	XTWMAIN
XDICMPC1	XDIWAKE	XJSLPARS	XUCMAIN
XDICMPC2	XEIALLOC	XJSLPROC	XVWEXITS
XDIESTAE	XEIATCH	XLWTMAIN	XVWMAIN
XDIFSACK	XEICLOSE	XOSFXPAF	XVWRMT
XDIFSAOR	XEIDALLC	XPCLMAIN	XWRMAIN
XDIFSICD	XEIDEQ	XPCLRESC	XWRMAINX
XDIFSIRQ	XEIDIR	XPLMAIN	XXQMAIN
XDIFSS	XEIDTCH	XPSCMAIN	
XDIFSSOR	XEIEEXIT	XPSCMSGP	
XDIFSTAE	XEIENQ	XRCIMAGE	
XDIGETRQ	XEIESTAE	XRCIRAW	
XDIHASP	XEIFSNAP	XRCOVLAY	
XDINOTE	XEIGETMN	XRCPSEG	

Procedure

For an explanation of how to run XOSF from an LPALST library, refer to "Preparing the operating system" earlier in this chapter.

Performance considerations for XDS

The XOSF FSS that will be used by an XDS subsystem must be defined in the performance group used for batch processing.

Performance optimization

XDS sends data as a block of records. Therefore, when you code the JCL for XDS print jobs, you should specify as large a block as possible for the input source to increase performance by XDS and XPAF.

Example:

```
//SYSUT1   DD DISP=SHR,DSN=input.source,
     DCB=(BLKSIZE=32760,LRECL=84,RECFM=FBM)
```

This example allows 390 records of 84 bytes to be transferred to XOSF in one I/O session. This method provides optimum performance.

Installing XPAF extended JCL

XPAF extended JCL does not modify z/OS or JES and does not affect any IBM modules or JCL. However, after you install XPAF, the Xerox JDT will reside in the LPA. If you have an LPA size constraint, you may not want to use XPAF extended JCL.

CAUTION: Any products that use their own JCL extensions and do not require extended JCL functions, such as output distribution packages, may not recognize XPAF extended JCL commands (Xerox-specific JDTs). Using XPAF on the same system as these products may cause unexpected print results.

NOTE: Review and set the NOXJCLMSG initialization parameter to match your usage of XPAF extended JCL.

If you want to install XPAF extended JCL keywords or apply maintenance to them without performing an IPL, refer to "Using XPAF extended JCL installation options" later in this chapter.

For information about using a particular XPAF extended JCL keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Using XPAF extended JCL installation options

You can install XPAF extended JCL keywords and apply maintenance to them without performing an IPL. To do so, use these options, which are specified on the PARM parameter of the EXEC statement in the extended JCL proc:

- INSTALL
- LOAD
- REDO
- REMOVE
- DISPLAY
- DELETE

These options are mutually exclusive. That is, you can specify only one option at a time on the proc. Do not include these options in the COMMND*xx* member in SYS1.PARMLIB.

Sample extended JCL proc

The XJCLPROC member in the STAGE2 dataset contains sample JCL for a procedure to activate the XPAF extended JCL.

Figure 5-3. Sample XJCLPROC member

```
//XFSJCL   PROC P=
//XFSJCL   EXEC PGM=XFSJCL,PARM=('&P')
//STEPLIB  DD   DISP=SHR,DSN=prefix.XPFLOAD
//XJDTLPA  DD   DISP=SHR,DSN=prefix.XPFLPA
//SYSPRINT DD   SYSOUT=*
```

Available options

NOTE: Ensure that all datasets specified for the XJDTLPA and STEPLIB DD statements are APF authorized.

To perform any of the installation options, issue the z/OS start command at the master console. If you renamed the extended JCL proc in your PROCLIB, substitute that name in place of XJCLPROC when you issue the command.

INSTALL

Use this option to install XPAF extended JCL for the first time. If no option is specified on the proc, this option is the default.

At the master console, enter:

S XJCLPROC,P=INSTALL

LOAD

Use this option to load the JDT module into the MLPA from the dataset specified in the XJDTLPA DD statement in the extended JCL proc.

ALL loads all of the JDT modules that are associated with XPAF. The XPAF extended JCL keywords are included in the XESJDT00 module.

At the master console, enter:

S XJCLPROC,P=LOAD

REDO

If you have applied maintenance to XESJDT00, use this option to reinstall the XPAF extended JCL keywords and make new or revised keywords available for use.

Before you use this option, you must load the updated JDT module into the LPA or MLPA by performing an IPL or using the LOAD option. Otherwise, the original JDT module will remain in effect.

Each time you use this option between IPLs, the extended CSA is enlarged by approximately 20K.

At the master console, enter:

S XJCLPROC,P=REDO

REMOVE

This option removes the XPAF extended JCL keywords from your system. Once the XPAF extended JCL keywords have been removed, they can be installed again using the INSTALL option.

CAUTION: If users submit jobs using the XPAF extended JCL keywords at the time you perform a REMOVE, they will receive JCL errors. Therefore, you should schedule this activity for a time when jobs using XPAF extended JCL are not run.

Each time you use this option between IPLs, the extended CSA is enlarged by approximately 20K.

At the master console, enter:

S XJCLPROC,P=REMOVE

DISPLAY

Use this option to display the JDTs installed on your system.

At the master console, enter:

S XJCLPROC,P=DISPLAY

Message XFS0114I will be issued for each JDT module installed on your system.

The XPAF JDT module for z/OS 2.1 is XZSJDT21. The XPAF JDT module for z/OS 1.13 and lower is XESJDT00.

DELETE

Use this option to delete XESJDT00 from the MLPA. The JDT module must have been loaded previously using the LOAD option. This option does not physically delete a module from the disk load library.

CAUTION: Do not use this option to delete XESJDT00 from the MLPA if you previously specified the INSTALL or REDO option to activate the XPAF extended JCL. If you do, jobs will fail with a JCL error, and you must IPL your system or specify the REMOVE option to remove the XPAF extended JCL without an IPL.

ALL deletes all of the JDT modules that are associated with XPAF. The XPAF extended JCL keywords are included in the XESJDT00 module.

At the master console, enter:

S XJCLPROC,P=DELETE

Installing XPAF extended JCL for the first time

To install XPAF extended JCL, follow these steps:

Step 1. Copy the sample procedure XJCLPROC from the stage 2 library to a system PROCLIB. You can use either the name XJCLPROC or your own procedure name.

If a security package is installed, contact the security administrator to authorize the procedure name for execution if necessary.

Step 2. At the master console, enter **S XJCLPROC,P='LOAD=ALL'** to load the XPAF JDT module, XESJDT00, into the MLPA.

Step 3. At the master console, enter **S XJCLPROC,P=INSTALL** to install all of the extended JCL keywords.

To install the extended JCL keywords permanently, you must also complete steps 4 and 5. Otherwise, you will have to perform steps 2 and 3 each time an IPL is performed.

Step 4. Add the command COM='S XJCLPROC' to the COMMND*xx* member in SYS1.PARMLIB to ensure the procedure is executed each time an IPL is performed.

Step 5. Load the XESJDT00 module from XPFLPA to the system LPA using one of these procedures:

- If you specified the HLQLPA or HLQMST parameter in the #GENPROD macro:
  - — Verify that the XPFLPA library is cataloged in the Master Catalog.
  - — Authorize the XPFLPA library by adding the XPFLPA library name and VOLSER to IEAAPF*xx* in SYS1.PARMLIB or PROG00.
  - — Add the XPFLPA library name to the LPALST*xx* member in SYS1.PARMLIB.
- If you did not specify the HLQLPA or HLQMST parameters in the #GENPROD macro and you need to create a new library:
  - — Create a new library large enough to hold the module in XPFLPA. Make sure the library is cataloged in the Master Catalog.
  - — Copy the module from the XPFLPA library into the new library.
  - — Authorize the library by adding the new library name to IEAAPFxx in SYS1.PARMLIB.
  - — Add the new library name to the LPALSTxx member in SYS1.PARMLIB.
- Load the module dynamically into the LPA using either the S XJCLPROC,P='LOAD=ALL' command or a software product such as Resolve or Omegamon.

NOTE: If you chose this option and want the changes to remain permanent, you must still perform either of the first two options. Otherwise, when you IPL your system, the changes you made will be lost.

Applying maintenance to the XPAF extended JCL

After you apply maintenance that affects XESJDT00, follow these steps to make the new or revised XPAF extended JCL keywords available:

Step 1. At the master console, enter **S XJCLPROC,P='LOAD=ALL'** to load the revised XESJDT00 module into the MLPA.

Step 2. At the master console, enter **S XJCLPROC,P=REDO** to reinstall all of the XPAF extended JCL keywords.

Removing XPAF extended JCL

If, after installing the XPAF extended JCL or applying maintenance to it, you decide that you want to remove it, follow these steps:

Step 1. At the master console, enter **S XJCLPROC,P=REMOVE** to remove all of the XPAF extended JCL keywords from your system.

Step 2. At the master console, enter **S XJCLPROC, P='DELETE=ALL'** to delete XESJDT00 from the MLPA.

If you applied maintenance and want to return to your previous maintenance level, perform this additional step:

Step 3. At the master console, enter **S XJCLPROC,P=REDO** to reinstall all of the original XPAF extended JCL keywords.

Defining XPAF to JES

To enable XPAF to send documents to the printer, it must be defined to JES as a functional subsystem (FSS) and associated with Xerox printers. This section introduces you to the JES2 and JES3 initialization statements for the functional subsystem and printer. For a complete description of the statements, including default values, refer to the appropriate z/OS JES2 or JES3 initialization and tuning manual.

The dataset referenced by the //HASPPARM DD in the JES2 start-up proc or //JES3IN DD in the JES3 start-up proc contains the necessary statements for defining XPAF to JES. For a detailed description of the parameters, refer to the SAMPJES member in the STAGE2 library for a sample of the FSS and PRT definition to JES.

Setting up definitions for non-JES subsystems

You must define XOSF to the spooling subsystem as a functional subsystem and associate it with Xerox printers.

If you are a CMA-SPOOL or CA-SPOOL user, use the dataset referenced by the ESFPARM DD statement in the CMA-SPOOL or CA-SPOOL startup proc. For a description of the non-JES initialization statements for the FSS and printer, refer to the corresponding documentation for CMA-SPOOL or CA-SPOOL.

If you are an XDS user, the printer to be used for an XDS batch print job is specified in the JCL for the job. Refer to chapter 38, “Using XPAF extended features” for a description of the JCL requirements for XDS.

FSS definitions

This section contains sample JES2 and JES3 functional subsystem definitions, along with a description of the parameters contained within those definitions. Use these examples to code your own FSS definitions.

Commas, single quotes, equal signs, and parentheses are part of a definition’s syntax. When present, you must include them exactly as indicated.

If a security package such as RACF is installed, you must add XPAF started task names to the started-task table (ICHRIN03).

JES2

```
FSS(fss-name) PROC=proc-name,HASPFSSM=HASPFSSM [,AUTOSTOP={ Y }]
                                                          { N }
```

{ FSSDEF / FSS }	Specifies the name of the XOSF FSS. You must refer to the same functional subsystem name in all PRTnnnn initialization statements for the FSS.
PROC	Specifies the name of a procedure for starting the XOSF FSS procedure. The installation library contains a sample of this procedure named XOSF00, which is modified during customization. You can refer to the same start-up procedure in different FSSDEF initialization statements. If you do not include this parameter, PROC defaults to the name specified in the FSSNAME parameter.
HASPFSSM	Specifies the name of the load module that is loaded into the FSS address space. You must code this parameter exactly as shown to specify the default.
AUTOSTOP	Specifies whether or not the address space is stopped automatically when the last active printer is drained.

To dynamically define the functional subsystem to JES, use the following JES command:

$ADD FSS(XOSF),PROC=XOSF00,AUTOSTOP=[NO | YES]

JES3

For all versions:

```
FSSDEF,TYPE=WTR,FSSNAME=fssname,PNAME=procname
```

TYPE — Defines the printer to JES3 as an FSS writer. You must code this parameter exactly as shown to define the printer as a writer.

FSSNAME — Specifies the name of the XOSF FSS. You must refer to the same functional subsystem name in all device initialization statement for the FSS so it can be recognized by JES.

PNAME — Specifies the name of a procedure for starting the XOSF FSS procedure. The installation library contains a sample of this procedure named XOSF00, which is modified during customization. You can refer to the same start-up procedure in different FSSDEF initialization statements. If you do not include this parameter, PNAME defaults to the name specified in the FSSNAME parameter.

If the XPAF subsystem name specified in SYS1.PARMLIB(IEFSSN*xx*) is the same as the procedure name specified on the JES3 FSSDEF statement, the started task is initialized by the master scheduler subsystem rather than the JES2 or JES3 subsystem. As a result, XPAF issues a message indicating that the named subsystem is not supported.

Printer definitions

This section contains sample JES2 and JES3 printer definitions and a description of the parameters contained within the definitions. Use these examples to code your own printer definitions.

JES2

```
PRTnnnn FSS=fss-name,MODE=FSS,NPRO=0,UCS=0[,DRAIN][,CLASS=class]
[,PRMODE={(LINE)|(DJDE)|(PAGE)|(VIPP)}] [,FLASH=forms-overlay-frame] [,SEP={YES|NO}] [,SEPDS={YES|NO}]
```

PRT*nnnn* — Names the printer that will operate under the control of an FSS.

FSS — Specifies the name of the functional subsystem that will manage the printer. This name must be the same as the functional subsystem name defined on an FSSDEF initialization statement.

MODE — Must specify that the printer is managed by a functional subsystem (MODE=FSS).

NPRO — Specifies the length of time the printer will wait for more data before forcing out the already-printed pages. It is specified for channel-attached printers only.

UCS — Specifies the name of the character set mounted on printers that have no UCS image specified. If you specify 0, JES2 bypasses the UCS loading procedure until a job is processed that requires a specific UCS image.

DRAIN — Specifies that the printer will be started by operator command. You can use the START parameter instead of the DRAIN parameter if you want to bypass the operator and use JES to start the printer automatically.

CLASS — Specifies the assigned output class.

PRMODE — Specifies the types of input accepted by this printer.

FLASH — Specifies a forms overlay frame associated with this printer rather than letting JES specify a default. If you use this parameter, be sure to specify the same value in the SYSFLSH initialization parameter. We recommend that you specify FLASH=NONE.

{SEP|NOSEP} — Indicates whether separator pages print between jobs. You must specify SEP or SEP=YES when using either default or custom banner pages.

{SEPDS|NOSEPDS} — Indicates whether separator pages print between datasets. You must specify SEPDS or SEPDS=YES when using either default or custom banner pages.

To dynamically define the printer to JES2, use the following JES command:

```
$ADD
PRT123,W=writer,Q=class,FSS=XOSF,MODE=FSS,PRMODE=(LINE,
DJDE, PAGE)
```

JES3

For all versions:

```
DEVICE,DTYPE=PRT3820,JUNIT=(,SY1,UR,OFF),JNAME=device-name,FSSNAME=fss-name
[, MODE=FSS][,NPRO=NO][,WS=(criteria)]  [,PM={(LINE)|(DJDE)|(PAGE)|(VIPP)}]  [,FLASH=forms-overlay-frame]
[,CARRIAGE=(forms-control-buffer)][,CHARS=(font-name)] ,HEADER={YES|NO}[,BURST={YES|NO}]
```

DTYPE — Defines the printer device type. Code this parameter exactly as shown.

JUNIT — Defines printer characteristics to JES. Code this parameter exactly as shown.

JNAME — Names the printer that will operate under the control of an FSS.

FSSNAME — Specifies the name of the functional subsystem that will manage the printer. This name must be the same as the functional subsystem name defined on an FSSDEF initialization statement.

MODE — Must specify that the printer is managed by a functional subsystem (MODE=FSS).

NPRO — Specifies the length of time the printer will wait for more data before forcing out the already-printed pages. This value is specified for channel-attached printers only.

WS — Specifies the writer selection criteria. The value of the criteria indicates the items JES3 output service checks, in order of importance, when selecting a dataset for output processing on this printer.

You must include CL and U as part of your specification, where:

CL	SYSOUT class
U	Train image UCS

Additional XPAF-acceptable criteria for this printer definition parameter are:

C	Carriage file or FCB
CM	Copy modification
D	Dataset destination
F	Forms requested
FL	Flash
L	Limit scheduling (line, page, or record)

P Dataset priority
PM Processing mode
SS Stacker
T Specific device type requested

Note these items when using the WS parameter:

- Do not use the parameters XUNIT or XTYPE for XPAF printers.
- Vary the XPAF printer UCB offline to each JES3 local and global processor:

  *V,(*ucb*),OFFLINE,(*sy*1,*sy*2)

- Vary the XPAF printer UCB online to the processor upon which XPAF is executing:

  *V,(*ucb*),ONLINE,*sy*1

- Start the output writer (XPAF):

  *X,WTR,OUT=*device-name*,NAV=R

- Vary the XPAF printer online:

  *V,*device-name*,ON

- If your system's operating environment is JES3 Version 4 or higher, you can define a maximum of 16 device statements that reference the same FSSNAME.

PM Specifies the types of input accepted by this printer.

FLASH Specifies a forms overlay frame associated with this printer rather than letting JES specify a default. If you use this parameter, be sure to specify the same value in the SYSFLSH initialization parameter. We recommend that you specify FLASH=NO.

CARRIAGE Specifies the JES default page definition or forms control buffer. If you use this parameter, be sure to specify the same value in the SYSFCB initialization parameter. Refer to the appropriate JES3 initialization and tuning manual for more information about this subparameter.

CHARS Specifies a default JES3 font. If you use this parameter, be sure to specify the same value in the SYSFONT initialization parameter. Refer to the appropriate JES3 initialization and tuning manual for more information about this subparameter.

HEADER Indicates that this printer will print header and dataset separator pages for each job and dataset.

BURST Indicates that this printer will print trailer separator pages for each job and dataset.

Selecting initialization parameters

XPAF is supplied with initialization parameters in the XINSXOAF and XINSXOSF members of XINPARM. These parameters:

- Provide z/OS and JES information to XPAF
- Name DD statements in the XOSF start-up and the XOAF logon procedures
- Describe DJDE formats and defaults

To prepare your system for printing with XPAF, review the default initialization parameters distributed in the XINSXOAF and XINSXOSF members of XINPARM. Add or modify any necessary parameters for your site's specifications.

Refer to *Section Five: XPAF Parameter and Keyword Reference* for a listing of parameters that apply to XOAF and to XOSF and for a description of each initialization parameter.

Preparing the printer PDL

PDL consists of two file types:

- JSL files
- Cataloged member files (CMEs and PDEs)

XPAF provides sample PDL members in XPFSAMP, as shown in table 5-1. You can copy and edit any of these members to create your own PDL.

Table 5-1. Sample PDL members in XPFSAMP

Member name	Description
DFAULT	Contains a JSL you can use to print online jobs or output that was written to file.
GLOBJSL	Contains standard PDE members that can be referenced by multiple JSLs or DJDEs.
XPAF	This is a copy of DFAULT with the JDL name changed to XPAF. This is supplied to give an example that will not replace a customer's DFAULT JSL/JDL.

PDL native libraries

XPAF provides a native library for storing PDL called PDLLIB, which contains the same JSL and cataloged members as the DFAULT, XPAF and GLOBJSL members in XPFSAMP.

You also can use your own native library by specifying it in the XOSF start-up proc DD statement named by the PDLLIB initialization or printer profile parameter. Each printer can use its own PDL native library, or all printers can share one common PDL native library.

Refer to *Section Five: XPAF Parameter and Keyword Reference* for more information about these parameters. Refer to *Section Three: Managing Resources with XPAF* for information on defining and initializing native libraries.

Checklist for preparing the printer PDL

Follow these steps to prepare your printer PDL for use with XPAF. Enter a check in the Completed column as you finish each step to track and record your progress.

Step	Procedure	Completed
1	Update the PDL source	
2	Load the PDL source	
3	Update initialization parameters (optional)	
4	Compile the PDL source	

Step 1 – Update the PDL source

You can update the sample PDL members to include your site-specific values, or you can use your current printer JSL and modify it to include XPAF parameters. If you make a change to one of the sample PDL members, make the corresponding change to the other members.

CAUTION: After you edit any online PDL, you must use the Load PDL option in XOAF to load the updated version to the appropriate PDL native library, or your results will be unpredictable.

Option 1: Updating the sample JSL

If you plan to use the JSL distributed with XPAF, you should first save the JSL currently residing on your printer. If necessary, make a backup or rename it so that it does not get overwritten when you download the XPAF version of the JSL. You may want to use your current printer JSL to run applications other than XPAF or to operate the printer in different environments.

Compare the sample JSL with the JSL you have been using on your printer. Edit the sample JSL on the host to add any site-specific values you require. The parameters you may want to add from your current JSL include:

- IDEN PREFIX, OFFSET, and SKIP
- RSTACK and RAUX criteria
- Banner page criteria
- Optional JDEs

Option 2: Updating your current JSL

If you want to continue using your own JSL, refer to *Section Three: Managing Resources with XPAF* for instructions on uploading your current JSL from the printer to the host for editing.

Compare the sample JSL with the JSL you have been using on your printer. Edit the uploaded JSL on the host to add any XPAF-specific values you require.

If you want to use the banner page supplied with XPAF, add the test for banner page from the DFAULT member. Be sure to include the appropriate TABLEs and CRITERIAs.

If you print page-formatted and/or AFP documents, add the test for RSTACK from the DFAULT member. Be sure to include the appropriate TABLEs and CRITERIAs. You must also add the PGMODE JDE or code your own JDE that includes a VOLUME CODE=NONE statement.

Step 2 – Load the PDL source

For online PDL only, in XOAF use the Load PDL option on the Load Resources menu to load the PDL into the appropriate PDL native library. For instructions on using the Load PDL option in XOAF, refer to *Section Three: Managing Resources with XPAF*.

Step 3 – Update initialization parameters (optional)

The XINSXOSF member distributed with XPAF in XINPARM contains JSL-related initialization parameters. The default values for these initialization parameters match the values of the equivalent parameters in the distributed JSL:

```
DEFJDE=DFLT
DEFJDL=DFAULT
METAJDE=PGMODE
METAJDL=DFAULT
```

NOTE: The DJDE IVP uses the identifier value @@@DJDE. If your system uses a different identifier value, specify IDENnn=@@@DJDE in your XINSXOSF member (as well as the corresponding DJDEOF*nn* and DJDESK*nn* initialization parameters).

For more information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Step 4 – Compile the PDL source

Step 1. Download the source to your printer.

After you edit the JSL, download it to your printer. There are two jobs in XPFSAMP you can use to download the JSL: $DJDECPY (refer to figure 5-4) and $HOSTCPY. To use $DJDECPY, your printer must be online and using V2 OSS or higher. Modify the appropriate JSL download job as required and submit it to download the JSL.

Step 2. Compile your JSL on the printer using your printer's PDL compiler.

CAUTION: You must ensure that the PDL members compiled on the printer are identical to those loaded to the native PDL libraries, or your results will be unpredictable.

Figure 5-4. $DJDECPY JCL for downloading JSL

```
//job-name  JOB (ACCT,ROOM),'DOWNLOAD DFAULT.JSL',CLASS=A,MSGCLASS=Y
//*
//*   DOWNLOAD DFAULT.JSL TO A CENTRALIZED PRINTER USING FILE= DJDE
//*
//OUTP   OUTPUT PRMODE=DJDE
//*
//DJDECOPY EXEC PGM=IEBGENER       ===>Change following @@@DJDE to <===
//SYSIN    DD  DUMMY               ===>match your IDEN if it is    <===
//SYSPRINT DD  SYSOUT=*            ===>different (2 places).       <===
//SYSUT1   DD  *
@@@DJDE FILE=(DFAULT,JSL,C,P,9999),END;
/*
//         DD  DISP=SHR,DSN=prefix.XPFSAMP(DFAULT) <===Your XPFSAMP lib
//         DD  *
@@@DJDE FILE=(END,,C),END;
/*
//SYSUT2   DD  SYSOUT=X,OUTPUT=*.OUTP
//
```

Create/Modify paper-related tables

The paper-related tables are a set of tables used by XPAF to determine paper size, AFP bin number, and paper tray processing:

- The paper name table is used to assign paper sizes to paper names. XPAF uses these values to determine which paper size to use when formatting a document.
- The varying paper size table is used to map AFP bin numbers to paper names. These paper names are then matched to paper sizes in the currently active paper name table.
- The cluster mapping table is used to map centralized paper tray cluster names to paper trays on decentralized and PCL-capable printers. Each paper tray is mapped to a tray select character.

Before printing the IVPs or any documents through XPAF, review the default paper-related tables to determine if you need to create new tables for your site. If so, use the Maintain Paper Tables option on the Manage Tables menu in XOAF to create new tables, add entries to existing tables, or modify entries.

For more information on paper-related tables and instructions on using the XOAF Maintain Paper Tables option, refer to *Section Three: Managing Resources with XPAF*.

Setting up your printers

You must set up your printers to enable them to print documents from XPAF. The method for setting up printers is different depending on the type of printer you have:

- For decentralized and PCL-capable printers, use the printer's setup function to set up the printer. Each decentralized and PCL-capable printer uses a different setup function. For complete instructions, refer to the documentation distributed with the printer.

For additional information on setting up your printers to run with XPAF, refer to the relevant printer chapter later in Section Two.

Setting up printer profiles

Printer profiles are site-dependent printer definitions that must be created before you can print documents through XOSF.

Each printer controlled by XPAF requires a printer profile. Profiles are stored in the library referenced by the PROFDD initialization parameter. This library is read each time an XPAF-controlled printer is started.

Creating printer profiles

Sample printer profiles for each XPAF-supported printer are provided in the PROFILES member in XPFSAMP. The samples include prototype statements which show the profile parameter defaults that are being used.

Follow this procedure to create a printer profile:

Step 1. Copy the PROFILES member in XPFSAMP to the library that is referenced by the PROFDD initialization parameter. During the copy, rename the PROFILES member to match the JES printer name of the printer for which you are creating a profile.

Example:

JES printer name = PRT7016
Rename PROFILES to PRT7016

NOTE: When naming your printer profiles, non-JES spooling subsystems allow you to specify alphanumeric printer names that do not begin with PRT.

•If you are a CMA-SPOOL or CA-SPOOL user, ensure that your profile names correspond to the companion CMA-SPOOL or CA-SPOOL printer definitions.

•If you are an XDS user, the printer profiles used for jobs submitted by XDS are those defined for the XOSF which processes the job.

Step 2. Edit the new member. Delete the prototype statements for all printer models except the model for which you are creating a profile.

Step 3. Edit the prototype statement for your printer model.

Step 4. Save the member. The next time you start the printer, XPAF reads the library referenced by the PROFDD initialization parameter and makes this printer profile available.

Refer to the PROFILES member in XPFSAMP for sample printer profiles for all printers supported by XPAF.

Sample profile

A sample printer profile is shown below:

```
DEVICE=DOCUSPL,
FEATURE=NODOWNLOAD, Do not download resources IPADDR=XXX.XXX.XXX.XXX,
Printer IP Address
TCPMODE=TCPLPR, Use the LPR protocol
LPRQNAME=qqqqqq, Queue name on the printer
TCPLPRDSN=DELETE, delete/keep temp dataset after LPR
XTCPJNAM=JESINFO, Display JES information on DocuSP GUI
WRITER=REMOTE
```

Editing printer profiles

Follow this procedure to edit a printer profile:

Step 1. Edit the member in the library referenced by the PROFDD initialization parameter. The member name is the same as the JES printer name. For a description of the parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Step 2. Save the member.

Step 3. Start the printer. The revised parameters are read from the library referenced by the PROFDD initialization parameter.

If the printer that uses the edited profile is already started, you must drain then restart it before the revised parameters become effective.

Installing multiple copies of XOSF

You can install multiple, concurrent copies of XOSF. This may be helpful, for example, if you want to run separate test and production systems when you receive a new version of the software. You can then maintain your current production schedule while you test the new version.

Using with JES

For each unique copy of XOSF, you must complete these steps:

Step 1. Designate a unique subsystem name and define it in the z/OS subsystem names list found in the IEFSSNnn member of SYS1.PARMLIB.

Step 2. Define a unique FSSDEF statement to JES, specifying the newly created start-up proc. Refer to "Defining XPAF to JES" earlier in this chapter.

Step 3. Define the unique set of printers to be controlled by this copy of XOSF, specifying the newly defined FSSDEF statement.

Step 4. Create a unique procedure in SYS1.PROCLIB.

Step 5. Create a new XINPARM dataset or share the existing dataset.

If you share the existing dataset, these parameters cannot be shared among multiple copies of XOSF:

- ACB (if you are using remotely-attached printers)
- ALOGDSN
- SUBSYS
- XLOGDSN

To override the current XINPARM values for these or any other initialization parameters you want to override, add the parameters to the PARM statement in the appropriate XOSF start-up proc. Overriding initialization parameters is explained in *Section Five: XPAF Parameter and Keyword Reference*.

Step 6. Specify a unique XLOGDSN dataset name for each XOSF session. For more information on the XLOGDSN parameter, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Step 7. Determine whether you want to share printer profiles among all copies of XOSF or create separate printer profiles for each XOSF. This may depend in part on whether you share the XINPARM library among all copies of XOSF.

Option 1: Share printer profiles among all copies of XOSF

Ensure that printer profiles for all printers controlled by the multiple copies of XOSF must reside in the dataset identified by the PROFDD initialization parameter.

Be aware that if you are installing copies of XOSF on different z/OS systems and want to share printer profiles, a conflict will arise if there is a printer with the same name but different characteristics on two or more z/OS systems. Therefore, ensure that two or more printers with different characteristics do not share the same JES printer name.

Option 2: Use separate printer profiles

Create a separate printer profile dataset for each copy of XOSF. Include in each dataset only the profiles for the printers that are controlled by the copy of XOSF with which the dataset is associated.

If you are sharing a XINPARM library among all copies of XOSF, identify the printer profile dataset by including the PROFDD initialization parameter on the PARM statement in the XOSF start-up proc. If you are using a separate XINPARM dataset for each copy of XOSF, identify the printer profile dataset by including the PROFDD initialization parameter in the XINSXOSF member.

For instructions about setting up printer profiles, refer to "Setting up printer profiles" earlier in this chapter.

Using multiple copies of XOSF with non-JES subsystems

You may use multiple copies of XOSF with non-JES subsystems. However, certain restrictions or limitations may apply, as described in this section.

CMA-SPOOL or CA-SPOOL

For each unique copy of XOSF, you must define a unique FSSDEF statement to CMA-SPOOL or CA-SPOOL, specifying the newly created start-up proc.

XDS

If you have multiple copies of XOSF installed and want to use XDS with more than one copy, you must define a unique copy of XDS for each XOSF.

To run more than one copy of XDS on one CPU, follow this procedure:

Step 1. Create a unique XOSF start-up proc for each XDS subsystem you run.

Step 2. Add the XOSF start-up proc name for each XDS subsystem to the SYS1.PARMLIB(IEFSSN*xx*).

Step 3. Update these members in SYS1.PARMLIB:

- COMMND*xx*
- LNKLST*xx*
- IEAAPF*xx*

Step 4. For each copy of XDS, create XDSSTART and XDSSTOP procs with unique names.

Step 5. Uniquely define the required initialization parameters.

Verifying the installation

You can verify the accuracy of your software installation by running the installation verification procedure (IVP). For more information about performing an IVP, refer to chapter 17, “Performing an installation verification procedure.”

NOTE: To use a DJDE IDEN that is different from the one used by XPAF, you should run your IVPs before customizing your system.

6. Setting up system-level features

XPAF provides additional customization features which are set up at the system level. This section describes these features and provides instructions on using them with XPAF:

- Enabling banner page processing
- Using SMF recording
- Printing output to file and/or disk
- Tailoring the DCF/SCRIPT environment

Enabling banner page processing

Banner pages, also known as separator pages, are issued with a print job and contain certain job information, such as the user ID, job ID, and print date. A banner page may be issued as a header page before each print job, as a trailer page after each print job, and as a separator page between each dataset.

Default banner pages

Unless you specify another format, XPAF uses its default format for banner pages. The format of banner pages at your site can be changed through parameters, keywords, or user exits. To use default or custom banner pages at your site, you must specify the JES printer definition or operator command to enable banner pages on your system.

The DFAULT member in XPFSAMP contains sample JSL statements for detecting banner header and trailer pages produced by XPAF. This member is set up for the default banner page format. If you use a banner page format other than the default, you may have to modify a copy of DFAULT and make the corresponding changes to the PDL on your printers.

Samples for user exit 05, also in XPFSAMP, produce banner pages. You can use these samples or create your own user exit 05 to customize banner pages for your site. The following sections explain in more detail any necessary system modifications for banner pages.

JES definitions/commands that affect banner pages

When using either default or customized banner pages, you must specify the JES printer definition or operator command to enable the type of separator pages you want to use: header, trailer, and/or dataset.

This table lists, by JES release level, the parameters that must be included in your JES printer definition to enable banner pages:

Product	Version	Header separator specification	Trailer separator specification	Dataset separator specification
JES2	All versions	SEP=YES	SEP=YES	SEPDS=YES
JES3	All versions	HEADER=YES	BURST=YES	HEADER=YES

For example, this printer definition would enable header, trailer, and dataset separator pages for JES2 for printer PRT1121:

```
PRT1121 FSS=XPAF,MODE=FSS,NPRO=0,UCS=0,
   SEP=YES,SEPDS=YES
```

This JES2 operator command will turn on header, trailer, and dataset separator pages:

$TPRT*nnnn*,S=Y,SEPDS=Y

where

nnnn	The printer ID number.
S	Specifies the header and trailer separator pages.
SEPDS	Specifies the dataset separator page.

This JES3 operator command will turn on header, trailer, and dataset separator pages:

*R *device-name*,H=Y,B=Y

where

device-name	The printer name.
H	Specifies the header and dataset separator pages.
B	Specifies the trailer separator page.

Parameters and keywords that affect banner pages

This selection describes the XPAF and IBM parameters and keywords that affect banner page processing are described here. For more information about these parameters and keywords, refer to *Section Five: XPAF Parameter and Keyword Reference*.

The BANSTYLE initialization parameter, printer profile parameter, and extended JCL keyword are used to specify one of the predefined banner page styles supplied with XPAF or a custom style defined by you in user exit 05. BANSTYLE=XPAF is the default setting, and BANSTYLE=JES specifies the JES style banner pages. In addition, if BANSTYLE=NONE is specified, no banner pages will be produced. To use a customized banner page style, specify BANSTYLE=*xxxx*, where *xxxx* is the name of your customized banner page style. XPAF passes this value to the XDIBBANS field in @XDIB in user exits 02 and 05. You must code the format for the customized banner page style in your user exit 05.

These IBM JCL keywords can be used with your banner pages: ADDRESS, BUILDING, DEPT, NAME, ROOM, TITLE, and USERDATA. These keywords can be overridden by fields in @XODB in user exit 02. The BANSTYLE extended JCL keyword also can be overridden by modifying the XDIBBANS field in @XDIB in user exit 02. The values specified in user exit 02 will be available in user exit 05.

DJDE documents

For DJDE data streams, you can use the BANNERJDL initialization parameter to specify the type of DJDE packet that is used with banner pages. For DJDE and XES data streams, the BANRESET initialization parameter is used to specify if any DJDE or XES packets will be generated by the banner page routine.

AFP documents

For AFP data streams, you can use these initialization and printer profile parameters to specify AFP resources with banner pages:

- AFPJOBHDR is used for the job header separator page.
- AFPJOBTLR is used for the job trailer separator page.
- AFPDSHDR is used for the dataset separator page.
- AFPMSGDS is used for the message dataset separator page.

You can specify form definitions and page definitions, as well as which font is used, with each of these parameters. For example, to use the AX0001 form definition, the A06460 page definition, and the GT20 character set on the header separator page, you would specify:

```
AFPJOBHDR=(FDEF=AX0001,PDEF=A06460,
   CHARS=GT20)
```

If banner page detection is used on the trailer pages of AFP documents, you must specify N, S or O in the RSTACK initialization or printer profile parameter. Refer to *Section Five: XPAF Parameter and Keyword Reference* for more information on these parameters.

Page-formatted documents

If banner page detection is used on the trailer pages of page formatted documents, you must specify N, S or O in the RSTACK initialization or printer profile parameter. Refer to *Section Five: XPAF Parameter and Keyword Reference* for more information on these parameters.

Changing the default banner page format

XPAF provides two predefined banner page formats: an XPAF style and a JES style. The default banner page format is the XPAF style. To use the JES style of banner page, you must specify BANSTYLE=JES in either your initialization parameters, printer profile, or extended JCL.

Figure 6-1 shows a sample of the default (BANSTYLE=XPAF) header banner page style for JES2 systems. Figure 6-2 shows a sample of the default header banner page style for JES3 systems. Figure 6-3 shows a sample of the header banner page style if you specify BANSTYLE=JES. This JES banner page style applies to both JES2 and JES3 systems.

Figure 6-1. Sample header page using the default XPAF style banner page (JES2)

```
 JJJJJJJJJ  AAAAAAAAAAAA  DDDDDDDDDDDD  AAAAAAAAAAAA   MM        MM  LL          SSSSSSSSS   TTTTTTTTTTTT
JJJJJJJJJ  AAAAAAAAAAAA  DDDDDDDDDDDD  AAAAAAAAAAAA   MMM      MMM  LL         SSSSSSSSSS  TTTTTTTTTTTT
   JJ     AAA      AAA  DD        DDD  AAA      AAA   MMMM    MMMM  LL          SSS      SSS       TT
  JJ     AA       AA  DD        DD  AA       AA   MM MM  MM MM  LL          SS                TT
 JJ     AA       AA  DD        DD  AA       AA   MM  MMMM  MM  LL          SSS               TT
JJ     AAAAAAAAAAAA  DD        DD  AAAAAAAAAAAA   MM   MM   MM  LL          SSSSSSSSSS       TT
JJ     AAAAAAAAAAAA  DD        DD  AAAAAAAAAAAA   MM        MM  LL          SSSSSSSSSS      TT
JJ     AA        AA  DD        DD  AA         AA  MM        MM  LL                   SSS      TT
 JJ     JJ     AA        AA  DD        DD  AA         AA  MM        MM  LL                   SS      TT
 JJJ   JJJ     AA        AA  DD        DDD  AA         AA  MM        MM  LL          SSS       SSS      TT
JJJJJJJJJ     AA        AA  DDDDDDDDDDDD  AA         AA  MM        MM  LLLLLLLLLLLL SSSSSSSSSSS      TT
JJJJJJJ      AA        AA  DDDDDDDDDDDD   AA         AA  MM        MM  LLLLLLLLLLLL  SSSSSSSSS       TT

      JJJJJJJJJ       11       555555555555    6666666666  555555555555       11                    9999999999
      JJJJJJJJJ      111       555555555555   666666666666 555555555555      111                   999999999999
          JJ        1111       55             666      666 55               1111                   999      999
          JJ          11       55             66          55                 11                   99        99
          JJ          11       55555555555    66          55555555555        11                   999      999
          JJ          11       555555555555   66666666666   555555555555     11                   999999999999
          JJ          11                 555  666666666666          555      11                    99999999999
          JJ          11                  55  666      666           55      11                            999
    JJ    JJ          11                  55  66        66           55      11                             99
    JJJ   JJJ         11       555      555   666      666  555      555      11                   999      999
    JJJJJJJJJ     111111111111  555555555555   666666666666  555555555555  111111111111         999999999999
     JJJJJJJ      111111111111   5555555555    6666666666    5555555555   111111111111          9999999999


*9 START JOB15651 JADAMLST 2       001 001 LOCAL    TEST IJCL         ROOM         12:39:45 PM 10-APR-96 PRT1588       START 9*
*9 START JOB15651 JADAMLST 2       001 001 LOCAL    TEST IJCL         ROOM         12:39:45 PM 10-APR-96 PRT1588       START 9*
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*9 START JOB15651 JADAMLST 2       001 001 LOCAL    TEST IJCL         ROOM         12:39:45 PM 10-APR-96 PRT1588       START 9*
```

Figure 6-2. Sample header page using the default XPAF style banner page (JES3)

```
   JJJJJJJJJ   AAAAAAAAAA   DDDDDDDDDDD    AAAAAAAAAA   MM        MM  LL             SSSSSSSSS   TTTTTTTTTTTT
   JJJJJJJJJ  AAAAAAAAAAAA  DDDDDDDDDDDD  AAAAAAAAAAAA  MMM      MMM  LL            SSSSSSSSSSSS  TTTTTTTTTTTT
       JJ     AAA      AAA  DD        DDD  AAA      AAA  MMMM    MMMM  LL            SSS      SSS       TT
       JJ     AA        AA  DD        DD   AA        AA  MM MM  MM MM  LL            SS                 TT
       JJ     AA        AA  DD        DD   AA        AA  MM  MMMM  MM  LL            SSS                TT
       JJ     AAAAAAAAAAAA  DD        DD   AAAAAAAAAAAA  MM   MM   MM  LL            SSSSSSSSSS         TT
       JJ     AAAAAAAAAAAA  DD        DD   AAAAAAAAAAAA  MM        MM  LL             SSSSSSSSSS        TT
       JJ     AA        AA  DD        DD   AA        AA  MM        MM  LL                    SSS        TT
JJ     JJ     AA        AA  DD        DD   AA        AA  MM        MM  LL                     SS        TT
JJJ   JJJ     AA        AA  DD       DDD   AA        AA  MM        MM  LL            SSS      SSS        TT
JJJJJJJJJ     AA        AA  DDDDDDDDDDDD   AA        AA  MM        MM  LLLLLLLLLLLL  SSSSSSSSSSS        TT
 JJJJJJJ      AA        AA  DDDDDDDDDDD    AA        AA  MM        MM  LLLLLLLLLLLL   SSSSSSSSS         TT

   JJJJJJJJJ   0000000000   BBBBBBBBBBB    0000000000   777777777777   8888888888   3333333333   3333333333
   JJJJJJJJJ  000000000000  BBBBBBBBBBBB  000000000000  777777777777  888888888888  333333333333  333333333333
       JJ     000      000  BB       BBB  000     0000            77  888      888  333      333  333      333
       JJ     00        00  BB        BB  00     00 00          77   88        88           33           33
       JJ     00        00  BB       BBB  00    00  00         77    888      888           333          333
       JJ     00        00  BBBBBBBBBBB   00   00   00        77      8888888888       3333333      3333333
       JJ     00        00  BBBBBBBBBBB   00  00    00       77       8888888888       3333333      3333333
       JJ     00        00  BB       BBB  00 00     00      77       888      888           333          333
JJ     JJ     00        00  BB        BB  0000      00     77        88        88           33           33
JJJ   JJJ     000      000  BB       BBB  000       000   77         888      888  333      333  333      333
JJJJJJJJJ     000000000000  BBBBBBBBBBBB  000000000000   77         888888888888  333333333333  333333333333
 JJJJJJJ       0000000000   BBBBBBBBBBB    0000000000    77          8888888888   3333333333   3333333333

PPPPPPPPPPP   RRRRRRRRRRR   TTTTTTTTTTTT       11        9999999999   8888888888   3333333333
PPPPPPPPPPPP  RRRRRRRRRRRR  TTTTTTTTTTTT      111       999999999999  888888888888  333333333333
PP       PPP  RR       RRR       TT          1111       999      999  888      888  333      333
PP        PP  RR        RR       TT            11       99        99  88        88           33
PP       PPP  RR       RRR       TT            11       999      999  888      888           333
PPPPPPPPPPPP  RRRRRRRRRRRR       TT            11       999999999999  8888888888       3333333
PPPPPPPPPPP   RRRRRRRRRRR        TT            11        99999999999  8888888888       3333333
PP            RR    RR           TT            11                999  888      888           333
PP            RR     RR          TT            11                 99  88        88           33
PP            RR      RR         TT            11       999      999  888      888  333      333
PP            RR       RR        TT       111111111111  999999999999  888888888888  333333333333
PP            RR        RR       TT       111111111111   9999999999   8888888888   3333333333

        44     6666666666   555555555555   0000000000
       444    666666666666  555555555555  000000000000
      4444    666      666  55            000     0000
    44 44     66            55            00     00 00
   44  44     66            55555555555   00    00  00
  44   44     66666666666   555555555555  00   00   00
 44    44     666666666666           555  00  00    00
44444444444   666      666           55  00 00     00
444444444444  66        66           55  0000      00
        44    666      666  555      555  000      000
        44    666666666666  555555555555  000000000000
        44     6666666666    5555555555    0000000000
```

Figure 6-3. Sample header page using the JES style banner page (JES2 and JES3)

```
   JJJJJJJJJ   AAAAAAAAAA   DDDDDDDDDDD    AAAAAAAAAA   MM        MM  LL             SSSSSSSSSS   TTTTTTTTTTTT
   JJJJJJJJJ  AAAAAAAAAAAA  DDDDDDDDDDDD  AAAAAAAAAAAA  MMM      MMM  LL            SSSSSSSSSSS  TTTTTTTTTTTT
       JJ     AAA      AAA  DD       DDD  AAA      AAA  MMMM    MMMM  LL            SSS      SSS       TT
       JJ     AA        AA  DD        DD  AA        AA  MM MM  MM MM  LL            SS                 TT
       JJ     AA        AA  DD        DD  AA        AA  MM  MMMM  MM  LL            SSS                TT
       JJ     AAAAAAAAAAAA  DD        DD  AAAAAAAAAAAA  MM   MM   MM  LL             SSSSSSSSSS        TT
       JJ     AAAAAAAAAAAA  DD        DD  AAAAAAAAAAAA  MM        MM  LL              SSSSSSSSSS       TT
       JJ     AA        AA  DD        DD  AA        AA  MM        MM  LL                     SSS       TT
JJ     JJ     AA        AA  DD        DD  AA        AA  MM        MM  LL                      SS       TT
JJJ   JJJ     AA        AA  DD       DDD  AA        AA  MM        MM  LL            SSS      SSS       TT
JJJJJJJJJ     AA        AA  DDDDDDDDDDDD  AA        AA  MM        MM  LLLLLLLLLLLL  SSSSSSSSSSS       TT
 JJJJJJJ      AA        AA  DDDDDDDDDDD   AA        AA  MM        MM  LLLLLLLLLLLL   SSSSSSSSS        TT


   JJJJJJJJJ   0000000000   BBBBBBBBBBB        11       555555555555   6666666666          44     2222222222
   JJJJJJJJJ  000000000000  BBBBBBBBBBBB      111       555555555555  666666666666         444    222222222222
       JJ     000      000  BB       BBB     1111       55            666      666       4444    222      222
       JJ     00        00  BB        BB       11       55            66                 44 44             22
       JJ     00        00  BB       BBB       11       55555555555   66                44  44            222
       JJ     00        00  BBBBBBBBBBB        11       555555555555  66666666666      44   44     22222222222
       JJ     00        00  BBBBBBBBBBB        11                555  666666666666    44    44    22222222222
       JJ     00        00  BB       BBB       11                 55  666      666   44444444444  222
JJ     JJ     00        00  BB        BB       11                 55  66        66  444444444444  22
JJJ   JJJ     000      000  BB       BBB       11       555      555  666      666          44    22
JJJJJJJJJ     000000000000  BBBBBBBBBBBB  111111111111  555555555555  666666666666          44    222222222222
 JJJJJJJ       0000000000   BBBBBBBBBBB   111111111111   5555555555    6666666666           44    222222222222

    **START*****JOB15642JADAMLST****START*****START*****START*****START*****START***
    *                                                                               *
    *                                                                               *
    * JOBID:          JOB15642                                                    *
    * JOB NAME:       JADAMLST                                                    *
    * USERID:         JADAM                                                       *
    * SYSOUT CLASS:   9                                                           *
    * OUTPUT GROUP:   2       .00001.00001                                        *
    * TITLE:          SYSTEM ANALYST                                              *
    *                                                                             *
    * DESTINATION:    LOCAL                                                       *
    * NAME:           JESSICA ADAMS                                               *
    * ROOM:           OPS LAB                                                     *
    * BUILDING:       MAIN                                                        *
    * DEPARTMENT:     SYSTEM OPERATIONS                                           *
    * ADDRESS:        123 SUNSHINE PARKWAY                                        *
    *                 SANDY BEACH, FL                                             *
    *                 32111                                                       *
    *                                                                             *
    *                                                                             *
    * PRINT TIME:     12:37:46 PM                                                 *
    * PRINT DATE:     10 APR 1996                                                 *
    * PRINTER:        PRT1588                                                     *
    * SYSTEM ID:      XE01                                                        *
    *                                                                             *
    *                                                                             *
    **START*****START*****START*****START*****START*****START*****START*****START***
```

Using the JES style banner page

Figure 6-4 shows a partial listing of the DFAULT member as it is supplied in XPFSAMP. The BANNER and RAUX statements are shown in the shaded areas. This member contains two versions of these statements: one for the XPAF style banner page and one for the JES style banner page.

DFAULT is initially set up to use the default XPAF style, and the statements for the JES style banner pages are commented out. If you specify BANSTYLE=JES, you must modify the PDL. Use one of the following options to modify the PDL and ensure that the PDL on the printer matches the PDL on the host:

CAUTION: You must ensure that the PDL members compiled on the printer are identical to those loaded to the PDL native libraries, or your results will be unpredictable.

Option 1: Editing PDL on the host

Step 1. Make a copy of the DFAULT member in XPFSAMP.

Step 2. In the copied member, remove the existing comments on the BANNER and RAUX statements for the JES style banner pages, and comment out the BANNER and RAUX statements for the XPAF style banner pages.

Step 3. Download the revised PDL member to the printer. You may use the sample $DJDECPY member in XPFSAMP to do this.

Step 4. On the printer, use the printer PDL command to compile the member into object code.

Step 5. Use one of these options to load the modified host member to the native PDL library specified in the XOSF start-up proc DD statement named by the PDLLIB initialization or printer profile parameter:

- XOAF Load PDL option on the Load Resources menu
- LOAD PDL TSO/batch command

Refer to *Section Three: Managing Resources with XPAF* for more information about the XOAF Load PDL option or LOAD PDL TSO/batch command.

Option 2: Editing PDL on the printer

Step 1. Edit the PDL source member on the printer.

Step 2. Remove the existing comments on the BANNER and RAUX statements for the JES style banner pages, and comment out the BANNER and RAUX statements for the XPAF style banner pages.

Step 3. On the printer, use the printer PDL command to compile the member into object code.

Step 4. Upload the PDL source member to a PDS on the host.

Step 5. Use one of these options to load the modified host member to the native PDL library specified in the XOSF start-up proc DD statement named by the PDLLIB initialization or printer profile parameter:

- XOAF Load PDL option on the Load Resources menu
- LOAD PDL TSO/batch command

Refer to *Section Three: Managing Resources with XPAF* for more information about the XOAF Load PDL option or LOAD PDL TSO/batch command.

Figure 6-4. Partial listing of DFAULT member (Example 1)

```
/*  ***************************************************** */
/*  ********  T A B L E S   &   C R I T E R I A S ******** */
/*  ***************************************************** */
T1:     TABLE    MASK=('?'),  CONSTANT=('*? START JOB',
                                        '*? START STC',
                                        '*? START TSU');
T2:     TABLE    MASK=('?'),  CONSTANT=('*?  END  JOB',
                                        '*?  END  STC',
                                        '*?  END  TSU');
T3:     TABLE                 CONSTANT=X'1313131313131313';
T5:     TABLE    MASK=(A'?'), CONSTANT=(A'*????START???JOB',
                                        A'*????START???STC',
                                        A'*????START???TSU');
T6:     TABLE                 CONSTANT=(A'**START*****');
T7:     TABLE                 CONSTANT=('**START*****');
T8:     TABLE                 CONSTANT=('**END*******');

        /* ***************************************************** */
        /* * C1 IDENTIFIES A NON-METACODE JOB HEADER PAGE     * */
        /* *    USING THE XPAF STYLE BANNER (DEFAULT).        * */
        /* * C2 IDENTIFIES A NON-METACODE JOB TRAILER PAGE    * */
        /* *    USING THE XPAF STYLE BANNER (DEFAULT).        * */
        /* * C3 IDENTIFIES A NON-METACODE JOB HEADER OR       * */
        /* *    SEPARATOR PAGE USING THE XPAF STYLE BANNER.   * */
        /* * C4 IDENTIFIES AN RSTACK DELIMITER.               * */
        /* * C5 IDENTIFIES A METACODE JOB HEADER PAGE         * */
        /* *    USING THE XPAF STYLE BANNER (DEFAULT).        * */
        /* * C6 IDENTIFIES A METACODE JOB HEADER PAGE         * */
        /* *    USING THE JES STYLE BANNER.                   * */
        /* * C7 IDENTIFIES A NON-METACODE JOB HEADER PAGE     * */
        /* *    USING THE JES STYLE.                          * */
        /* * C8 IDENTIFIES A NON-METACODE JOB TRAILER PAGE    * */
        /* *    USING THE JES STYLE.                          * */
        /* * C1T, C4T, C5T, C6T, C7T, C8T ARE USED IN THE     * */
        /* *                        OFFLINE file ENVIRONMENT * */
        /* ***************************************************** */
C1:     CRITERIA CONSTANT=(0,12,EQ,T1),LINENUM=(35,1);
C2:     CRITERIA CONSTANT=(0,12,EQ,T2),LINENUM=(35,1);
C3:     CRITERIA CONSTANT=(0,12,EQ,T1),LINENUM=(50,1);
C4:     CRITERIA CONSTANT=(1,08,EQ,T3);
C5:     CRITERIA CONSTANT=(9,16,EQ,T5);
C6:     CRITERIA CONSTANT=(9,12,EQ,T6);
C7:     CRITERIA CONSTANT=(15,12,EQ,T7),LINENUM=(30,10);
C8:     CRITERIA CONSTANT=(15,12,EQ,T8),LINENUM=(30,10);
C1T:    CRITERIA CONSTANT=(1,12,EQ,T1),LINENUM=(35,1);
C4T:    CRITERIA CONSTANT=(2,08,EQ,T3);
C5T:    CRITERIA CONSTANT=(10,16,EQ,T5);
C6T:    CRITERIA CONSTANT=(10,12,EQ,T6);
C7T:    CRITERIA CONSTANT=(16,12,EQ,T7),LINENUM=(30,10);
C8T:    CRITERIA CONSTANT=(16,12,EQ,T8),LINENUM=(30,10);
```

Figure 6-5. Partial listing of DFAULT member (Example 2)

```
/*   ******************************************************* */
/*   ******* T E S T   F O R   B A N N E R   P A G E ******* */
/*   *******        N O N  -  M E T A C O D E        ******* */
/*   *******           X P A F   S T Y L E           ******* */
/*   ******************************************************* */

         BANNER   TEST=(C1 OR C2),
                  HJOBNO=(12,5),
                  HRPTNA=(18,8),
                  HCOUNT=1,
                  TCOUNT=1;

/*   ******************************************************* */
/*   ******* T E S T   F O R   B A N N E R   P A G E ******* */
/*   *******        N O N  -  M E T A C O D E        ******* */
/*   *******            J E S   S T Y L E            ******* */
/*   ******************************************************* */

/*       BANNER   TEST=(C7 OR C8),                          */
/*                HJOBNO=(30,5),                            */
/*                HRPTNA=(35,8),                            */
/*                HCOUNT=1,                                 */
/*                TCOUNT=1;                                 */

/*  ******************************************************* */
/*  ******** TEST TO FEED FROM AUX FOR A JOB HEADER ******** */
/*  ******************************************************* */
/* * THIS TEST IS USED TO FEED FROM THE AUX PAPER          * */
/* *    TRAY FOR A JOB HEADER PAGE.                        * */
/* *    THIS IS INTENDED TO ALLOW COLORED PAPER TO         * */
/* *    BE USED TO EASILY SEPARATE JOBS.  IF THIS          * */
/* *    IS USED, THE PRINTER MUST BE SET TO FEED           * */
/* *    ONLY FROM THE MAIN CLUSTER (FEED MAIN).            * */
/* *                                                       * */
/* * IF THIS IS NOT DESIRED, COMMENT THIS TEST OUT         * */
/* *    OR REMOVE IT.                                      * */
/* ******************************************************* */

         RAUX     TEST=(C1 OR C5);

                  /*     *     *     FEED HDR FROM AUX TRAY   */
                  /*     *     *                              */
                  /*     *     * * * * * METACODE HEADER      */
                  /*     *               FOR XPAF STYLE       */
                  /*     *                                    */
                  /*     * * * * * * * * NON-METACODE HEADER  */
                  /*                     FOR XPAF STYLE       */

/*       RAUX     TEST=(C7 OR C6);                           */

                  /*     *     *     FEED HDR FROM AUX TRAY   */
                  /*     *     *                              */
                  /*     *     * * * * * METACODE HEADER      */
                  /*     *               FOR JES STYLE        */
                  /*     *                                    */
                  /*     * * * * * * * * NON-METACODE HEADER  */
                  /*                     FOR JES STYLE        */
```

Using a custom banner page

If neither of the supplied styles fits your needs, you can create your own user exit 05 to customize the banner pages used at your site. Review the comments in the sample user exit members in XPFSAMP for more information on how to create your own user exit.

If you change the banner page format so that the banner page detection CRITERIA statements in the DFAULT member are no longer accurate, you also must make a copy of the DFAULT member in XPFSAMP, make the necessary modifications for the customized banner page style, and make these corresponding changes to the PDL on your printers. Recompile the PDL on your printers, and reload the modified host member to your native PDL library.

Refer to your printer's PDL/DJDE reference manual for a complete explanation of the banner page detection CRITERIA statement. Refer to the procedures in "Using the JES style banner page" earlier in this chapter for a detailed explanation of how to update PDL on both your printers and the host.

CAUTION: You must ensure that the PDL members compiled on the printer are identical to those loaded to the native PDL libraries, or your results will be unpredictable.

Using banner pages on decentralized and PCL-capable printers

By default, all of the banner page formats described in this section are for use on centralized printers. To use any of these formats on decentralized and PCL-capable printers, you must change the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'. For more information on how to modify user exits, refer to chapter 7, "Coding the XPAF user exits."

Using SMF recording

XPAF supports IBM's SMF recording capability. XPAF writes an enhanced SMF type 6 PSF record when document processing is complete. When SMF recording has been activated, these records are stored in the system SMF dataset.

While XPAF supports SMF recording for printing via TCP or BARR configurations and other intermediate spooling devices, note that for these configurations your SMF records will reflect job creation information instead of actual printing information. Therefore, you may see differences in your SMF statistics for these types of jobs. For example, the SMF record will be updated even if the job did not print.

On activating SMF recording, refer to the next section in this chapter.

Activating SMF recording

To generate SMF records for XPAF automatically, specify **SMF=Y** in either the XINSXOAF or XINSXOSF member of XINPARM.

For more information about these initialization parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

You can also use the SET SMF RECORDING ON|OFF command to turn SMF recording on or off. For more information about this operator command, refer to *Section Seven: XPAF Operator Guide*.

Fields updated during SMF recording

Some fields in the record are updated by XPAF processing, while others are not. Tables 6-1 through 6-3 show all SMF type 6 PSF fields for which IBM provides documented support and identifies which of these fields are updated by XPAF. For a thorough description of SMF, refer to the appropriate z/OS SMF publication.

Table 6-1. SMF record type 6 PSF fields updated by XPAF (standard data)

Standard data section				
Offset	**SMF field**	**Length**	**Description**	**Comments**
5	SMF6RTY	1	Record type	X'06'
6	SMF6TME	4	Time record moved to SMF buffer	Supplied by z/OS SMF routine
10	SMF6DTE	4	Date record moved to SMF buffer	Supplied by z/OS SMF routine
14	SMF6SID	4	System identification	JES system ID from CVT
18	SMF6JBN	8	Job name	Job name from XDIBJNAM
26	SMF6RST	4	Reader start time	Reader start time from XDIBJTIM
30	SMF6RSD	4	Reader start date	Reader start date from XDIBJTIM

Table 6-1. SMF record type 6 PSF fields updated by XPAF (standard data) (Continued)

Standard data section				
Offset	**SMF field**	**Length**	**Description**	**Comments**
34	SMF6UIF	8	User identification	User identification from XDIBUSER
42	SMF6OWC	1	SYSOUT class	SYSOUT class from XDIBSOCL
43	SMF6WST	4	Writer start time	Time XOSF started printing
47	SMF6WSD	4	Writer start date	Date XOSF started printing
51	SMF6NLR	4	Number of logical records	Number of logical records processed (including multiple copies)
55	SMF6IOE	1	I/O status	X'00'
56	SMF6NDS	1	Number of datasets processed	X'01'
57	SMF6FMN	4	Form number	First 4 bytes of XDIBFORM
61	SMF6PAD1	1	Section indicator	X'E0'
62	SMF6SBS	2	Subsystem identification	X'0007'
64	SMF6LN1	2	Length of rest of record	X'001C'
66	SMF6DC1	1	Dataset control indicator	Restart information: X'08' - The job was restarted. X'10' - The job was interrupted. X'20' - The job was cancelled.
67	SMF6INDC	1	Record level indicator	X'01' - PSF 1.1 X'03' - Job number greater than 9999 X'04' - Security support X'05' - PSF 2.1
68	SMF6JNM	4	JES-assigned job number (binary)	Job number from XDIBJNO+4
72	SMF6OUT	8	Output device name	Printer name
80	SMF6FCB	4	FCB ID	Not updated by XPAF
84	SMF6UCS	4	UCS ID	Not updated by XPAF
88	SMF6PGE	4	Approximate physical page count	Number of physical sheets printed

Table 6-2. SMF record type 6 PSF fields updated by XPAF (non-impact printing subsystem data)

Non-impact printing subsystem section				
Offset	**SMF field**	**Length**	**Description**	**Comments**
2	SMF6CPS	8	Number of copies in each copy group	First copy group equals the number of copies produced, including JCL COPIES, XCOPY, and DJDE COPIES. Copy groups 2 - 8 = 0.
10	SMF6CHR	16	CHARS values	Four 4-byte CHARS values, as specified in the JCL
26	SMF6MID	4	Copy modification name	Not updated by XPAF
30	SMF6FLI	4	Name of forms overlay	FORM name from XDIBFORM
34	SMF6FLC	1	Number of copies on which the form is printed	Same value as SMF6CPS
35	SMF6BID	1	Options indicator	X'40' - OPTCD=J X'20' - Cut sheet printer

Table 6-3. SMF record type 6 PSF fields updated by XPAF (APA printing subsystem)

All-points-addressable printing subsystem section				
Offset	**SMF field**	**Length**	**Description**	**Comments**
4	SMF6FONT	4	Number of fonts used	Number of fonts used
8	SMF6LFNT	4	Number of fonts loaded	Number of fonts downloaded
12	SMF6OVLY	4	Number of overlays used	Number of forms used
16	SMF6LOLY	4	Number of overlays loaded	Number of forms downloaded
20	SMF6PGSG	4	Number of page segments used	Number of images used
24	SMF6LPSG	4	Number of page segments loaded	Number of images downloaded
28	SMF6IMPS	4	Number of sides of paper printed	Number of sides of paper printed
32	SMF6FEET	4	Number of feet of paper printed	Not updated by XPAF
36	SMF6PGDF	4	Number of PAGEDEFs used	Number of PAGEDEFs used
40	SMF6FMDF	4	Number of FORMDEFs used	Number of FORMDEFs used
44	SMF6BIN	1	Bin indicators	Not updated by XPAF

Table 6-3. SMF record type 6 PSF fields updated by XPAF (APA printing subsystem) (Continued)

45	SMF6PGOP	1	Duplex indicators	Duplex and/or tumble duplex indicated
46	SMF6FLG3	1	Flags	X'00'
48	SMF6NSOL	4	Number of security overlays used	Not updated by XPAF
52	SMF6NSFO	4	Number of security fonts used	Not updated by XPAF
56	SMF6NSPS	4	Number of security page segments used	Not updated by XPAF
60	SMF6FDNM	8	FORMDEF name	FORMDEF name
68	SMF6PDNM	8	PAGEDEF name	PAGEDEF name
76	SMF6OCNM	32	Object container names	Not used by XPAF

Printing to disk and/or file

In addition to printing, you can write to disk and/or file any document that XPAF has prepared for a centralized printer. This allows you to archive printable output for later use.

Output selection can be specified for individual documents using extended JCL keywords or for all documents directed to a printer using printer profile parameters.

Checklist for printing to disk and/or file

Perform these steps, in the order they appear, to print your documents to file and/or disk. As you complete each step, enter a check in the checklist to track and record your progress.

Step	Action	Completed
1	Add necessary initialization parameters	
2	Specify WRITER printer profile parameter	
3	Specify OPWRITER extended JCL keyword (optional)	
4	Modify printer profile for resource management	

Step 1 – Add necessary initialization parameters

To support the OPWRITER extended JCL keyword and the WRITER FILE/DISK printer profile parameter, specify these initialization parameters in the XINSXOSF member of XINPARM:

- OPDALLOC
- OPDALLOS
- OPDUNIT
- OPHLQ
- OPTEXPDT
- OPTUNIT
- OPTVOLCT
- OPVOLSER

These parameters are required for dynamic allocation of file and/or disk datasets. For a complete description of these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Step 2 – Specify WRITER printer profile parameter

To direct all documents transmitted to a specific centralized printer to file and/or disk, you must specify the WRITER parameter in the printer's profile. For a complete discussion of this parameter, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Step 3 – Specify OPWRITER extended JCL keyword (optional)

To direct a specific document to any supported combination of printer, file, and/or disk, you must specify the WRITER printer profile parameter or OPWRITER extended JCL keyword. For more information about the WRITER printer profile parameter or the OPWRITER extended JCL keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Step 4 – Modify printer profile for resource management

When writing a print job to file only, you can control whether the resources required to print the job are written to the file. You can use either of these options:

- Download all required resources to the file; all resources required to print any job on the file are downloaded to the file. To set up this option, you must use these printer profile parameter settings:

  ```
  LIBRARY=,
  XNS=NO,
  WRITER=TAPE
  ```

- Do not download any required resources to the file; no resources referenced by any job on the file are written to the file. To set up this option, you must use these printer profile parameter settings:

  ```
  LIBRARY=,
  FEATURE=NODOWNLOAD,
  XNS=NO,
  WRITER=TAPE
  ```

If you use this option, the required resources must be available on the printer when you ultimately print the job. If any required resources are missing, the job will fail at the printer.

Tailoring the DCF/SCRIPT environment

If you use DCF/SCRIPT to create documents, XPAF allows you to format your documents using Xerox fonts. Since Xerox fonts are designed to print at 300 dpi and IBM fonts at 240 or 300 dpi, you must first update the necessary tables and profiles, then convert the Xerox fonts. This section provides instructions for performing these steps.

Checklist for tailoring the DCF/SCRIPT environment

As you complete each step, enter a check in the Completed column to track and record your progress.

Step		Action	Completed
1	Update the logical device table		
	A	Specify the logical device name (LD)	
	B	Specify the physical device name (PD)	
	C	Specify the default font (DF)	
	D	Define the page formatting parameters (PL)	
	E	Reassemble and link-edit the LDT	
2	Update the physical device table		
	A	Specify the physical device name	
	B	Specify the output type	
	C	Indicate the default font library	
	D	Specify the page segment library	
	E	Specify the baseline shift	
	F	Specify the rotation	
	G	Specify the inter-character spacing	
	H	Specify the horizontal and vertical resolution	
	I	Reassemble and link-edit the PDT	

Step	Action		Completed
3	Update the Generalized Markup Language profile		
	A	Establish the default PI font	
	B	Establish the 38PP printer default fonts	
	C	Substitute the physical device name	
4	Convert the Xerox fonts		

NOTE: You only need to perform these steps if you plan to use Xerox fonts with the DCF/SCRIPT environment.

For additional information about the Logical and physical device tables, refer to IBM's *Document Composition Facility SCRIPT/VS Text Programmer's Guide*.

Step 1 – Update the logical device table

The logical device table (LDT) allows you to access and select certain adjustable print format settings. For example, you can use the LDT to specify the font, page length, and page width to be used repeatedly for a particular type of document (such as an internal memo).

Step 1A – Specify the logical device name

Specify the name to be used in the DEVICE option of SCRIPT. This name must begin with an X and may be followed by up to seven additional characters. The X prefix informs XPAF that native Xerox fonts are present in the document and that font mapping and resolution conversion are not required.

When a document is generated, DCF/SCRIPT inserts a NOP structured field as the first record in the document. This NOP structured field contains the specifications entered in the LDT and is examined by XPAF to determine if Xerox fonts are present.

For example, to use the logical device name XRXSTDPG, enter **LD=XRXSTDPG**.

Step 1B – Specify the physical device name

Specify the name of the printer which will be used to print the document. This name must match the name contained in the appropriate PDT.

For example, to print documents to printer XRX9700F, enter **PD=XRX9700F**.

Step 1C – Specify the default font

Specify the font to be used when none is specified in the document. The default font must specify the IBM-coded font name for a converted Xerox font. This name must have a prefix of X*n*, where *n* identifies the IBM orientation.

Valid values for *n* are:

1 Portrait
2 Landscape
3 Inverse portrait
4 Inverse landscape

For example, to specify the font UN110E in IBM portrait orientation, enter **DF=X1UN110E**.

Step 1D – Specify the page formatting parameters

Define the necessary page formatting values using these parameters:

PL Page length
PW Page width
LL Line length
TM Top margin
BM Bottom margin

Table 6-4 shows valid page width and page length values (in dots) for several different page sizes.

Table 6-4. Page width and length values

Page size	Page width (dots)	Page length (dots)
8.5 by 11 inch page (letter)	2550	3300
8.5 by 14 inch page (legal)	2550	4200
11 by 17 inch page (long)	3300	5100
8.27 by 11.69 inch page (A4)	2481	3507
11.69 by 16.54 inch page (A3)	3507	4962

Step 1E – Reassemble and link-edit the LDT

Once modified, reassemble the LDT and link-edit the results.

Sample LDT

Using the examples defined above for an 8.5 by 11 inch page with a line length of 6 inches, a top margin of .5 inch, and a bottom margin of .5 inch, the code for the LDT might look like this:

```
DSMLDTLD=XRXSTDPG,
PD=XRX9700F,
DF=X1UN110E,
PL=3300,PW=2550,LL=1800,TM=150,BM=150
```

Step 2 – Update the physical device table

The physical device table (PDT) allows you to specify the characteristics of the printer to be used as the output device. For example, you can specify the horizontal and vertical resolution for a printer. Each printer has a physical device table entry.

Step 2A – Specify the physical device name

Specify the physical device name referenced in the logical device table.

For example, to print documents to printer XRX9700F, enter **PD=XRX9700F**.

Step 2B – Specify the output type

Specify the type of data stream to be generated. Set this value to **38PP** so SCRIPT generates an output stream emulative for an IBM 3800 page printer.

For example, to generate 38PP type documents, enter **OD=38PP**.

Step 2C – Specify the default font library

Specify the library where the default font specified in the LDT is stored. You should use the distributed dataset AFPFONTS.

For example, to use the library that contains the 38PP fonts as the default font library, enter **FL=FONT38PP**.

Step 2D – Specify the page segment library

Specify the library where page segments are stored.

For example, to use the library that contains the 38PP page segments, enter **PSL=PSEG38PP**.

Step 2E – Specify the baseline shift

Specify **BSS=ALL** to indicate that both positive and negative values are supported.

Step 2F – Specify the rotation

Specify **ROT=(0,90,180,270)** to indicate that all four rotations are supported.

Step 2G – Specify inter-character spacing

Specify **ICS=ALL** to indicate that both positive and negative values are supported.

Step 2H – Specify the horizontal and vertical resolution

Specify **HR=300** and **VR=300** for Xerox printer resolution.

Step 2I – Reassemble and link-edit the PDT

Once modified, reassemble the PDT and link-edit the results.

Sample PDT

Using the examples defined above, the code for the PDT might look like this:

```
DSMPDTPD=XRX9700F,
OD=38PP,
FL=FONT38PP,PSL=PSEG38PP,
BSS=ALL,ROT=(0,90,180,270),ICS=ALL,
HR=300,VR=300,FSS=512
```

Step 3 – Update the Generalized Markup Language profile

The Generalized Markup Language (GML) profile (DSMPROF3 or DSMPROF4) must be modified so that the execution path for the Xerox printer is the same as the IBM 3800 page printer. Make these changes to the GML profiles.

Step 3A – Establish the default PI font

To establish the default PI font for the Xerox printer:

after this line:

```
.if &$PDEV eq 38PP .df @pi@ul type ('pi sans serif' 8) codepage t1gpi363
```

enter this line of code:

```
.if &$PDEV eq XRX9700F .df @pi@ul type ('pi sans serif 8') codepage t1gpi363
```

Step 3B – Establish the 38PP printer default font

To establish the 38PP printer default fonts for the Xerox printer:

after this line:

```
.if &$PDEV eq 3800 .or &$PDEV eq 1403 .se @suprstyl = nums
```

enter this line of code:

```
.if &$PDEV eq XRX9700F .go 38PP
```

Step 3C – Substitute the physical device name

Substitute the correct physical device name for the specified Xerox printer, if different than the 9700 printer.

Step 4 – Convert the Xerox fonts

You must convert the Xerox fonts so that the font's metrics are made available to DCF/SCRIPT. For information on converting Xerox font attributes to IBM font attributes, refer to *Section Three: Managing Resources with XPAF*.

7. Coding the XPAF user exits

This chapter describes the procedures used for coding the XOAF and XOSF user exits for XPAF.

Coding the XOAF user exit (XOAFUSEC)

You can include an optional user-written routine called XOAFUSEC in XPFLOAD to provide installation security for XOAF processing. XPFSAMP contains a sample of this routine, XOAFUSEC, which executes under TSO. This routine logs user IDs and dataset names involved in each XOAF request without disturbing XOAF processing.

XOAFUSEC is invoked after the dataset names to be referenced have been determined but before processing of the XOAF request starts. The module can communicate with XOAF by setting a return code in register 15 and by passing a message through the parameter list.

Coding requirements

Keep these considerations in mind if you code your own XOAFUSEC:

- The name of the load module must be XOAFUSEC.
- XOAFUSEC must be reentrant. Use standard register linkage conventions, but remember that XPAF modules may be running in 31-bit mode.
- If it abends, XOAFUSEC is not called again during that execution of XOAF.
- The XOAF default is to allow a requested XOAF function. If XOAFUSEC is absent, abends, or sets a return code other than the one expected, the requested function is allowed.
- Do not open a dataset and keep it open across multiple executions of XOAFUSEC. XOAF cannot close such a dataset, so it will still be open if you exit and then reenter XOAF.

NOTE: User-coded exits are not serviced or supported under your Xerox Software License Agreement or Xerox Service Contract. You may be asked to remove a user-coded exit when requesting software support.

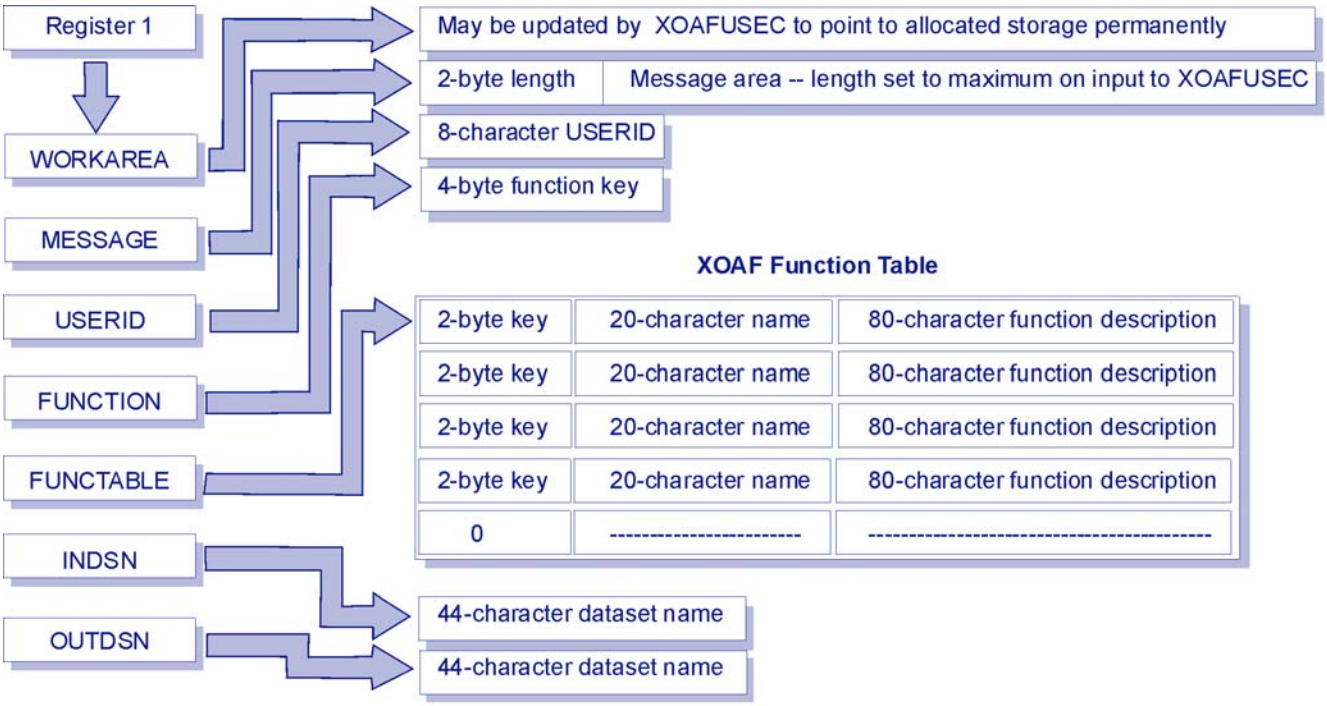
Parameter list

On entry to XOAFUSEC, register 1 points to a parameter list containing pointers to:

- The working storage for XOAFUSEC. This pointer's value is zero unless it is updated by XOAFUSEC. XOAF saves this pointer's value and returns it the next time XOAFUSEC is invoked. This process allows XOAFUSEC to allocate storage until XOAFUSEC is removed from the system.
- An area that XOAFUSEC can use to pass a message to XOAF. This pointer contains the address of a halfword binary value followed by storage for the passed message. The halfword specifies the maximum number of bytes provided for the message (at least 200 bytes). Set the halfword to the length of the passed message before returning.
- The 8-character user ID of the user making the request.
- A fullword binary value identifying the requested function in the XOAF function table.
- The XOAF function table.
- The input dataset name, if provided.
- The output dataset name, if provided.

This figure displays the parameter list passed to XOAFUSEC and the data fields to which it points.

Figure 7-1. XOAFUSEC parameter list and its data fields



XOAF function table

The XOAF function table is provided to assist you in coding your own XOAFUSEC. Before you begin coding, dump the XOAF function table (module XOAFUNCT in the distribution load library). The table shows the functions you can request and contains:

- A halfword binary value identifying the function
- A 20-character function name
- An 80-character function description

The last entry in the table has zero in the halfword key.

Return codes in register 15

XOAFUSEC can set these return codes in register 15:

00 Allow the requested function to continue. Do not check for a message to log.

02 Allow the requested function to continue. Log the passed message if one is provided.

08 Do not allow the requested function to continue.

12 Invalid parameters received by XOAFUSEC. Allow the requested function to continue.

14 Invalid parameters received by XOAFUSEC. Do not allow the requested function to continue.

16 XOAFUSEC internal error. Allow the requested function to continue.

18 XOAFUSEC internal error. Do not allow the requested function to continue.

All return codes greater than zero cause passed messages to be logged. The only return codes that prevent a request from processing are 08, 14, and 18.

Installing the user exit

After you have coded and tested your user exit, you are ready to generate the SMP/E jobs that will install the user exit as an SMP/E usermod to your system. Refer to “Installing user exits” in chapter 3, “SMP/E installation” for a description of the #GENUXIT installation service macro and instructions on installing the user exit.

Coding the XOSF user exits

The XOSF user exit facility provides a common interface and a common routine for calling all XOSF user exits. It includes these features:

- Provides you with a standard method for accessing information and issuing instructions to XPAF
- Uses a standard format for the input parameters to all user exits
- Uses a standard set of values to interpret the return codes from the user exits
- Provides the user exits with a common work area to facilitate communication between user exits executing in the same subtask

User exits provided

If you need to perform a function not provided by standard XPAF code, such as customizing your banner page, you should determine if one of the XPAF-provided user exits suits your intended purpose. Table 7-1 identifies the available XOSF user exits.

Table 7-1. XOSF-defined user exits

Exit point	Purpose	Sample(s) provided	Input parameters provided
—	Generic user exit example	XUXIT00	—
01	FSA initialization	XUXIT01	XXQPPT
02	Dataset begin	XUXIT02, XUXIT02A, XUXIT02C	IATSRL, IAZCHK, IAZJSPA, $JOE, $JCT, XDIB, XDJD, XODB, $FQE, $PDDB
03	JES record	XUXIT03, XUXIT03A, XUXIT03C, XUXIT03D	Logical print record, flags, XDIB
04	XOSF dataset open	XUXIT04	XXQPPT
05	Banner page	XUXIT05, XUXIT05A, XUXIT05B, XUXIT05C	IATSRL, IAZJSPA, $JOE, $JCT, XDIB, XDJD, XJOBPRM, XODB, XXQPPT
06	Resource access	XUXIT06	Member name, resource type, library format, library reference method, library DD name, library dataset name, name of load module, access type
07	Resource download begins	XUXIT07	Member name, resource type, library format, library reference method, library DD name, library dataset name, name of load module
08	Resource download ends	XUXIT08	Member name, resource type, library format, library reference method, library DD name, library dataset name, name of load module, return code from resource download

Table 7-1. XOSF-defined user exits (Continued)

Exit point	Purpose	Sample(s) provided	Input parameters provided
09	SMF record	XUXIT09	SMF type 6 record
10	FSA termination	XUXIT10	—
11	XOSF dataset close	XUXIT11	XDIB
12	Writer data option	XUXIT12	Logical print record, flags, XDIB, XXQPPT
30	Messages	XUXIT30	Message flag, message text
31	Commands	XUXIT31	Command text
32	Refresh security	XUXIT32	Address of XOSF function table, function key, command value, XOSF function table

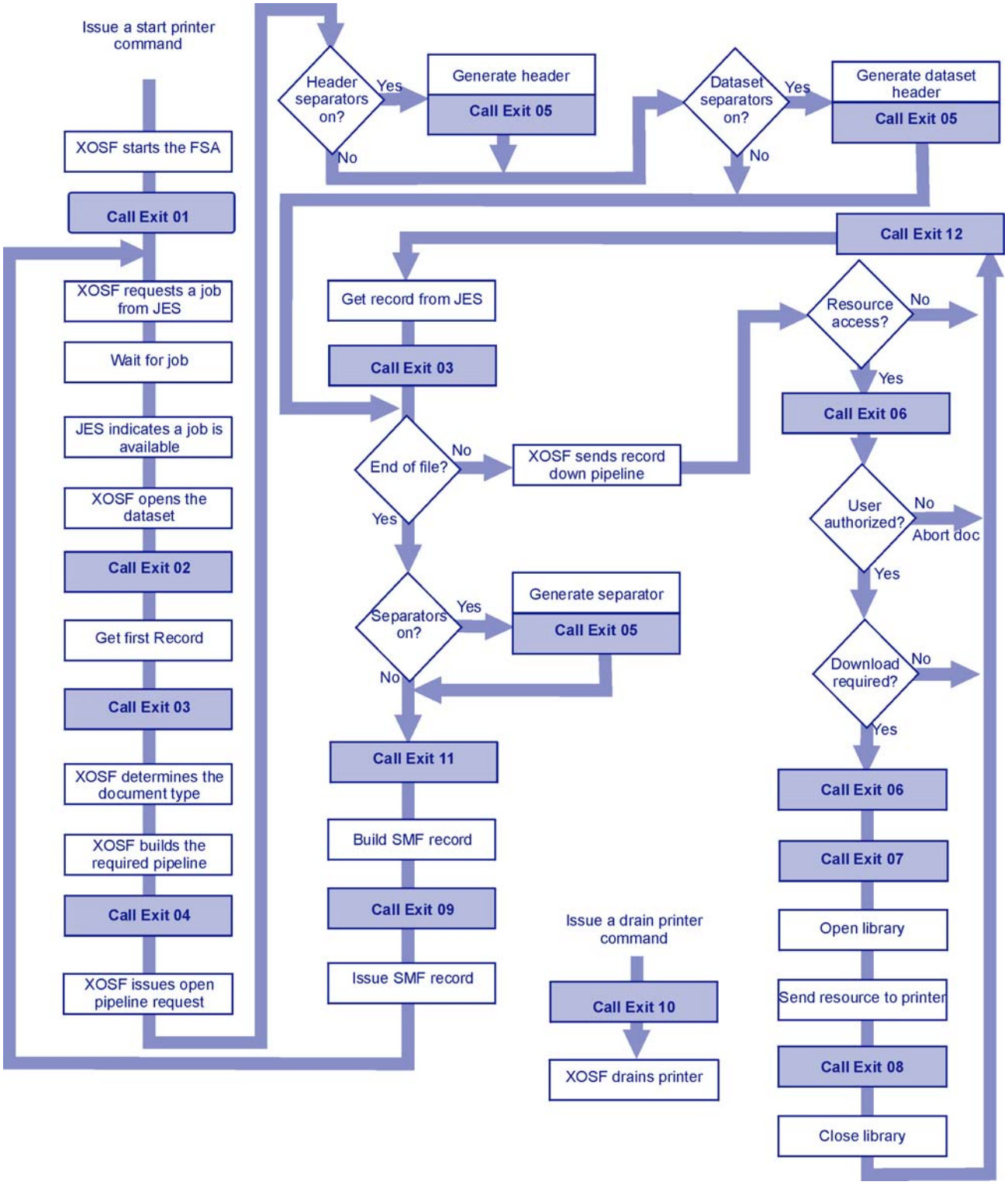
Order of invocation

User exits 01 through 10, the FSA exits, are called in sequence at a predefined time between FSA start and task termination. Some user exits may be called many times for a single JES document being printed; other user exits may be called only once.

User exits 30 through 32 depend on the operating environment, so the order in which they are called cannot be determined.

Figure 7-2 shows the timing of invocation for user exits 01 through 10, and does not represent the true flow of XOSF. Refer to “User exit descriptions” later in this chapter for details on how each user exit can affect processing based on return codes from the user exit.

Figure 7-2. User exit calling order



Sample materials

The installation libraries contain the mapping macros, inline code macros, testing JCL, and source code required to code an XOSF user exit. You can view the source code online or print it. After you copy it to a library or member you define, you can modify the source to create your own version of any of the user exits.

Macros

XPFMAC contains the mapping macros and inline code macros for the user exit routines. When assembling any of the XOSF user exits for testing, ensure that XPFMAC and the appropriate z/OS and JES MACLIBs are included in your SYSLIB concatenation.

JCL

The XUXASM member in XPFSAMP contains JCL you can use to assemble and link-edit the XOSF user exits.

Source code

XPFSAMP contains the source code for each of the sample user exits. These user exists are defined in “User exit descriptions” later in this chapter.

Initialization parameter requirements

For each user exit you code, you must specify the user exit load module name using the USRXIT*nn* initialization parameter. You should also set the maximum work area size required by all the user exits using the USRXITWA initialization parameter. For more information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Coding requirements

When planning to code an XOSF user exit, you need to consider each of the programming issues described in this section.

NOTE: User-coded exits are not serviced or supported under your Xerox Software License Agreement or Service Contract. You may be asked to remove a user-coded exit when requesting software support.

Linkage conventions

You must follow standard z/OS linkage conventions.

- Upon entry, register contents are as follows:

  R1 Points to a standard z/OS variable length parameter list

  R13 Points to a standard 18 fullword z/OS save area

  R14 Contains the XPAF return address

  R15 Contains the user exit entry point address

- All input parameters and work areas passed to the user exit are in key 8 storage, subpool 230 above the 16M line.
- The user exit is given control in storage protect key 8 and AMODE 31.
- The user exit must be written to handle input parameters and a work area residing in storage above the 16-megabyte line.
- When returning control to XPAF, you must restore register 13 to its original contents, set a return code in register 15, and branch to the address originally passed in register 14.

Common parameters

Upon entry, register 1 points to the input parameter list. This input parameter list can be mapped by the @UXPL macro included in XPFMAC. It contains four fullwords that are pointers to other parameter areas. For any area that does not exist for a specific user exit, the pointer is zero. The end of the list is indicated by a 1 in the high order bit of the fullword. The input parameter list follows this format:

```
DS  A(@UXWA)Pointer to exit work area
DS  A(@UXPA)Pointer to exit specific parameters
DS  A(@UXIN)Pointer to common information area
DS  A(@UXMG)Pointer to user message area
ORG*-4Pointer to last parameter in list
DS  X'80' Indicates end of list
```

User exit work area

The first parameter in the input parameter list is the common work area. This work area can be mapped by the @UXWA macro included in XPFMAC.

The size of the work area is specified by the USRXITWA initialization parameter, and is passed in the XPAF common information area. Check this work area field at execution time to verify that the work area is large enough before making any references to it. Use the first 18 fullwords as your standard z/OS save area, and the remainder as needed by all user exits.

The area is initialized to binary zeros the first time any user exit is called in a subtask. Then, each subsequent user exit called in the same task is passed the same work area.

Since it is passed unchanged between user exits within the same subtask, the work area can be used to pass information between user exits or subsequent calls of the same user exit. Be sure to initialize all work areas properly, and ensure that all user exits are aware of the shared portion of the work area.

User exit-specific parameter areas

The second parameter in the input parameter list points to an area containing information specific to the user exit being called. The first fullword in this area contains the length (in bytes) of the entire user exit-specific work area, including the length word itself. If the user exit has no unique parameters, the pointer to this field contains zeros.

The user exit-specific work areas can be mapped by the @UXPM macro included in XPFMAC. This macro has one required parameter: EXIT=*nn*, where *nn* is the user exit number to be mapped. For example, to map the parameters to user exit 05, the banner page exit, specify:

```
@UXPM EXIT=05
```

The @UXPM macro invokes the XPAF, z/OS, JES, CMA-SPOOL, or CA-SPOOL macros to map the areas required. You must include the appropriate MACLIBs in your SYSLIB concatenation when assembling the user exit. See your OS/390 system administrator for information on your system and subsystem macro libraries.

@UXPM has the optional parameter SUBSYS=*xxx*. The valid values are either JES or CMA. The default is JES if this parameter is not specified. If you are using XPAF with CMA-SPOOL or CA-SPOOL, SUBSYS=CMA is required for exits that provide CMA-SPOOL or CA-SPOOL control blocks. Only user exit 02 uses the CMA-SPOOL and CA-SPOOL control block $FQE. To map the parameters to user exit 02, the dataset open exit, for CMA-SPOOL or CA-SPOOL, specify:

```
@UXPM EXIT=02,SUBSYS=CMA
```

@UXPM also invokes the @UXEQ macro to generate equates for the user exit numbers and standard user exit return codes. The DSECT name is either the tag name you code in the label field of the assembler statement, or UXP*nn* (where *nn* is the 1- or 2-digit user exit number) if you do not code a tag name.

Common information area

The third parameter in the input parameter list points to an area containing information common to all XPAF user exits. This area can be mapped by the @UXIN macro included in XPFMAC.

Message area

The fourth parameter in the input parameter list points to the XPAF user exit message area. The message area can be mapped using the @UXMG macro included in XPFMAC.

This area is initialized to binary zeros each time a user exit is called. If you place a message length and text in this area, XPAF will issue the message through the XPAF message facility when the user exit returns control to XPAF. The return code you specify has no effect on the message facility.

The maximum length of the message is 222 bytes.

Referencing input parameters

Use the macros shown in table 7-2 to map or reference user exit input and work areas.

NOTE: Most of the mapping macros are invoked dynamically by the @UXPM macro for the user exit being assembled.

Table 7-2. User exit macros

Function	Macro name	Area or routine
Map input parameter areas	@UXPL	Parameter list map
	@UXWA	XPAF user exit work area
	@UXPM	XPAF user exit-specific parameters for user exits 01–32
	@UXIN	XPAF user exit common information
	@UXMG	XPAF user exit message area
Call macros for XPAF separator exit routines	#UXITBLK	Calls XPAF separator exit block letter routine
	#UXITPRT	Calls XPAF separator exit print routine
Map XPAF parameters	@XDIB	XPAF document information block
	@XJOBPRM	XPAF separator exit parameters
	@XOSFTAB	XPAF XOSF function table
	@XXQPPT	XPAF printer profile table
Map z/OS parameters	IEFJMR	z/OS job management area
	IFSAMFR	z/OS SMF record
Map JES common parameters	IAZCHK	JES checkpoint area
	IAZJSPA	JES job separator page area
	IAZIDX	JES index record flag

Table 7-2. User exit macros (Continued)

Function	Macro name	Area or routine
Map JES2 parameters	$JCT	JES2 job control table
	$JOE	JES2 job output element
	$PDDB	Peripheral data definition block
Map JES3 parameters	IATYSRL	JES3 service request list
Map CMA-SPOOL or CA-SPOOL parameters	$FQE	File queue element
Map user-modified record	@UXUREC	For user exit 03 only, maps a user record used as an inserted or replacement record
Equates	@UXEQ	XPAF user exit numbers and return code equates

Return codes

At return to XPAF, all user exits should set R15 to indicate the action XPAF should take. Return code settings for each valid return code are defined by assembler EQU statements in the @UXEQ macro included in XPFMAC. This macro is called by the @UXPM macro, so you need not specify it if you use the @UXPM macro to map user exit input parameters.

The general return codes are:

Value	Meaning	@UXEQ Field Name	Value
0	Continue.	#CONTINUE	0
1–4	Bypass function.	#BYPASS	4
5–8	Purge the JES dataset.	#PURGE	8
9–16	Requeue the JES dataset.	#REQUEUE	16
17–32	Requeue and hold the JES dataset.	#HOLD	32
33–4095	Terminate the printer subtask.	#ABORT #MAXRC	64 4095
4096+	The address of the user-provided data or control block to be used in place of the one supplied by XPAF. The next time the user exit is called, the original provided record will be presented to the user exit.		

Control blocks

All control blocks passed to a user exit through the user exit-specific parameters (mapped by @UXPM) are copies of the XPAF (or JES) control blocks. Therefore, any modification made to these control blocks by the user exit will be only for the benefit of that invocation of the user exit. The control block copies are not copied back to the real control blocks when the user exit returns to XOSF.

Some user exits allow certain control blocks to be modified. This is accomplished by making any modifications to the supplied control block and returning the address of that modified control block in R15. XOSF will then modify the actual control block from that copy. For an example of this procedure, refer to XUXIT02A in XPFSAMP.

CAUTION: When modifying the XDIB control block, failure to supply the address of the XDIB tagname 'XDIB' when you update the XDIB or its extensions will cause unpredictable results.

Assembly requirements

A user exit must be coded in Assembler H or its equivalent. It must be reentrant and reusable, and written in AMODE 31. We recommend that you also specify RMODE ANY.

Link-edit requirements

When you link-edit a user exit, you must specify RENT and REUS, and AMODE 31. We recommend that you also specify RMODE ANY.

Load library

The load library containing the XPAF user exits must be specified in the UXLNKLB parameter of the #GENUXIT macro and must be in one of these places:

- XPAF procedure STEPLIB
- z/OS Link List Concatenation
- z/OS Link Pack Area

XPAF uses the standard z/OS search order when searching for user exits in the load library. The load module name can be any name that conforms to z/OS naming conventions and can not already exist in XPFLOAD.

Controlling active user exits

You can activate and deactivate the user exits within a subtask using a fullword bit mask in the UXITXACT field of the user exit common information area. This bit mask controls which user exits will be active in each subtask. There is a unique UXITXACT for each subtask operating within XPAF. Each bit within the mask corresponds to one of the XPAF user exits; the low order bit corresponds to user exit 01, and the high order bit corresponds to user exit 32. A one bit indicates that the user exit is active, and a 0 (zero) bit indicates the user exit is inactive.

The first time a user exit is called in a subtask, the UXITXACT field is initialized; each user exit specified by the USRXITnn initialization parameter is set to 1. At this point, you can turn the bits on or off to control which user exits are called. If you turn on a bit for a user exit that has not been specified in the USRXITnn initialization parameter, the user exit is not called.

Bit map settings for each user exit are defined by assembler EQU statements in the @UXEQ macro included in XPFMAC. This macro is invoked by the @UXPM macro, so you need not specify it if you use @UXPM to map user exit input parameters.

Debugging user exits

When you are debugging an XOSF user exit, perform these actions:

- Specify **ESTAE=Y** in the initialization parameters.
- Add a SYSUDUMP DD statement to the XOSF start-up proc.
- Be careful using z/OS and JES macros. The MACLIBs used to assemble user exits must be the same ones used for XDIOFTAB and must be of a level supported by XPAF.
- Specify **LSQA** in the z/OS dump parameters. This allows you to access user exit parameter areas and work areas in Subpool 230 for diagnostic purposes. All work and parameter areas are in key 8.
- Do not exceed the 222 byte maximum when filling the XPAF message area.
- To obtain diagnostic information from the XOSF log, code user exit diagnostics to use the XPAF message facility. Since the messages also appear at the console, you should use this function sparingly. Use XUXIT00, the generic user exit, as a prototype since it issues a message with the user exit number, name, and return code.
- If you are using user exit 05 for banner pages for JES2 printers, specify **SEP**, **SEPDS**, or both in the JES printer definition.
- Use care when planning the shared user exit work area. Since the area is shared by all user exits running in the same subtask, information can be passed between user exit calls. Ensure that no intervening calls overlay data intended for a different user exit. Create a common macro to map the common work area fields. Remember that XPAF initializes the area to binary zeros the first time a user exit is called in a subtask, but does not change the work area from that point on.

Installing the user exits

After you have coded and tested a user exit, you are ready to generate the SMP/E jobs that will install the user exit as an SMP/E usermod to your system. Refer to “Installing user exits” in chapter 3, “SMP/E installation” for instructions.

User exit descriptions

For each supported user exit, this section describes the purpose, input parameters, return codes, and sample(s) provided. It also identifies the point within processing when the user exit is called. For additional information about any of the user exits, refer to the comments provided within each sample user exit.

Generic user exit

XUXIT00 is a generic sample user exit which you can use as a model for creating any XPAF user exit. The sample shows basic initialization, parameter access, and return functions. It also shows a method for passing a message back to the system for logging to the SYSLOG and XOSF log with error message number XUX2626I.

User exit 01 (FSA start)

This user exit provides the earliest opportunity for initializing fields passed between user exits. It can be used to initialize work areas, counters, and other fields for use by subsequent user exits.

When called

This user exit is called when the FSA (printer) is started.

Input parameters

Input	Mapped by
XPAF printer profile table (also known as XPAF point product table)	@XXQPPT

Return codes

Value	Meaning
0+	Continue.

Sample user exit

XUXIT01 is a sample user exit 01. It performs these functions:

- Initializes the entire work area to binary zeros
- Initializes the work area device type field with dummy data
- Saves the beginning date and time
- Turns on user exit 04 in the XPAF active user exit bit mask

User exit 02 (Dataset open)

This user exit can be used to:

- Determine whether a job should be printed
- Initialize counters or data fields specific to a single job for use by later user exits
- Increment job related counters
- Alter document information in the XDIB or its extensions to meet specific requirements, such as changing a form name or distribution keyword
- Select the processing mode for a data stream

When called

This user exit is called each time the first copy of a SPOOL dataset is presented to XOSF by the spooling subsystem.

Input parameters

For CMA-SPOOL or CA-SPOOL:

Input	Mapped by
CMA-SPOOL or CA-SPOOL file queue element	@FQE
FSS common checkpoint area	IAZCHK
XPAF document information block area	@XDIB
XDIB DJDE extension data	@XDJD
XDIB output data block area	@XODB
FSS job separator page area	IAZJSPA

For JES2:

Input	Mapped by
Address of JES2 job output element	$JOE
Address of JES2 job control table	$JCT
Address of JES2 peripheral data definition block	$PDDB
FSS common checkpoint area	IAZCHK
XPAF document information block data	@XDIB
XDIB DJDE extension data	@XDJD
XDIB output data block data	@XODB
Address of FSS job separator page area	IAZJSPA

For JES3:

Input	Mapped by
Address of JES3 service request list	IATSRL
FSS common checkpoint area	IAZCHK
XPAF document information block data	@XDIB
XDIB DJDE extension data	@XDJD
XDIB output data block data	@XODB
Address of FSS job separator page area	IAZJSPA

Return codes

Value	Meaning
0	Continue.
1–8	Purge the JES dataset.
9–16	Requeue the JES dataset.
17–32	Requeue and hold the JES dataset.
33–4095	Abort the print subtask.
4096+	The address of the modified XDIB and its extensions to be used in place of the XPAF-supplied XDIB and extensions.

Sample user exits

XUXIT02, XUXIT02A, and XUXIT02C are samples of user exit 02.

XUXIT02 This user exit performs these functions:

- Initializes fields in the work area for use by subsequent user exits
- Saves the job name, job number, and user ID of the job that created this document
- Initializes a line counter

XUXIT02A This user exit contains the same code as XUXIT02, with additional code to select the processing mode for a data stream. You can use any of the fields available in the XDIB control block to build your test criteria and determine the desired document type. For example, you can test the form name, SYSOUT class, or FCB name to decide if the document should be printed as native mode or AFP.

You must then code user exit 02 to update the XDIBDFMT field with the desired type of data stream processing. Valid types of data stream processing include:

blank XPAF determines what processing mode to use based on the extended JCL and the data stream.

NM Forces the job through native mode processing. No extended JCL processing is provided, and no DJDE processing is provided for decentralized and PCL-capable printers.

DJDE Forces the job through DJDE processing; no extended JCL processing is provided. NM and DJDE processing are equivalent for centralized printers.

JCL Forces the job through extended JCL processing. For decentralized printers, DJDE-to-XES processing also is included.

XES Forces the job through XES processing to decentralized printers.

PCL5 Forces pass-through processing to PCL-capable printers.

AFPA Forces AFP processing.

AFPX Forces page-formatted processing.

XUXIT02C This user exit contains the same code as XUXIT02. It also shows how to access the CMA-SPOOL or CA-SPOOL $FQE data. It copies selected $FQE fields and the programmer name from the IAZJSPA to the XPAF XDIB control block.

Since the exit parameter list contains the variable length $FQE, the corresponding CMA-SPOOL or CA-SPOOL sample offset table, XUXOF02C, must also be assembled and linked into the user exit load library.

User exit 03 (JES record)

This user exit can be used to:

- Suppress unwanted records
- Add user-generated records
- Change the values in records
- Dynamically limit the size of a dataset to be printed (using a unique identifier such as a time, date, or user ID)

When called

This user exit is called each time a record from the JES dataset is read, before XOSF processes it.

Input parameters

Input	Mapped by
XPAF Document Information Block data	@XDIB
JES index record flag from the JES index table	IAZIDX
Logical print record from JES	n/a

Return codes

Value	Meaning
0	Continue.
1–4	Bypass this record.
5–8	Purge the JES dataset.
9–16	Requeue the JES dataset.
17–32	Requeue and hold the JES dataset.
33–4095	Abort the thread.
4096+	The address of the user-provided record is used in place of the JES-provided record. The next time the user exit is called, the original JES-provided record will again be input to the user exit.

Sample user exits

XUXIT03, XUXIT03A, XUXIT03C, and XUXIT03D are samples of user exit 03.

XUXIT03 This user exit counts spool records and stops printing on decentralized printers after 1,000 lines. It demonstrates a method of inspecting JES input records without changing them and terminating the processing of a single print dataset. If it encounters a dataset with over 1,000 lines, this user exit also issues an error message.

XUXIT03A This user exit contains the same code as XUXIT03, with additional code to insert a user-defined record, then print the JES record. This user exit cannot be used with AFP data streams.

XUXIT03C This user exit contains the same code as XUXIT03, with additional code to replace the JES record with a user-defined record. This user exit can be used only with datasets that include carriage control.

XUXIT03D This user exit contains the same code as XUXIT03, with additional code to delete the JES record before XOSF processes it. This user exit cannot be used with AFP data streams.

User exit 04 (XOSF dataset open)

This user exit can be used to dynamically alter printer attributes, such as XJCF processing mode or download options. This processing may be based on criteria such as a time, date, or user ID.

When called

This user exit is called when a dataset is retrieved for output and the XOSF processors are being initialized for the dataset.

Input parameters

Input	Mapped by
XPAF Printer Profile Table (also known as XPAF point product table)	@XXQPPT

Return codes

Value	Meaning
0	Continue.
1–4095	Abort the thread.
4096+	The address of the modified printer profile table to be used in place of the XPAF-provided printer profile table.

Sample user exit

XUXIT04 is a sample user exit 04. It saves the printer device type for use by subsequent user exits. Since the device type will not change, the bit corresponding to this user exit in the active user exit bit mask is turned off to prevent subsequent calls to this user exit.

User exit 05 (Banner page)

This user exit can be used to:

- Create custom banner pages
- Dynamically suppress banner pages
- Add DJDEs or XESs before a dataset
- Distribute information, much like JES2 news

Standard banner pages for AFP documents use the C1D0GT15 character set and T1D0BASE code page by default. For instructions on changing these defaults, refer to "Specifying separator print attributes" later in this chapter.

You cannot print banner pages in a portrait orientation in an AFP environment.

For more information on banner page processing, refer to chapter 6, "Setting up system-level features."

When called

This user exit is called immediately before the first line and after the last line of a JES dataset is processed by XOSF, before the default XOSF banner routine is called.

The user exit is called only if a JES printer definition or operator command has been issued to enable the type of banner pages this user exit uses: header, trailer, and/or dataset.

For any JES2 version, you can override the job separator specification by including SEPPAGE=NONE in the PRINTDEF statement.

For more information on banner page processing, refer to chapter 6, "Setting up system-level features." For other information on how JES handles banner pages, refer to your JES initialization and tuning manuals.

Input parameters

For JES2:

Input	Mapped by
Address of XPAF print routine	n/a
Address of XPAF block letter routine	n/a
Address of JES Job Output Element	$JOE
Address of JES Job Control Table	$JCT
XPAF separator exit parameters	@XJOBPRM
XPAF Point Product Table data	@XXQPPT
Address of JES Job Separator Page Area	IAZJSPA
XPAF Document Information Block data	@XDIB
XDIB DJDE extension data	@XDJD
XDIB Output Data Block data	@XODB
JES News Data	@XNEWS

For JES3:

Input	Mapped by
Address of XPAF print routine	n/a
Address of XPAF block letter routine	n/a
Address of JES Service Request List	IATSRL
XPAF separator exit parameters	@XJOBPRM
XPAF Point Product Table data	@XXQPPT
Address of JES job separator page area	IAZJSPA
XPAF Document Information Block data	@XDIB
XDIB DJDE extension data	@XDJD
XDIB Output Data Block data	@XODB
JES News Data	@XNEWS

Return codes

Value	Meaning
0	Continue. XPAF will produce the default banner page either in place of or in addition to any user-created banner.
1+	Bypass the XPAF default banner. The user has created a banner or does not want a banner.

Specifying separator print attributes

This section explains how to specify separator print attributes for banner pages.

DJDE documents

When printing DJDE documents on centralized printers, you can use DJDEs to specify the print attributes for the banner page; however, resource conditioning is not performed for the banner page. For example, if you specify the DJDE FONT=RK1ABP and that font is not loaded on the printer, XOSF will not download it for you.

When printing DJDE documents on decentralized printers, you cannot use DJDEs to specify print attributes for a banner page. If you attempt to do this, the DJDEs are printed as data. For more information, refer to "Decentralized printers" later in this chapter.

AFP and page-formatted documents

You cannot use DJDEs to specify print attributes for a banner page for an AFP or page-formatted job. If you attempt to do this, the DJDEs are printed as data. However, you can specify these print attributes for an AFP or page-formatted banner as shown at label ASUREC in XUXIT05B:

- Use overlay for banner
- Paper size (width, length)
- Print orientation
- Margins (left, top)
- Font selection (character set, code page, or coded font)
- Line spacing

Decentralized printers

All non-AFP and non-page-formatted documents printed on decentralized printers have banner pages formatted with XES commands. You may specify XES commands in user exit 05 to customize the format of these decentralized banner pages.

Calling support routines

XPAF provides these macros to call XPAF or IBM routines within user exit 05:

- #UXITBLK
- #UXITPRT
- SJFREQ

#UXITBLK

Use the #UXITBLK macro to call the XPAF block letter routine. The block letter routine generates 12 lines, each 124 bytes in length, containing block letters generated from an input string. The input string can be from 1 to 9 bytes long.

To reserve the parameter list and work area that XPAF needs for the block letter routine, you must specify

#UXITBLK MF=R

in your work area. You also must specify a label on the MF=R format of the macro.

To call the routine, specify

#UXITBLK MF=(E,*label*),TEXT=*x*[,LENGTH=*l*]

where

label The label specified on the MF=R format.

x The name of a 1- to 9-character field or register specification (R*n*) of the field to be converted.

l The length of the field to be converted and can be:

- An equated length
- An expression
- A decimal digit
- A register specification (R*n*), where the length value has been previously loaded into the register specified

l is optional. If you omit it, the assembler length attribute of *x* is used. If register notation is used for *x*, *l* must be specified.

The parameter list generated by the MF=R form of the #UXITBLK macro is as follows:

```
#XITBLPL  DS OF Banner print routine parm list
#XITTAD   DS   AAddress text to be printed
#XITTLN   DS   FLength of text to be printed
#XITBAD   DC   ABlock letter line address
#XITBLN   DC   FLength block letter address area
#XITBNO   EQU  &NUMLINENumber of block lines
#XITBLK   DS   (#XITBNO)CL124Block letter lines
```

XPAF places the block letter lines in the field #XITBLK when called by the MF=E form of the #UXITBLK macro. The lines can be printed subsequently using the #UXITPRT macro.

#UXITPRT

Use the #UXITPRT macro to call the XPAF print routine. Through the print routine, the 133 bytes that you point to are written to the printer. The first character of this print line is the machine code carriage control character.

To reserve the parameter list and work area that XPAF needs for the print routine, you must specify

#UXITPRT MF=R

in your work area. You must also specify a label on the MF=R format of the macro.

To call the routine, specify

#UXITPRT MF=(E,*label*),LINE=*xxx*

where

label The label specified on the MF=R format.

xxx The label of the 133 byte field to be printed. The LINE value may also be a register specification (R*n*).

For this XPAF routine, the address of the XPAF subtask control block must be passed as an input parameter. This value is passed to UXITSTCB in the user exit common information area. To ensure that #UXITPRT has addressability to the XPAF subtask control block, you must use the @UXIN macro to map the XPAF common information area.

The parameter list generated by the MF=R form of the #UXITPRT macro is as follows:

```
#XITPRPLDSOF    Banner print routine parm list
#XITSTCBDSA     Address subtask control block
#XITLADDSA      Address line to be printed
```

SJFREQ

Use the SJFREQ macro to call the IBM routine used to retrieve information for XPAF banner pages that was originally coded on the IBM OUTPUT JCL statement.

To call the routine, specify

SJFREQ REQUEST=RETRIEVE

The REQUEST command must reference the XDIB output token field (XDIBOUTK) as a parameter. This parameter retrieves the keyword values from the IBM OUTPUT JCL statements. The statements may include the ADDRESS, BUILDING, DEPT, NAME, ROOM, and TITLE keywords to be printed on banner pages.

For more information on the SJFREQ routine, refer to the *z/OS/ESA Application Development Reference: Services for Authorized Assembler Language Programs*.

Sample user exits

XUXIT05, XUXIT05A, and XUXIT05B are samples of user exit 05.

XUXIT05 This user exit generates a job header, but no trailer or dataset separator pages. The header contains the room number and programmer's name in block letters. At the bottom of the page, it prints JES-specific information from either JES2 or JES3 control blocks. This user exit provides examples of accessing all of the input control blocks (XPAF, z/OS, JES common, JES2, and JES3), as well as information passed from other user exits.

XUXIT05A This user exit is an example of a banner page that uses a form and honors DJDEs. It generates a header for copy one and a trailer after the last copy of a dataset. It does not print dataset banners and cannot be used for AFP documents, decentralized printers, or PCL-capable printers.

XUXIT05B This user exit generates a banner page in the same format as the default banner page supplied with XPAF.

NOTE: The banner pages for decentralized and centralized printers use different formats. To print a banner page on a decentralized or PCL-capable printer in the same format as a banner page printed on a centralized printer, follow the instructions included at the beginning of this sample.

XUXIT05C This user exit generates a banner page that displays updated Job Separator Page Area (JSPA) user data fields.

User exit 06 (Resource security)

This user exit can be used to:

- Ensure that a resource being accessed is authorized for a particular user ID
- Restrict resource downloads to noncritical times

When called

This user exit is called when a printer or AFP resource is referenced. This user exit also is called when a printer resource (that is, font, form, image) is downloaded.

NOTE: For overlays and page segments that have already been converted and stored in a native mode library, a call will be made only for the native mode object.

Input parameters

- Member name
- Resource type
- Library format
- Library reference method
- Library DD name
- Library dataset name
- Name of load module from which user exit is being called
- Access type

Return codes

Value	Meaning
0	Continue.
1–4	Bypass the resource download.
5–4095	Fail the resource access and abort the print job.
4096+	The address of the modified resource name to be used in place of the XPAF-provided resource name (valid for download only).

Sample user exit

XUXIT06 is a sample user exit 06. It issues a RACF RACHECK to determine whether the user who submitted the job is authorized to read the resource. If the user is authorized, the resource is read. If the RACHECK fails, printing is terminated, and an error message is issued.

User exit 07 (Begin resource download)

This user exit can be used to:

- Issue an enqueue on a dataset name being downloaded
- Issue an enqueue on a member name being downloaded

When called

This user exit is called immediately before a resource is downloaded.

Input parameters

- Member name
- Resource type
- Library format
- Library reference method
- Library DD name
- Library dataset name
- Name of load module from which user exit is being called

Return codes

Value	Meaning
0	Continue.
1–4	Bypass the resource access.
5+	Bypass the resource access and purge the JES dataset.

Sample user exit

XUXIT07 is a sample user exit 07. It issues an enqueue for the resource library and member being downloaded.

User exit 08 (End resource download)

This user exit can be used to issue a dequeue for a resource enqueued in user exit 07.

When called

This user exit is called immediately after a resource is downloaded.

Input parameters

- Member name
- Resource type
- Library format
- Library reference method
- Library DD name
- Library dataset name
- Name of load module from which user exit is being called
- Return code from resource download

Return codes

Value	Meaning
0+	Continue.

Sample user exit

XUXIT08 is a sample user exit 08. It issues a dequeue for the resource library and member being downloaded.

User exit 09 (SMF record)

This user exit can be used to:

- Consolidate SMF records
- Add user-generated fields as SMF record extension fields
- Adjust fields generated by XPAF
- Select printers, jobs, or users to be accounted for
- Change the SMF record type to a user-defined value
- Collect and save accumulated JES dataset statistics

When called

This user exit is called immediately before the SMF type-6 record is written (after printing of a dataset has completed).

Input parameters

- Standard type 6 SMF record (PSF subtype)

Return codes

Value	Meaning
0	Continue.
1–4095	Bypass writing the SMF record.
4096+	The address of the user-provided SMF record is used in place of the XPAF-generated SMF record.

Sample user exit

XUXIT09 is a sample user exit 09. It copies the XPAF requestor ID to the SMF user ID field and indicates that this modified SMF record will be written in place of the XPAF-generated record.

User exit 10 (FSA termination)

This user exit can be used to:

- Issue a termination message
- Collect and save accumulated subtask-related statistics

When called

This user exit is called immediately before a task is terminated.

Input parameters

None.

Return codes

Value	Meaning
0+	Continue.

Sample user exit

XUXIT10 is a sample user exit 10. It issues a message with the elapsed time XPAF was active.

User exit 11 (XOSF dataset close)

This exit can be used to:

- Issue a dataset close message
- Collect or save accumulated dataset statistics

When called

This user exit is called after the last record in a dataset has been processed just before the dataset is logically closed.

Input parameters

Input	Mapped by
XPAF Document Information Block	@XDIB

Return codes

Value	Meaning
Any	Continue

Sample user exits

XUXIT11is a sample user exit 11. This sample exit will generate a message showing JOBNAME, JOBNUMBER, FCB, FORMS, SYSOUT CLASS and the count of records sent to the printer (accumulated by sample exit XUXIT12).

User exit 12 (Writer data record)

This exit can be used to:

- Modify data records before they are sent to printer
- Insert data records in printer data stream
- Delete data records from printer data stream

When called

This user exit is called for each record presented to the physical writer (XWRMAIN), before the record is transmitted to the printer. Note that this exit is before any VTAM or TCP/IP conditioning has been done and the records will not include any records generated by the VTAM or TCP/IP conditioning.

Input parameters

Input	Mapped by
XPAF Document Information Block	@XDIB
XPAF printer profile table	@XXQPPT
Flags indicating type of carriage control used	@UXPM
Logical print record from XOSF transform and conditioning	@UXPM

Return codes

Value	Meaning
0	Continue
1-4	Bypass this record
5-16	Requeue the JES dataset
17-32	Requeue and hold the JES dataset
33-4095	Abort the thread
4096+	The address of the user-provided record is used in place of the provided record. The next time the user exit is called, the original provided record will again be presented to the user exit.

Sample user exits

XUXIT12 is a sample user exit 12. This sample exit will add a DJDE SIDE=NUFRONT in front of each DJDE dataset and will count the number of records sent to the printer.

User exit 30 (Messages)

This user exit can be used to:

- Extract statistics from messages or information from other user exits in the task
- Control message suppression dynamically
- Translate console messages to meet user requirements via WTO

When called

For all messages issued from the Message Service Facility except MSF and XUX messages, this user exit is called before a message is issued.

Input parameters

- Message flag.
- Message text with all MSF substitutions resolved. The length is determined from the parm length field.

Return codes

Value	Meaning
0	Continue.
1+	Bypass message processing for this message.

Sample user exit

XUXIT30 is a sample user exit 30. It suppresses all informational XPAF console messages.

User exit 31 (Commands)

This user exit can be used to:

- Restrict commands to certain users or time periods
- Suppress commands

When called

This user exit is called before a command is parsed. At this point in processing, syntax checking has not been performed; therefore, the command may not be valid.

Input parameters

- Command text. The length is determined from the parm length field.

Return codes

Value	Meaning
0	Continue.
1+	Bypass command processing for this command.

Sample user exit

XUXIT31 is a sample user exit 31. It suppresses operator commands to turn off SMF or XOSF logging, issues a message when a command is suppressed, and maintains a counter of suppressed messages.

User exit 32 (Refresh security)

This user exit can be used to:

- Restrict access to the PDS refresh function to selected groups or individuals
- Restrict access to refresh functions during periods of high usage
- Dynamically alter the data controlling access defined by the user exit itself

The PDS refresh function can be accessed in two ways:

- In XOAF, using the PDS refresh and display services.
- In XOSF, using these XPAF-exclusive operator commands:

  REFRESH ALLPDS
  REFRESH FONT240
  REFRESH FONT300
  REFRESH FORMDEF
  REFRESH OVERLAY
  REFRESH PAGEDEF
  REFRESH PAGESEG
  REFRESH PAGEFORM
  DISPLAY REFRESH STATS
  RESET THRESHOLD
  SET REFRESH SECURITY ON
  SET REFRESH SECURITY OFF
  SET REFRESH SECURITY '*user-text*'

When called

This user exit is called before a refresh request from the z/OS operator or TSO user is executed.

Input parameters

- Address of XOSF function table
- Function key to use with the XOSF function table
- Command value
- XOSF function table

Return codes

Value	Meaning
0	Continue.
1+	Bypass refresh processing for this refresh request.

Sample user exit

XUXIT32 is a sample user exit 32. It suppresses TSO-initiated refresh requests during typical morning and afternoon peak processing hours. It also demonstrates a method of accessing the XOSF function table.

XPAF, PSF, and JES user exit cross-reference

Table 7-3 identifies the XPAF user exits by user exit ID and function and lists the corresponding PSF and JES user exits, where applicable.

Table 7-3. XPAF, PSF, and JES user exit cross-reference

XPAF user exits		PSF user exits		JES user exits		
ID	**Function**	**ID**	**Function**	**Ver.**	**ID**	**Function**
01	FSA initialization	7.a	FSA initialization			
02	Dataset open	7.b	Begin dataset			
03	Read JES logical record	4.a	JES record line fields			
		4.b	JES record structured fields			
04	XOAF dataset open					
05	Banner pages	1	Job header separator	2	1	Print/Punch separators
		2	Job trailer separator	3	20	Job output job header
		3	Job dataset separator	3	21	Dataset job header
				3	23	Job output job trailer
06	Resource access	7.c	Resource access			
07	Begin resource download	7.d.1	Resource load: before load			
08	End resource download	7.d.2	Resource load: after load			
		7.e	Resource delete			
09	Write SMF record	5	SMF record	2	21	SMF record
10	FSA termination	7.f	FSA termination			
11	XOSF dataset close					
12	Writer data option					
30	Messages					
31	Commands					
32	Security					

8. Message logging

This chapter describes the logs used by XPAF and explains how to set up logging functions. It also explains how to print the XOAF and XOSF log datasets using JCL.

For more information about any of the initialization or printer profile parameters mentioned in the following sections, refer to *Section Five: XPAF Parameter and Keyword Reference*.

z/OS system logging

The z/OS system log (SYSLOG) may contain z/OS system messages, XOAF messages, XOSF messages, and messages from other host products. For example, messages in the SYSLOG may show the status of jobs running on the host system, actions taken by users, or information about XPAF processing.

Setting system logging

The XPAF default is to write all XPAF system messages along with other system messages to the z/OS system log. However, you may want to avoid logging duplicate entries in both the z/OS system log and the XOAF or XOSF log.

If you do not want XPAF system messages written to the z/OS system log, you can turn system logging off:

- For XOAF, specify **SLOG=N** in the XINSXOAF member of XINPARM.
- For XOSF, specify **SLOG=N** in one of these locations:
  - The XINSXOSF member of XINPARM.
  - The PARM parameter on the EXEC statement included in the XOSF start-up proc.

You also can use the SET SYSTEM LOGGING ON|OFF command to change the current status of XOSF message logging. For more information about this operator command, refer to *Section Seven: XPAF Operator Guide*.

NOTE: It is recommended that the SLOG=N always be specified for XOAF (XINSXOAF). Otherwise, a flurry of superfluous and annoying messages will be displayed on the system console whenever XOAF is run.

Suppressing messages

XPAF messages, except those coded as non-suppressible, can either be enabled to or suppressed from displaying on the console.

To suppress XPAF system messages directed to the SYSLOG and z/OS operator console, you must specify a member name in the MSFSUPPMEM initialization parameter in the XINSXOAF and XINSXOSF members of XINPARM. The member name identifies which member contains the suppression text (message number/message type) used to suppress message numbers or message types at start-up time. All XPAF system messages will continue to be written to the XOAF and/or XOSF log.

A sample message suppression member, MSGSUPP, is included in XPFSAMP. You can use this sample text as a pattern for creating your own message suppression member.

You also can use the SUPPRESS or ENABLE commands to suppress or enable XOSF messages. For more information about these operator commands, refer to *Section Seven: XPAF Operator Guide*.

Setting a message threshold

You may set a maximum number of messages that can be displayed on the operator console and written to the SYSLOG while printing a document. To do this, specify the MSGTHMAX parameter in the XINSXOSF member of XINPARM. This option is only available for XOSF messages; it does not apply to XOAF messages.

When the maximum threshold value is reached, XOSF issues a message to the SYSLOG and the XOSF log. All messages issued after this value is reached are written only to the XOSF log.

XPAF system logging

XPAF system messages can be written to either the XOAF log dataset or the XOSF log dataset.

Managing the XOAF log

XOAF logging is similar to z/OS system logging. The difference is that only XOAF messages are written to the XOAF log. If you have specified SLOG=Y in the XINSXOAF member of XINPARM to enable both system logging and XOAF logging, the system writes messages to both the XOAF log and the operating system log.

Creating an XOAF log

During installation, XPAF allocates an XOAF log dataset called *prefix*.XOAFLOG, where *prefix* is the value specified for the HLQ (high-level qualifier) parameter in the #GENPROD installation service macro. You can use this installation-generated dataset to log messages, or you can specify a different sequential dataset for logging messages.

CAUTION: If you have multiple XOAF users, each XOAF session should have a unique XOAF log dataset. Sharing an XOAF log dataset between multiple users may result in data being overwritten or lost, or in messages for different users being intermingled.

You must allocate each XOAF log dataset as a sequential dataset with these file specifications:

```
RECFM=VB
LRECL=256
BLKSIZE=4096
```

Setting XOAF logging on

If you want all XPAF system messages written to the XOAF log, follow these steps:

Step 1. Specify **XLOG=Y** in the XINSXOAF member of XINPARM.

Step 2. Specify a dataset name for the XLOGDSN initialization parameter in the XINSXOAF member of XINPARM. There is no default dataset; XPAF cannot set logging on unless you specify a dataset name for this parameter.

Step 3. After you log on to TSO, enter these commands:

```
TSO FREE DDN(XINPARM)
TSO ALLOC DDN(XINPARM)
DSN('prefix.xinparm-library-name') SHR
```

Switching XOAF log datasets

You may define a primary XOAF log dataset via the XLOGDSN initialization parameter. When this primary dataset becomes full, you must clear the file contents. While you clear the primary log, messages will be sent to the alternate XOAF log dataset, as defined by the ALOGDSN initialization parameter. You must have both a primary and an alternate log dataset defined for log switching to work properly.

To enable XPAF to switch between primary and alternate log datasets automatically, follow these steps:

Step 1. Allocate an alternate dataset with the same attributes as the primary dataset. The alternate dataset must be empty or contain only one record before it is switched to. This requirement prevents you from switching to a dataset that has not been archived or cleared.

If the alternate log is not empty, a message is issued, and XOAF logging is disabled. You must clear the alternate log before it can be used.

Step 2. Specify the ALOGDSN initialization parameter and the name of the alternate log dataset in the XINSXOAF member of XINPARM.

When the switch occurs, XOAF issues an informational message notifying you of the change in log datasets.

Step 3. Before logging is switched back to the primary dataset, clear the primary log dataset. For more information, refer to "Clearing the XOAF log dataset" later in this chapter.

Setting intensive logging

As a diagnostic aid, you can turn the intensive logging indicator on or off.

- When the indicator is turned on, the system writes debugging messages or additional informational messages to the XOAF log. Therefore, you should turn on intensive logging when diagnosing a problem.
- When the indicator is turned off, the system does not write additional messages to the XOAF log.

To ensure that the intensive logging indicator is turned on before an XOAF session is initiated, verify that DEFILIND=Y has been specified in the XINSXOAF member of XINPARM.

Recovering an XOAF log dataset after an I/O error

To allow you to browse the XOAF log dataset while XOAF is still active, XPAF allocates the log dataset with a disposition of SHARE. This means that a program (for example, IEBGENER or a user-written program) in another address space may be able to update the same log dataset as XPAF, causing the currently active log dataset to become corrupted.

If this happens, XPAF issues a message indicating that an I/O error has occurred. Logging is disabled.

This error may occur when you are using the ISPF editor or when you are redefining the log dataset. Use one of these two options to recover the XOAF log dataset in which the error occurred.

Option 1: Using the ISPF editor

If you are using the ISPF editor, follow these steps:

Step 1. Edit the named log dataset and add one character to the first line.

Step 2. Save the dataset.

Step 3. Reedit the dataset and delete the first record.

Step 4. Save the dataset again.

Option 2: Redefining the log dataset

If you are redefining the log dataset, perform either of these options:

- Run a batch job using IEBGENER to delete and define the named log dataset.
- Use ISPF option 3.2 to delete and define the named log dataset.

Clearing the XOAF log dataset

If XPAF issues messages indicating that the XOAF log dataset is full, you must clear the dataset. If you want to keep a record of the messages, print or archive the dataset before clearing it.

To clear the dataset, follow these steps:

Step 1. If the XOAF log is allocated to an XOAF session, terminate the session before performing the next step.

Step 2. Either edit the dataset and delete all of the lines from it, or delete and uncatalog the dataset and then reallocate a new one with the same name.

CAUTION: Failure to perform these steps can cause a permanent I/O error in the log dataset.

Managing the XOSF log

XOSF logging is similar to z/OS system logging. The difference is that only XOSF messages are written to the XOSF log. If you have enabled both system logging and XOSF logging and specified SLOG=Y in the XINSXOSF member of XINPARM, the system writes messages to both the XOSF log and the operating system log.

Creating an XOSF log

During installation, XPAF allocates an XOSF log dataset called *prefix*.XOSFLOG, where *prefix* is the value you specified for the HLQ (high-level qualifier) parameter in the #GENPROD installation service macro. You can use this installation-generated dataset to log messages, or you can specify a different sequential dataset for logging messages.

If you have multiple XOSF started tasks, each XOSF address space should have a unique XLOGDSN.

CAUTION: Sharing an XLOGDSN between multiple XOSF printer address spaces may result in data being overwritten or lost.

You must allocate each XOSF log dataset as a sequential dataset with these file specifications:

RECFM=VB
LRECL=256
BLKSIZE=4096

Setting XOSF logging on

If you want all XOSF messages to be written to the XOSF log, follow these steps:

Step 1. Specify **XLOG=Y** in one of these locations:

- The XINSXOSF member of XINPARM
- The PARM parameter on the EXEC statement included in the XOSF start-up proc
- The dataset specified by the PFILE initialization parameter

Step 2. Specify a dataset name for the XLOGDSN initialization parameter in the XINSXOSF member of XINPARM. There is no default dataset; XPAF cannot set logging on unless you specify a dataset name for this parameter.

Step 3. Issue the start printer JES command to start your XOSF session and activate the parameter settings.

After XOSF has been initialized, use the SET XOSF LOGGING ON|OFF command to turn XOSF logging on or off. For more information about this operator command, refer to *Section Seven: XPAF Operator Guide*.

Switching XOSF log datasets

You may define a primary XOSF log dataset via the XLOGDSN initialization parameter. When this primary dataset becomes full, you must clear the file contents. To continue logging messages while clearing the file, activate log switching. While you clear the primary log, messages will be sent to the alternate XOSF log dataset, as defined by the ALOGDSN initialization parameter. You must have both a primary and an alternate log dataset defined for log switching to work properly.

To switch between primary and alternate log datasets automatically, follow these steps:

Step 1. Allocate the alternate dataset with the same attributes as the primary dataset. The alternate dataset must be empty or contain only one record before it is switched to. This requirement prevents you from switching to a dataset that has not been archived or cleared.

If the alternate log is not empty, a message is issued, and XOSF logging is disabled. You must clear the log, then reactivate it by issuing the SET XOSF LOG ON command.

Step 2. Add the ALOGDSN initialization parameter and the name of the alternate log dataset to one of these locations:

- The XINSXOSF member of XINPARM
- The PARM parameter on the EXEC statement included in the XOSF start-up proc
- The dataset specified by the PFILE initialization parameter

When the switch occurs, XOSF issues an informational message notifying you of the change in log datasets.

Step 3. Before logging is switched back to the primary dataset, clear the primary log dataset. For more information, refer to “Clearing the XOSF log dataset” later in this chapter.

You can also manually switch between datasets using the SWITCH XLOG command. For more information about this operator command, refer to *Section Seven: XPAF Operator Guide*.

Setting intensive logging

As a diagnostic aid, you can turn the intensive logging indicator on or off:

- When the indicator is turned on, debugging messages or additional information messages are written to the XOSF log. Therefore, you should turn on intensive logging when diagnosing a problem.
- When the indicator is turned off, additional messages are not written to the XOSF log.

To ensure that the intensive logging indicator is turned on before XOSF is started, verify that DEFILIND=Y has been specified in the XINSXOSF member of XINPARM.

To turn intensive logging on at the operator console, use the SET INTENSIVE LOGGING ON command. For more information about this operator command, refer to *Section Seven: XPAF Operator Guide*.

Recovering an XOSF log dataset after an I/O error

To allow you to browse the XOSF log dataset while XOSF is still active, XPAF allocates the log dataset with a disposition of SHARE. This means that a program (for example, IEBGENER or a user-written program) in another address space may be able to update the same log dataset as XPAF, causing the currently active log dataset to become corrupted.

If this happens, XPAF issues a message indicating that an I/O error has occurred. Logging is disabled.

This error may occur when you are using the ISPF editor or when you are redefining the log dataset. Use one of these two options to recover the XOSF log dataset in which the error occurred.

Option 1: Using the ISPF editor

If you are using the ISPF editor, follow these steps:

Step 1. Edit the named log dataset and add one character to the first line.

Step 2. Save the dataset.

Step 3. Reedit the dataset and delete the first record.

Step 4. Save the dataset again.

Step 5. Issue the SET XOSF LOG ON command.

Option 2: Redefining the log dataset

If you are redefining the log dataset, perform either of these options:

- Run a batch job using IEBGENER to delete and define the named log dataset.
- Use ISPF option 3.2 to delete and define the named log dataset.

Clearing the XOSF log dataset

If XPAF issues messages indicating that the XOSF log dataset is full, you must clear the dataset. If you want to keep a record of the messages, print or archive the dataset before clearing it.

To clear the dataset, follow these steps:

Step 1. If XOSF is active and the log to be cleared is the currently active log, you must disable it by issuing the SET XOSF LOG OFF command. Or, if the alternate log is empty, switch the logs.

Step 2. Either edit the dataset and delete all of the lines from it, or delete and uncatalog the dataset and then reallocate a new one with the same name.

Step 3. Issue the SET XOSF LOG ON command.

CAUTION: Failure to perform these steps can cause a permanent I/O error in the log dataset.

Printing document-related messages

To print the messages that XOSF issued while processing a document, specify the PRINTMSG parameter in the XINSXOSF member of XINPARM. If you elect to print the messages, they are printed following the last page of the document and before the trailer page. You can print all messages, no messages, or selected message types.

If you elect to print the messages, you must also specify the MSGFEED parameter in XINSXOSF to identify the tray from which paper is fed when printing the messages.

For a specific printer, you can override these settings using the PRINTMSG and MSGFEED printer profile parameters.

Printing the log datasets

You can use the IEBGENER program to print messages written to the XOAF and XOSF log datasets. This program prints messages in this format:

yyddd hhmmss issued-by message-text

where

yyddd	The julian date of the message.
hhmmss	The hour, minute, and second when the message was issued.
issued-by	Either the name of the printer task that issued the message or the name of the address space. If there is no entry for this parameter, then XPAF system components issued the message.
message-text	The text of the message. If the message is 110 characters, it wraps to the next line.

9. Setting up multiple CPUs

If you plan to submit jobs that contain XPAF extended JCL keywords from a remote CPU to a host CPU, you must install the XPAF extended JCL on both the host and remote systems. This chapter explains how to set up one or more remote CPUs for printing to the host.

NOTE: If your data streams do not include XPAF extended JCL, this procedure is not required. You can submit jobs directly from the remote CPU to the host CPU by specifying a printer that is attached to the host CPU.

Checklist for setting up multiple CPUs

As you complete each step, enter a check in the Completed column to track and record your progress. Each step is explained later in this chapter.

Step	Action		Completed
1	Copy files to file from host CPU		
	A	Copy XFSJCL from XPFLOAD	
	B	Copy XESJDT00 from XPFLPA	
	C	Copy XJCLPROC from PROCLIB	
2	Offload files from file to remote CPU		
	A	Copy XFSJCL to a LNKLIST library	
	B	Copy XESJDT00 to a system LPALIB	
	C	Copy XJCLPROC to a system PROCLIB	
3	Install the extended JCL keywords on the remote CPU		
4	Submit the print job		

Step 1 – Copy files to file from host CPU

After XPAF is installed on your host system, use the sample IEBCOPY jobs shown below to copy the specified members to file.

Step 1A – Copy XFSJCL from XPFLOAD

From the XPFLOAD library on the host system, copy the XFSJCL member to a file.

```
//COPYXJCL  EXEC  PGM=IEBCOPY
//SYSPRINT  DD  SYSPRINT=*
//SYSUT1    DD  UNIT=SYSDA,SPACE=(CYL,3)
//SYSUT2    DD  UNIT=SYSDA,SPACE=(CYL,3)
//INDD      DD  DISP=SHR,DSN=prefix.XPFLOAD
//OUTDD     DD  DISP=(,PASS,DELETE),DSN=prefix.XPFLOAD.OUT,
//  UNIT=3480,VOL=SER=volser,LABEL=(n,SL,EXPDT=98000)
//SYSIN     DD  *
  COPY OUTDD=OUTDD,INDD=INDD
  SELECT MEMBER=XFSJCL
/*
```

Step 1B – Copy XESJDT00 from XPFLPA

From the XPFLPA library on the host system, copy the XESJDT00 member to a file.

```
//COPYJDTS  EXEC  PGM=IEBCOPY
//SYSPRINT  DD    SYSPRINT=*
//SYSUT1    DD    UNIT=SYSDA,SPACE=(CYL,3)
//SYSUT2    DD    UNIT=SYSDA,SPACE=(CYL,3)
//INDD      DD    DISP=SHR,DSN=prefix.XPFLPA
//OUTDD     DD    DISP=(,PASS,DELETE),DSN=prefix.XPFLPA.OUT,
//  UNIT=3480,VOL=SER=volser,LABEL=(n,SL,EXPDT=98000)
//SYSIN    DD  *
  COPY   OUTDD=OUTDD,INDD=INDD
  SELECT MEMBER=XESJDT00
/*
```

Step 1C – Copy XJCLPROC from PROCLIB

From the PROCLIB library on your host system, copy the XJCLPROC member to a file.

```
//COPYJDTS  EXEC  PGM=IEBCOPY
//SYSPRINT  DD    SYSPRINT=*
//SYSUT1    DD    UNIT=SYSDA,SPACE=(CYL,3)
//SYSUT2    DD    UNIT=SYSDA,SPACE=(CYL,3)
//INDD      DD    DISP=SHR,DSN=prefix.PROCLIB
//OUTDD     DD    DISP=(,PASS,DELETE),DSN=prefix.PROCLIB.OUT,
//  UNIT=3480,VOL=SER=volser,LABEL=(n,SL,EXPDT=98000)
//SYSIN    DD  *
  COPY   OUTDD=OUTDD,INDD=INDD
  SELECT MEMBER=XJCLPROC
/*
```

Step 2 – Offload files from file to remote CPU

At the remote site, offload the files from the file to the remote CPU. Use the sample IEBCOPY jobs to copy the specified members from file to the remote CPU.

Step 2A – Copy XFSJCL to a LNKLIST library

Copy the XFSJCL member into a LNKLIST library or to an authorized library that will be used as a STEPLIB in the XFSJCL procedure.

```
//UNLOAD1   EXEC PGM=IEBCOPY
//SYSPRINT  DD  SYSPRINT=*
//SYSUT1    DD  UNIT=SYSDA,SPACE=(CYL,3)
//SYSUT2    DD  UNIT=SYSDA,SPACE=(CYL,3)
//INDD      DD  DISP=(,PASS,DELETE),DSN=prefix.XPFLOAD.OUT,
//  UNIT=3480,VOL=SER=volser,LABEL=(n,SL,EXPDT=98000)
//OUTDD     DD  DISP=SHR,DSN=prefix.lnklst-library-name
//SYSIN     DD   *
  COPY  OUTDD=OUTDD,INDD=INDD
/*
```

Step 2B – Copy XESJDT00 to a system LPALIB

Copy the XESJDT00 member into a library that is specified in one of the LPA lists (IEAFIX*xx*, IEALPA*xx*, or LPALST*xx*) in *prefix*.PARMLIB:

```
//UNLOAD2   EXEC PGM=IEBCOPY
//SYSPRINT  DD  SYSPRINT=*
//SYSUT1    DD  UNIT=SYSDA,SPACE=(CYL,3)
//SYSUT2    DD  UNIT=SYSDA,SPACE=(CYL,3)
//INDD      DD  DISP=(,PASS,DELETE),DSN=prefix.XPFLPA.OUT,
//    UNIT=3480,VOL=SER=volser,LABEL=(n,SL,EXPDT=98000)
//OUTDD     DD  DISP=SHR,DSN=prefix.lpa-library-name
//SYSIN     DD    *
  COPY OUTDD=OUTDD,INDD=INDD
/*
```

Step 2C – Copy XJCLPROC to a system PROCLIB

Copy the XJCLPROC member to a system PROCLIB. You can use either the name XJCLPROC or your own procedure name.

```
//UNLOAD1   EXEC PGM=IEBCOPY
//SYSPRINT  DD  SYSPRINT=*
//SYSUT1    DD  UNIT=SYSDA,SPACE=(CYL,3)
//SYSUT2    DD  UNIT=SYSDA,SPACE=(CYL,3)
//INDD      DD  DISP=(,PASS,DELETE),DSN=prefix.PROCLIB.OUT,
//  UNIT=3480,VOL=SER=volser,LABEL=(n,SL,EXPDT=98000)
//OUTDD     DD  DISP=SHR,DSN=prefix.proclib-library-name
//SYSIN     DD   *
  COPY  OUTDD=OUTDD,INDD=INDD
/*
```

If a security package is installed, contact your security administrator to authorize the procedure name for execution if necessary.

Step 3 – Install the extended JCL keywords on the remote CPU

Use one of these options to install the XPAF extended JCL keywords:

- To install XPAF extended JCL keywords or apply maintenance to them without performing an IPL, refer to "Installing XPAF extended JCL" in chapter 5, "Customizing your system."
- To activate the keywords until the next IPL without installing them permanently, submit the start procedure command (S *procname*) from the master console. *Procname* is the name of the procedure being started by XOSF, which is usually XJCLPROC.
- To install the XPAF extended JCL keywords permanently, add the COM='S *procname*' command to the COMMND*xx* member in SYS1.PARMLIB. This ensures that the procedure is executed each time you IPL.

Step 4 – Submit the print job

After you have copied the files to the remote CPU and installed the extended JCL, you can submit the print job for printing on the host CPU. For instructions on submitting print jobs, refer to *Section Four: Printing Documents with XPAF*.

10. XPAF printer support

This chapter provides a listing of centralized, decentralized, and PCL-capable printers which are supported by XPAF. It also lists the parameter and keyword settings necessary for specific interface devices.

For all printer types, the capabilities of XPAF are limited to the functional abilities of the printer. For example, if a printer does not print duplex, XPAF cannot duplex a document sent to that printer.

Centralized printer models

XPAF supports these centralized printers:

- DocuPrint Family
- Nuvera Family
- DocuTech Family
- 4xxx EPS Family
- Any printer connected via a FreeFlow Print Server or DocuSP controller with the LCDS Decomposer option

For information on setting up your centralized printers, refer to chapter 11, “Setting up LCDS-capable printers.”

Decentralized printer models

As Xerox no longer sells or supports XES capable (aka UDK or Decentralized) devices, they are no longer documented in XPAF 6.0 or later.

Actual code support has not been removed and these devices will continue to work with XPAF 7.0. For information on this support please refer to old versions of the XPAF 4.0 User Documentation.

The new intermediate font format first used in XPAF 6.0 is not compatible with XES devices. To continue to use XES devices with XPAF 7.0, dynamic font conversion must be disabled via the FNTLGOCON=N XOSF Initialization parameter

PCL-capable printer models

XPAF supports these PCL-capable printers:

- All members of the Phaser, ColorQube, FreeFlow Print Server, WorkCenter, Nuvera, DocuPrint, Docutech families that support PCL
- For information on setting up your PCL-capable printers, refer to chapter 13, “Setting up PCL-capable printers.”

VIPP-enabled printers

VIPP-enabled printers are printers that support VIPP, but are otherwise not supported by XPAF.

11. Setting up LCDS-capable printers

This chapter provides instructions on setting up your LCDS-capable (centralized) printers to print documents from XPAF.

The capabilities of XPAF are limited to the functional abilities of the printer. For example, if a printer does not print duplex, XPAF cannot duplex a document sent to that printer.

Connections to host and communication protocols

You can connect your centralized printer to the host in two ways:

- Via TCP/IP, using LPR, direct socket or the Batch JCL feature
- Channel-attached, using the 3211 protocol
- Via BARR/SNA RJE

Network-attached LCDS-capable printers

You can also attach remotely attached centralized printers to the z/OS Host via TCP/IP.

Channel-attached LCDS-capable printers

Channel-attached LCDS-Capable printers use the standard IBM 3211 protocol

Running Network-attached LCDS-capable printers

To run LCDS-capable printers via TCP/IP, perform these steps:

Step 1. Refer to the “Printing via TCPIP” section to determine the TCPIP protocol to use and how to set up the printer profile

Step 2. On the printer controller, define a Queue that will be used to process jobs from XPAF and note the Initial JDE and JDL specified under the LCDS option of “PDL Settings”.

Specify the same values of the Initial JDE and JDL for the JDE= and JDL= printer profile parameters

Step 3. Review the XTCPJNAM parameter and decide on a format for the “Document Name” appearance on the printer GUI

Running in channel attached ONLINE mode

To run centralized printers in ONLINE mode, perform these steps:

Step 1. Specify **LIBRARY=*ddname*** in the printer's profile to identify the native library where lists of resident fonts, forms, images, and logos are maintained.

If you do not specify LIBRARY=*ddname*, XPAF will download the same resources every time the printer is started, which increases processing time.

Step 2. At the printer console, start the Online Manager to activate online processing.

Step 3. At the printer console, enter **START** to start your default JSL.

You must perform these steps for each printer you want to run in ONLINE mode. For more information about ONLINE commands, refer to your printer's operator guide or reference manual.

Using BARR/SNA RJE

BARR/SNA RJE is a communication interface that can be used to remotely attach centralized printers to the host. You can specify two different modes:

- Standard BARR/SNA RJE support is the most common way a printer is defined to XPAF. It provides these features:
  - Support for up to six centralized printers on the PRINT370 adapter
  - The ability for you to start printers individually
- Extended support is primarily used when a BARR/SNA RJE workstation is at a remote site and either has no operator support or no access to an operator console.

Standard support and extended support provide the same communication functionality. However, with standard support, XPAF initiates the session to the printer, and with extended support, the BARR/SNA RJE workstation initiates the session.

BARR/SNA RJE release 90C2.2 or higher is required for use with XPAF. Refer to the following sections for information about using BARR/SNA RJE.

Standard BARR/SNA RJE

To use standard BARR/SNA RJE support with XPAF, perform these tasks using the information that follows in this chapter:

1. Configure the BARR/SNA RJE workstation. Standard support is designated to BARR/SNA RJE software by specifying Logon Type as “Host Initiated” in the RJE Description.
2. Configure an XPAF printer profile for each printer attached to the BARR/SNA RJE workstation. Standard support is designated in the printer profiles by using the SLU parameter to assign LUs statically to each printer profile. If multiple printers are connected to the BARR/SNA RJE, use the SELECT parameter to identify the printer with which each profile is associated.

Configuring the BARR/SNA RJE workstation

For XPAF to communicate with a BARR/SNA RJE-attached printer, specific RJE Description and S/370 Channel-Attached Printer parameters must be set during BARR/SNA RJE installation.

Use these procedures to configure a BARR/SNA RJE workstation in standard support mode.

Setting up the RJE Description

The RJE Description contains the parameters needed by the BARR/SNA RJE program and the host system.

Follow this procedure to create an RJE Description:

Step 1. From the BARR/SNA RJE workstation, access the Installation Description menu by following the procedure described in the BARR/SNA RJE documentation.

Step 2. Select **RJE Description**.

Step 3. At the RJE Description screen, complete these steps:

a. Set ‘RJE System?’ to **JES2**. You must enter JES2 irrespective of your actual JES system. BARR/SNA RJE generates JES initialization statements based on this parameter.

b. For ‘Remote Name,’ enter a unique workstation name in the format RMT*nnnn*.

c. Omit the ‘Password’ parameter.

d. For ‘Printers,’ enter the number of PRINT370-attached Xerox printers. BARR/SNA RJE supports up to six PRINT370-attached printers.

e. For ‘Punches,’ enter **0**.

f. For ‘Readers,’ enter **0**.

g. For ‘APPLID,’ omit this parameter.

h. For ‘LOGMODE,’ enter **BATCH**. This is the BARR/SNA RJE-provided logmode.

i. For ‘Logon Type?,’ enter **Host Initiated**.

Defining S/370 printers

In addition to the RJE Description parameters, you also must specify PRINT370 parameters. To perform this step, you must have the PRINT370 package, including adapter, cable, terminators, and software installed on your system.

Complete this procedure to define an S/370 printer to BARR/SNA RJE.

NOTE: Use the default setting for any parameter displayed on a screen but not listed in this section.

Step 1. Access the Installation Description menu by following the procedure described in the BARR/SNA RJE documentation.

Step 2. Select **S/370 Channel-Attached Printers**.

Step 3. From the list of printers displayed, select the appropriate printer.

Step 4. At the S/370 Channel-Attached Printer screen, set 'Printer type?' to **Xerox laser**.

Step 5. Select **Set Printer Options**.

Step 6. At the Printer Options screen, set 'Modify advanced printer options?' to **Yes**.

Step 7. At the Advanced Printer Options screen, enter these values:

- Set 'Pad zero length records' to **No**.
- Set 'Pad zero length Skip to channel 1' to **No**.

Configuring the printer profile

XPAF uses initialization and/or printer profile parameters to define a BARR/SNA RJE workstation. Review these printer profile parameters to determine if you need to change the settings.

- BUFSIZE
- CONVERTER
- SDLCRLC
- SELECT
- SETUP
- SLU
- WRITER

For more information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Sample profile

This figure shows a sample printer profile for standard BARR/SNA RJE support.

```
*PRT4050
 DEVICE=4050,
 BUFSIZE=512,
 CONVERTER=BARRSNA,
 LUTYPE=LU1,
 SDLCRLC=N,
 SELECT=PRINT1,
 SETUP=PDIR,
 SLU=SLU2222,
 WRITER=REMOTE
```

Optimizing performance

For documents sent to BARR/SNA RJE-attached printers, you must use the CKPTPAGE JES printer parameter to indicate the number of pages in a chain. XOSF uses only the CKPTPAGE JES printer parameter value for BARR/SNA RJE-attached printers; it does not use the CKPTPAGE IBM JCL keyword value.

To obtain the best performance, use the largest possible value for your site. For example, a 10-page document sent with CKPTPAGE=10 is sent in one chain with one response. However, the same document sent with CKPTPAGE=1 is sent in 10 chains with 10 responses.

Defining the BARR/SNA RJE workstation to XPAF

During workstation configuration, BARR/SNA RJE generates RJE System Definitions based on the settings established in the RJE Description.

Each RJE System Definition consists of two types of statements:

- A Remote Definition statement in the form RMT(*n*).
- One or more Remote Printer statements in the form R(*n*).PR(*m*). There is a Remote Printer statement for each remote printer.

The RMTTBL initialization parameter is used to specify the XINPARM member containing the RJE System Definition. The RJE System Definition must be replicated and stored in a member of the XPAF XINPARM library. The definition in XINPARM is read during initialization and used to create the run-time data structures that control the BARR/SNA RJE environment.

Procedure

To define the BARR/SNA RJE workstation to XPAF, follow this procedure:

Step 1. Create an RJE System Definition in XINPARM:

a. From the BARR/SNA RJE workstation, complete the RJE Description to generate the RJE System Definition. For more information, refer to "Setting up the RJE Description" earlier in this chapter.

b. From the host, add the RMTTBL initialization parameter to the XINSXOSF member of XINPARM. This parameter specifies the name of the member that will contain the RJE System Definition. For more information about this parameter, refer to *Section Five: XPAF Parameter and Keyword Reference*.

c. In XINPARM, create a member with the name you specified in the RMTTBL initialization parameter.

d. Type a copy of the RJE System Definition you created from the BARR/SNA RJE workstation into the newly created member.

e. Within the member, edit these parameters included in the Remote Definition statement, if necessary:

- BUFSIZE
- COMPRESS
- NUMPRT
- NUMRDR
- SETUP
- PASSWORD

For more information, refer to step 2 of this procedure. All other parameters in the Remote Definition statement are ignored by XPAF.

f. Within the member, edit these parameters included in the Remote Printer statements, if necessary:

- DRAIN
- SELECT

For more information, refer to step 3 of this procedure. All other parameters in the Remote Printer statements are ignored by XPAF.

Step 2. Edit the workstation-specific Remote Definition parameters included in the RMT(*n*) statement:

BUFSIZE — Specifies the buffer size to be used for transmitting data to the BARR/SNA RJE workstation. You can specify a value from 256 to 3840.

XOSF determines the buffer size according to this processing hierarchy:

- XOSF's system default buffer size is set to 512.
- If it is not set to zero, the DLOGMODE (default logmode table entry) buffer size overrides the default.
- If specified, the BUFSIZE value on the RMT(*n*) statement overrides all other settings.

COMPRESS — Specifies whether compression will be used to increase line throughput.

NUMPRT	Specifies the number of RJE printers.
NUMRDR	Specifies the number of RJE readers. If this parameter is assigned a value other than zero, XOSF establishes one reader.
SETUP	Enables generation of Peripheral Device Information Record (PDIR). Specify **SETUP=PDIR**. The PDIR contains this information: date, time, forms, FCB name, copies, volume, number of print lines, and job name. You can use the information in these fields to manage your output and control job routing. The copies field passed in the PDIR contains the value specified for the COPIES IBM JCL keyword. BARR/SNA RJE uses this value to determine the number of copies needed. Also, the output must be directed to the BARR/SNA RJE spool. For example, if a value of three is passed in the PDIR, XPAF will transmit the job to the BARR/SNA RJE workstation once, then the BARR/SNA RJE workstation will send the job to the printer three times. If the JCL for a job does not include the COPIES IBM JCL keyword, no additional copies will be printed. You can also specify SETUP=(PDIR,NOCOPY) to generate a PDIR record without any “copies”. This setting may be used when you want to print the PDIR information but the jobs are too large to be contained on the BARR spool. For the PDIR information to appear on the BARR/SNA print spool display, you must change the “ending of file name” option which appears when a device is assigned to the spool. Refer to the BARR/SNA documentation for instructions.
PASSWORD	Specifies a logon password. Use this parameter to restrict use of the remote connections to authorized users. When a BARR/SNA RJE workstation logs on to XPAF, the value in this parameter is compared to the value in the PASSWORD RJE Description parameter. If they are different, the logon is rejected, and XPAF issues an error message.

Step 3. Edit the Remote Printer parameters included in the R(*n*).PR(*m*) statement:

DRAIN	Requires an operator command to begin processing. If you include this parameter, XOSF does not start the printer.
SELECT	Specifies the name of the XPAF printer profile member which is associated with this BARR/SNA RJE-attached printer. You must change the value generated by BARR/SNA RJE to the FSA printer name.

Example

Assume that you will be using extended BARR/SNA RJE support with two centralized printers: PRT123 and PRT456. You want to use a buffer size of 3840 and enable PDIR support.

Step 1. From the BARR/SNA RJE workstation, specify this set of parameters in the RJE Description to support two centralized printers.

RJE System: JES2
Remote Name: RMT2
Printers: 2
Punches: 0
Readers: 1

BARR/SNA RJE generates this RJE System Definition for JES:

```
RMT(2)   DEVTYPE=LUTYPE1,BUFSIZE=512,COMPACT=YES,PASSWORD=ABC123,
   COMPRESS=YES,CONS=YES,MFORM=J,NUMPRT=2,
   NUMPUN=O,NUMRDR=1
R(2).PR(1)  CKPTLINE=66,CKPTPAGE=10,PRWIDTH=255,SELECT=PRINT1
R(2).PR(2)  CKPTLINE=66,CKPTPAGE=10,PRWIDTH=255,SELECT=PRINT2
R(2).RD(1)
```

Step 2. From the host, specify **RMTTBL=REMOTE** in the XINSXOSF member of XINPARM.

Step 3. In XINPARM, create a member named REMOTE.

Step 4. Type a copy of the RJE System Definition you created from the BARR/SNA RJE workstation into the REMOTE member and make these changes:

- Update the BUFSIZE parameter in the Remote Definition statement to specify **BUFSIZE=3840**.
- Add **SETUP=PDIR** to the Remote Definition statement.
- Update each SELECT parameter in a Remote Printer statement to identify the appropriate FSA printer.

When completed, REMOTE contains this RJE System Definition:

```
RMT(2)      DEVTYPE=LUTYPE1,BUFSIZE=3840,COMPACT=YES,PASSWORD=ABC123,
     COMPRESS=YES,CONS=YES,MFORM=J,NUMPRT=2,
     NUMPUN=O,NUMRDR=1,SETUP=PDIR
R(2).PR(1)  CKPTLINE=66,CKPTPAGE=10,PRWIDTH=255,SELECT=PRT123
R(2).PR(2)  CKPTLINE=66,CKPTPAGE=10,PRWIDTH=255,SELECT=PRT456
R(2).RD(1)
```

Configuring the printer profile

XPAF uses initialization and/or printer profile parameters to define a BARR/SNA RJE workstation. Review these printer profile parameters to determine if you need to change the settings for printers that are connected to the host via BARR/SNA RJE communications. For more information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

- CONVERTER
- SELECT
- WRITER

Sample profile

This is a sample printer profile for extended BARR/SNA RJE support.

```
*PRT4050
 DEVICE=4050,
 CONVERTER=BARRSNA,
 LUTYPE=LU1,
 SELECT=PRINT1,
 WRITER=REMOTE
```

Optimizing performance

For documents sent to BARR/SNA RJE-attached printers, you must use the CKPTPAGE JES printer parameter to indicate the number of pages in a chain. XOSF uses only the CKPTPAGE JES printer parameter value for BARR/SNA RJE-attached printers; it does not use the CKPTPAGE IBM JCL keyword value.

To obtain the best performance, use the largest possible value for your site. For example, a 10-page document sent with CKPTPAGE=10 is sent in one chain with one response. However, the same document sent with CKPTPAGE=1 is sent in 10 chains with 10 responses.

Remote job entry

Remote job entry allows JCL stored at the BARR/SNA RJE workstation to be submitted to z/OS for processing through XPAF. Output from these jobs can subsequently be routed back to the BARR/SNA RJE workstation for printing. This option applies to extended BARR/SNA RJE support only.

The procedure for using remote job entry is described in *BARR/SNA RJE Version 90, Edition 1: Remote Communications for IBM PC, PS/2, and compatible computers*.

Loading LCDS resources from a FreeFlow Print Server

As part of the installation process, three jobs have created in the STAGE2 library to assist with the transfer of resources from the FreeFlow Print Server to the mainframe. In order for this process to work, FTP access must be enabled ion the FreeFlow Print Server and you must

To load LCDS resources from a FreeFlow Print Server to the mainframe follow these steps:

Step 1. Allocate datasets to use in the upload process by submitting STAGE2(RJOB301)

Review and submit STAGE2 job RJOB301

Step 2. Transfer resources from the FreeFlow Print Server to the 'NOHDR' partitioned datasets created in step 1.

Edit STAGE2 job RJOB302 and change the following:

- IPADDR to the ip address of the FreeFlow Print Server controller
- PUID to the userid of the account on the FreeFlow Print Server controller can read the /var/spool/XRXnps/resources/lcds directory via FTP.
- PWD to the password of the userid

Submit RJOB303

Step 3. Add the header record to resources

The XOAF utilities, used to load resources into the XPAF libraries, identify and validate each resource by examining the 'LPS Tape Label Header Record' of each font, form, image and logo. The FreeFlow Print Server removes the header record when resources are loaded onto the controller, so the header record needs to be added to each resource before it can be loaded into the XPAF library,

To add the header record, review and submit STAGE2 job RJOB303

Step 4. Load the resources into your XPAF libraries

After RJOB303 has successfully completed you will have a set of libraries with all the printer ready to load via XOAF. You can either use the XOAF ISPF panels or XOAF Batch jobs to load the resources. The STAGE2 library contains customized JCL to run XOAF in batch to load the resources. Refer to the following STAGE2 members:

RLFNTLD, RLFRMLD, RLIMGLD, RMJSLLD and RLLGOLD

12. Setting up decentralized printers

As Xerox no longer sells or supports XES capable (aka UDK or Decentralized) devices, they are no longer documented in XPAF 5.0 or later.

Actual code support has not been removed and these devices will continue to work with XPAF 7.0. For information on this support please refer to old versions of the XPAF 4.0 User Documentation.

13. Setting up PCL-capable printers

This chapter provides instructions for setting up your PCL-capable printers to print documents from XPAF.

The capabilities of XPAF are limited to the functional abilities of the printer. For example, if a printer does not print duplex, XPAF cannot duplex a document sent to that printer.

Preparing resources

If you require the country-specific variants of the R03 fonts to print on a decentralized or PCL-capable printer, you must convert them from the centralized font library using XOAF or batch processing.

The following JCL is similar to the UFTCONV member in XPFSAMP. You can use this job to assist you in your font conversion. Use your standard job card information and make any necessary modifications to the JCL as described in the comments.

```
//job-name JOB job-information
//*
//*      RUN UFTCONV - GENERATE CONVERT XFONT COMMANDS
//*
//*   This job will compare your CFONTLIB and DFONTLIB and generate
//*   CONVERT XFONT commands for any fonts found in CFONTLIB that are
//*   not also in DFONTLIB.  The resulting command file should then be
//*   edited to include only those fonts you want converted.  The
//*   resulting file is then used as XOAIN input to XOAF Batch to do
//*   the font conversion.
//*
//* 1. Modify the following DD statements to point to your XPAF
//*    libraries.
//*
//* 2. SYSUT2 should point to an 80-byte LRECL file or PDS member that
//*    will eventually be input to XOAF Batch processing.
//*
//* 3. Submit this job.  The SYSUT2 output will be CONVERT commands
//*    for XOAF Batch.
//*
//* 4. Edit the SYSUT2 file and delete any commands for fonts that you
//*    do not want converted.
//*
//* 5. Use your XOAF Batch job to read the edited SYSUT2 file as
//*    XOAIN.
//*
//*        ========> EXEC UFTCONV <========
//UFTCONV  EXEC PGM=UFTCONV,REGION=6M
//STEPLIB  DD DISP=SHR,DSN=prefix.XPFLIB     <==YOUR XPAF LINKLIB
//CFONTLIB DD DISP=SHR,DSN=prefix.CFONTLIB   <==YOUR XPAF CFONTLIB
//DFONTLIB DD DISP=SHR,DSN=prefix.DFONTLIB   <==YOUR XPAF DFONTLIB
//SYSUT2   DD DISP=SHR,DSN=prefix.JCL(XFONT) <==TO BE XOAF BATCH INPUT
//*YSUT2   DD SYSOUT=X
//
```

Printing to PCL-capable printers

The following sections provide step-by-step instruction on how to perform these functions:

- Set up PCL-capable printers
- Send documents to PCL-capable printers using TCP/LPR or TCP/IP protocols
- Set device-specific features

Setting up PCL-capable printers

To set up PCL-capable printers to accept documents from XPAF, perform these steps:

Step 1. Allocate and initialize the PCL font, form, and image libraries.

- If you chose to have XPAF allocate the PCL resource libraries during installation (you did not specify OPTIONS=NOPCL in the #GENRSC macro), continue with step 2.
- If you entered OPTIONS=NOPCL in the #GENRSC macro at installation time, allocate and initialize the PCL resource libraries on your host system. To manually allocate the libraries, use the LDMUTIL batch utility. For instructions on using this utility, refer to appendix A, “Defining and initializing native libraries.”

Step 2. If you want to use libraries other than the default, add the PFONTLIB, PFORMLIB, and PIMAGELIB parameters to either or both of these locations:

- The XINSXOSF member of XINPARM
- The printer’s profile

Ensure that these parameters point to the DD statements that define the PCL resource libraries for the specified printer.

NOTE: To use named fonts they must first be downloaded to your printer. This can be achieved by running the sample PCL font extraction REXX procedure, FONTEXTR, and then using LPR to send the output dataset to the relevant printer. Please refer to the FSDOWNLOAD PJL command in the *System Administrator Guide* for the target printer for additional information.

For more information on the parameters and keywords mentioned in the previous steps, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Sending TCP batch print jobs to PCL-capable printers

Follow this procedure to send a document to a PCL-capable printer using the TCP/LPR or TCP/IP protocols.

Step 1. Ensure that your TCP JCL datasets have been created and contain your customized XTCPLPRJ and XTCPIPJ members. Use XTCPLPRJ to send documents using the TCP/LPR protocol, and XTCPIPJ to send documents using the TCP/IP protocol.

Step 2. Ensure that a printer profile has been created for each printer you will be sending documents to using the TCP/LPR or TCP/IP protocols, and that it contains all the necessary TCP-related printer profile parameters.

Step 3. Send your document to the destination printer. XPAF will save the document to a disk dataset, and use the specified TCP JCL member to submit a batch job that will send it to the destination printer. When the dataset has been successfully transmitted, XPAF deletes it.

If you have not correctly specified the TCP dataset and JCL member in your printer's profile, XPAF will issue an error message. To print the dataset, you must manually LPR it. For example, if you are using IBM TCP/LPR, you could issue this LPR command:

LPR '*dataset-name*(*member-name*)' AT *ip-address* PRINTER queue-name FILTER L BINARY

Refer to IBM's *TCP/IP for z/OS: User's Guide* for more information about this and other LPR commands you can use. If you are using another vendor's TCP software, refer to their documentation for valid command syntax.

For more information on TCP batch printing, refer to "TCP batch printing" on page 15-5.

Modifying document processing

There are several XPAF-supplied parameters and keywords used to print PJL and job ticket documents. This section identifies some of the keywords available in XPAF to change document processing. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the keywords identified in this section and for other XPAF keywords available for document processing.

Table 13-1. Keywords for PJL and job ticket processing

Keyword	Function
XPJLMEM	Must be specified to indicate PJL processing.
XJOBTMEM	Specifies a job ticket to be retrieved from the dataset defined by LPRDSN.
XUSERAC1-3	Specifies user-defined variable information used by the members described in this table for variable substitution at the time of document creation.

Using the insertion feature to add PJL and job ticket commands

You can use the job ticket insertion feature to set device-specific features on NPS and DocuSP printers, and the PJL insertion feature to set device-specific features on PCL-capable printers. For example, when a PJL member is created to print three copies of a document, XPAF only transmits the document once, however, when the printer processes the PJL three copies are printed.

The following members are provided in XPFSAMP:

- XPJL3COP — an example of PJL commands
- XJTKJOB — an example of a job ticket
- XJTKJOB1 — an example of a variable insert

The XPFSAMP member, XPJL3COP, provides a set of PJL commands that will produce three collated copies and suppress the printer-generated banner page on a DC265LP printer.

```
@PJL COMMENT ** 3 copies, suppress DC265LP banner page **
@PJL SET COPIES=3
@PJL SET JOBOFFSET=ON
@PJL COMMENT XRXbegin
@PJL COMMENT OID_ATT_START_SHEET OID_VAL_JOB_SHEET_NONE;
@PJL COMMENT OID_ATT_JOB_TYPE OID_VAL_JOB_TYPE_PRINT;
@PJL COMMENT OID_ATT_INTERLEAVE OID_VAL_INTERLEAVE_NONE;
@PJL COMMENT OID_ATT_OUTPUT OID_VAL_OUTPUT_PAGE_COLLATE;
@PJL COMMENT XRXend
@PJL ENTER LANGUAGE=PCL
```

The XPFSAMP member, XJTKJOB, when used on a DocuSP printer with a stapler, provides a set of 2 copies of the document, each copy will be stapled separately.

```
%XRXbegin: 001.0300
%XRXcopyCount: 2
%XRXedgeStitching: SinglePortrait
%XRXbookletMaker: False
%XRXedgeStitchPosition: none top
%XRXbinding: None
%XRXend
```

NOTE: Since the copying is performed at the printer level in this example, each copy will contain a set of banner pages if banner pages have been enabled in the JES printer definition.

XPAF can insert document-specific information into a job ticket or PJL member using XJOBTMEM or XPJLMEM. Variable substitution occurs when using the following information in XJOBTMEM or XPJLMEM:

Variable	Description
%FORMNAME	The JES FORM name used to process the document, i.e. STD1
%STEPNAME	The job step name i.e. PRTSTEP
%ACCOUNT	The account number used to print the job i.e. D498
%JOBNAME	The JES job name i.e. HWMPRTAC
%PRINTER	The XPAF/JES printer name i.e. PRT123
%STEPDDN	The job step ddname i.e SYSUT1
%USERAC1	User variable extended JCL field
%USERAC2	User variable extended JCL field
%USERAC3	User variable extended JCL field
%DEVICE	The printer device from the XPAF PPT i.e. N32
%IPADDR	The IP address of the document i.e 192.64.0.1
%IPADDZ	The default IP address from the XPAF PPT i.e 192.64.0.4
%LPRDSN	The name of the XPAF created temporary LPR dataset

Variable	Description
%JOBNO	The JES job number
%LINES	The number of records in the dataset
%PAGES	The number of pages in the dataset
%QNAME	The name of the LPR queue the document will be sent to
%QNAMZ	The name of the default LPR queue in the XPAF PPT
%PORT	The name of the IP port number the document will be sent to
%PORZ	The name of the default IP port number in the XPAF PPT
%USER	The user name of the account that submitted the job

Advanced users of this feature can use most of the fields defined in the following XPAF macros:

- Document Information Block, member @XDIB in SAMPMAC
- Printer Profile Table, member @XXQPPT in SAMPMAC
- Output Data Block, member @XODB in SAMPMAC
- XDIB DJDE extension, member @XDJD in SAMPMAC

Review the macros supplied in the sample macro library and use a '%' followed by the field name.

For example, the JES output class is held in the XDIB in field XDIBSOCL. To use the sysout class as a variable field in a PJL or job ticket command file, specify %XDIBSOCL.

The XPFSAMP member, XJTKJOB1, shows how variable inserts can override the XPAF-generated job name displayed on the job queue on a DocuSP printer:

```
%XRXbegin: 001.0300
%XRXtitle: %JOBNAME %JOBNO %FORMNAME %XDIBSOCL
%XRXcopyCount: 1
%XRXend
```

NOTE: All PJL commands begin with the prefix “@PJL”. All job ticket commands begin with the prefix “%XRX”.

Default FORM and JOBNAME PJL command processing

You can create default PJL commands that will be used for a job based on the JES job name or FORMS name. Simply create a member containing PJL commands with the same name as the JOB or FORM. XPAF first searches for a member that matches the JOBNAME or FORM name and will use these commands if present.

The hierarchy of the member name to use is as follows:

1. JOBNAME
2. JES FORM name
3. extended JCL keyword XPJLMEM
4. The value specified by the XPJLMEM PPT keyword

Preparing to add PJL commands to XPAF-created PCL documents

Step 1. Create the relevant members in the LPRDSN dataset to include the PJL desired parameters.

Step 2. (Optional) To include a set of PJL commands that will be applied to documents with no specified user-defined commands, point the XPJLMEM parameter in the printer's PPT to the member containing the desired commands.

Step 3. Update the JCL to add the XPJLMEM keyword to the relevant OUTPUT statement(s)

Step 4. Ensure the target printer supports the PJL commands created in the PDS member used.

Default FORM and JOBNAME job ticket command processing

You can create default job ticket commands that will be used for a job based on the JES job name or FORMS name. Simply create a member, with the job ticket, with the same name as the JOB or FORM. XPAF first searches for a member that matches the JOBNAME or FORM name and will use these commands if present.

The hierarchy of the member name to use is as follows:

1. JOBNAME
2. JES FORM name
3. extended JCL keyword XJOBTMEM
4. The value specified by the XJOBTMEM PPT keyword.

Preparing to add job ticket commands to XPAF-created PCL documents

Step 1. Create the relevant members in the LPRDSN dataset to include the desired job ticket parameters.

Step 2. (Optional) To include a set of job ticket commands that will be applied to documents with no specified user-defined commands, point the XJOBTMEM parameter in the printer's PPT to the member containing the desired commands.

Step 3. Update the JCL to add the XJOBTMEM keyword to the relevant OUTPUT statement(s).

Step 4. Ensure the target printer supports the job ticket commands created in the PDS member used.

Specifying a Secure Print pass code

Many Xerox PCL devices support the “Secure Print” feature that assigns a one to 12 digit pass code to a document sent to the printer. The document will not print until released by manually entering the pass code on the device. For more information on the secure print feature, or to determine if your printer supports the secure print feature go to the Xerox support page, enter the printer’s model number and search on “Secure Print”.

Specifying the pass code via extended JCL.

To specify a secure print pass code for a document, use the XSPPCODE extended JCL keyword.

Note: The value specified will be visible in the JESJCL system dataset as well as your JCL

Specifying the pass code via an XPAF User Exit

The secure print passcode is stored in the XPAF XDIB control block in field XDIBSPPC. To set a pass code for a document, move a 1 to 12 digit character string into this field..

For example, add the following code example for XPAF user exit 2 will specify a pass code of ‘123456789’ to any job with a job name of “SECUREJB”

```
CLC   XDIBJNAM,=CL8’SECUREJB’     Is this the secure job?
BNE   NOTSEC                      No, carry on
MVC   XDIBSPCC,=CL12’123456789’   Set the Secure print pass code
```

Note: To allow users to specify their own pass code, the user exit could be modified to read the pass code from an ACF protected dataset.

14. Overview of the PDF Transform

The XPAF PDF Transform takes data from any conventional datastream (such as line-mode, XES, or LCDS/DJDE) and converts that data into Adobe's Portable Document Format (PDF). Once it has been converted, the data can be:

- Printed conventionally on any Xerox PDF-compliant printer
- Attached to an E-mail and sent to any valid e-mail address in the world
- Transmitted using the direct LPR or Direct Socket protocols
- Passed to the XPAF Batch JCL feature for subsequent processing, such as
  - Storing on an FTP server for later viewing
  - Invoking LPR with additional parameter padding

NOTE: Xerox recommends using Adobe Reader 6.0 or above to view your XPAF-generated PDF documents. Older versions of the Adobe Acrobat Reader may not process and display PDF form objects correctly.

Configuring XPAF

This section outlines how to configure your XPAF system for use with the PDF Transform.

Adding the license string

The PDF Transform requires a license string tied to the CPUID that XOSF runs under. To obtain a license string, contact your local Xerox Sales Representative.

Step 1. Create member XINSLSTR in your XPAF XINPARM dataset and copy and paste the two records from the license string file (PC text file) into the new member.

Step 2. Save the newly created member, XINSLSTR.

Figure 14-3. Sample license string member XINSLSTR

```
Cpuid=FF01565A2066, ExpDate=01-Jan-2012, Feature=XPAF_PDF
LicenseString=BF5F1B29860CD8378406DA4ADD9
```

Creating a printer profile

Step 1. Create a printer profile for the PDF Printer. Refer to the New initialization parameters and New printer profile parameters sections of this document for more information about the parameters you can specify.

a) Set an IP address and a Queue name (note that these values are not used when TCPEMAIL=MAILONLY is specified).

Figure 14-4. Sample PDF printer profile configured for e-mail support

```
DEVICE=PDF, Required to invoke the PDF transform
XMAILADR=EMAIL, EMAIL Address list member name
XSMTPCTL=XSMTPCTL, HTML e-mail skeleton member name
TCPMAIL=MAILONLY, (BOTH | MAILONLY)
TCPMODE=TCPLPR, Required to invoke e-mail support
LPRDSN=your.xpaf.XINPARM,
PRINTMSG=N
```

Step 2. Create JES printer definitions for your new PDF printer(s) or use existing

Step 3. JES printer definitions.

You are now ready to start your new PDF printers and generate documents in PDF format.

PDF Font Substitution

This section describes how to set up and use a PDF Font Substitution table with the XPAF PDF Transform. This feature was originally designed to improve the viewing of documents rather than using XPAF converted fonts. However, this need was obviated with the vast improvements made to viewing Adobe Reader 6.0.

PDF Font Substitution can still be of benefit to customers wishing to decrease the size of the PDF files generated by XPAF.

Defining a PDF font substitution table

A PDF font substitution table is created as a PDS member of the XINPARM dataset. The member name is referenced via the XPDFFSUB extended JCL, Printer Profile, or Initialization parameter.

An entry in the font substitution table, consists of a single line with four values:

1. **Xerox font name:** This is the name of the Xerox font that you want to substitute. It must be the complete name and wild cards are not supported. For AFP jobs, the name must be the Xerox replica font name and not the IBM character set name. For LCDS documents the Xerox font name will be the name of the converted decentralized font, which may include a split number.

2. **Scaling factor:** This is a number in the range 0.00001 to 9999999 which is used to scale the outline font both vertically and horizontally. There is no ideal number for this value. The ‘font height’ of the original Xerox font is a good value to start with. For LCDS documents, the font height of the original Xerox font can be obtained by displaying the XPAFXFI entry for the original font.

3. **Escapement scaling factor:** This is a real number in the range 0 to 9999999 which is used to scale the escapement value of the characters in the outline font.

- A value of ‘0’ indicates that the character widths of the outline font are used.
- A value of ‘1’ indicates that the widths of the original Xerox font are used and multiplied by the scaling factor.
- A value other than ‘0’ or ‘1’ indicates that the widths of the original Xerox font are used and multiplied by the value specified.

4. **Outline font name:** The name of the outline font to use instead of the Xerox converted font. This name should be one of the 14 supported outline font names:

- `Helvetica`
- `Helvetica-Oblique`
- `Helvetica-Bold`
- `Helvetica-BoldOblique`
- `Courier`
- `Courier-Oblique`
- `Courier-Bold`
- `Courier-BoldOblique`

- Times-Roman
- Times-Bold
- Times-Italic
- Times-BoldItalic
- Symbol
- ZapfDingbats

Comments can be included in the table by placing an '*' in column 1.

Figure 14-5. Sample PDF Font substitution table

```
*
* PDF FONT SUBSTITUTION TABLE
* ===========================
*
* '*' in column 1, is a comment
* /--Xerox font name
* |
* | /--Scaling factor
* | |
* | | /--Escapement Scaling factor
* | | | 0 = Use Outline font character escapement
* | | | 1 = Use Scaling factor
* | | | nn.nn = escapement factor
* | | |
* | | | /-- Outline font name
* | | | |
* | | | |
* v v v v
HL124B 100 0 Helvetica
H106JP 28 0 Helvetica
H108JP 33 0 Helvetica
H208JP 36 0 Helvetica-Bold
M0112B 36.36 36.36 Courier
P06BOB 37 0 Courier
P07TYA 41.65 0 Courier
P08TAC 50 0 Courier
P08TAB 50 0 Courier
UN104A 18 0 Helvetica
UN104B 18 0 Helvetica
UN104E 18 0 Helvetica
UN106E 25 40 Helvetica
UN107E 30 0 Helvetica
```

Points to consider

- When creating the PDF font substitution table the best way is to start with a ‘Scaling value’ equal to the Xerox font height and a ‘Escapement scaling value’ of ‘0’.
  - Adjust the ‘Scaling value’ until the height of the substituted font matches the height of the original Xerox font.
  - Finally, adjust the ‘Escapement scaling value’ so the escapement of the substituted font matches the widths of the original Xerox font.
  - The formula: Escapement_scaling_value = 1000 / scaling_value can be used to match the original Xerox font widths
- You can refer to PC based fonts for the outline name. However, a warning will be generated.
- A maximum of 100 entries can be specified in the font substitution table

Encrypting PDF Documents

PDF Encryption - Overview

Encrypted PDF documents are also referred to as “Secure”. Some PDF readers will add “(SECURED)”, to the viewing window title, to show that an encrypted document is being viewed

PDF documents are encrypted by specifying an owner password, a user permissions value and an optional user password.

The Owner Password

The owner password is the master password and if supplied to the viewing software will provide full access to the PDF document. To set the owner password, use the XPDFOPW extended JCL keyword.

The User Password

The user password is required to open an encrypted PDF document for viewing.

The user password can be null (an empty string).

If a null user password has been specified, the user is not required to enter a password to view the document, and most viewers will automatically display the document without prompting for a password. To set the user password, use the XPDFUPW extended JCL keyword.

User Permissions

An encrypted PDF document has permission flags that tell the displaying software which user actions are permitted and which are not. For example, the permission flags can be set to prevent a user from printing the PDF document. Not all of the permission flags are valid in the XPAF environment. XPAF provides a set of keywords that will set the relevant flags. See Chapter 43, “XPAF extended JCL keywords” for information on the available options.

Encrypting PDF documents

To encrypt an XPAF generated PDF document use the XPDFOPW, XPDFPW, and the XPDFPERM extended JCL keyword. Note: These values can also be set via XPAF User Exit 2. Refer to sample user exit XUXIT02E in XPFSAMP.

Points to note

This sections covers information relating to converting documents to PDF format

General

This section applies to all data stream types.

Converting duplex documents

To reproduce the correct output, when converted documents are printed, duplex documents are converted with blank pages inserted in the PDF file where a blank page would occur on the original print stream. Also see the PDFDUPLEX FEATURE= Printer Profile Parameter.

AFP Specific

This section relates to AFP data streams converted to PDF.

Viewing orientation

The viewing orientation of a page in a converted AFP document is taken from the MDD, if one exists. If an MDD is not found, the value specified for the PMODE keyword/parameter is used.

The viewing orientation of a PDF file created from an AFP datastream can be overridden by the XPDFVIEW extended JCL keyword. Refer to the extended JCL Keyword section for more information.

Known issues

DJDE processing considerations

- If your DJDE document includes the COPIES keyword, you may encounter errors viewing and printing the resulting PDF document.

15. Printing via TCP/IP

This chapter provides instructions for printing via TCP/IP. The TCP/IP direct socket support allows XPAF to transmit transformed document data across a network using TCP/IP socket.

This feature uses the IBM assembler macros from TCP/IP for z/OS version 3, release 2, and is called EZASMI. These macros allow an application to interface with the latest version of TCP/IP for z/OS and provide for the new functionality of IBM's TCP/IP interface, HPNS (high-performance native sockets). Utilizing these macros ensures all new performance and functionality that is added to IBM TCP/IP for z/OS automatically works with XPAF without any application changes being required.

TCP/IP printing methods

There are three methods available for printing via TCP/IP:

- Direct LPR
- Direct socket
- TCP/IP batch

NOTE: Any vendor and version of TCP/IP can be used, but for direct LPR, users must have IBM TCP/IP version 3.2.0 or higher installed.

Direct LPR

Direct LPR uses the LPR/LPD protocol to send data to an LPD server. The LPD server can reside on the printer or can be a separate device such as a Windows or UNIX Server.

Direct socket

Direct socket uses a different protocol to send data to an IP address and port number (referred to as a “socket”). XPAF sends the data as soon as it is generated so there is no need to create an intermediate file. Only certain printers can support this protocol.

TCP/IP batch

TCP/IP batch printing is used when direct printing is not desired or when IBM TCP/IP support is unavailable.

XPAF JCL keywords XIPADDR, XIPPORT, XLPRQNAM allow for dynamic IP assignment to a document via extended JCL. Each printer definition contains a default IP address and port number to support TCP/IP printing. If no IP address or port number is given via the JCL, the defaults from the printer parameters are used for each document transmission.

Sending print jobs via TCP/IP

Follow these procedures to send documents to printers using the TCP/IP protocol.

TCP direct LPR printing

Use this method if your printer supports the LPR/LPD protocol (or is connected via an LPD server) and you are running IBM's TCP/IP for z/OS.

Step 1. Review the TCPIPJOB initialization parameter within XINSXOSF.

Step 2. Ensure that a printer profile has been created for the printer you will be sending documents to using the direct LPR connection, and that it contains all the necessary printer profile parameters.

For example

```
*PRT1240
DEVICE=PHASER,
 IPADDR=13.245.111.001,(IP address of printer)
 TCPPORT=515,(TCP port)
 LPRQNAME=PASSTHRU,(LPR queue name)
 TCPMODE=TCPLPR(Indicates LPR/LPD)
```

Step 3. Send your document to the destination printer.

If you have not specified your printer’s profile correctly, XPAF will issue an error message. See *Section Six: XPAF Messages* for instructions concerning any error messages.

TCP direct socket printing

Use this method if your printer supports a direct socket connection and you are running IBM's TCP/IP for z/OS.

Step 1. Review the initialization parameter TCPIPJOB.

Step 2. Ensure that a printer profile has been created for the printer to which you will be sending documents using the direct socket connection, and that it contains all the necessary printer profile parameters.

For example:

```
*PRT1240
DEVICE=PHASER,
IPADDR=13.245.111.001,(IP address of printer)
TCPPORT=245,(TCP port)
TCPMODE=TCPIP(Indicates TCP/IP direct
socket)
```

Step 3. Send your document to the destination printer.

If you have not specified your printer's profile correctly, XPAF will issue an error message. Refer to *Section Six: XPAF Messages* for instructions concerning any error messages.

TCP batch printing

Use this method if your printer supports the LPR/LPD protocol (or is connected via an LPD server) and you are using a TCP/IP stack other than IBM's TCP/IP for z/OS.

Step 1. Ensure that your TCP JCL dataset has been created and contains your customized XTCPLPRJ member.

Step 2. Ensure that a printer profile has been created for each printer to which you will be sending documents using the direct TCP/LPR protocol, and that it contains all the necessary TCP-related printer profile parameters including:

LPRDSN=*dataset-name*
LPRJCL=*member-name*
TCPMODE=LPR

Step 3. Send your document to the destination printer. XPAF will save the document to a disk dataset, and use the specified TCP JCL member to submit a batch job that will send it to the destination printer. When the dataset has been successfully transmitted, XPAF deletes it.

If you have not specified the TCP dataset and JCL member in your printer's profile correctly, XPAF will issue an error message. To print the dataset, you must manually LPR it. For example, if you are using IBM TCP/IP, you could issue this LPR command:

LPR '*dataset-name*(*member-name*)' (AT *ip-address* PRINTER *queue-name* FILTER I BINARY

Refer to *IBM's TCP/IP for z/OS: User's Guide* for more information about this and other LPR commands you can use. If you are using another vendor's TCP software, refer to their documentation for valid command syntax.

16. Additional features

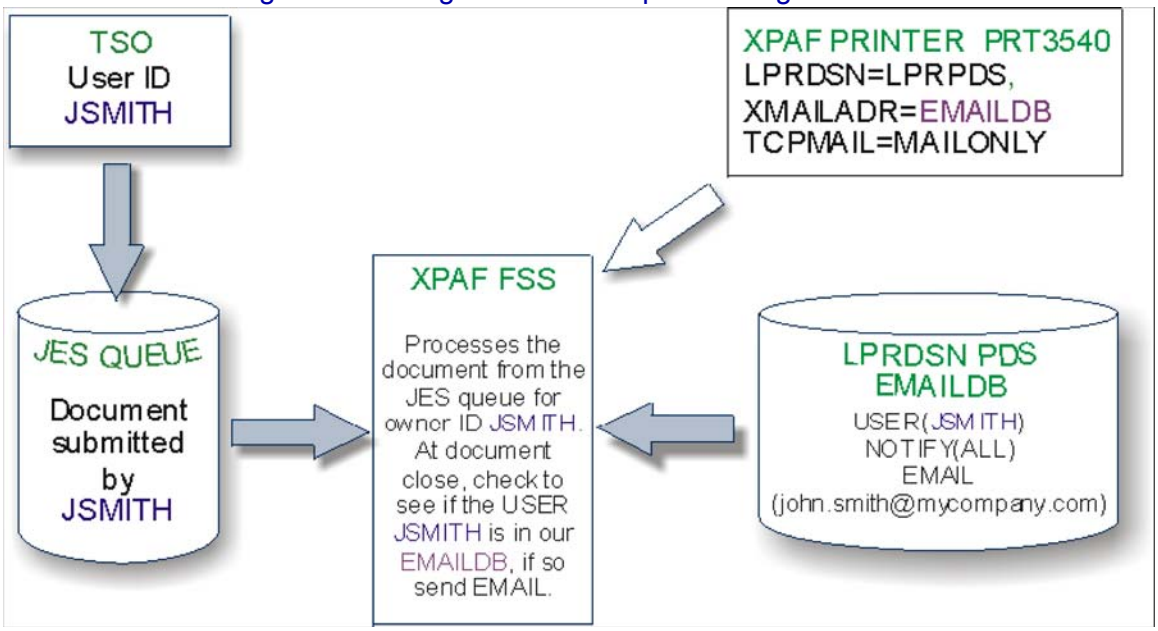
This chapter describes installation steps necessary to install and customize optional features available with XPAF.

E-mail notification and sending documents as e-mail attachments

Through the XPAF Printing process, you can receive e-mail notification of job completion or any error conditions encountered while printing a job. You can specify the recipients for the e-mail, as well as criteria for sending it. For example, you might send notification to the user who submitted the job and/or a system administrator. You might specify that you receive e-mail notification only if an error occurs, or every time a document is printed successfully to the requested printer on the Intranet.

A graphical representation of the processing XPAF performs is shown in Figure 16-6.

Figure 16-6. Figure 1. E-mail processing overview



Configuring e-mail support

Step 1. Create member EMAILADR in the LPRJCL dataset to specify the following e-mail options, a sample can be found in XPFSAMP:

Option	Description
MAILFROM(*address*)	Specify the e-mail address of the sender who will provide notification when the document prints successfully. You can enter any e-mail address that conforms to the SMTP protocol naming standards. Example: MAILFROM(Host.PrintedOK@my.company.com) XPAF enters this name in the FROM column in your email software. ***NOTE***: If you will use XPAF to send e-mail outside of your company intranet, then this email address must be a valid e-mail address. Otherwise, your company proxy server will not send it to the internet to reach the addressee.
MAILFERR(*address*)	Specify the e-mail address of the sender who will provide notification if an error condition was raised while printing the document to the required device. You can enter any e-mail address that conforms to the SMTP protocol naming standards. Example: MAILFERR(Host.Failed@my.company.com) XPAF enters this name in the FROM column in your email software. ***NOTE***: If you will use XPAF to send e-mail outside of your company intranet, then this email address must be a valid email address. Otherwise, your company proxy server will not send it to the internet to reach the addressee.
MAILSERVER(*address*)	Specify the address of the mail server you wish to use when XPAF sends out the email data. This can be either an IP address or a host name if your OS/390 system is set up for it. Examples: MAILSERVER(13.234.112.345) MAILSERVER(MAIL-SERVER.MY.COMPANY)

Option	Description
IPVERSION(Ipversion)	Use this option to specify the Internet Protocol version to use when communicating with the SMTP mail server. ***Ipversion*** [**4** | 6] **4** specifies that IP version 4 is to be used **6** specifies that IP version 6 is to be used
EMAILTYPE(HTML) **EMAILTYPE(TEXT)**	Specify HTML or TEXT to indicate whether the e-mail recipients following this statement will receive e-mail notifications in HTML or plain text format. If you specify EMAILTYPE(HTML), users will receive HTML-formatted notices using the HTMLDECK from the XPAF printer definition pointed to by XSMTPCTL=HTMLDECK.
DOMAIN (name)	Specify the domain name that is used on the HELO function when a connection to a mail server is established. Example: DOMAIN(mail.mailserver.net)
GLOBAL(*name*) **NOTIFY(*condition*)** **EMAIL(*emailaddress*)**	Use this option to define global network administrators for the OS/390 environment. You can include as many instances of this definition as you need. ***name*** is for identification purposes only, and specifies the administrator's known name, It is not used in the SMTP protocol generation. *condition* [ERR | ALL] **ALL** specifies that the administrator should receive e-mail notification for all documents produced (those that print successfully and also those that receive an error). **ERR** specifies that the administrator should receive e-mail notification only if there is an error producing a document. ***emailaddress*** is the email address of the administrator who will receive the e-mail notification. Example: GLOBAL(John) NOTIFY(ERR) EMAIL(John.Smith@my.company.com)

Option	Description
JOBNAME(*JESJobName*) **NOTIFY(*condition*)** **EMAIL(*emailaddress*)**	Use this option to define the users to be sent an e-mail for a particular job. XPAF compares the values specified here to the Document JES job name to determine if an e-mail should be sent. If no match is found, no e-mail will be sent. You can include as many instances of this definition as you need. ***JES-jobn-Name*** specifies the JES job name. ***condition*** [ERR | ALL] **ALL** specifies that the user should receive notifications for all documents (those that print successfully and also those that receive an error). **ERR** specifies that the user should receive e-mail notification only if there is an error producing a document. ***emailaddress*** is the email address of the user who will receive the e-mail. Example: JOBNAME(REPORT27) NOTIFY(ALL) EMAIL(Mary.Jones@my.company.com)

Option	Description
USER(*tso-id*) **NOTIFY(*condition*)** **EMAIL(*emailaddress*)**	Use this option to define the users to be notified of print job completion codes. XPAF compares the values specified here to the Document Owner to determine if an e-mail notification should be sent. If no match is found, no e-mail will be sent. You can include as many instances of this definition as you need. ***tso-id*** specifies the user's mainframe logon id. condition [ERR | ALL] **ALL** specifies that the user should receive notifications for all documents (those that print successfully and also those that receive an error). **ERR** specifies that the user should receive e-mail notification only if there is an error producing a document. ***emailaddress*** is the email address of the user who will receive the e-mail notification. Example: USER(MJ12345) NOTIFY(ALL) EMAIL(Mary.Jones@my.company.com)
SEND(*value*)	Use this option to specify whether an email will be sent to only the first email address that matches the USER or JOBNAME option or to all email addresses that match either the JOBNAME and/or USER option. ***value*** [ONE | **ALL**] **ONE** specifies that only one email should be sent, it will be sent to the first email address that matches the USER or JOBNAME option. Once the email has been sent, the process will end and the EMAILADR table will not be examined for additional matches **ALL** specifies that multiple emails can be sent. An email will be sent to all email addresses that specify a JOBNAME or USER that match with the values of the document being processed. Example: SEND(ONE) JOBNAME(REPORT28) NOTIFY(ALL) EMAIL(jsmith@example.net) USER(JSMITH) NOTIFY(ALL) EMAIL(jsmith@example.net) In the example above, if USER JSMITH submits the job REPORT28, only one email will be sent to jsmith@example.net.

Enabling XJCF simulation processing

To set up your system to run XPAF in XJCF simulation mode, you must first create an XJCFSIM table. You can create your XJCFSIM table using one of two options:

Manually code the entries to the table.

Create your table from your existing Xerox Information Module (XIM) table(s). XIMCVT is a conversion tool provided in XPFSAMP that translates your XIM table into an XJCFSIM table. This method generates approximately 95 percent of the entries required to simulate your XJCF jobs through XPAF.

You must review the converted source to ensure that all XIM statements were converted correctly and to add the appropriate FORMS and/or CLASS table entries.

Manually creating your XJCFSIM table

To create your XJCFSIM table manually, follow these steps.

Step 1 – Copy XJCFSIM from XPFSAMP

Copy the XJCFSIM member from XPFSAMP. This member provides a model you can use to create your own table.

Step 2 – Edit the XJCFSIM member

Edit your new XJCFSIM member to add or update the necessary option, JDL, and/or table entries.

Step 2A – Update the XJCFSIM OPTION statement

There are six processing options you can specify for the XJCFSIM table:

The DUP option enables you to specify duplicate keywords. Normally, once a particular keyword is specified (for example, in the extended JCL or FORMS table), any subsequent occurrences are ignored (for example, in the CLASS table or initial packet). However, if you specify OPTION,DUP=YES, duplicate keywords are allowed unless the first instance is from extended JCL. Extended JCL always overrides any other DJDE generation.

The default is DUP=NO.

The OTEXT option allows you to notify the printer operator when a new form is needed. If you specify OPTION,OTEXT=YES, XPAF generates OTEXT messages to inform the printer operator which dataset is printing and which form it requires.

Normally, the OTEXT message uses the WAIT option if the form name is different from the form on the last dataset. However, you can specify OTEXT=(YES,NOWAIT) if you want to receive the OTEXT message without the WAIT. You cannot use multiple forms in a single dataset.

The default is OTEXT=NO.

For best-fit PDE processing, the TRCLIM option allows you to specify whether the font index value can exceed the number of CHARS specified for the job. You should use this option if your PDE has more than four fonts available.

If you specify TRCLIM=YES, the TRC value cannot exceed the number of fonts specified using the CHARS IBM JCL keyword. Depending on the number of CHARS specified for the job, the font index value can be from 0 to 3.

If you specify TRCLIM=NO, the font index value can exceed the number of fonts specified using the CHARS IBM JCL keyword. The font index value can be from 0 to 15.

The default is TRCLIM=YES.

The BANRJDL option allows you to specify whether or not a JDL or JDE included in the banner page DJDE packet should be overridden by a value found in the JCL or in the XJCFSIM table.

Normally, if XJCF simulation is active and a JDL or JDE name is found in the banner page initial DJDE packet, that name is replaced with the JDL or JDE name specified for the job (in either the JCL or XJCFSIM table). This ensures that the banner page is included as part of the print job for stapling purposes.

If you specify BANRJDL=NO, however, the JDL or JDE name in the banner page initial DJDE packet is not replaced.

The default is BANRJDL=YES.

The TRC option allows you to specify if the FONTINDEX= and DATA= DJDEs will be generated when TRC=YES, or OPTCD=J are specified in your JCL.

If you specify TRC=YES, DATA=(1,250) and FONTINDEX=(0,ZERO,4) are generated.

If you specify TRC=NO, neither the DATA= nor FONTINDEX= is generated.

The default is TRC=YES.

The WARN option allows you to disable the XJC4600 warning message.

The default is WARN=YES.

The OPTION statement, if used, must be the first statement and must be used only once in the XJCFSIM table.

Example:

```
@XJCFSIM OPTION,DUP=YES,OTEXT=YES,
        TRCLIM=NO,BANRJDL=NO
```

Step 2B – Add the JDL definition statement

A JDL definition statement is mandatory and must follow the OPTION statement, if one is used. This statement names the JDL used to reference other tables coded within XJCFSIM. The JDL name is required and must be specified in columns 1–6. After the JDL definition statement, you can code the tables belonging to that JDL in any order.

For each JDL you use, define the appropriate simulation tables:

CHARS

CLASS

DEST

FCB

FLASH

FORMS

MODIFY

PDE

WRITER

NOTE: Numeric labels must be preceded by a #. Some assemblers do not permit labels that begin with numeric characters. However, the @XJCFSIM macro drops the # and generates the correct names.

You can use the ALIAS keyword to allow multiple JDL names to refer to the same tables. The ALIAS keyword is optional.

Using the ALIAS=* command instructs XJCFSIM to use this table for all JDLs.

Example:

```
DFAULT  @XJCFSIM JDL,ALIAS=(APPL,FCOMB,PGMODE,OPRINF)
        . . .
        . . .       (tables for DFAULT JDL)
        . . .
TEST    @XJCFSIM JDL
```

Non-DJDE Keywords

The FORMS, CLASS, DEST and WRITER tables can contain the following non-DJDE keywords:

- DJDE
- FCB
- UCS
- FLASH
- TWOUP
- PAPERSIZE
- LINECT
- XIPADDR
- IP
- HOST
- XLPRQNAM
- QNAME
- PORT
- BANSTYLE and
- CLUSTRTB

IP and HOST are synonyms for XIPADDR. QNAME is synonymous with XLPRQNAM

Update the XJCFSIM FORMS table

This feature simulates XJCF FORMS processing. XPAF generates DJDEs for a job based on the form name specified on the DD or OUTPUT JCL card used to process the job.

Your XJCFSIM FORMS table should contain an entry for each form you use and its associated DJDEs. The label for each table entry is a FORMS value. Numeric labels must be preceded by a #. For example, ASML4 and #4 are valid labels.

You can specify the non-DJDE keywords DJDE, FCB, UCS, FLASH, TWOUP, PAPERSIZE, LINECT, XIPADDR, IP, HOST, XLPRQNAM, QNAME, PORT, BANSTYLE and CLUSTRTB in this table. XPAF processes them as if they were coded in the JCL but does not generate DJDE statements for them.

Example:

```
STD      @XJCFSIM FORMS
#4       @XJCFSIM FORMS,                                          *
              'PMODE=PORTRAIT,DUPLEX=YES,'
ASMP     @XJCFSIM FORMS,                                          *
              'PMODE=PORTRAIT,DUPLEX=YES,'
ASML     @XJCFSIM FORMS,                                          *
              'PMODE=LANDSCAPE,DUPLEX=YES,',                      *
              'FLASH=ASL2,FCB=LINA,'
ASML4    @XJCFSIM FORMS,'TWOUP=YES,UCS=XX,',                      *
              'PMODE=LANDSCAPE,DUPLEX=YES,FLASH=ASL4,FCB=LINB,'
```

Each set of parameters is enclosed in quotes. You can specify up to ten strings of parameters within quotes for a single form name.

NOTE: Each string, including the last one, must end with a comma inside the quotes.

Update the XJCFSIM CLASS table

This feature simulates XJCF's SYSOUT CLASS processing. XPAF generates DJDEs used for a job based on the SYSOUT CLASS specified in the JCL used to process the job.

For each output class, your XJCFSIM CLASS table can contain an entry for that output class and its associated DJDEs. The label for each table entry is a CLASS value. Numeric labels must be preceded by a #. For example, X and #3 are valid labels.

You can specify the non-DJDE keywords DJDE, FCB, UCS, FLASH, TWOUP, PAPERSIZE, LINECT, XIPADDR, IP, HOST, XLPRQNAM, QNAME, PORT, BANSTYLE and CLUSTRTB in this table. XPAF processes them as if they were coded in the JCL but does not generate DJDE statements for them.

Example:

```
#3       @XJCFSIM CLASS,'PMODE=LANDSCAPE,DUPLEX=YES,',            *
              'FLASH=TEST,FCB=LIN6,'
X        @XJCFSIM CLASS,'PMODE=PORTRAIT,DUPLEX=NO,'
```

Each set of parameters is enclosed in quotes. You can specify up to 10 strings of parameters within quotes for a single class.

NOTE: Each string, including the last one, must end with a comma inside the quotes.

Update the XJCFSIM DEST table

This feature allows you to generate DJDEs used for a job based on the DEST specified in the JCL used to process the job.

This table is used to specify the XIPADDR and QNAME to use when routing print jobs to specific printers based on the destination ID specified in the JCL.

For each DEST ID, your XJCFSIM DEST table can contain an entry for that destination and its associated DJDEs. The label for each table entry is a DEST value. Numeric labels must be preceded by a #. For example, X and #3 are valid labels.

You can specify the non-DJDE keywords DJDE, FCB, UCS, FLASH, TWOUP, PAPERSIZE, LINECT, XIPADDR, IP, HOST, XLPRQNAM, QNAME, PORT, BANSTYLE and CLUSTRTB in this table. XPAF processes them as if they were coded in the JCL but does not generate DJDE statements for them.

Example:

```
RMT25   @XJCFSIM DEST,'XIPADDR=13.245.113.77,XLPRQNAM=PASSTHRU,',      *
                'CLUSTRTB=DEFAULT4517,'
PAYROLL  @XJCFSIM DEST,'XIPADDR=13.245.112.106,XLPRQNAM=PORT1,',       *
                'CLUSTRTB=DEFAULT4512,'
```

Each set of parameters is enclosed in quotes. You can specify up to 10 strings of parameters within quotes for a single DEST.

NOTE: Each string, including the last one, must end with a comma inside the quotes.

Update the XJCFSIM WRITER table

This feature allows you to generate DJDEs used for a job based on the WRITER specified in the JCL used to process the job.

This table is used to specify the XIPADDR and QNAME to use when routing print jobs to specific printers based on the destination ID specified in the JCL.

For each WRITER ID, your XJCFSIM WRITER table can contain an entry for that destination and its associated DJDEs. The label for each table entry is a WRITER value. Numeric labels must be preceded by a #. For example, X and #3 are valid labels.

You can specify the non-DJDE keywords DJDE, FCB, UCS, FLASH, TWOUP, PAPERSIZE, LINECT, XIPADDR, IP, HOST, XLPRQNAM, QNAME, PORT, BANSTYLE and CLUSTRTB in this table. XPAF processes them as if they were coded in the JCL but does not generate DJDE statements for them.

Example:

```
RMT25    @XJCFSIM WRITER,'XIPADDR=13.245.113.77,XLPRQNAM=PASSTHRU,',  *
               'CLUSTRTB=DEFAULT4517,'
PAYROLL  @XJCFSIM WRITER,'IP=13.245.112.106,PORT=9100,',             *
               'CLUSTRTB=DEFAULT4512,BANSTYLE=NONE'
```

Each set of parameters is enclosed in quotes. You can specify up to 10 strings of parameters within quotes for a single WRITER.

NOTE: Each string, including the last one, must end with a comma inside the quotes.

Update the XJCFSIM FLASH table

This feature simulates XJCF's FLASH processing. XPAF generates DJDEs based on the values in effect for these keywords in the XJCFSIM FORMS table, XJCFSIM CLASS table, or JCL for the job:

- COPIES — Indicates the copy to which the form will be applied.
- FLASH — Names the IBM form flash.
- PMODE — Indicates the orientation of the job.
- TWOUP — Indicates whether multiple-up formats are used.

For each form you reference using the FLASH IBM JCL keyword, the XJCFSIM FLASH table should contain a corresponding entry that specifies, BFORM, COPIES, FORMS, PMODE, and/or TWOUP values. The label for each table entry is a FLASH value. Numeric labels must be preceded by a #. For example, CX02 and #10 are valid labels.

For each entry in the XJCFSIM FLASH table, you can specify these values:

Table 16-1. XJCFSIM FLASH table entries

Value	Description
BFORM	Valid values: *form-name* Name of a Xerox form to be printed on the back side of a duplex page. NONE No form.
COPIES	The number that indicates to which copy the forms will be applied. For example, if you enter 3, the form will only be applied to the third copy of the document; if you enter 25, the form will only be applied to the twenty-fifth copy. Valid values: 0 through 255. Default: 0 (all copies)
FORMS	Valid values: *form-name* Name of a Xerox form to replace the IBM form flash. NONE No form.

Value	Description
PMODE	Valid values: P or PORTRAIT L or LANDSCAPE B or BOTH Specifying PMODE=B is equivalent to specifying PMODE=(P,L) or PMODE=(L,P). Regardless of which value you specify in the JCL, the PMODE value in the JCL will always match the table entry. Default: B
TWOUP	Valid values: Y or YES N or NO B or BOTH Specifying TWOUP=B is equivalent to specifying TWOUP=(Y,N) or TWOUP=(N,Y). Regardless of which value you specify in the JCL, the TWOUP value in the JCL will always match the table entry. Default: N

Example:

```
C000     @XJCFSIM FLASH,PMODE=LANDSCAPE,TWOUP=(Y,N),FORMS=C000L
CX02     @XJCFSIM FLASH,                                        *
               PMODE=LANDSCAPE,TWOUP=N,FORMS=CX02L,BFORM=NONE
CX02     @XJCFSIM FLASH,                                        *
               PMODE=PORTRAIT,TWOUP=NO,FORMS=CX02P,BFORM=NONE
#10      @XJCFSIM FLASH,                                        *
               PMODE=PORTRAIT,TWOUP=YES,FORMS=CX02T,BFORM=NONE
CX05     @XJCFSIM FLASH,                                        *
               PMODE=L,TWOUP=B,FORMS=CX05L,BFORM=NONE
CX05     @XJCFSIM FLASH,                                        *
               PMODE=BOTH,TWOUP=NO,FORMS=CX05P,BFORM=NONE
```

Update the XJCFSIM MODIFY table

This feature simulates XJCF's MODIFY processing. XPAF generates DJDEs based on the values in effect for these keywords in the XJCFSIM FORMS table, XJCFSIM CLASS table, or JCL for the job:

- COPIES — Indicates to which copy the CME will be applied.
- MODIFY — Names the CME to be used when printing the document.
- PMODE — Indicates the orientation of the job.

For each CME you reference using the MODIFY IBM JCL keyword, the XJCFSIM MODIFY table should contain a corresponding entry that specifies COPIES, MODIFY, and PMODE values. The label for each table entry is a MODIFY value. Numeric labels must be preceded by a #. For example, CX03 and #5 are valid labels.

For each entry in the XJCFSIM MODIFY table, you can specify these values:

Table 16-2. XJCF MODIFY table entries

Value	Description
COPIES	The number that indicates which copy the CME will be applied to. For example, if you enter 3, the form will only be applied to the third copy of the document; if you enter 25, the form will only be applied to the twenty-fifth copy. Valid values: 0 through 255. Default: 0 (all copies)
MODIFY	The CME to be used when printing the document.
PMODE	Valid values: P or PORTRAIT L or LANDSCAPE B or BOTH Specifying PMODE=B is equivalent to specifying PMODE=(P,L) or PMODE=(L,P). Regardless of which value you specify in the JCL, the PMODE value in the JCL will always match the table entry. Default: B

Example:

```
C001     @XJCFSIM MODIFY,MODIFY=CD03,PMODE=BOTH,COPIES=3
CX03     @XJCFSIM MODIFY,MODIFY=CG13,PMODE=P,COPIES=0
CX03     @XJCFSIM MODIFY,MODIFY=GP0D0,PMODE=L,COPIES=0
#5       @XJCFSIM MODIFY,MODIFY=GW54,PMODE=B,COPIES=25
```

Update the XJCFSIM FCB table

XPAF reads the XJCFSIM FCB table to obtain an LPI value for use in the best-fit PDE selection. LPI values may include up to three decimal places. XPAF will also generate DJDEs from the FCB table entry if they are specified. These would typically be ASSIGN, TOF, BOF, and BEGIN statements to be used instead of using the FCB itself. However, any valid DJDE can be specified. You can specify the non-DJDE keywords DJDE, FCB, UCS, FLASH, TWOUP, PAPERSIZE, LINECT, XIPADDR, IP, HOST, XLPRQNAM, QNAME, PORT, BANSTYLE and CLUSTRTB in this table. XPAF processes them as if they were coded in the JCL but does not generate DJDE statements for them. The label for each table entry in the XJCFSIM FCB table is an FCB value. Numeric labels must be preceded by a #. For example, LIN6 and #8 are valid labels.

Example:

```
LIN6     @XJCFSIM FCB,LPI=6,                                    *
               'BEGIN=(0.50 IN,0.50 IN),TOF=1,BOF=45,',         *
               'ASSIGN=(1,1),ASSIGN=(12,45),'
#8       @XJCFSIM FCB,LPI=8.1,                                  *
               'BEGIN=(0.50 IN,0.50 IN),TOF=1,BOF=60,',         *
               'ASSIGN=(1,1),ASSIGN=(12,60),'
LINA     @XJCFSIM FCB,LPI=10
LPI1     @XJCFSIM FCB,LPI=11
LPI2     @XJCFSIM FCB,LPI=12.125
```

Update the XJCFSIM CHARS table

This feature provides CHARS-to-Xerox font translation to determine which PDE to select. During processing, XPAF determines which Xerox font to use based on the values in effect for these keywords in the JCL for the job:

- CHARS — Identifies IBM fonts.
- PMODE — Identifies the document orientation.

For each font you reference using the CHARS IBM JCL keyword, the XJCFSIM CHARS table should contain a corresponding entry that specifies FONTS and PMODE values. The label for each entry identifies a CHARS value. Numeric labels must be preceded by a #. For example, GT10 is a valid label.

Within the XJCFSIM CHARS table, you can specify these values for PMODE:

P or PORTRAIT
L or LANDSCAPE
B or BOTH

Specifying PMODE=B is equivalent to specifying PMODE=(P,L) or PMODE=(L,P). Regardless of which value you specify in the JCL, the PMODE value in the JCL will always match the table entry. The default is B.

Example:

```
GT10     @XJCFSIM CHARS,FONTS=L106GT,PMODE=L
GT10     @XJCFSIM CHARS,FONTS=P106GT,PMODE=P
GB10     @XJCFSIM CHARS,FONTS=L106GB,PMODE=LANDSCAPE
GB10     @XJCFSIM CHARS,FONTS=P106GB,PMODE=PORTRAIT
SC10     @XJCFSIM CHARS,FONTS=L106SC,PMODE=LANDSCAPE
SC10     @XJCFSIM CHARS,FONTS=P106SC,PMODE=PORTRAIT
TB10     @XJCFSIM CHARS,FONTS=L05TBC,PMODE=L
TB10     @XJCFSIM CHARS,FONTS=P05TBC,PMODE=P
```

Update the XJCFSIM PDE table

This feature simulates XJCF's best-fit PDE option. A PDE is always selected unless you do not code any XJCFSIM PDE table.

XPAF selects a PDE based on the values in effect for the FONTS, LPI, PMODE, and TWOUP keywords in the XJCFSIM PDE table. Each keyword has a different importance in determining the best-fit PDE. The order—from most important to least important—is as follows:

1. PMODE — Identifies the document orientation.
2. FONTS — Identifies the fonts used by the job.
3. LPI — Identifies the number of lines per inch.
4. TWOUP — Identifies either single- or multiple-up formats.

Evaluation of the FONTS keyword varies depending on whether font indexing is being used:

- If font indexing is being used (TRC=YES or DCB=OPTCD=J specified in the JCL), all CHARS values are examined against all fonts in each PDE.
- If font indexing is not being used (TRC=YES and DCB=OPTCD=J are not specified in the JCL), only the first CHARS value is examined against the first font in each PDE.

Each entry in the XJCFSIM PDE table should correspond to a PDE defined on the printer. The label for each entry identifies a PDE name. Numeric labels must be preceded by a #. For example, L148GT is a valid label.

For each entry in the XJCFSIM PDE table, you can specify these values:

Table 16-3. XJCFSIM PDE table entries

Value	Description
FONTS	The name or names of the fonts used by the PDE.
LPI	A lines-per-inch value of up to three decimal places.
PMODE	Valid values: P or PORTRAIT L or LANDSCAPE B or BOTH Specifying PMODE=B is equivalent to specifying PMODE=(P,L) or PMODE=(L,P). Regardless of which value you specify in the JCL, the PMODE value in the JCL will always match the table entry. Default: B
TWOUP	Valid values: Y or YES N or NO B or BOTH Specifying TWOUP=B is equivalent to specifying TWOUP=(Y,N) or TWOUP=(N,Y). Regardless of which value you specify in the JCL, the TWOUP value in the JCL will always match the table entry. Default: N

If no matches are found in the XJCFSIM PDE table for the PMODE/LPI/TWOUP/ CHARS combination specified in the JCL, XPAF uses the first PDE in the table. PDE selection processing generates a FORMAT DJDE.

Example:

```
L148GT   @XJCFSIM PDE,PMODE=LANDSCAPE,TWOUP=NO,LPI=8.1,          *
            FONTS=(L146GT)
P148GT   @XJCFSIM PDE,PMODE=PORTRAIT,TWOUP=NO,LPI=8.1,           *
            FONTS=(P146GT)
L106GT   @XJCFSIM PDE,PMODE=LANDSCAPE,TWOUP=B,LPI=6,             *
            FONTS=(L106GT)
L106GI   @XJCFSIM PDE,PMODE=LANDSCAPE,TWOUP=(YES,NO),            *
            LPI=6,FONTS=(L106GI,L106GT,L106GB)
```

Step 3 – Assemble and link-edit XJCFSIM

Assemble and link-edit XJCFSIM into the XPAF load library.

You can use the JXJCFSIM member in XPFSAMP to perform this assembly. Modify the DD and COPY statements where necessary.

NOTE: The load module name must be XJCFSIM. If you change this name, the module does not assemble correctly.

Setting up XV2S

The XPAF VTAM to SPOOL, XV2S, utility enables you to capture data sent to a VTAM SLU and place it on the spool for subsequent printing by XOSF. The output place on the spool can be configured with various output characteristics, that can be customized on a per printer basis, via parameters in the XV2S control file.

This section describes the procedure used in setting up Xerox VTAM to SPOOL (XV2S) utility. It also explains the different options you can select when initializing XV2S.

Checklist for setting up XV2S

To set up XV2S, you must perform these steps in the order that they are listed. As each step is completed, enter a check in the Completed column to track and record your progress.

Step	Action	Completed
1	Create a start-up proc	
2	(Optional) Create separate XINPARM dataset	
3	Define the XV2S log datasets	
4	Add the XV2S license string	
5	Define SLU definitions	
6	Verify the installation	

Step - 1 Create a start-up proc

To use XV2S you must create a start-up procedure for the utility. A customizes start-up procedure is created in your installation STAGE2 library as member XV2S.

Copy the XV2S member from your STAGE2 library to your system procedure library.

Add additional output descriptors to the sample proc. to specify additional formatting options to be used by the SLU definitions in the printer control file. The SLU definitions will use the OUTDES parameter to refer to the output descriptors defined in the procedure.

Step - 2 (Optional) Create a separate XINPARM dataset

The sample proc provided in Step 1 uses the XPAF XINPARM dataset to contain the XV2S control file, XV2SCNTL, and the XV2S license string file.

If you wish to separate these datasets review and submit STAGE2 job XV2SPARM, to allocate a new XV2S XINPARM dataset, XV2SPARM and copy the relevant members into the new dataset.

You will also need to update the XV2S started task procedure to point to the new dataset.

Step - 3 Define the XV2S log files

XV2S writes activity to a log file. You can define two log files via the control parameters XV2SLOG, forthe prinmary log dataset, and AV2SLOG for the alternate log dataset.

These datasets can be allocated using the JCL provided in member XV2SLOGS in STAGE2.

Review and submit STAGE2 job XV2SLOGS, to allocate the XV2S log datasets.

Note: If you change the names of the log datasets, you must also update the XV2S control file parameters XV2SLOG and AV2SLOG.

Step - 4 Add the XV2S license string

The XV2S utility is a separate, chargeable, utility and requires it's own license string.

Contact Xerox Technical Support to obtain the XV2S license string.

Once you have obtained the license string, copy it to member XV2SLSTR in the dataset referenced by the XINPARM DD statement in your started task procedure"

Example license string:

```
Cpuid=00009A172818, ExpDate=09-Aug-2016, Feature=XPAF_V2S
LicenseString=A9461B258A15D82A8B0BDD46DD94
```

Step - 5 Define SLU definitions

Define an SLU printer definition for each SLU to be used with XV2S.

Modify the XV2SCNTL member in XINPARM to add the definitions you need for your system.

Refer to the XV2S Control File Parameter section later in this section for detailed information on defining XV2S printers.

Step - 6 Verify the installation

Start the XV2S system by starting the started task procedure defined in Step 1:

S XV2S

To stop V2S issue the MVS stop command:

P XV2S

XV2S Control File Parameters

This section explains the parameters available in the XV2S control file, XV2SCNTL

XV2S Initialization parameters

The following parameters are used at initialization time:

- XV2SLOG
- AV2SLOG

XV2S SLU definitions

The following parameters must be included in a XV2S SLU definition:

- PRINTER
- RECFM
- LRECL
- SYSOUT
- FORM

The following parameters may be included if required:

- DEST
- OUTDES
- WRITER
- DOCHDR

Example:

```
PRINTER=XWTS02,
  ACB=AT02,
  DEST=RMT07,
  FORM=STD1,
  LRECL=133,
  RECFM=F,
  SYSOUT=M,
  WRITER=XP01
```

XV2S Control File Parameters

The following XV2S control file parameters are used to define the XV2S environment. Where applicable, default values are shown.

ACB

Description Specifies the VTAM SLU name that XV2S is to accept data from.

Syntax ACB=sluname

where

sluname The 1 to 8 character SLU name.

Default None

Example ACB=O177734

AV2SLOG

Description Specifies the dataset name of the alternate, or secondary log

Syntax AV2SLOG=dsname

where

dsname The 1 to 44 character dataset name.

Default None

Example AV2SLOG=ISV.XPAF.XV2SLOGA

DEST

Description Specifies a the JES destination, or ROUTE CODE, to be used for all output placed on the spool by this printer.

Syntax DEST=rtecde

where

rtecde The 1 to 8 character destination name.

Default None

Example DEST=RMT7

FORM

Description Specifies a the JES form to be used for all output placed on the spool by this printer.

Syntax FORM=*formname*

where

formname The 1 to 4 character form name.

Default None

Example FORM=STD3

LRECL

Description Specifies a the record length to be used for all output received from the host application. Most host applications, CICS, IMS, etc., send data with no logical record delimiter. XV2S uses the value specified on the LRECL parameter to split the input data up into logical records

Syntax LRECL=*nnn*

where

nnn A value in the range 1 to 255.

Default None

Example LRECL=133

OUTDES

Description Specifies an output descriptor, defined in the XV2S started task procedure JCL, that contains additional formatting information that is associated with the output data placed on the spool.

Note: A corresponding output descriptor must be defined in the XV2S started task procedure JCL.

If the XPAF extended JCL facility is installed on the system, XPAF extended JCL keywords can be used to specify enhanced formatting of the data.

Syntax OUTDES=*outputdesc*

where

outputdesc The 1 to eight character output descriptor.

Default None

Example OUTDES=PORT2UP

PRINTER

Description Specifies a logical name for this SLU definition. This parameter signifies the start of a new SLU definition and indicates the end of the previous SLU definition.

Syntax PRINTER=prtname

where

prtname The 1 to 8 character logical printer name.

Default None

Example PRINTER=IMSACCT1

RECFM

Description Specifies a the record format to be used for all output received from the host application. Most host applications, CICS, IMS, etc., send data with no indication of the record format. XV2S uses the value specified on the RECFM parameter to determine the record format to use when the data is written to the spool

Syntax RECFM=FB | FBA | FBM

where

FB The input records do not contain any carriage control characters

FBA The input records contain ANSI carriage control characters

FBM The input records contain Machine carriage control characters

Default None

Example RECFM=FBA

SYSOUT

Description Specifies the output class to be used for all output received from the host application and placed on the spool..

Syntax SYSOUT=q

where

q The 1 character output class

Default None

Example SYSOUT=D

XV2SLOG

Description Specifies the dataset name of the primary log

Syntax XV2SLOG=dsname

where

dsname The 1 to 44 character dataset name.

Default None

Example XV2SLOG=ISV.XPAF.XV2SLOG

WRITER

Description Specifies the writer name to be used for all output received from the host application and placed on the spool.

Syntax WRITER=wrtname

where

wrtname The 1 to 4 character writer name.

Default None

Example WRITER=XPAF

Setting up XDS

This section describes the procedure used in setting up Xerox Direct Print Services (XDS). It also explains the different options you can select when initializing XDS.

Pre-setup considerations for XDS

The information in this section will help you make setup decisions for the XDS subsystem. Read the information and decide how you want to handle these considerations before you set up XDS.

Setup materials

Your sample source library contains these members which are used for setup XDS:

XDSCOPY — Contains sample JCL to copy all XDS modules from the user-installed XPFLOAD library to the user-defined LNKLST library.

XDSMCS — Contains the XUMXDS1 usermod, which is called by XDSSETUP to move all XDS modules to a separate dataset. It also reestablishes JCLIN for all XDS XOSF members.

XDSSETUP — Contains sample JCL for:

- Allocating the XDSLOAD library dataset
- Adding the DDDEF to the SMPCSI target and distribution zones for XDSLOAD
- Receiving and applying the XUMXDS1 usermod
- Using UCLIN to change the SYSLIB entry in the CSI distribution library for XDS mods from XPFLOAD to XDSLOAD

XDSSTART — Contains a sample proc used to start XDS.

XDSSTOP — Contains a sample proc used to stop XDS.

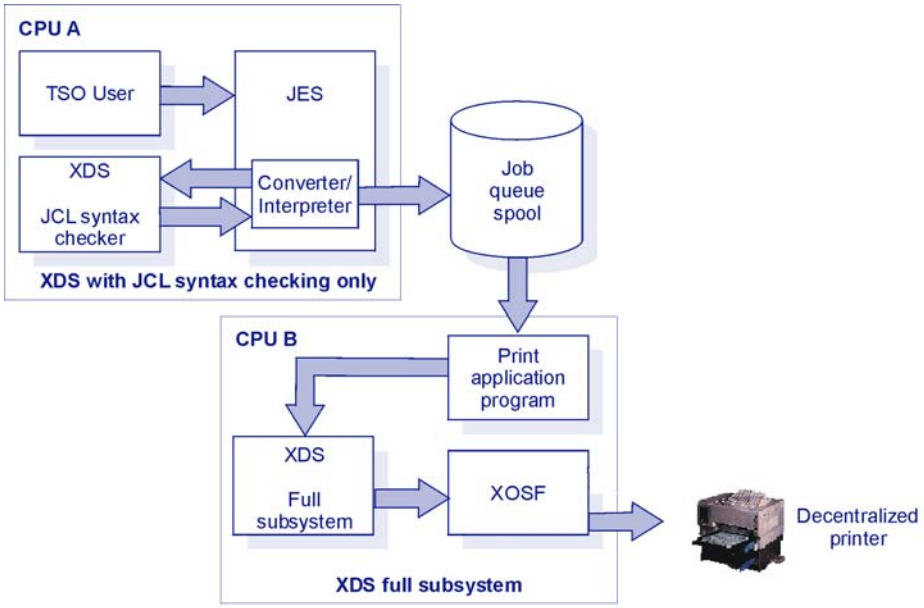
XDS subset

The XDS subsystem performs all functions of XDS. You may, however, elect to use a subset of XDS which performs only JCL syntax checking of the SUBSYS parameter and uses no XOSF overhead. Use this XDS subset in a multiple CPU environment to submit print jobs from one CPU to another CPU with the specified printer attached.

If you use the XDS subset, you will need another copy of the full XDS subsystem running on the CPU to which the print jobs are sent. This CPU must have the printer attached to it.

Figure 10-1 illustrates a multiple processor environment with a different version of XDS installed for each processor.

Figure 16-1. Multiple processor environment for XDS



XDS initialization options

You can initialize XDS in one of these ways:

Automatically, by the Master Scheduler at IPL, before JES is started

Automatically, by z/OS at IPL, after JES is started

Manually by issuing the z/OS START operator command

NOTE: You must initialize the XDS subsystem before you can submit any job using XDS.
Complete the following checklist for any XDS initialization option.

Checklist for setting up XDS

To set up XDS initialization, you must perform these steps in the order that they are listed. As each step is completed, enter a check in the Completed column to track and record your progress.

Step	Action		Completed
1	Modify XDSSETUP		
2	Submit XDSSETUP		
3	Create a start-up proc		
4	Modify the SYS1.PARMLIB members		
	A	Update the IEFSSN*xx* member	
	B	Update the COMMND*xx* member	
	C	Authorize the XDSLOAD library	
5	Define XDSSSTART and XDSSTOP		
6	Define initialization parameters		
7	Define the printer profiles		
8	Perform an IPL		
9	Verify the installation		

Step 1 – Modify XDSSETUP

Change the variables in the XDSSETUP sample JCL to reflect your user-defined qualifiers. Each of the required changes is marked “<== CHANGE” in the XDSSETUP sample JCL.

Step 2 – Submit XDSSETUP

Submit the job XDSSETUP. When this job finishes, all modules required for XDS will reside in the libraries you specified in the job JCL.

Step 3 – Create a start-up proc

To use the XDS subsystem, you must create a start-up proc for this XOSF. Use the sample proc STAGE2(XOSF00) as a base, then follow these guidelines for the start-up proc:

NOTE: The name you specify for this XOSF FSS must be unique and not used for any other XOSF FSS

Later in these procedures you will be allocating a new XINPARM library with a unique name. Decide now on the XINPARM library name. Include a DD statement in this XOSF start-up proc that names this new XINPARM library.

If you are setting up XDS to be initialized before JES is started:

1. Place the XOSF start-up proc in SYS1.PROCLIB.
2. Be sure there are no SYSOUT statements in the XOSF start-up proc.
3. Be sure all dataset names in the XOSF start-up proc have a high level qualifier that is cataloged in the Master Catalog.
4. For non-VSAM datasets, make sure the DD statement in the XOSF start-up proc specifies the UNIT and VOLSER.
5. If you are setting up XDS to be initialized after JES is started, place the XOSF start-up proc in a JES-controlled proclib.

Step 4 – Modify the SYS1.PARMLIB members

These steps describe how to update specific members of SYS1.PARMLIB.

Step 4A – Update the IEFSSNxx member

Add the XOSF start-up proc name to the SYS1.PARMLIB(IEFSSNxx)FSS list. Follow these guidelines:

- If you are using all functions of XDS, include these parameters:

  xds-name,XDSINITS,character

  where

  xds-name — The 4-character XDS subsystem name. It must be the same as the name of the XOSF start-up proc you created in SYS1.PROCLIB.

  XDSINITS — The name of the XDS initialization routine used by XDS for the full subsystem. XDSINITS resides in the z/OS LNKLST library where XDS was loaded. Specify this parameter only if you are setting up XDS to start before JES is started.

character — Your optional subsystem command character. Specify this parameter only if you are setting up XDS to start before JES is started.

- If you are using only the JCL syntax checking function of XDS, use these parameters:

  xds-name,XDSINITJ

  where

  xds-name — The 4-character XDS subsystem name. It must be the same as the name of the XOSF start-up proc you created in SYS1.PROCLIB.

  XDSINITJ — The name of the XDS initialization routine used by XDS for the partial subsystem which does JCL syntax checking only. XDSINITJ resides in the z/OS LNKLST library where XDS was loaded.

Step 4B – Update the COMMNDxx member

If you are setting up XDS to start automatically after JES is started, add this command statement to the member SYS1.PARMLIB(COMMNDxx):

```
COM='START XDSSTART'
```

Step 4C – Authorize the XDSLOAD library

To authorize the XDSLOAD library for use by XDS, perform these steps:

Add the XDSLOAD library to the z/OS link list, SYS1.PARMLIB(LNKLSTxx).

Authorize the XDSLOAD library by adding it to SYS1.PARMLIB(IEAAPFxx).

Step 5 – Define XDSSTART and XDSSTOP

To define the XDSSTART start-up proc, the XDSSTOP abend recovery proc, and the command character for XDS, perform these steps:

1. Copy these members to a JES-controlled proclib:

   XDSSTART
   XDSSTOP

2. Modify the PARM parameter on the EXEC statement for the XDSSTART proc to read:

```
//XDSSTART EXEC PGM=XDSSTART,
   PARM='xds-name,character '
```

where

xds-name — The 4-character XDS subsystem name. It must be the same as the name of the XOSF start-up proc you created in SYS1.PROCLIB, and the name of the XOSF FSS you specified in SYS1.PARMLIB(IEFSSNxx).

character The optional subsystem command character. Be sure the character you choose is not used for any other subsystem command character.

3. Modify the PARM parameter on the EXEC statement for the XDSSTOP proc to read:

```
//XDSSTOP EXEC PGM=XDSSTOP,PARM=xds-name
```

where xds-name is the 4-character XDS subsystem name. This must be the same as the name of the XOSF start-up proc you created in SYS1.PROCLIB, and the name of the XOSF FSS you specified in SYS1.PARMLIB(IEFSSNxx).

Step 6 – Define initialization parameters

Define the initialization parameters for the XDS subsystem interface by modifying your existing XINPARM library. If you do not have an existing XINPARM library, you must allocate one with a unique name, then modify it with these parameters:

1. Add this parameter and its value to the XINSXOAF member in the XINPARM library:

   COMSSTYP=DIRECT

2. Add these parameters and their values to the XINSXOSF member in the new XINPARM library:

   COMSSID=subsys-name,
   COMSSTYP=DIRECT,
   SUBSYS=subsys-name,
   XLOGDSN=dataset-name,
   ALOGDSN=dataset-name (optional)

The values for COMSSID and SUBSYS must be identical. They are the same as the name of the XOSF start-up proc you created in SYS1.PROCLIB, and the name of the XOSF FSS you specified in SYS1.PARMLIB(IEFSSNxx).

NOTE: XDS only supports an SWA below the 16M line. For JES2 systems, specify SWA=BELOW in the JOBCLASS initialization parameter. For JES3 systems, select option 0, 1, 2, or 3 in the CIPARM initialization parameter to indicate an SWA below the 16M line.

Step 7 – Define the printer profiles

Define a printer profile for each printer to be used with XDS. For instructions on creating your printer profiles, refer to “Setting up printer profiles” in chapter 5, “Customizing your system.”

Step 8 – Perform an IPL

Perform an IPL to complete XDS setup. An IPL will:

- Authorize required XDS and XOSF libraries
- Update the z/OS link list
- Update the Subsystem Name Table

Step 9 – Verify the installation

You can verify the accuracy of your software installation by performing an IVP. For more information about performing an IVP, refer to chapter 18, "Performing an installation verification procedure."

Connection to FTP servers/websites

You can set up XPAF to use batch LPR to FTP documents to your FTP server or website. Refer to Setting up BATCH FTP for more information.

Setting up BATCH FTP

To use batch LPR to FTP documents to your server, you must first edit your PDF printer definition as follows:

```
DEVICE=PDF,
 IPADDR=13.245.113.77, Only required if used by FTP JCL/REXX
 LPRQNAME=PASSTHRU,    Only required if used by FTP JCL/REXX
 TCPMODE=LPR,
 LPRDSN=MJONES.LPRJCL, Dataset containing skeleton JCL
 LPRJCL=XTCPFTP    Skeleton JCL member (to invoke REXX FTPXPAF)
```

Review the sample skeleton JCL member XTCPFTP in XPFSAMP and the sample REXX FTPXPAF. The XTCPFTP JCL is configured to execute the REXX FTPXPAF.

Step 1. Copy the XTCPFTP member from XPFSAMP into the dataset specified by the LPRJCL parameter in your printer definition.

Step 2. Copy the FTPXPAF member from XPFSAMP into the REXX library referenced by your modified XTCPFTP skeleton JCL.

Step 3. Review the parameters passed by XTCPFTP to the REXX. XTCPFTP uses the XPAF variable substitution to replace keywords in the skeleton JCL with document specific information.

NOTE: If you change the parameters passed to the REXX invoked by the skeleton JCL, you must also modify the REXX accordingly.

Variable substitution occurs when using the following information in XTCPFTP

Variable	Description
%FORMNAME	The JES FORM name used to process the document. I.e. STD1
%STEPNAME	The job step name i.e. PRTSTEP
%ACCOUNT	The account number used to print the job i.e. D498
%JOBNAME	The JES job name i.e. HWMPRTAC
%PRINTER	The XPAF/JES printer name i.e. PRT123
%STEPDDN	The job step ddname i.e SYSUT1
%USERAC1	User variable extended JCL field
%USERAC2	User variable extended JCL field
%USERAC3	User variable extended JCL field
%DEVICE	The printer device from the XPAF PPT i.e. N32
%IPADDR	The IP address the document i.e 192.64.0.1
%IPADDZ	The default IP address from the XPAF printer profile i.e 192.64.0.4
%LPRDSN	The name of the XPAF created temporary LPR dataset
%JOBNO	The JES job number
%LINES	The number of records in the dataset
%PAGES	The number of pages in the dataset
%QNAME	The name of the LPR queue the document will be sent to
%QNAMZ	The name of the default LPR queue in the XPAF printer profile
%PORT	The name of the IP port number the document will be sent to
%PORZ	The name of the default IP port number in the XPAF printer profile
%USER	The user name of the account that submitted the job

Advanced users of this feature can use most of the fields defined in the following XPAF macros:

- Document Information Block, member @XDIB in SAMPMAC
- Printer Profile Table, member @XXQPPT in SAMPMAC
- Output Data Block, member @XODB in SAMPMAC
- XDIB DJDE extension, member @XDJD in SAMPMAC

Review the macros supplied in the sample macro library and use a '%' followed by the field name.

For example, the JES output class is held in the XDIB in field `XDIBSOCL`.

To use the sysout class as a variable field in the XTCPFTP skeleton JCL use the `%XDIBSOCL` keyword.

Support for Emtex V-Services print servers

XPAF supports the Emtex V-Services print server as a printer type. In this environment, XPAF is only a host and, as such, does no data conditioning or transform of the data. XPAF will only receive the data file and send it to the Emtex server. There is no communication from the server as to the successful printing of the document. It is the users responsibility to make sure all resources (AFP and LCDS) are available on the Emtex V-Services print server prior to printing a document.

Defining the V-Services printer

The V-Services printer is defined in the XOSF printer profile. The printer profile should include the following parameters:

```
DEVICE=VSERV,
IPADDR=ipaddr/host-name,
TCPMODE=tcpmode,
WRITER=REMOTE
```

The TCPMODE value can be one of the following: LPR, TCPLPR, or TCPIP.

For TCPMODE=TCPIP, you must also specify TCPPORT= to identify the port number that has been defined in the TCPIP connection profile on the V-Services server.

For TCPMODE=LPR or TCPLPR, two additional keywords are provided to allow XOSF to direct AFPA or LCDS data streams to the correct LPR Queue on the V-Services Server:

```
AFPAQNAME
LCDSQNAME
```

AFPAQNAME defines the connection profile name on the V-Services server that will receive AFPA data streams via LPR.

LCDSQNAME defines the connection profile name on the V-Services server that will receive LCDS data streams via LPR.

These Queue Names must be defined on the XPAF V-Services server as connection profile names.

Syntax: LCDSQNAME=queue-name

AFPAQNAME=queue-name

where

queue-name is the 1- to 50-character queue name on this printer. The queue name can include alphanumeric, national ($, #, @), or special characters.

NOTE: Spaces are not valid characters within a queue name.

Default: None

Examples:

```
LCDSQNAME=LCDSData
AFPAQNAME=AFPAData
```

Overrides: None

Related info: See also the IPADDR, LPRBNDRY, LPRDSN, LPRJCL and TCPMODE printer profile parameters for information on setting up your system for TCP batch printing.

A Sample connection profile for use on the Emtex Server follows:

```
//CONNECT.CFG
//-----------
CLIENTTYPE=IPCCLN_CONNECT
SUBMITONHOLD=NO
//CONNECT DOWNLOAD PARAMETERS//
ENABLE_DOWNLOAD=YES
DOWNLOADPORT=9501
DOWNLOAD_PROFILE_NAME=XPAFAFPA
DEBUGMODE=0
//CONNECT LPD PARAMETERS//
ENABLE_LPD=YES
DATAPATH=USERPATH:\CONNECT\DTA
CONTROLPATH=USERPATH:\LPD
LPDQUEUEASOUTPUT=YES
```

A Sample printer profile called N40 the Emtex Server follows:

```
//N40.PRF
//-------
COPIES=1
DATATYPE=DISK
DEFAULTVIRTUALFONT=P06BOB
DEFAULT_COLOUR=BLACK
DISABLEOTEXTWAIT=YES
HOSTFORM=STD
INPUT=XRX2VDD
OUTPUT=VDD2PCL4
JDE=LETTER
JDL=DFAULT
OPRINFO=BOTH
OUTPUTPAPERSIZE=USLETTER
PREPROCESSDATATYPE=VARIABLE
PREPROCESSPCCTYPE=MACHINE
PREPROCESSPCCCOL=3
PREPROCESSDATACOL=4
PREPROCESSRECLTHFLD=2
REPORTSPLIT=BOTH
SEPCOUNT=1
SET=C:\VIPUSER\SET\USLETTER.SET
TYPE=XEROX
VIPFILE=XPAFLCDS
```

17. Performing an installation verification procedure

On your installation file, you received programs to perform installation verification procedures (IVPs) for:

- The complete XPAF product
- The CMA-SPOOL or CA-SPOOL subsystem
- The XDS subsystem

The procedures consist of a series of jobs designed to validate your XPAF installation, CMA-SPOOL or CA-SPOOL setup, and/or XDS setup.

Running the XPAF IVP

The XPAF IVP executes XOAF and XOSF functions to ensure that the installation was successful. You can run the XPAF IVP through XOAF or through batch jobs.

Running the CMA-SPOOL or CA-SPOOL IVP

The CMA-SPOOL or CA-SPOOL IVP executes XOSF functions only. You can run these IVPs through XOAF. However, these IVPs cannot be run through the IVP batch jobs supplied with XPAF.

Before you access XOAF to run the CMA-SPOOL or CA-SPOOL IVP, be sure you have specified COMSSTYP=CMASPOOL in both the XINSXOAF and XINSXOSF members o‘f XINPARM.

Running the XDS IVP

The XDS IVP executes XOSF functions only. You can run the XDS IVP through XOAF. The XDS IVP cannot be run through the IVP batch jobs supplied with XPAF.

Before you access XOAF to run the XDS IVP, be sure you have specified COMSSTYP=DIRECT in both the XINSXOAF and XINSXOSF members of XINPARM you created for XDS.

What does the IVP test?

The IVP tests to ensure your installation successfully generated all components needed for XOAF and/or XOSF processing.

XOAF testing

When you select XOAF batch processing, XPAF generates a batch job that loads a resource to a native library, then performs an LDM library directory display for that library.

XOSF testing

The XOSF IVP jobs generate centralized and decentralized documents using the resources prepared during XOAF installation.

- To verify centralized printer processing, run the line-mode, DJDE, page-formatted, and AFP IVPs.
- To verify decentralized and PCL-capable printer processing, run the line-mode, DJDE, XES, page-formatted, AFP, and pass-through IVPs.

XPAF extended JCL testing

The DJDE, page-formatted, and AFP IVP jobs test XPAF extended JCL. If you have not installed XPAF extended JCL on your system, you can only run the line-mode IVP job.

Setup requirements

Before you execute the IVPs, ensure that you have installed the necessary hardware and made the appropriate resources available to XPAF.

Resources

To generate the expected results, use the DFAULT JSL provided with XPAF in XPFSAMP.

Printer profile parameter settings

The resources for native Xerox IVP jobs are distributed in centralized resource libraries. If you have changed the values for the SFONTLIB, SFORMLIB, and SIMAGELIB printer profile parameters from their default settings, you must change them back to SFONTLIB=CFONTLIB, SFORMLIB=CFORMLIB and SIMAGELIB=CIMGLIB to print the IVPs successfully.

Printing the line-mode IVP on PCL-capable printers

Before you print the line-mode IVP on a PCL-capable printer, verify that the default font on the printer is a 6-point landscape font similar to L0112B or XCP14-L.

Using a custom DJDE IDEN

The DJDE IVP uses the XPAF system default DJDE IDEN. To use a different DJDE IDEN, you should run the IVPs before loading your customized JSL to the host.

Printing the DJDE IVP on PCL-capable printers

When printing the DJDE IVP to a decentralized or PCL-capable printer, the centralized images used for this IVP are converted to decentralized format. An information message is issued but can be ignored.

Printing the AFP IVP

Before you verify AFP processing, be sure to:

- Allocate IBM AFP resource libraries to XOSF. Refer to "Step 3 – Update the system procedure library" in chapter 5, "Customizing your system" for detailed information.
- Ensure Sonoran Serif character set T05500 (medium, normal, 10 point) is available to your XPAF system.
- Make the AFP resources in IVPRESC available to XOSF using one of these methods:
  - Add IVPRESC to the XOSF start-up proc concatenation for the PDEFLIB (page definition), FDEFLIB (form definition), and OVERLIB (overlay) libraries.
  - Copy members from IVPRESC to the installation AFP resource libraries you have assigned to PDEFLIB, FDEFLIB, and OVERLIB. Copy the members with prefix P1 to PDEFLIB, F1 to FDEFLIB, and O1 to OVERLIB.

Printing the IVPs on A4 paper

To print the IVPs on A4 paper, you must specify OPTIONS=A4 in the #GENRSC installation macro before generating stage 2 jobs for resource installation.

Executing the XPAF IVP

You can execute the XPAF IVPs using either of these options:

- Batch jobs
- XOAF

IVP batch jobs

IVP batch jobs are generated only if you specify YES and a print output class in the IVP parameter of the #GENRSC macro. Refer to "Installation service macro worksheets," for a description of the RSCIVP parameter and its values.

Submit the IVP job for the particular IVP you want to perform:

- IVPJOB01: Verifies XOAF batch processing
- IVPJOB02: Verifies line-mode processing
- IVPJOB03: Verifies DJDE and extended JCL processing
- IVPJOB04: Verifies XES processing
- IVPJOB05: Verifies page-format and extended JCL processing
- IVPJOB06: Verifies AFP and extended JCL processing
- IVPJOB07: Verifies pass-through processing

Successful execution of each IVP job is indicated by a return code of 00 with no error messages.

XOAF IVP option

To execute IVPs from XOAF, enter **I** at the System Services menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Installation Verification Procedure

 OPTION ===>

1.. Verify XOAF Batch Processing          5. Verify Page Format Processing
2. Verify Line Mode Processing            6. Verify AFP Processing
3. Verify DJDE/Extended JCL Processing    7. Verify Pass-Through Processing
4. Verify XES Processing


SYSOUT Class:                          Using A4 Paper? (Y/N):

DATASET PREFIX
        XPFLOAD Library:
        XINPARM Library:
     Resource Libraries:

JOB CARD INFORMATION:
===> //JOBNAME JOB (ACCOUNT),'NAME',CLASS=A
===> //*
===> //*
===> //*
```

Use this panel to complete these fields:

Field	Description
OPTION	Select the type of processing you want to perform. Valid values: 1 Loads a form to the centralized form library, then performs an LDM library directory display for that library. 2 Tests line-mode processing. 3 Tests DJDE and extended JCL processing. 4 Tests XES processing. 5 Tests page-formatted and extended JCL processing. 6 Tests AFP and extended JCL processing. 7 Tests pass-through document processing.
SYSOUT Class	For XPAF IVP testing only. Enter your job SYSOUT class (centralized or decentralized printer). If you select option 4 (Verify XES Processing), you must enter the SYSOUT class for a PCL-capable printer or PDF device printer.

Field	Description
Using A4 Paper?	Indicate whether you are printing the IVP jobs on 8.5 by 11 inch or A4 paper. Valid values: Y Indicates the paper size is A4. N Indicates the paper size is 8.5 by 11 inches. ***NOTE:*** When using the option to print the DJDE IVP with extended JCL, the output for letter size and A4 paper is not identical. Text may be shifted slightly when it is printed on A4 paper.
DATASET PREFIX **XPFLOAD Library**	Enter the high-level and mid-level qualifiers for your system load library.
XINPARM Library	Enter the high-level and mid-level qualifiers for the library containing your initialization parameters.
Resource Libraries	Enter the high-level and mid-level qualifiers for your resource libraries, if different from your XPFLOAD library.
JOB CARD INFORMATION	Enter your standard JCL job card information.

Press **ENTER**, and the second IVP panel appears:

```
Xerox Output Administrative Facility
Installation Verification Procedure

OPTION ===>

C. Cancel  JCL

E. Edit  JCL

K. Keep  JCL

S. Submit  JCL
```

On this panel, select the option you want to use and press **ENTER**. Valid values are:

C Cancels the generated JCL and returns to the initial Installation Verification Procedure panel.

E Displays the generated JCL for editing purposes.

K Keeps the generated JCL in a sequential dataset. After you save the JCL, you can access this dataset and submit the job without regenerating the JCL each time.

S Submits the JCL. Standard TSO/ISPF JCL submission error or confirmation messages are displayed.

NOTE: You cannot use the END command or the PF3 key to exit this panel. If you want to return to the previous panel and do not want to display, submit or keep the JCL, you must enter **C** on the COMMAND line and press **ENTER**.

Editing the JCL

If you enter E in the OPTION field on the JCL options panel, a panel the similar to this appears:

```
//job-name JOB job-information
//*
//*
//*
//*****************************************************************************//
//*   INSTALLATION VERIFICATION PROCEDURE - XOAJ1810                           *//
//*                                                                           *//
//*****************************************************************************//
//*
//XOAFBAT  PROC
//XOAF     EXEC PGM=XOASUP00,REGION=1024K,PARM=(userid)
//STEPLIB  DD   DISP=SHR,DSN=xpfload-library-name
//TABLELIB DD   DISP=SHR,DSN=font-table—library-name
//XINPARM  DD   DISP=SHR,DSN=xinparm-library-name
//UJLLIST  DD   SYSOUT=*,DCB=(RECFM=FBA,LRECL=133,BLKSIZE=1330)
//XOAPRINT DD   SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//XOAIN    DD   DDNAME=SYSIN
//*
// PEND
//*
//S1       EXEC XOAFBAT
LOAD FORM('resource-library-name.IVPXOAF(DJ3F)')
         ('resource-library-name.CFORMLIB(DJ3F)') CENT
//*
//S2       EXEC XOAFBAT
LIB DIR('resource-library-name.CFORMLIB')
//*
```

You can edit and save the JCL and cancel or submit the job using standard TSO/ISPF commands.

Keeping the JCL

If you enter K in the OPTION field on the JCL options panel, this panel appears:

```
                    Xerox Output Administrative Facility
                    Installation Verification Procedure

COMMAND ===>

* To keep the JCL, enter a new sequential dataset name.

  Dataset Name:
```

Use this panel to complete this field and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the sequential dataset that is not currently cataloged. This is the dataset in which your JCL will be stored.

To return to the previous panel, enter **END** and press **ENTER**.

Executing the CMA-SPOOL or CA-SPOOL IVP

To execute the CMA-SPOOL or CA-SPOOL IVPs, enter **I** on the System Services menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Installation Verification Procedure

OPTION ===>

 1. Verify XOAF Batch Processing        5. Verify Page Format Processing
 2. Verify Line Mode Processing         6. Verify AFP Processing
 3. Verify DJDE/Extended JCL Processing 7. Verify Pass-Through Processing
 4. Verify XES Processing

   Subsystem:                           Using A4 Paper? (Y/N):

 DATASET PREFIX
       XPFLOAD Library:
       XINPARM Library:
    Resource Libraries:

 JOB CARD INFORMATION:
  ===> //JOBNAME JOB (ACCOUNT),'NAME',CLASS=A
  ===> //*
  ===> //*
  ===> //*
```

Use this panel to complete these fields:

Field	Description
OPTION	Select the type of processing you want to perform. Valid values: 1 Loads a form to the centralized form library, then performs an LDM library directory display for that library. 2 Tests line-mode processing. 3 Tests DJDE and extended JCL processing. 4 Tests XES processing. 5 Tests page-formatted and extended JCL processing. 6 Tests AFP and extended JCL processing. 7 Tests pass-through document processing.
Subsystem	Enter these parameters: (*subsys-name*,class,,*printer-name*) where *subsys-name* The 1- to 4-character subsystem name as defined in the COMSSID parameter in the XINSXOSF member in XINPARM you created for CMA-SPOOL or CA-SPOOL. *class* The 1-character output class defined for the CMA-SPOOL or CA-SPOOL printer. *printer-name* The name of the printer to be used. The printer name must be defined in the printer profile library. If you select option 2, Verify XES processing, you must specify a decentralized printer. Example: SUBSYSTEM = (ESF,5,,PRT1652)
Using A4 Paper?	Indicate whether you are printing the IVP jobs on 8.5 by 11 inch or A4 paper. Valid values: Y Indicates the paper size is A4. N Indicates the paper size is 8.5 by 11 inches. ***NOTE:*** When using the option to print the DJDE IVP with extended JCL, the output for letter size and A4 paper is not identical. Text may be shifted slightly when it is printed on A4 paper.
DATASET PREFIX **XPFLOAD Library**	Enter the high-level and mid-level qualifiers for your system load library.
XINPARM Library	Enter the high-level and mid-level qualifiers for the library containing your initialization parameters.

Field	Description
Resource Libraries	Enter the high-level and mid-level qualifiers for your resource libraries, if different from your XPFLOAD library.
JOB CARD INFORMATION	Enter your standard JCL job card information.

Press **ENTER**, and the second IVP panel appears:

```
                    Xerox Output Administrative Facility
                    Installation Verification Procedure

OPTION ===>

 C. Cancel  JCL

 E. Edit  JCL

 K. Keep  JCL

 S. Submit  JCL
```

On this panel, select the option you want to use and press **ENTER**. Valid values are:

- C Cancels the generated JCL and returns to the initial Installation Verification Procedure panel.
- E Displays the generated JCL for editing purposes.
- K Keeps the generated JCL in a sequential dataset. After you save the JCL, you can access this dataset and submit the job without regenerating the JCL each time.
- S Submits the JCL. Standard TSO/ISPF JCL submission error or confirmation messages are displayed.

NOTE: You cannot use the END command or the PF3 key to exit this panel. If you want to return to the previous panel and do not want to display, submit or keep the JCL, you must enter **C** on the COMMAND line and press **ENTER**.

Editing the JCL

If you enter E in the OPTION field on the JCL options panel, a panel the similar to this appears:

```
//job-name  JOB  job-information
//*
//*
//*
//*****************************************************************************//
//*   INSTALLATION VERIFICATION PROCEDURE - XOAJ1810                           *//
//*                                                                            *//
//*****************************************************************************//
//*
//XOAFBAT  PROC
//XOAF     EXEC PGM=XOASUP00,REGION=1024K,PARM=(userid)
//STEPLIB  DD   DISP=SHR,DSN=xpfload-library-name
//TABLELIB DD   DISP=SHR,DSN=font-table—library-name
//XINPARM  DD   DISP=SHR,DSN=xinparm-library-name
//UJLLIST  DD   SYSOUT=*,DCB=(RECFM=FBA,LRECL=133,BLKSIZE=1330)
//XOAPRINT DD   SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//XOAIN    DD   DDNAME=SYSIN
//*
// PEND
//*
//S1       EXEC XOAFBAT
LOAD FORM('resource-library-name.IVPXOAF(DJ3F)')
         ('resource-library-name.CFORMLIB(DJ3F)') CENT
//*
//S2       EXEC XOAFBAT
LIB DIR('resource-library-name.CFORMLIB')
//*
```

You can edit and save the JCL and cancel or submit the job using standard TSO/ISPF commands.

Keeping the JCL

If you enter K in the OPTION field on the JCL options panel, this panel appears:

```
                    Xerox Output Administrative Facility
                    Installation Verification Procedure

COMMAND  ===>

* To keep the JCL, enter a new sequential dataset name.

  Dataset Name:
```

Use this panel to complete this field and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the sequential dataset that is not currently cataloged. This is the dataset in which your JCL will be stored.

To return to the previous panel, enter **END** and press **ENTER**.

Executing the XDS IVP

Before you execute the XDS IVPs, be sure XDS is initialized.

NOTE: To ensure proper execution of the IVPs, submit each IVP job separately. Also, you must manually schedule the jobs.

To execute the XDS IVPs, enter **I** on the System Services panel OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Installation Verification Procedure

 OPTION ===>

   1. Verify XOAF Batch Processing          5. Verify Page Format Processing
   2. Verify Line Mode Processing           6. Verify AFP Processing
   3. Verify DJDE/Extended JCL Processing   7. Verify Pass-Through Processing
   4. Verify XES Processing

       Subsystem:                            Using A4 Paper? (Y/N):

 DATASET PREFIX
          XPFLOAD Library:
          XINPARM Library:
      Resource Libraries:

 JOB CARD INFORMATION:
    ===> //JOBNAME JOB (ACCOUNT),'NAME',CLASS=A
    ===> //*
    ===> //*
    ===> //*
```

Use this panel to complete these fields:

Field	Description
OPTION	Select the type of processing you want to perform. Valid values: 1 Loads a form to the centralized form library, then performs an LDM library directory display for that library. 2 Tests line-mode processing. 3 Tests DJDE and extended JCL processing. 4 Tests XES processing. 5 Tests page-formatted and extended JCL processing. 6 Tests AFP and extended JCL processing. 7 Tests pass-through document processing.
Subsystem	Enter these parameters: (*xds-name*,*printer-name*,'SEP=*x*') where *xds-name* The 4-character XDS subsystem name as defined in the SUBSYS parameter in the XINSXOSF member of XINPARM you created for XDS. *printer-name* The name of the printer to be used. The printer name must be defined in the XOSF printer profile library. If you select option 2, Verify XES processing, you must specify a decentralized printer. *x* One of these values: J Produces job header and trailer pages. D Produces dataset separator pages. JD Produces both job header and trailer pages and dataset separator pages. N Produces no separator pages. Default: N Example: SUBSYSTEM = (XOSF,PRT1652,'SEP=J')
Using A4 Paper?	Indicate whether you are printing the IVP jobs on 8.5 by 11 inch or A4 paper. Valid values: Y Indicates the paper size is A4. N Indicates the paper size is 8.5 by 11 inches. ***NOTE:*** When using the option to print the DJDE IVP with extended JCL, the output for letter size and A4 paper is not identical. Text may be shifted slightly when it is printed on A4 paper.

Field	Description
DATASET PREFIX **XPFLOAD Library**	Enter the high-level and mid-level qualifiers for your system load library.
XINPARM Library	Enter the high-level and mid-level qualifiers for the library containing your initialization parameters.
Resource Libraries	Enter the high-level and mid-level qualifiers for your resource libraries, if different from your XPFLOAD library.
JOB CARD INFORMATION	Enter your standard JCL job card information.

Press **ENTER**, and the second IVP panel appears:

```
                    Xerox Output Administrative Facility
                    Installation Verification Procedure

OPTION ===>

 C. Cancel  JCL

 E. Edit  JCL

 K. Keep  JCL

 S. Submit  JCL
```

On this panel, select the option you want to use and press **ENTER**. Valid values are:

- C Cancels the generated JCL and returns to the initial Installation Verification Procedure panel.
- E Displays the generated JCL for editing purposes.
- K Keeps the generated JCL in a sequential dataset. After you save the JCL, you can access this dataset and submit the job without regenerating the JCL each time.
- S Submits the JCL. Standard TSO/ISPF JCL submission error or confirmation messages are displayed.

NOTE: You cannot use the END command or the PF3 key to exit this panel. If you want to return to the previous panel and do not want to display, submit or keep the JCL, you must enter **C** on the COMMAND line and press **ENTER**.

Editing the JCL

If you enter E in the OPTION field on the JCL options panel, a panel the similar to this appears:

```
//job-name JOB job-information
//*
//*
//*
//*****************************************************************************//
//*   INSTALLATION VERIFICATION PROCEDURE - XOAJ1810                           *//
//*                                                                            *//
//*****************************************************************************//
//*
//XOAFBAT  PROC
//XOAF     EXEC PGM=XOASUP00,REGION=1024K,PARM=(userid)
//STEPLIB  DD   DISP=SHR,DSN=xpfload-library-name
//TABLELIB DD   DISP=SHR,DSN=font-table—library-name
//XINPARM  DD   DISP=SHR,DSN=xinparm-library-name
//UJLLIST  DD   SYSOUT=*,DCB=(RECFM=FBA,LRECL=133,BLKSIZE=1330)
//XOAPRINT DD   SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//XOAIN    DD   DDNAME=SYSIN
//*
// PEND
//*
//S1       EXEC XOAFBAT
LOAD FORM('resource-library-name.IVPXOAF(DJ3F)')
         ('resource-library-name.CFORMLIB(DJ3F)') CENT
//*
//S2       EXEC XOAFBAT
LIB DIR('resource-library-name.CFORMLIB')
//*
```

You can edit and save the JCL and cancel or submit the job using standard TSO/ISPF commands.

Keeping the JCL

If you enter K in the OPTION field on the JCL options panel, this panel appears:

```
                    Xerox Output Administrative Facility
                    Installation Verification Procedure

COMMAND  ===>

* To keep the JCL, enter a new sequential dataset name.

  Dataset Name:
```

Use this panel to complete this field and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the sequential dataset that is not currently cataloged. This is the dataset in which your JCL will be stored.

To return to the previous panel, enter **END** and press **ENTER**.

Verifying your output

When you perform the IVPs, check your output against the samples provided in this section and verify they are similar. Banner pages are not shown in the sample output; each job is separated by a cover page that indicates the type of processing by which the sample output is produced. At your site, these cover pages are replaced by your site-specific banner pages.

Sample output is provided for these types of processing:

- Line-mode
- DJDE and extended JCL
- XES
- Page format
- AFP
- Pass-through

The XOAF IVP does not produce printed output.

Your IVP output quality may vary, depending on the model of printer you use and its current print quality. Due to production variations when printing the IVP samples, your IVP output may not precisely match the samples provided.

After you have successfully run the IVP jobs, XPAF installation, CMA-SPOOL or CA-SPOOL setup, and/or XDS setup is complete. For information about using XPAF, CMA-SPOOL or CA-SPOOL, and/or XDS, refer to *Section Three: Managing Resources with XPAF* and *Section Four: Printing Documents with XPAF*.

Line-mode processing IVP sample output

The line-mode IVP sample is a single sided document similar to the sample on the next page.

Rainbow Office Supplies
123 Sunshine Parkway
Sandy Beach, FL 32111

July 3, 1996

Mr. Paul O'Hara, Manager
Surf & Sand Hotel
1000 Flamingo Drive, Suite B
Salty Shores, FL 32110

Dear Mr. O'Hara:

We received a new shipment of window envelopes this week and wanted to let you know you could redeem your raincheck for this item. We now have enough of the item in stock to fill your order.

When you come in to redeem your raincheck, please let our staff know of any other office supply needs you may have. We will be glad to help you find any item in our store. If the item is not in stock, we'll be happy to order it for you.

Thank you for your patronage. We hope to see you soon.

Sincerely,

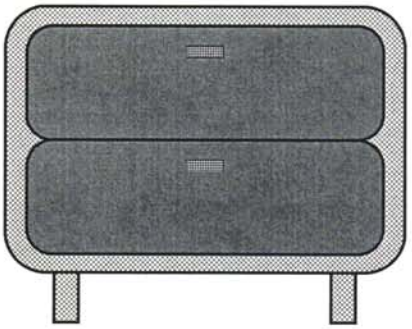
James Lemanski
Store Manager

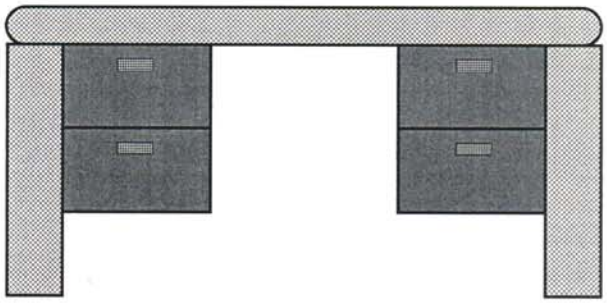
DJDE processing IVP sample output

The DJDE processing IVP sample is a single sided document similar to the sample on the next printed page.

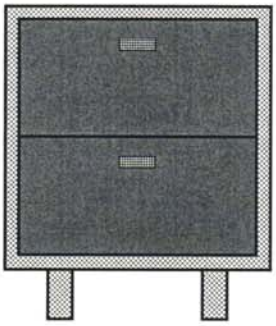
XES processing IVP sample output

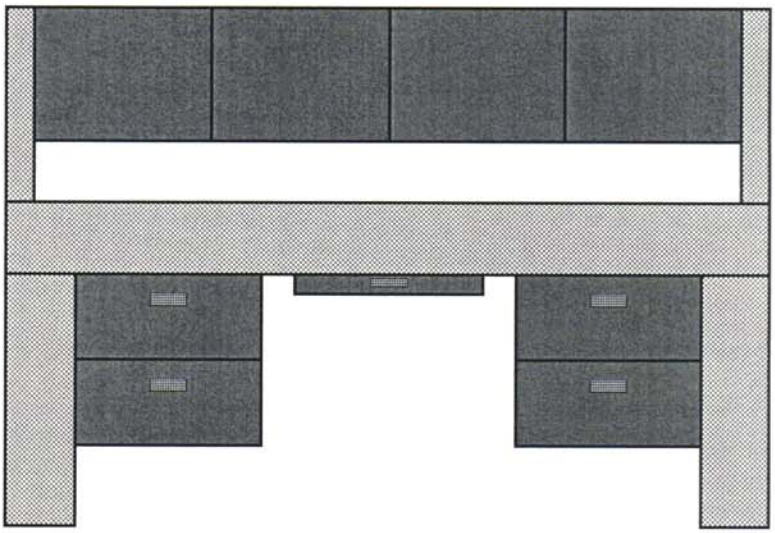
A





B





CLASSIC DESK COLLECTION

A Desker's Radius Edge Desk Collection

This collection includes a desk, credenza, book case, and matching lateral file in a light oak finish. Mar-resistant laminated surface with oak-veneered radius edges, with solid oak pull handles. Desk and credenza include locking mechanism for security. Drawers feature ball bearing suspension for easy opening.

Item	Description	Dimensions	List	Our Cost
DRE1204	Desk	29Hx71Wx36D	$428.00	$211.00
CRE1227	Credenza	29Hx71Wx20D	$394.00	$186.00
BRE1332	Book Case	42Hx36Wx18D	$198.00	$104.59
LRE1479	Lateral File	29Hx36Wx20D	$436.00	$234.00

B Bennett's Mahogany Desk Collection

Individual pieces in a rich mahogany veneer include a single or double pedestal desk, credenza, hutch, book case, and two-drawer pedestal. Desk features a full modesty panel. A pull-out keyboard drawer is available for use with the desk and credenza. Pedestal comes fully assembled. Other items use our quick-lock steel clips for ease of assembly.

Item	Description	Dimensions	List	Our Cost
BSD-264M	Single Ped. Desk	29Hx68Wx34D	$572.00	$305.00
BDD-265M	Double Ped. Desk	29Hx72Wx34D	$598.00	$322.00
BCD-296M	Credenza	29Hx70Wx20D	$526.00	$284.00
BBD-351M	Book Case	44Hx34Wx18D	$386.00	$192.00
BPD 399M	2-Drawer Pedestal	28Hx38Wx16D	$280.00	$126.00
BHD-326M	Hutch	39Hx70Wx18D	$422.00	$208.00

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RAINBOW OFFICE SUPPLIES

XES processing IVP sample output

The XES processing IVP sample is a single sided document similar to the sample on the next printed page.

Rainbow Office Supplies

JUNE 1997

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Page Format processing IVP sample output

The Page Format processing IVP sample prints as two single-sided documents, similar to the samples on the next printed pages.

Rainbow Office Supplies
Phone Call Log for June 1996
Purchasing Department Ext.: 2120

Date	Number Dialed	Time	Mins	Charge
06/03	305-896-0110	9:38	3.41	.76
06/03	561-222-4844	10:14	2.18	.48
06/04	305-896-2506	1:17	10.25	2.26
06/05	561-222-9933	2:05	6.15	1.36
06/05	305-896-2562	3:14	10.11	2.23
06/06	813-636-2400	8:58	1.50	.33
06/06	561-222-7008	9:27	13.45	2.96
06/10	305-896-3200	9:56	5.04	1.11
06/11	305-896-2506	11:12	2.09	.46
06/11	407-804-3003	3:37	4.01	.89
06/12	305-896-2562	4:11	6.23	1.37
06/13	561-222-0620	4:27	4.44	.98
06/13	813-636-0027	4:52	11.26	2.48
06/14	305-896-8251	9:13	15.16	3.34
06/14	305-896-4354	10:09	2.50	.55
06/15	407-804-7777	10:23	12.57	2.77
06/16	305-896-6389	12:17	3.11	.69
06/17	305-896-0700	8:32	8.17	1.80
06/17	561-222-6363	8:54	11.22	2.47
06/18	305-896-2282	11:47	2.51	.56
06/26	407-804-9542	3:31	6.36	1.40
06/26	813-636-2459	3:41	4.41	.98
06/27	305-896-1166	9:19	5.52	1.22
06/27	305-896-1200	11:06	15.08	3.32

Rainbow Office Supplies
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Sandy Beach, FL 32111

Rainbow Office Supplies
Phone Call Log for June 1996
Sales Department Ext.: 2175

Date	Number Dialed	Time	Mins	Charge
06/03	305-896-6020	8:30	4.52	.99
06/03	407-804-1932	9:57	3.16	.69
06/03	305-896-7780	10:14	11.49	2.52
06/03	305-896-0280	11:20	7.32	1.61
06/03	813-636-0990	2:50	28.11	6.18
06/04	305-896-5350	8:46	1.02	.22
06/04	561-222-3883	11:02	18.37	4.04
06/04	813-636-7710	1:16	4.24	.93
06/05	561-222-5860	8:37	6.53	1.43
06/05	407-804-1424	9:05	3.05	.67
06/06	305-896-2900	10:22	7.08	1.55
06/06	305-896-3842	11:32	5.38	1.18
06/06	561-222-1003	12:45	13.16	2.89
06/10	407-804-8251	8:05	19.48	4.28
06/10	561-222-1003	9:17	5.32	1.17
06/11	813-636-6020	10:44	15.41	3.39
06/11	561-222-1004	11:09	2.11	.46
06/13	305-896-8745	8:34	9.28	2.05
06/14	305-896-9000	9:01	13.55	2.98
06/14	407-804-3393	10:12	1.50	.33
06/15	305-896-7340	2:14	7.37	1.84
06/15	813-636-9542	3:11	5.01	1.10
06/18	561-222-0097	8:24	6.10	1.34
06/18	407-804-4640	9:08	40.05	8.81
06/19	561-222-4000	9:16	13.55	2.98
06/25	813-636-3393	10:38	1.50	.33
06/25	813-725-6600	1:07	7.37	1.84
06/26	813-636-2178	4:52	6.10	1.34
06/28	407-804-8745	8:29	9.28	2.05
06/28	813-725-6600	11:04	15.41	3.39

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Sandy Beach, FL 32111

AFP processing IVP sample output

The AFP processing IVP sample output prints as two single-sided documents, similar to the samples on the next printed pages.

Rainbow Office Supplies
123 Sunshine Parkway
Sandy Beach, FL 32111

Statement of Account

Tom W. Smith
1100-C Oak Avenue
Sandy Beach, FL 32111

ACCOUNT NUMBER:	53162581
AMOUNT DUE:	$ 62.89
DATE DUE:	06/25/95
PAST DUE ON:	06/30/95

DATE	DESCRIPTION	CHARGES	PAYMENTS
05/19/95	Payment Received - Thank You		$ 57.46
06/05/95	3-ring Binders	$ 43.84	
06/09/95	Index tabs, Binder clips	$ 19.05	

PREVIOUS BALANCE	CHARGES	NEW BALANCE
$ 57.46	$ 62.89	$ 62.89
PAYMENTS/CREDITS	**FINANCE CHARGE**	**MINIMUM PAYMENT**
$ 57.46	$ 0.00	$ 10.00

Please Remit This Portion With Your Payment

Tom W. Smith
1100-C Oak Avenue
Sandy Beach, FL 32111

AMOUNT DUE: $ 62.89

AMOUNT PAID:

ACCOUNT NUMBER: 53162581

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Sandy Beach, FL 32111

Shop Rainbow Office Supplies for all your office needs

Form 12A, Designed 4/95

Rainbow Office Supplies
123 Sunshine Parkway
Sandy Beach, FL 32111

Statement of Account

Virtual Computer Company
Robert Shaw
200 Main Street, Suite 100
Sandy Beach, FL 32111

ACCOUNT NUMBER:	53268424
AMOUNT DUE:	$ 253.79
DATE DUE:	06/25/95
PAST DUE ON:	06/30/95

DATE	DESCRIPTION	CHARGES	PAYMENTS
05/20/95	Copy paper	$ 25.40	
05/21/95	Toner cartridge	$ 127.64	
05/24/95	Payment Received - Thank You		$ 75.00
06/11/95	Pens, Note pads, Paper Clips	$ 48.92	

PREVIOUS BALANCE	CHARGES	NEW BALANCE
$ 112.30	$ 201.96	$ 253.79
PAYMENTS/CREDITS	**FINANCE CHARGE**	**MINIMUM PAYMENT**
$ 75.00	$ 14.53	$ 50.00

Please Remit This Portion With Your Payment

Virtual Computer Company
Robert Shaw
200 Main Street, Suite 100
Sandy Beach, FL 32111

AMOUNT DUE: $ 253.79

AMOUNT PAID:

ACCOUNT NUMBER: 53268424

Rainbow Office Supplies
123 Sunshine Parkway
Sandy Beach, FL 32111

Shop Rainbow Office Supplies for all your office needs

Form 12A, Designed 4/95

Pass-through processing IVP sample output

The Pass-through processing IVP sample output prints as a single-sided document, similar to the sample on the next printed page.

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Congratulations on opening your new business. We at Rainbow Office Supplies wish you every success in the Sandy Beach area.

We invite you to visit our store for all of your office supply needs. Our friendly personnel can help you find whatever you need, from office furniture to computers to thumbtacks. Once you see the large selection of items we have, we feel sure that you'll think of Rainbow Office Supplies as your office supply headquarters.

To help you become better acquainted with our services, Rainbow Office Supplies would like to extend to you a special offer. Please bring the attached coupon to the store nearest you for a 20% discount on all items purchased during your first visit. We look forward to serving you on this and all future visits.

Sincerely,

Pamela D. Greene
General Manager

First-Timer's Discount Coupon

Bring this coupon for a 20% discount on all items purchased.
Offer valid only on initial visit.

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Section Three: Managing Resources with XPAF

You can use *Managing Resources with XPAF* to:

- Access the Xerox Output Administrative Facility (XOAF)
- Manage font, form, image, and logo resources
- Load PDL from a printer to a native library
- Manage resource lists
- Load custom font resources
- Manage XPAF libraries
- Manage paper-related, font, color cross-reference, and color conversion tables

Before you begin to use XPAF's resource management facilities, verify that XPAF has been installed and that the installation verification procedures (IVPs) can be run successfully.

As the administrator responsible for maintaining XPAF system resources, you should be familiar with IBM z/OS data administration, including allocating, loading, and deallocating sequential and partitioned datasets. You also should be familiar with processing VSAM datasets using the IBM Access Method Services.

If you are planning on using IBM look-alike (that is, replica) fonts that are not distributed with XPAF (such as those purchased from Xerox Font Services), you should be familiar with IBM font structure concepts.

18. Accessing XOAF

This chapter summarizes the utilities that XOAF provides for loading, converting, updating, and managing resources. To ensure that the necessary resources are available to XPAF, you must perform the applicable tasks related to each XOAF utility before you print documents.

After you create and store your resources, you can print documents without using XOAF. You may occasionally need to use XOAF to perform maintenance (for example, to add new fonts).

You can access XOAF utilities through ISPF panels, TSO commands, and batch JCL.

Using ISPF panels

This section discusses the conventions used for ISPF panels, and introduces you to the System Services menu and its XOAF options.

Panel conventions

You should be aware of the following conventions when using the ISPF panels in XOAF.

Panel keys

These keys are in effect when you use XOAF panels:

- Press the **ENTER** key to cause XPAF to process your input.
- Enter either the **HELP** command on the COMMAND line or press the **PF1** function key to display online information about how to use that panel.
- Enter either the **END** command on the COMMAND line or press the **PF3** function key to return to a previous panel.

NOTE: If you have remapped your standard PF keys, use the appropriate keys to perform these functions.

Valid values

Where space permits, the valid values or range of values for a field appear after the field name. For example, this partial panel shows that the only valid values for the ‘Rotation’ field are 0, 1, 2, and 3.

```
OUTPUT
  Dataset Name:
   Member Name:

OUTPUT SPECIFICATIONS
  Rotation (0/1/2/3):
```

Information about the valid values for fields on a panel also appears in the Help panel for that function.

Dataset names can be 1- to 44-characters long. Unless otherwise noted, dataset names and member names must follow standard z/OS naming conventions.

Option selection chaining

You can chain option selection values using a period as a separator to provide direct access to the option you want to perform. You can go directly to another option in two ways:

- If you are on the System Services menu, a chained option selection can be entered in the OPTION line. For example, entering 4.2.4 in the System Services menu OPTION line will take you directly to the Maintain the Coded Font Name (XPAFCFN) Table option.
- If you are on a menu other than the System Services menu, or within a data entry panel, a chained option selection must be preceded by an equal sign (=) on the COMMAND line. For example, if you were in the Maintain the Coded Font Name (XPAFCFN) Table data entry panel, you would enter =7.2 on the COMMAND line to go directly into the Browse a Member option on the Manage Libraries menu.

When you use chaining to access an option, pressing PF3 upon leaving that option will return you to the System Services menu.

Panel message display

Two types of messages may appear on the terminal when you use the ISPF panels in XPAF:

- ISPF messages
- XOAF system messages

NOTE: XPAF also may write messages to the z/OS system log (SYSLOG), your XOAF log (XLOG) dataset, or the host operator console.

For complete information about XPAF message handling and the messages that can be generated, refer to *Section Six: XPAF Messages*.

ISPF messages

XPAF writes two versions of each ISPF message to the TSO terminal:

- A short version that appears on the first row of an XOAF panel.
- A long version that appears on the third row of an XOAF panel. You can display this message only by either entering HELP on the COMMAND line and pressing ENTER, or by pressing the PF1 key.

NOTE: If you are using the ISPF window “pop-up” option for messages, the long version of the ISPF message can be displayed anywhere on the panel.

If the long version of a message overwrites the option or COMMAND line, press **ENTER** to refresh the panel display.

Other ISPF messages may be issued from the host system. These messages are issued without a message number and prefix, and include both upper and lowercase characters. Because these messages are not issued by XPAF, they are not documented in *Section Six: XPAF Messages*.

This sample panel shows both versions of an ISPF message issued by XPAF:

Short ISPF Message

Long ISPF Message

```
                    Xerox Output Administrative Facility MISSING REQUIRED ENTRY
                                Maintain Resident Font Lists
XOAF008E - ENTER LIST NAME AT THE CURSOR POSITION.
COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a list.

  Dataset Name: TABLELIB

     List Name:
```

XOAF system messages

XOAF system messages appear in response to XOAF activities. XPAF may issue more than one message for some error conditions. Use the messages collectively to help identify and correct errors.

XOAF system messages are displayed at the bottom of a panel, for example:

```
                    Xerox Output Administrative Facility
                    Load Centralized Images to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     Member Name:

UPL1406I RESOURCE GRAPH21 LOADED SUCCESSFULLY
```

XOAF Message

Some XOAF system messages displayed on your TSO terminal exceed 80 characters, resulting in a truncated message. To read the complete message, access the SYSLOG or XLOG dataset for your XOAF session.

NOTE: If you have set up your ISPF user environment to display PF key values at the bottom of every panel, you may not be able to view XOAF system messages.

Scroll fields

A ‘SCROLL’ field appears on some panels where the number of rows of data to be displayed exceeds the physical rows available on the terminal page. The ‘SCROLL’ field enables you to page forward and backward through the list of data using the page FORWARD and BACKWARD commands or function keys (typically PF8 and PF7).

For example, this panel shows a ‘SCROLL’ field:

```
                    Xerox Output Administrative Facility  Row 1 to 7 of 17
                         Selection List of Font Table Members

COMMAND ===>                                                SCROLL===> PAGE

* Next to name, enter 'S' to select a member.

  X0AD0A
  X0AD0B
  X0AD10
  X0AD2A
  X0AD2B
  X0AE10
  X0AG0A
```

Panels containing a ‘SCROLL’ field display a message indicating which rows currently are being viewed and the total number of rows available for viewing.

System Services menu

When you invoke XOAF, this menu appears:

```
                    Xerox Output Administrative Facility
                          System Services 5.0

OPTION ===>

  1.  Load Resources
  2.  Convert Resources
  3.  Manage Resource Lists
  4.  Manage Tables
  5.  Manage Custom Replica Fonts
  6.  Display Printer Status
  7.  Manage Libraries

  E.  ISPF Edit
  I.  Installation Verification Procedure
  P.  Xerox Page Format Editor
  T.  Help Tutorial
  X.  Exit
```

When you select an option from this menu, the system displays a secondary menu from which other data entry panels can be accessed. To select an option, enter the number of the option you want to use and press **ENTER**. To return to this menu from a secondary menu, press **PF3**.

XOAF options

XOAF provides the menu options listed below. These options are independent of one another; they do not need to be used together or in any specific order.

- Option 1, Load Resources
- Option 2, Convert Resources
- Option 3, Manage Resource Lists
- Option 4, Manage Tables
- Option 5, Manage Custom Replica Fonts
- Option 6, Display Printer Status
- Option 7, Manage Libraries

These options are used specifically to manage resources. Figure 18-1 shows the organizational flow of the resource management menus/options provided by XOAF.

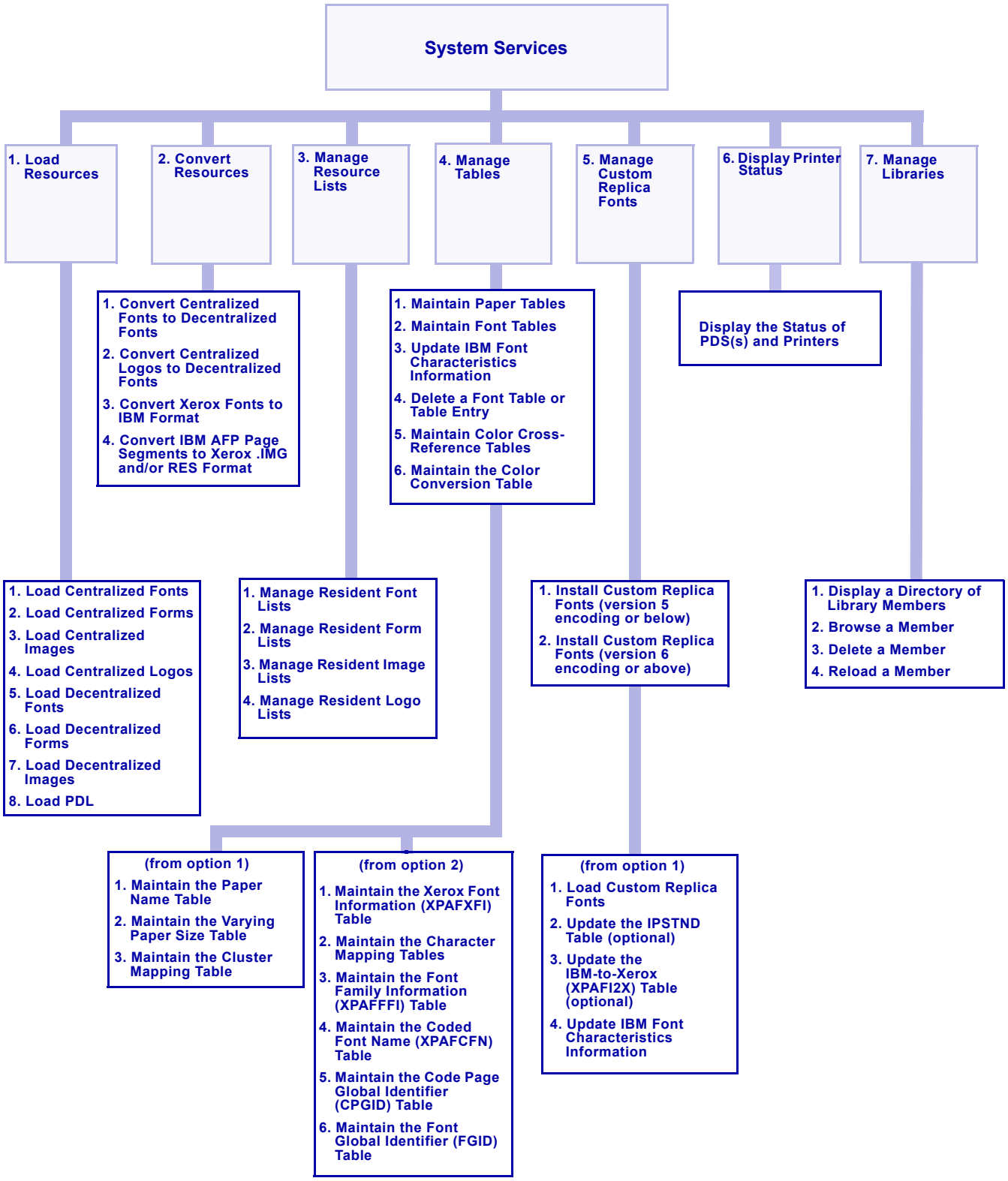
A brief overview of each resource management option is provided later in this chapter. Information on how and when to use each option can be found in later chapters of Section Three.

Five additional options also appear on the System Services menu:

- Option E, ISPF Edit, allows you to access the ISPF editor and returns to XOAF at the end of the EDIT session. Before you invoke any other editor, you must exit XOAF.
- Option I, Installation Verification Procedure, allows you to generate jobs that you can submit to test your installation. This option is discussed in detail in *Section Two: Installing and Customizing XPAF*.
- Option P, Xerox Page Format Editor, allows you to create and update page formats which are used to format line-mode data streams. This option is discussed in detail in the *Section Eight: Xerox Page Format Editor User Guide*.
- Option T, Help Tutorial, provides information about how to use the online help feature available on each active panel.
- Option X, Exit, ends your XOAF session.

To select an option on any menu, enter the number or letter of the option you want to use and press **ENTER**.

Figure 18-1. Organizational flow of resource management panels



Load Resources menu option

You can use this option to:

- Load centralized or decentralized fonts, forms, and images into native libraries
- Load centralized logos into a native library
- Load print description language (PDL) members to a native library

To access this option, enter **1** on the System Services menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                              Load Resources

OPTION ===>

  1.  Load Centralized Fonts

  2.  Load or Compile Centralized Forms

  3.  Load Centralized Images

  4.  Load Centralized Logos

  5.  Load Decentralized Fonts

  6.  Load Decentralized Forms

  7.  Load Decentralized Images

  8.  Load PDL
```

Convert Resources menu option

You can use this option to:

- Convert centralized fonts and logos to decentralized fonts
- Convert Xerox fonts to IBM format
- Convert IBM page segments to Xerox centralized or decentralized format

To access this option, enter **2** on the System Services menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                          Convert Resources

OPTION ===>

  1.  Convert Centralized Fonts to Decentralized Fonts

  2.  Convert Centralized Logos to Decentralized Fonts

  3.  Convert Xerox Fonts to IBM Format

  4.  Convert IBM AFP Page Segments to Xerox .IMG and/or RES Format
```

Manage Resource Lists menu option

You can use this option to create and maintain lists of fonts, forms, images, and logos that are resident on each printer so that XPAF knows which resources must be downloaded at print time.

To access this option, enter **3** on the System Services menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                          Manage Resource Lists

OPTION ===>

  1.  Manage Resident Font Lists

  2.  Manage Resident Form Lists

  3.  Manage Resident Image Lists

  4.  Manage Resident Logo Lists
```

Manage Tables menu option

You can use this option to:

- Create, update, or delete paper-related tables
- Display, update, or delete font tables
- Update IBM font characteristics table information
- Create, delete, or update color cross-reference tables, which are used to support highlight color for centralized printers
- Load the color conversion table, which is used to map centralized highlight colors to decentralized full color values

To access this option, enter **4** on the System Services menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                              Manage Tables

OPTION ===>

  1.  Maintain Paper Tables

  2.  Maintain Font Tables

  3.  Update IBM Font Characteristics Information

  4.  Delete a Font Table or Table Entry

  5.  Maintain Color Cross-Reference Tables

  6.  Maintain the Color Conversion Table
```

Manage Custom Replica Fonts menu option

You can use this option to make custom replica fonts available to XPAF. To access this option, enter **5** on the System Services menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                         Manage Custom Replica Fonts

OPTION ===>

  1.  Install Custom Replica Fonts (version 5 encoding or below)

  2.  Install Custom Replica Fonts (version 6 encoding or above)
```

Display Printer Status menu option

You can use this option to:

- Display the status of printers and PDS members by address space.

To access this option, enter **6** on the System Services menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                         Display Printer Status

OPTION ===>

 1. Display the Status of PDS(s) and Printers
```

Manage Libraries menu option

You can use this option to list, browse, delete, and offload members of native libraries and PDSs. You also can use this option to reload members of native libraries.

NOTE: A native library is a VSAM library formatted for XPAF use.

To access this option, enter **7** on the System Services menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                         Manage Libraries

OPTION ===>

  1.  Display a Directory of Library Members

  2.  Browse a Member

  3.  Delete a Member

  4.  Reload a Member
```

Using TSO/batch commands

Section Three focuses on the use of ISPF panels to perform XOAF functions. However, TSO/batch commands are available as alternatives to using many of the XOAF panel options. Information on using particular TSO/batch commands can also be found in Section Three. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for a complete list of the commands.

Coding conventions

The XOAF TSO/batch commands follow standard JCL coding conventions. Items such as commas, single quotes, equal signs, and parentheses are part of a definition's syntax. When present, you must include them exactly as indicated. Refer to the appropriate JCL reference manual for a detailed description of valid syntax.

When allocating an XOAIN dataset ensure that it is in fixed format.

When coding a batch job, each new XOAF batch command must begin on a new record. A command can continue across as many records as necessary.

When submitting an XOAF batch job, do not delete the PARM statement from the EXEC card. If you do, the batch job will fail with a return code of 0132. This return code indicates an invalid or missing parameter list.

Using TSO commands

You can execute the TSO/batch commands in two ways:

- From the native TSO environment
- From the ISPF Primary Option Menu

Executing commands in the native TSO environment

The native TSO environment does not use menus to access XOAF. The instructions for entering, executing, and exiting an XOAF session using the native TSO environment are:

Step 1. Log on to TSO.

Step 2. Enter **XOAF** (or a site-specific prompt) and press **ENTER**.

Step 3. Enter a command statement as provided in Section Three for the XOAF function. Press **ENTER**. A TSO message is displayed indicating success or failure.

Step 4. Enter **END** and press **ENTER** to exit XOAF.

CAUTION: You must use the XOAF command processor as described. Do not access XOAF using a TSO CLIST and do not invoke XOAF with the TSO CALL command. If you do, the results may be unpredictable.

Executing commands from the ISPF Primary Option Menu

The instructions for entering, executing, and exiting an XOAF session from the ISPF Primary Option Menu are:

Step 1. On the ISPF Primary Option Menu, enter **TSO XOAF** on the Option line. Press **ENTER**. The XOAF prompt will be displayed.

Step 2. Enter a command statement as provided in Section Three for the XOAF function. Press **ENTER**. A TSO message is displayed indicating success or failure.

Step 3. Enter **END** and press **ENTER** to exit XOAF and return to the ISPF Primary Option Menu.

NOTE: Depending on your system, you may need to press ENTER twice to display the XOAF prompt or to return to the ISPF Primary Option Menu.

Using batch JCL

To use the batch environment to access an XOAF utility, submit a batch job that reads a command statement from the JCL and invokes the requested services. You can use JCL similar to this:

```
//job-name JOB job-information
//S1        EXEC    PGM=XOASUP00,REGION=2048K,PARM=userid
//STEPLIB   DD      DSN=prefix.XPFLOAD,DISP=SHR
//XINPARM   DD      DSN=prefix.XINPARM,DISP=SHR
//XOAFMSG   DD      DSN=prefix.XPFMLIB(XOAOO),DISP=SHR
//TABLELIB  DD      DSN=prefix.TABLELIB,DISP=SHR
//UJLLIST   DD      SYSOUT=*
//XOAPRINT  DD      SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//XOAIN     DD      *
/* command statement */
/*
```

During the installation process, XOAFBAT is loaded into the system procedure library. You can substitute XOAFBAT (shown below) in a batch job.

```
//XOAFBAT   PROC  CORE=4096K,USER=
//XOAF      EXEC  PGM=XOASUP00,REGION=&CORE,PARM=(&USER)
//STEPLIB   DD    DSN=prefix.XPFLOAD,DISP=SHR
//TABLELIB  DD    DSN=prefix.TABLELIB,DISP=SHR
//XINPARM   DD    DSN=prefix.XINPARM,DISP=SHR
//XOAFMSG   DD    DSN=prefix.XPFMLIB(XOAOO),DISP=SHR
//XOAPRINT  DD    SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//UJLLIST   DD    SYSOUT=*,DCB=(RECFM=FBA,LRECL=133,BLKSIZE=1330)
//XOAIN     DD    DDNAME=SYSIN
```

Sample batch jobs

The following examples execute batch jobs using the XOAFBAT procedure.

This JCL causes a batch job to display a directory of members in a library.

```
//job-name JOB job-information
//XOAFBAT  EXEC XOAFBAT,USER=userid
//SYSIN    DD *
LIB DIR(library-name)
/*
```

This JCL loads the MYCOLORS PDS member which resides in the XPAF30.XPFSAMP dataset to the default table library, TABLELIB.

```
//job-name JOB job-information
//XOAFBAT  EXEC XOAFBAT,USER=userid
//SYSIN    DD *
LOAD INKS('XPAF30.XPFSAMP(MYCOLORS)') TO('XPAF30.TABLELIB')
/*
```

19. XPAF resources

This chapter provides an overview of the types of resources used by XPAF and the libraries in which XPAF can store resources. XPAF stores resources in two types of libraries:

- Partitioned datasets.
- Native libraries. A native library is a VSAM dataset that is used by XPAF to store resources.

NOTE: Before you can manage your resources, you will need to know the names of the resource libraries at your site. Library names and the values of other resource management-related information are specified by your systems programmer during installation using initialization and printer profile parameters. Refer to appendix C, “Resource management parameters” for a list of parameters whose values you will need to know.

Depending on the data stream type being processed and the printer being used, certain types of resources can be stored in a library and downloaded at print time, inline in the data stream, or resident on the printer if the printer is capable of storing resources. Refer to *Section Four: Printing Documents with XPAF* for information regarding the print time handling of resources for each data stream type.

Resources such as fonts, forms, images, and logos must be in a format recognized by the Xerox printer whether they are library or printer-resident, or included inline as part of the document:

- Centralized printers recognize these Xerox file formats:
  - .FNT format for fonts
  - .FRM format for forms
  - .IMG format for images
  - .LGO format for logos
- Decentralized printers recognize these Xerox file formats:
  - XES format for forms
  - Sixelized format for fonts and images
- PCL-capable printers recognize these Xerox file formats:
  - PCL macro format for forms
  - Bitmapped format for fonts and images

For resources that are not already in a format required by the printer, XPAF either performs dynamic resource conversions during XPAF processing or provides XOAF options or TSO/batch commands to preconvert and store those resources.

Fonts

A font is a set of printing characters that have common characteristics such as style, width, height, and weight. This term is used in XPAF to indicate one of these resources:

- A centralized font stored in .FNT file format
- A decentralized font stored in sixelized file format
- A PCL or PDF font stored in bitmapped file format

XPAF currently supports only the 2700 font format for decentralized (sixelized) fonts.

Specifying font libraries

XPAF stores fonts in these types of native libraries:

- A centralized font library for fonts in .FNT format that will be downloaded to a centralized printer
- A decentralized font library for fonts in sixelized format that will be downloaded to a decentralized printer
- A PCL font library for fonts in bitmapped format that will be downloaded to a PCL-capable printer
- A PDF font library for fonts in bitmapped format that will be included in a PDF document

During installation, your systems programmer specified these libraries to XPAF by using the following parameters:

- CFONTLIB initialization parameter or FONTLIB printer profile parameter, which names the XOSF DD statement that specifies the centralized font library for each printer.
- DFONTLIB initialization parameter or FONTLIB printer profile parameter, which names the XOSF DD statement that specifies the decentralized font library for each printer.
- SFONTLIB printer profile parameter, which names the XOSF DD statement that specifies the centralized font library to be searched when a font cannot be found in the decentralized font library. XPAF looks at the corresponding centralized font to obtain the font metric information it needs to determine line spacing. This parameter is applicable only to DJDE data streams sent to a decentralized or PCL-capable printer.
- PFONTLIB initialization or printer profile parameter, which names the XOSF DD statement that specifies the PCL font library for a PCL-capable printer.
- FFONTLIB initialization or printer profile parameter, which names the XOSF DD statement that specifies the PDF font library for a PDF device.

If you will be sending AFP documents to Xerox printers, your systems programmer also specified the XOSF DD statement that identifies your IBM font library by using the IBMFNTDD initialization parameter. XPAF obtains font width information from this library.

Another parameter that may be specified during system installation and which can affect your font libraries and resource downloading to

centralized printers is the DELFONT printer profile parameter. DELFONT can be used to indicate that fonts which are downloaded with a document will be deleted from the printer after the document has been printed.

For additional information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

NOTE: On an individual job basis, the DELFONT and REVFONT extended JCL keywords can affect the storing of fonts in the font library or on the printer. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the function and format of these keywords. Refer to *Section Four: Printing Documents with XPAF* for information about their usage.

Understanding font types

Xerox distributes two sets of fonts with XPAF:

- A set of U.S. (A03) and international (R03) Xerox centralized and decentralized fonts. These fonts can be used without modification when printing native mode documents. The fonts also can be used to print DCF documents at 300 dpi; however, the IBM font characteristics first must be converted before they can be used.
- A set of standard replica fonts. A replica font is a Xerox font that looks like an IBM font. These fonts can be used without modification when printing AFP documents.

In addition to the XPAF-supplied fonts, you can use these types of fonts which you have purchased from Xerox Font Services or a third-party vendor:

- Custom Xerox fonts
- Custom replica fonts

If you use custom fonts, you must use various XOAF panel functions to load the fonts into the appropriate libraries, perform conversions, and generate the necessary font table entries.

NOTE: If you are using an IBM font that does not have a corresponding replica font, you must acquire the custom replica font from Xerox Font Services or a third-party vendor to print your document through XPAF.

Appendix C lists some of the character sets that can be used in documents sent to XPAF printers.

Using licensed fonts with XPAF

A licensed font is a font for which you are required to pay royalties to the vendor depending on usage. You should contact your local Xerox representative for the font format or other requirements if you plan to obtain a licensed font for use with XPAF.

You can use licensed fonts with XPAF and Xerox printers in accordance with the font licensor's shrink-wrap license agreement or executable license agreement which accompanies all licensed font products. If you have any questions regarding the use of a specific font, you should contact the font vendor directly. You are responsible for the proper contractual use of licensed fonts.

CAUTION: Printing with a licensed font to a non-Xerox printer may violate your licensing agreement.

Understanding dynamic font conversions

XPAF performs dynamic font conversions for documents converted to PCL or PDF. When printing documents to a PCL-capable printer or converting to PDF, XPAF searches the PCL or PDF font library to determine if the font already resides in the library. If it does, XPAF uses the font stored in the library. If it does not or if you have requested a revision of the font, then XPAF dynamically converts the font from Xerox 2700 format to PCL or PDF bitmapped format. This conversion ensures that the correct positioning is used when the page output is produced. The font is then stored in the PCL or PDF font library.

Fonts which are included inline in the data stream are converted to PCL or PDF format but are not stored in the PCL or PDF font library.

XPAF downloads the necessary fonts every time a PCL or PDF job is printed but does not store them on the printer.

NOTE: For data streams for which dynamic font conversions are not performed, you must convert the font from centralized to decentralized format using either the Convert Centralized Fonts to Decentralized Fonts option on the Convert Resources menu or the CONVERT XFONT TSO/batch command. Refer to chapter 22, "Converting resources" for more information about these options.

Understanding replica font processing

If you plan to use replica fonts, you should be aware of some of the differences that exist between the Xerox and IBM font architecture:

- IBM fonts used for printing AFP data streams typically are designed to print at 240 or 300 dpi; replica fonts print at 300 dpi.
- AFP generally uses an EBCDIC font mapping; XPAF uses an ASCII font mapping.
- A single IBM character set has no limit on the number of characters it may contain. The Xerox printer architecture limits the size of each centralized font to a maximum of 240 printable characters and 256K of raster data. For decentralized fonts, the size limit is a maximum of 192 printable characters and 64K of raster data.
- Xerox uses different formats (that is, .FNT and sixelized) for centralized and decentralized fonts as well as different fonts for different page orientations.

To adjust for these differences, XPAF uses a number of tables. These tables provide XPAF with the cross-reference information needed to process each replica font correctly. Use of these tables also helps XPAF avoid having to read the IBM font libraries each time a document is processed.

For detailed information about these tables, refer to chapter 20, “XPAF tables.”

Using Xerox fonts in DCF/SCRIPT documents

When you use IBM’s Document Composition Facility (DCF) or SCRIPT products to create a document that you intend to print on a Xerox laser printer, you can use IBM fonts or centralized Xerox fonts. Using centralized Xerox fonts gives you the benefit of 300-dpi fonts and enhances throughput. This is because the internal 240-to-300 dpi translations that may be performed when using IBM fonts are not required. You can use any of the centralized Xerox fonts provided with XPAF or any custom font you purchased for your system.

Xerox 300-dpi fonts for which no IBM resources exist can be used with IBM's DCF program. However, they cannot be mixed with existing IBM fonts, and they cannot be used as true replica fonts.

NOTE: Before you can format your DCF/SCRIPT documents using Xerox fonts, your systems programmer must first update the DCF/SCRIPT logical and physical device tables and the Generalized Markup Language (GML) profile. Refer to *Section Two: Installing and Customizing XPAF* for information about the steps that must be performed.

For a complete list of available centralized Xerox fonts, refer to *Xerox Laser Printing Systems Standard Font Library Font User Guide*. For DCF information, refer to *SCRIPT/VS Language Reference*.

Using PCL fonts

PCL fonts are used by XPAF in one of the following methods:

- The PCL generated by XPAF is produced using PCL temporary soft fonts. XPAF downloads the fonts for each print job, and deletes those fonts at the end of each job.
- When permanent soft fonts are identified in the PCL font list XPAF will download the fonts once, the first time they are referenced.

  Once downloaded, XPAF assumes that the font remains in the printer's memory, and will only download the font again when the XPAF printer is drained and restarted. Because the DocuSP printers store permanent soft fonts on their hard drives, this restriction does not apply.
- Named fonts are permanently stored on the printer's hard drive. This allows XPAF to select the font based on their unique name and eliminates the need for XPAF to download those fonts. Named fonts are always available unless physically deleted by the FSDELETE PJL command.

Using PDF fonts

Fonts for PDF documents are converted and included in the PDF file.

Loading and maintaining fonts

Table 19-1 identifies the options you use and the chapter to which you should refer for each function needed to manage font resources.

Table 19-1. Font management functions

If you want to ...	Use this option ...	Refer to this chapter ...
Load fonts (.FNT format) to a centralized font library	XOAF option: Load Centralized Fonts option on the Load Resources menu	Chapter 21, "Loading resources to a native library"
	TSO/Batch command: LOAD FONT	
Load fonts (sixelized format) to a decentralized font library	XOAF option: Load Decentralized Fonts option on the Load Resources menu	Chapter 21, "Loading resources to a native library"
	TSO/Batch command: LOAD FONT	
Convert fonts from centralized (.FNT) to decentralized (sixelized) format for printing to a decentralized or PCL-capable printer or PDF device	XOAF option: Convert Centralized Fonts to Decentralized Fonts option on the Convert Resources menu	Chapter 22, "Converting resources"
	TSO/Batch command: CONVERT XFONT	
Use Xerox fonts in a DCF document	XOAF option: Convert Xerox Fonts to IBM Format option on the Convert Resources menu	Chapter 22, "Converting resources"
	TSO/Batch command: CONVERT FONT	
Use custom Xerox fonts	(Refer to chapter 25, "Managing custom fonts" for options and procedures)	Chapter 25, "Managing custom fonts"
Use custom replica fonts	(Refer to chapter 25, "Managing custom fonts" for options and procedures)	Chapter 25, "Managing custom fonts"

Forms

A form is an electronically composed arrangement of predefined items such as lines, boxes, text, and images that may be printed as is or merged with data during the printing process. This term is used in XPAF to indicate one of these resources:

- A centralized form stored in .FRM file format
- A decentralized form stored in XES or XPAF-internal file format
- A PCL form stored in PCL macro file format
- A PDF object contained in the PDF document

Specifying form libraries

XPAF stores forms in these types of native libraries:

- A centralized form library for forms in .FRM format that will be downloaded to a centralized printer
- A decentralized form library for forms in XES or XPAF-internal format that will be downloaded to a decentralized printer
- A PCL form library for forms in PCL macro format that will be downloaded to a PCL-capable printer

During installation, your systems programmer specified these libraries to XPAF by using the following parameters:

- CFORMLIB initialization parameter or FORMLIB printer profile parameter, which names the XOSF DD statement that specifies the centralized form library for each printer.
- DFORMLIB initialization parameter or FORMLIB printer profile parameter, which names the XOSF DD statement that specifies the decentralized form library for each printer.
- SFORMLIB printer profile parameter, which names the XOSF DD statement that specifies the secondary (centralized) form library for the printer. XPAF searches the secondary library when a form cannot be found in the primary (decentralized) form library. If a corresponding centralized form is found, XPAF will convert it dynamically to decentralized format. This parameter is applicable only to DJDE data streams sent to a decentralized or PCL-capable printer.
- PFORMLIB initialization or printer profile parameter, which names the XOSF DD statement that specifies the PCL form library for a PCL-capable printer.

If you will be sending AFP documents to Xerox printers, your systems programmer also specified the XOSF DD statement that identifies your overlay library by using the OVERLAYDD initialization parameter.

Other parameters that may be specified during system installation and which can affect your centralized form libraries and resource downloading to centralized printers are listed below:

- The DELFORM printer profile parameter can be used to indicate that forms which are downloaded with a document be deleted from the printer after the document has been printed.

- The MERGEOVL initialization or printer profile parameter can be used to merge all AFP overlays in a copy group the first time the copy group is used in an AFP document. Each overlay in the copy group is converted, then the individual converted overlays are consolidated into a single .FRM file. The .FRM file is not saved in the native form library, and is deleted from the printer at the completion of the document.
- The NOSTORE initialization or printer profile parameter can be used to override the storing of converted AFP overlays in the centralized form library. This will result in the AFP overlays being converted and downloaded for every job. The downloaded resources will be deleted from the printer at the end of the job.
- The UNIQNAME initialization or printer profile parameter can be used to specify that XPAF append a unique 6-character suffix to the form name for any converted AFP overlay.

For additional information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

NOTE: On an individual job basis, the DELFORM, MERGEOVL, REVFORM, and REVOVLY extended JCL keywords and the USERLIB IBM JCL keyword can affect the storing of forms in the form library or on the printer. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the function and format of these keywords. Refer to *Section Four: Printing Documents with XPAF* for information about their usage.

Understanding dynamic form conversions

During data stream processing, XPAF searches the form library specified by the CFORMLIB, DFORMLIB, FORMLIB, or PFORMLIB parameters to determine if a form already resides in the library. If it does, XPAF uses the form stored in the library. If it does not or if you have requested a revision of the form, XPAF will perform dynamic conversions only for the following types of printers and data streams:

- For data streams sent to centralized printers, XPAF converts an overlay in an AFP data stream to .FRM format the first time it is referenced in a document and stores it in the centralized form library with a 20-character name. The last six characters of this member name are used as the form name on the printer. The converted overlay is stored on the printer if the printer can store resources.
- For data streams sent to decentralized printers:
  - XPAF searches the secondary (centralized) library specified by the SFORMLIB printer profile parameter if a decentralized form referenced in a DJDE data stream is not found in the primary (decentralized) form library. If it finds one, XPAF dynamically converts the form from .FRM to XES format the first time it is referenced and stores the converted form in the decentralized form library. The converted form also will be stored on the printer if the printer can store resources.

— Any dynamically converted colorized form in a DJDE data stream will print in black when sent to a monochrome decentralized printer and will print in color when sent to a color decentralized printer.

— Forms which are included inline in the data stream are not dynamically converted.

— XPAF converts a form in a page-formatted data stream from .FRM to XES format the first time it is referenced in a document. The converted form is stored in the decentralized form library for that printer, and on the printer if the printer can store resources.

— XPAF converts an overlay in an AFP data stream to a form in XPAF-internal format the first time it is referenced in a document and stores the form in the decentralized form library. The form is then converted from XPAF-internal format to XES format before being downloaded to the printer. The XES form is stored on the printer if the printer can store resources.

- For data streams sent to PCL-capable printers, XPAF converts an XES form to a PCL macro which contains a set of PCL commands that define the form. XPAF then stores the macro in the PCL form library.

  Forms which are included inline in the data stream are converted to PCL macro format but are not stored in the PCL form library.

  XPAF downloads the necessary forms every time a PCL job is printed but does not store them on the printer.

Loading and maintaining forms

Table 19-2 identifies the options you use and the chapter to which you should refer for each function needed to manage form resources.

Table 19-2. Form management functions

If you want to ...	Use this option ...	Refer to this chapter ...
Load forms (.FRM format) to a centralized form library	XOAF option: Load Centralized Forms option on the Load Resources menu	Chapter 21, “Loading resources to a native library”
	TSO/Batch command: LOAD FORM	
Load forms (XES format) to a decentralized form library	XOAF option: Load Decentralized Forms option on the Load Resources menu	Chapter 21, “Loading resources to a native library”
	TSO/Batch command: LOAD FORM	

Images

An image is a resource that contains visual data such as a picture, map, or graph. This term is used in XPAF to indicate one of these types of Xerox resources:

- A centralized image stored in .IMG file format
- A decentralized image stored in sixelized or .IMG file format
- A PCL image stored in bitmapped file format

For an IBM resource, this term is used in XPAF to indicate an image referenced in an AFP data stream.

Specifying image libraries

XPAF stores images in these types of native libraries:

- A centralized image library for images in .IMG format that will be downloaded to a centralized printer
- A decentralized image library for images in sixelized and .IMG format that will be downloaded to a decentralized printer
- A PCL image library for images in bitmapped format that will be downloaded to a PCL-capable printer
- A PDF image object that is included in the PDF file

During installation, your systems programmer specified these libraries to XPAF by using the following parameters:

- CIMAGELIB initialization parameter or IMAGELIB printer profile parameter, which names the XOSF DD statement that specifies the centralized image library for each printer.
- DIMAGELIB initialization parameter or IMAGELIB printer profile parameter, which names the XOSF DD statement that specifies the decentralized image library for each printer.
- SIMAGELIB printer profile parameter, which names the XOSF DD statement that specifies the secondary (centralized) image library for the printer. XPAF searches the secondary library when an image cannot be found in the primary (decentralized) image library. If a corresponding centralized image is found, XPAF will convert it dynamically to decentralized format. This parameter is applicable only to DJDE data streams sent to a decentralized or PCL-capable printer.
- PIMAGELIB initialization or printer profile parameter, which names the XOSF DD statement that specifies the PCL image library for a PCL-capable printer.
- FIMAGELIB initialization or printer profile parameter, which names the XOSF DD statement that specifies the PDF image library for PDF devices.

If you will be sending AFP documents to Xerox printers, your systems programmer also specified the XOSF DD statement that identifies your page segment library by using the PAGESEGDD initialization parameter.

Other parameters that may be specified during system installation and which can affect your centralized image libraries and resource downloading to centralized printers are listed below:

- The DELIMAGE printer profile parameter can be used to indicate that images which are downloaded with a document be deleted from the printer after the document has been printed.
- The NOSTORE initialization or printer profile parameter can be used to override the storing of converted AFP images in the centralized image library. This will result in the AFP images being converted and downloaded for every job. The downloaded resources will be deleted from the printer at the end of the job.
- The PRINTENV initialization parameter can be used to specify how XPAF should dynamically convert AFP images colorized via the IID structured field for printing on a centralized printer. Refer to "Understanding dynamic conversions for colorized AFP IM-type images" later in this chapter for more information about the function of this parameter.

For additional information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

NOTE: On an individual job basis, the DELIMAGE, REVIMAGE, REVOPSEG, and REVPSEG extended JCL keywords and the USERLIB IBM JCL keyword can affect the storing of images in the image library or on the printer. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the function and format of these keywords. Refer to *Section Four: Printing Documents with XPAF* for information about their usage.

Understanding dynamic image conversions

During data stream processing, XPAF searches the image library specified by the CIMAGELIB, DIMAGELIB, FIMAGELIB, IMAGELIB or PIMAGELIB parameters to determine if an image already resides in the library. If it does, XPAF uses the image stored in the library. If it does not or if you have requested a revision of the image, XPAF will perform dynamic conversions only for the following types of printers and data streams:

- For data streams sent to centralized printers:
  - — XPAF converts a page segment in an AFP data stream to .IMG format the first time it is referenced in a document and stores it in the centralized image library. The converted page segment is stored on the printer if the printer can store resources.

    When naming your page segments for use with XPAF, the names should not begin with the letter O. If you have page segments that begin with O, they may not be converted or they may cause unpredictable results when printed with XPAF.
  - — XPAF converts an AFP IM image which is colorized via the IID structured field to .IMG or RES .IMG format. Unless the image is inline, the converted image is stored in the centralized image library and on the printer if the printer can store resources.

Refer to "Understanding dynamic conversions for colorized AFP IM-type images" later in this chapter for detailed information on how XPAF handles dynamic conversion for these types of images.

— XPAF performs consolidation in AFP data streams for images within a single IBM resource type. Images referenced within an overlay, excluding those that are included in a page segment referenced by the overlay, are consolidated and converted into a single .IMG, then downloaded to the printer. Images referenced within a page segment are consolidated and converted into a single .IMG, then downloaded to the printer.

  The converted image is stored in the centralized image library and on the printer if the printer can store resources.

  Images which are inline on a page but not referenced by another resource (overlay or page segment) are consolidated and converted to a single .IMG, then downloaded to the printer. The .IMG file is neither stored in the centralized image library nor on the printer.

  For detailed information about AFP resource consolidation, refer to *Section Four: Printing Documents with XPAF*.

- For data streams sent to decentralized printers:

  — XPAF searches the secondary (centralized) library specified by the SIMAGELIB parameter if a decentralized image referenced in a DJDE data stream is not found in the primary (decentralized) image library. If it finds one, XPAF dynamically converts the image from .IMG to sixelized format the first time it is referenced and stores the converted image in the decentralized image library. The converted image also is stored on the printer if the printer can store resources.

  Any dynamically converted colorized centralized images will print in black when sent to a monochrome decentralized printer and in color when sent to a color decentralized printer. RES .IMG files will print in black when sent to a monochrome decentralized printer and will print in black and the specified highlight color when sent to a color decentralized printer.

  Images which are included inline in the data stream are not dynamically converted.

  — XPAF converts any image referenced by a form in a page-formatted data stream from .IMG to sixelized format, but does not store it in the decentralized image library.

  — XPAF converts a page segment in an AFP data stream to an image in .IMG format the first time it is referenced in a document and stores the image in the decentralized image library. The image is then converted from .IMG format to sixelized format before being downloaded to the printer. The sixelized image is stored on the printer if the printer can store resources.

  When naming your page segments for use with XPAF, the names should not begin with the letter O. If you have page segments that

begin with O, they may not be converted or they may cause unpredictable results when printed with XPAF.

- For data streams sent to PCL-capable printers, XPAF converts an image from sixelized format to bitmapped (HP raster graphic) format the first time it is referenced in a document. XPAF then stores the converted image in the PCL image library.

  Images which are included inline in the data stream are converted to PCL format but are not stored in the PCL image library.

  XPAF downloads the necessary images every time a PCL job is printed but does not store them on the printer.

- For data streams sent to PDF devices, XPAF converts an image from sixelized format to a bitmapped PDF object format the first time it is referenced in a document. XPAF then stores the converted image in the PDF image library.

  Images which are included inline in the data stream are converted to PDF format but are not stored in the PDF image library.

  XPAF includes the necessary image objects every time a PDF file is created.

Understanding dynamic conversions for colorized AFP IM-type images

During image processing, XPAF converts AFP image resources to the appropriate .IMG format required for the target printer. For IM-type images colorized via the IID structured field and sent to a centralized printer, XPAF converts the image to a monochrome black .IMG file, a monochrome RES .IMG file, and/or a two-color RES .IMG file, based on these factors:

- The value specified for the PRINTENV initialization parameter
- The target printer (whether monochrome or highlight color)
- Whether the color of the image is black only, color only, or both black and color
- Whether the image will be stored in the native centralized image library

The final printed color of the image is dependent upon the ink color loaded at the target printer.

Print factor relationships

The print factors identified previously only affect the resource when the image is first converted or if it is revised. If the resource has been previously converted, no change is made.

The relationship of how the print factors work together is shown in table 19-3. If you specify PRINTENV=MONO, XPAF only creates and prints a monochrome black .IMG file, regardless of the other print factors.

Table 19-3. Print factors for colorized images

	Target printer is ...			
	Mono	Highlight	Mono	Highlight
AFP resource is ...	**PRINTENV=COLR**		**PRINTENV=BOTH**	
Black only Not stored in native library	A[1]	A	A	A
Black only Stored in native library	A[1]	A	A	A
Color only (no black) Not stored in native library	A[1]	B	A	B
Color only (no black) Stored in native library	C[1]	B	C	D
Both black and color Not stored in native library	A[1]	E	A	E
Both black and color Stored in native library	F[1]	E	F	G

[1] XPAF forces the PRINTENV=COLR parameter to PRINTENV=BOTH, and creates the specified image type.

where

A XPAF only creates and prints a monochrome black .IMG file.

B XPAF only creates and prints a monochrome RES .IMG file.

C XPAF creates both a monochrome black .IMG file and a monochrome RES .IMG file, but only prints the monochrome black .IMG file.

D XPAF creates both a monochrome black .IMG file and a monochrome RES .IMG file, but only prints the monochrome RES .IMG file.

E XPAF only creates and prints a two-color RES .IMG file.

F XPAF creates both a monochrome black .IMG file and a two-color RES .IMG file, but only prints the monochrome black .IMG file.

G XPAF creates both a monochrome black .IMG file and a two-color RES .IMG file, but only prints the two-color RES .IMG file.

Restrictions and limitations

These restrictions and limitations apply to color IID structured field processing:

- XPAF support is limited to IM-type images.
- XPAF support does not include these features:
  - Reverse video processing
  - Image print impression processing
- XPAF does not convert an image every time it is printed. If XPAF does not revise the image, the existing image will be printed instead of the updated image. Therefore, if you change the color in the IID structured field for an image, you must also specify either the REVOVLY or REVPSEG extended JCL keyword to reconvert the image.
- If you store color images in the centralized image library and you specify PRINTENV=BOTH, XPAF maintains two separate copies of the image: one black and the other color. When the image is printed, XPAF downloads the appropriate file to the specified printer, using the last six characters of the file name as the resource name stored on the printer. Because the last six characters are the same for both files, they will both have the same name when downloaded to a printer. However, the two files will never be downloaded to or stored on the same printer, so no naming conflict will exist.
- All individual colors of a RES .IMG format image, other than black, will be represented in a consolidated image as a single color. This color will match the first colorized IID image color attribute value encountered within the AFP resource or data stream.

Loading and maintaining images

Table 19-4 identifies the options you use and the chapter to which you should refer for each function needed to manage image resources.

Table 19-4. Image management functions

If you want to ...	Use this option ...	Refer to this chapter ...
Load images (.IMG format) to a centralized image library	XOAF option: Load Centralized Images option on the Load Resources menu	Chapter 21, "Loading resources to a native library"
	TSO/Batch command: LOAD IMAGE	
Load images (sixelized format) to a decentralized image library	XOAF option: Load Decentralized Images option on the Load Resources menu	Chapter 21, "Loading resources to a native library"
	TSO/Batch command: LOAD IMAGE	
Convert AFP page segments to centralized or decentralized format	XOAF option: Convert IBM AFP Page Segments to Xerox .IMG and/or RES Format option on the Convert Resources menu	Chapter 22, "Converting resources"
	Batch utility: XRFBATCH	Chapter 30, "XRFBATCH utility"
Convert AFP IM-type images colorized via the IID structured field to monochrome .IMG, monochrome RES .IMG, and/or two-color RES .IMG format	XOAF option: Convert IBM AFP Page Segments to Xerox .IMG and/or RES Format option on the Convert Resources menu	Chapter 22, "Converting resources"
	Batch utility: XRFBATCH	Chapter 30, "XRFBATCH utility"

Logos

A logo is a resource that contains an identifying graphical symbol such as a trademarked company or product name. This term is used in XPAF to indicate any Xerox centralized resource stored in .LGO file format.

Specifying a logo library

XPAF stores logos in a native centralized logo library. During installation, your systems programmer used the CLOGOLIB initialization parameter or LOGOLIB printer profile parameter to name the XOSF DD statement that specifies the logo library for each centralized printer.

NOTE: Logos do not use a decentralized logo library. XPAF emulates logos on decentralized printers through the use of decentralized fonts.

Another parameter that may be specified during system installation and which can affect your logo library and resource downloading is the DELLOGO printer profile parameter. DELLOGO can be used to indicate that logos which are downloaded with a document be deleted from the printer after the document has been printed. For additional information about the DELLOGO printer profile parameter, refer to *Section Five: XPAF Parameter and Keyword Reference*.

NOTE: On an individual job basis, the DELLOGO and REVLOGO extended JCL keywords can affect the storing of logos in the logo library or on the printer. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the function and format of these keywords. Refer to *Section Four: Printing Documents with XPAF* for information about their usage.

Loading and maintaining logos

Table 19-5 identifies the options you use and the chapter to which you should refer for each function needed to manage logo resources.

NOTE: XPAF does not dynamically convert logos. If you want to send a centralized form that contains a logo to either a decentralized or PCL-capable printer or PDF device you must first convert the logo to a decentralized font using the Convert Centralized Logos to Decentralized Fonts option on the Convert Resources menu.

Table 19-5. Logo management functions

If you want to ...	Use this option ...	Refer to this chapter ...
Load logos (.LGO format) to a centralized logo library	XOAF option: Load Centralized Logos option on the Load Resources menu	Chapter 21, "Loading resources to a native library"
	TSO/Batch command: LOAD LOGO	
Convert logos (.LGO format) that are referenced in a centralized form to decentralized fonts for printing on a decentralized or PCL-capable printer or PDF device.	XOAF option: Convert Centralized Logos to Decentralized Fonts option on the Convert Resources menu	Chapter 22, "Converting resources"

Printer-resident resource lists

This section describes resource lists, which are lists of resources that are resident on a selected printer. Resident resource list processing depends on whether a printer supports and stores downloaded resources. This ability is dependent on the printer's hardware. If multiple printers store exactly the same resources, they can share a single resource list.

Resource lists can be used in two ways:

- You can use resource lists to avoid unnecessary resource downloading each time a job is sent to a printer that normally stores resources but does not have two-way communication with XPAF. For example, you can use resource lists for a Nuvera printer in LCDS mode to enable XPAF to retain a list of resources for the printer when the printer is drained and then restarted.
- You can use resource lists for a printer that does not normally store resources but may have resources (such as cartridge fonts) resident on the printer.

Resource lists can be maintained for each of these types of resources:

- Fonts
- Forms
- Images
- Logos

In addition to fonts that have been downloaded, a resident font list should include default fonts that are built into the hard disk on the printer and any cartridge fonts.

NOTE: Decentralized printers do not use logo lists. If you convert logos to decentralized fonts for printing on decentralized printers, XPAF will automatically include the decentralized fonts in the decentralized printer's font list if the printer can store resources.

Understanding resource list processing

XPAF maintains resource lists for each printer defined to XOSF. They list the resources which are resident on the printer, either on a printer disk, in the printer firmware, or on a resource cartridge in the printer.

XPAF maintains a separate resource list for each resource type (font, form, image, and logo). You can define the list names via the FONTLIST, FORMLIST, IMAGELIST, and LOGOLIST printer profile parameters, or you can allow the list name to default to a unique name for each printer and resource type.

XOSF updates resource lists every time resources are downloaded to a printer that can store resources, such as a printer that has a disk storage system. You should store resource lists in an XPAF native library so that any updates made to them are maintained when you stop and restart the printer. If a list is not stored in an XPAF native library, XOSF rebuilds a new list each time you start the printer.

During printing, XOSF searches the resource lists to determine if the requested resource must be downloaded to the printer. When a document references a resource that is not in the resource list, XPAF downloads the resource and XOSF updates the resource list. The next time that resource is referenced, XOSF determines from the resource list that the resource already resides on the printer and does not download it again. If you do not store resource lists, XPAF will download every resource referenced in a document the first time the document is printed after you restart a printer. This download occurs even if the resource is already resident on the printer since the initial resource list will be empty.

Because XPAF cannot use resources that are resident on PCL-capable printers, resource lists are not required for this type of printer.

Automatic revision of Xerox native resources

If you have loaded a Xerox native resource into a native resource library and you want XPAF to download the most current resource to a printer, specify AUTOREV=XEROX (to indicate Xerox native resources) in the XINSXOSF member in XINPARM or in the printer's profile. This feature applies to Xerox native resources only.

You should store all of the resource lists in the XPAF native library to maintain the date and time stamps for the XOSF automatic revision feature.

When a resource is referenced in a document, XPAF compares the date and time stamp of the resource in the resource list with the date and time stamp of the resource in the native resource library. If the native library resource is newer than the one indicated in the resource list, XOSF forces a download of the newer resource to the printer.

For example, if the most current resource is the one in the native resource library, XPAF downloads that resource to the printer and updates the resource list. If the most current resource is on the printer, no download occurs.

If most current resource is . . .	Download to printer occurs?	Resource list is . . .
In a native resource library	Yes	Updated
On the printer	No	Not updated

Specifying permanent resources

You should create and maintain resource lists for printers that do not store resources. These lists allow XOSF to know which resources are present in the printer's firmware or resource cartridges. When you create these resource lists, specify that the resources are permanent to ensure that the XOSF automatic revision feature will not try to revise them.

Because XOSF does not update resource lists for this type of printer, you must maintain the resource lists using these options on the Manage Resource Lists menu to specify that resources are permanent:

- Manage Resident Font Lists
- Manage Resident Form Lists
- Manage Resident Image Lists
- Manage Resident Logo Lists

You can also use these TSO/batch commands to specify permanent resources:

- TABLE LOAD
- TABLE UPDATE

Refer to chapter 23, "Managing resource lists" for more information on these options and commands.

Specifying list processing

The DOWNLOAD/NODOWNLOAD setting of the FEATURE printer profile parameter defines whether a printer supports downloaded resources. The FILEKEEP/NOFILEKEEP setting of the FEATURE printer profile parameter indicates whether a printer can store downloaded resources permanently.

- A printer that has a FEATURE setting of FILEKEEP can store downloaded resources permanently. XPAF automatically adds the resource name to the printer's resource list when it downloads a resource. Each printer that uses FEATURE=FILEKEEP must have its own resource list.

  CAUTION: If you delete a resource from a printer, you must delete it from the corresponding printer's resource list. This ensures that XPAF will download the resource if it is referenced again. Otherwise, unpredictable results may occur. Refer to chapter 23, "Managing resource lists" for instructions on deleting a resource from a resource list.

- A printer that has a FEATURE setting of NOFILEKEEP cannot store downloaded resources permanently. XPAF downloads all resources needed for each job but does not update a resource list. This means that if the same job is printed a second time, the resources will be downloaded again.

  Printers using FEATURE=NOFILEKEEP can share a resource list if they have the same resident resources (for example, if they use the same cartridge fonts).

NOTE: XPAF ignores the FILEKEEP/NOFILEKEEP setting of the FEATURE printer profile parameter for PCL-capable printers because PCL-capable printers do not store resources.

NOTE: If you specified FEATURE=NODOWNLOAD in your printer's profile, XPAF ignores the FILEKEEP/NOFILEKEEP setting.

Specifying list libraries and list names

During system installation, your systems programmer specified the following information to XPAF for each printer that can support list processing:

- The XOSF DD statement that identifies the native library in which the lists for resident fonts, forms, images, and logos are maintained for each printer. This is specified by the LIBRARY printer profile parameter.
- The names of each resident font, form, image, and logo list for that printer. These are specified by the FONTLIST, FORMLIST, IMAGELIST, and LOGOLIST printer profile parameters.

If your systems programmer specified the LIBRARY parameter but omitted a list parameter (that is, FONTLIST, FORMLIST, IMAGELIST, or LOGOLIST) in the printer profile, XPAF will automatically create a list for that resource type on the printer the first time it downloads a corresponding resource to the printer. Depending on the resource type, the list name is created using this convention:

- For a channel-attached centralized printer, the list name is FONT*cuu*, FORM*cuu*, IMAG*cuu*, or LOGO*cuu*, where *cuu* is the value specified for the UNIT printer profile parameter.
- For a remotely-attached centralized printer or a decentralized printer, the list name is FONT*slu*, FORM*slu*, IMAG*slu*, or LOGO*slu*, where *slu* is the value specified for the SLU printer profile parameter.

However, if your systems programmer did not specify a LIBRARY parameter in the printer profile, XPAF cannot create resource lists for the printer.

NOTE: You can cause XPAF to download resources even though they are named in a particular resource list by including the REVFONT, REVFORM, REVIMAGE, or REVLOGO extended JCL keywords in the JCL used to submit a job. Refer to *Section Four: Printing Documents with XPAF* for more information about overriding resources.

Creating and maintaining resource lists

Table 19-6 identifies the options you use and the chapter to which you should refer for each function needed to manage resident resource lists.

Table 19-6. Resident resource list functions

If you want to ...	Use this option ...	Refer to this chapter ...
Create, update, or delete resident font lists	XOAF option: Manage Resident Font Lists option on the Manage Resource Lists menu	Chapter 23, "Managing resource lists"
	TSO/Batch command: TABLE LOAD TABLE UPDATE TABLE DELETE	
Create, update, or delete resident form lists	XOAF option: Manage Resident Form Lists option on the Manage Resource Lists menu	Chapter 23, "Managing resource lists"
	TSO/Batch command: TABLE LOAD TABLE UPDATE TABLE DELETE	
Create, update, or delete resident image lists	XOAF option: Manage Resident Image Lists option on the Manage Resource Lists menu	Chapter 23, "Managing resource lists"
	TSO/Batch command: TABLE LOAD TABLE UPDATE TABLE DELETE	
Create, update, or delete resident logo lists	XOAF option: Manage Resident Logo Lists option on the Manage Resource Lists menu	Chapter 23, "Managing resource lists"
	TSO/Batch command: TABLE LOAD TABLE UPDATE TABLE DELETE	Chapter 23, "Managing resource lists"

Automatic revision of AFP resources

XPAF supports the automatic revision of AFP resources for centralized, decentralized, and PCL-capable printers. This support allows you to automatically revise updated AFP resources when they are first referenced within a document. XPAF will read the latest copy of an AFP resource whenever access to that AFP resource is required for processing. You do not have to explicitly specify a revision of these resources or a refresh of the entire AFP resource library. AFP documents will print using the most current version of the resource, not a copy that was available at initialization or refresh time.

When processing AFP applications, XPAF also examines the ISPF statistics field for the IBM PDS members to identify changes to those members since the last XPAF conversion.

Limitations of support

Automatic revision of AFP resources is limited to the following types of AFP resources:

- Overlays
- Page segments
- Form definitions
- Page definitions

NOTE: AFP font resources are not eligible for automatic revision.

Processing Xerox native resources within AFP data streams

Because AFP overlay and page segment resources are converted into Xerox .FRMs and .IMGs, Xerox native resources within AFP data streams are subject to automatic revision. This support includes Xerox AFP replica fonts.

Processing page segments embedded within overlays

When a page segment embedded within an unchanged AFP overlay is revised automatically, the entire overlay, including any embedded page segments, is also revised.

Enabling support

Automatic revision of AFP resources is enabled via the AUTOREV initialization or printer profile parameter. Specify AUTOREV=A to indicate revision of AFP resources or AUTOREV=B to indicate revision of both AFP resources and Xerox native resources. Refer to *Section Five: XPAF Parameter and Keyword Reference* for additional information.

Determining changes in AFP resource members

AFP resources reside as members in a PDS or PDS/E library. Whenever a PDS or PDS/E member is updated, the unique TTR address of that member is changed. This unique TTR value is accessible via the directory entry of the modified member. Statistics, such as the date and time of the latest update to a member, may also be present in the directory entry. XPAF uses the TTR value and any available date and time statistics to determine whether an AFP resource member has changed.

Print description language

Print description language (PDL) is the language used to describe printing jobs to a laser printer. PDL describes the input (type, format, characteristics), performs the processing functions (logical processing), and describes the output (type, format, font selection, accounting options).

PDL files can be created on a centralized printer or on your host computer. For instructions on coding and compiling PDL, refer to the PDL reference manual distributed with your Xerox printer.

Before using XPAF to print documents that reference PDL, you must ensure that the same PDL members which are compiled on the printer are loaded into the native PDL library for that printer. When they have been loaded to the native library, PDL members are available for centralized processing and for using in DJDE data streams sent to decentralized, PCL-capable and PDF printers.

PDL object management

XPAF can manage PDL object resource files (types of JDL, PDE, CME, TST, STK, LIB, or IDR) for centralized printers in the same manner as fonts, forms, images and logos. This means that when a data stream references a PDL object, it will be downloaded to the centralized printer if it is determined that the resource is not already on the printer. This feature is enabled by specifying PDLOBJ=YES in the printer profile.

JDL objects must first be loaded into the PDLLIB with the PDL loader in the same manner as JSL source is loaded. It is important that the PDL object corresponds to the source JSL for that object and that the source JSL is also loaded into the same PDLLIB.

XOSF processing will recognize when a JDL object is referenced in the data stream or the started JDL. By keeping a list of all JDL objects already downloaded to a printer, the centralized conditioner will determine when a referenced JDL object needs to be downloaded to the printer and will retrieve it from the PDLLIB and download it to the printer. The PDLOBJ resource list will be updated so that future references to the same JDL object will not cause the resource to be downloaded again. If LIBRARY= is specified in the printer profile the resource lists will be saved in that library when the printer is stopped and retrieved when the printer is started again. This will ensure that unnecessary downloading is avoided between printer stops and starts. If AUTOREV=XEROX or BOTH has been specified, it will also apply to PDL object resources.

It is important to note that different versions of printer OSS software generate different levels of PDL object code. This may be generated by the PDL command at the printer or by using an offline tool such as XJDC. The printer OSS software level is typically known as V35 for 4050 and 4090 printers, V37 for 4850 and 4890 printers, and V3A for 4135, 4635 and any of the other channel-attached printers that support large paper sizes such as 11x17-inches. There is a printer profile parameter to inform XPAF which software version is running on any particular printer. The parameter is LPSRELEASE= and the default values are as listed above under the typical values.

When the PDL loader is used to load PDL objects, the PCLVER value is used as part of the member name in the PDLLIB. When the centralized conditioner downloads a PDL object, it attempts to match the PCLVER in the member name to the LPSRELEASE value in the printer profile to ensure that the downloaded code is the "best-fit" for the destination printer. If an exact match to LPSRELEASE is not found, the first object

with the correct name and type will be downloaded. If none is found a message is produced. If incorrect default values are entered, unpredictable results may occur. In some cases (PDEs, STKs, TSTs, LIBs, and IDRs) the object code has no PCLVER restrictions. JDL and CME objects may be fully compatible also, for example, a JDL compiled for a 4090 (V35) will run perfectly on a 4890 or 4635 because it will have no unique requirements that the 4890 or 4635 do not support. This may not be true of a JDL compiled on a 4890 or 4635 because they may have ink or large paper size requirements that the 4090 does not support.

Enabling PDL object management

Follow these steps to enable PDL object management:

Step 1. Load source JSL to the PDLLIB (existing requirement).

Step 2. Load PDL objects to the PDLLIB with the appropriate PCLVER value. The default is V35 and, if there are no color or large paper requirements, this value will be sufficient.

Step 3. Specify PDLOBJ=YES in your printer profile(s). This is honored for centralized printers only.

Step 4. Ensure that LIBRARY= has been specified in the printer profiles if you want the resource lists maintained between printer stops and starts. The recommended library to use is LIBRARY=XWRLIB.

Specifying PDL source file types

PDL consists of two file types:

- Job source library (JSL) files
- Cataloged member files

JSL format

A JSL file begins with a JDL command, includes system, catalog, and job level commands, and ends with an END command. For example:

```
SAMPLE: JDL;

VFU1:   VFU      ASSIGN=(1,1),
                 TOF=1,
                 BOF=255;

FMT01:  PDE      PMODE=LANDSCAPE,
                 FONTS=L0112B,
                 BEGIN=(.18,.66);

STK2:   STOCKSET ASSIGN=('MAIN',MAIN),
                 ASSIGN=('AUX',AUX),
                 INIFEED='MAIN',
                 SYSPAGE='MAIN';
.
.  (additional JSL statements)
.
END;
```

Cataloged member format

A cataloged member (also referred to as a global member) is one of the following types of statements that will be referenced globally.

- A copy modification entry (CME) is a set of statements that modifies the output printing characteristics of a report by defining fonts, inks, and constant data to be applied to specific print lines and columns.
- A page description entry (PDE) is a set of statements that defines page characteristics. These characteristics are the page orientation (PMODE), logical page definitions (BEGINs), and fonts used with line spacing (FONTS).
- A stockset (STK) is a set of statements that defines a set of stocks used in a report. Stocksets are also the means of associating stock references (FEED=) with stock names (CLUSTERs).
- An RTEXT (TST) definition is a set of statements defining text to be printed on a separate page at the beginning of a report.
- An ink descriptor entry (IDR) is a set of statements that defines the ink catalogs, palette, and ink list to be used for used in a report.
- A short-edge-feed MAP (LIB) is a set of statements that defines a font substitution list to be used to print a document on large paper that is fed short edge rather than long edge.

Some examples are shown below.

```
CME1:  CME LINE=1, POS=1, CONSTANT='MONTHLY TOTALS:';
END;
```

```
FMT1:   PDE  BEGIN=(.18,.66),FONT=L0112B,PMODE=LANDSCAPE;
FMT2:   PDE  BEGIN=(.18,.50),FONT=L0212A,PMODE=LANDSCAPE;
FMT3:   PDE  BEGIN=(.14,.66),FONT=L0312A,PMODE=LANDSCAPE;
END;
```

Using distributed sample PDL members

XPAF provides several sample PDL members in XPFSAMP, as shown in table 19-7. You can copy and edit any of these members to create your own PDL.

Table 19-7. Sample PDL members in XPFSAMP

Member name	Description
DFAULT	Contains a JSL you can use to print online jobs or output that was written to file.
GLOBJSL	Contains standard PDE members that can be referenced by multiple JSLs or DJDEs.

Specifying a native PDL library

XPAF provides a native library for storing PDL called PDLLIB, which contains the same JSL and cataloged members as the DFAULT and GLOBJSL members in XPFSAMP.

You also can name your own native library by specifying it in the XOSF start-up proc DD statement named by the PDLLIB initialization or printer profile parameter. Each printer can name its own native PDL library, or all printers can share one common native PDL library.

Creating and loading PDL

Before using XPAF to print documents that reference PDL, you must ensure that the same PDL members which are compiled on the printer are loaded into the native PDL library for that printer. When they have been loaded to the native library, PDL members are available for centralized processing and for using in DJDE data streams sent to decentralized and PCL-capable printers and PDF devices.

CAUTION: You must ensure that the PDL members compiled on the printer are identical to those loaded to the native PDL library, or your results will be unpredictable.

Perform one of the following procedures to ensure that the PDL on the printer matches the PDL on the host:

Option 1: Maintaining PDL on the printer

Step 1. Create or update PDL source members on the printer.

Step 2. Compile the members into object code on the printer.

Step 3. Upload the PDL source members to a PDS on the host.

Step 4. Use one of these options to load the host members to a native PDL library:

- Load PDL option on the Load Resources menu
- Load PDL TSO/batch command

Refer to chapter 21, “Loading resources to a native library” for more information on the Load PDL option or LOAD PDL TSO/batch command.

Option 2: Maintaining PDL on the host

Step 1. Create or update PDL source members on the host.

Step 2. Download the host members to the printer and compile them into object code on the printer.

Step 3. Use one of these options to load the host members to a native PDL library:

- Load PDL option on the Load Resources menu
- LOAD PDL TSO/batch command

Refer to chapter 21, “Loading resources to a native library” for more information on the Load PDL option or LOAD PDL TSO/batch command.

Page formats

A Xerox page format is a set of specifications used to format line-mode data streams before sending them to the printer. A page format allows you to enhance the effectiveness of your line-mode applications without changing the application program.

You can incorporate fonts, forms (.FRM format only), images, logos, highlight color, and many other features by using page formats. In addition, the conditional formatting feature allows you to change page features dynamically based on conditions within the input stream.

Specifying a page format library

During system installation, your systems programmer named the XOSF DD statement that specifies the name of the page format library at the system level using the PGFRMDD initialization parameter or at the printer level using the PAGEFORMLIB printer profile parameter. For more information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Understanding page format processing

You use the Xerox page format editor to create and compile a Xerox page format. The page format then can be invoked in a line-mode application by using the PAGEFORM extended JCL keyword. Refer to *Section Eight: Xerox Page Format Editor User Guide* for information about creating and using page formats.

During processing, XPAF will retrieve the page format from the page format library and use it to convert line-mode data into either a Metacode or XES data stream. Any .FRM forms referenced in a page-formatted document and sent to a decentralized printer will be converted dynamically to XES format. The XES version of the form will be stored in the decentralized library named by the DFORMLIB initialization parameter or FORMLIB printer profile parameter.

NOTE: On an individual job basis, the USERLIB IBM JCL keyword can affect the storing of forms referenced by a page format on the printer. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the function and format of this keyword. Refer to *Section Four: Printing Documents with XPAF* for information about its usage.

Creating and maintaining page format datasets

You can create and maintain page format datasets through option P on the System Services menu. Refer to *Section Eight: Xerox Page Format Editor User Guide* for detailed information about setting up and maintaining page format datasets.

20. XPAF tables

This chapter describes the following tables that XPAF uses during processing:

- Paper-related tables
- Font tables
- Color cross-reference tables
- Color conversion table

NOTE: Before you can manage your resources, you will need to know the names of the table libraries at your site. The XOAF and/or XOSF DD statements that specify the library names typically are identified by your systems programmer during installation using initialization and printer profile parameters. Refer to appendix C, “Resource management parameters” for a list of parameters whose values you will need to know.

Paper-related tables

The paper-related tables are a set of tables used by XPAF to determine paper size, AFP bin number, and paper tray processing. The paper-related tables are stored in a native library specified by the XOSF DD statement identified by your systems programmer during installation using the PAPTBLDD initialization or printer profile parameter. XPAF supplies default paper-related tables in TABLELIB.

XPAF uses three types of paper-related tables:

Table 20-1. Types of paper-related tables

Table	Function
Paper name	This table is used to assign paper sizes to paper names. XPAF uses these values to determine which paper size to use when formatting a document. You can specify the currently active paper name table with the PAPNAMTB initialization parameter, printer profile parameter, or extended JCL keyword.
Varying paper size	This table is used to map AFP bin numbers to paper names. These paper names are then matched to paper sizes in the currently active paper name table. You can specify the currently active varying paper size table with the VARPAPTB initialization parameter, printer profile parameter, or extended JCL keyword.
Cluster mapping	This table is used to map centralized paper tray cluster names to paper trays on decentralized and PCL-capable printers. Each paper tray is mapped to a tray select character. You can specify the currently active cluster mapping table with the CLUSTRTB printer profile parameter or extended JCL keyword.

XPAF uses the currently active paper name table to determine the paper size that corresponds to a paper name specified in any of these locations:

- The PAPERSIZ initialization parameter, printer profile parameter, or extended JCL keyword
- A varying paper size table
- The active JDE PAPERSIZE= value

Refer to *Section Five: XPAF Parameter and Keyword Reference* for more information about how to use the PAPTBLDD, PAPNAMTB, VARPAPTB, CLUSTRTB, and PAPERSIZ parameters and keywords.

CAUTION: XPAF cannot verify that the specified paper size matches the paper size that actually is loaded in the specified paper tray on the target printer. You must ensure that each printer tray contains the paper that corresponds to the currently active XPAF paper-related tables.

Creating a new paper-related table

You can create a new paper-related table or modify or delete any existing paper-related tables through the Maintain Paper Tables option on the

Manage Tables menu. Refer to chapter 24, “Managing XPAF tables” for information about how to use the XOAF panels to maintain the paper-related tables.

Table type prefixes

When you specify a paper-related table name in the applicable parameters, keywords, or XOAF panels, XPAF automatically will prefix that name with one of these table type abbreviations:

- PNAM for paper name table
- VPSZ for varying paper size table
- CMAP for cluster mapping table

For example, if you specify PAPER01 for the PAPNAMTB initialization parameter, XPAF will reference the table in TABLELIB as PNAMPAPER01. Or, if you create a varying paper size table using the Maintain Paper Tables option and specify VARSIZE01 in the ‘Member Name’ field, XPAF stores the member as VPSZVARSIZE01 in TABLELIB.

If you use the Maintain Paper Tables option to edit this table, do not specify the prefix portion of the name in the ‘Member Name’ field. However, you will see these prefixes if you view the contents of TABLELIB during an LDM OFFLOAD or if you use the Display a Directory of Library Members option on the Manage Libraries menu.

Default table names

Each paper-related table has a default table named DEFAULT. These default tables are used during XOAF processing. When you create a new table, the entries from the default table are used as initial field values, which you can then modify. When you update a table, if you leave the ‘Member Name’ field blank, the default table will be substituted. Each default table is stored in TABLELIB using the appropriate table type prefix as previously defined.

Cluster mapping tables also have a default table for every decentralized and PCL-capable printer model supported by XPAF. These tables use the naming convention DEFAULT*xxxx*, where *xxxx* is the printer model. For example, the 4235’s default cluster mapping table is named DEFAULT4235. The default cluster mapping table for all NPS printers is named DEFAULTDPNP. Printers configured with the same paper tray definitions can share the same cluster mapping table.

NOTE: The paper name in the default varying paper size and cluster mapping tables defaults to LETTER. To set the default paper name in these tables to A4, specify OPTIONS=A4 in the #GENRSC macro. For further information, refer to *Section Two: Installing and Customizing XPAF*.

Paper name table

The paper name table allows you to assign a paper size to a generic name. For example, 8-1/2- by 11-inch paper is known as LETTER. You

could define your company letter head as LTRHEAD or another name of your choice.

This section provides the following information about the paper name table:

- The default values supplied with XPAF
- How to define and use values other than the supplied defaults for the paper name table
- How XPAF processes the paper name table

Default table values

A default paper name table called DEFAULT is supplied with XPAF in TABLELIB. Table 20-2 shows the values defined for the default paper name table.

Table 20-2. Default paper name table values

Paper name	Width	Height	Unit measure
#10	4.25	9.5	IN
#7	3.78	7.5	IN
A3	11.69	16.54	IN
A4	8.27	11.69	IN
A5	5.83	8.27	IN
A6	4.12	5.83	IN
B4	9.84	13.9	IN
B5	6.93	9.84	IN
C5	6.38	9.02	IN
DL	4.33	8.66	IN
EXEC	7.25	10.5	IN
LEGAL	8.5	14	IN
LEGL13	8.5	13	IN
LETTER	8.5	11	IN
LONG	11	17	IN
POST	3.5	5.5	IN
STATMT	5.5	8.5	IN

Table specification

You can change the dimensions for a paper name already defined in a paper name table by using the Maintain Paper Tables option. For example, you may change the dimensions for LEGAL from 8.5 by 14 inches to 8.25 by 13.5 inches. Then, when you specify LEGAL in the PAPERSIZ initialization parameter, printer profile parameter, or extended JCL keyword, XPAF will use the dimensions of 8.25 by 13.5 inches to format your document.

You can also add new paper names to a paper name table by using the Maintain Paper Tables option, then specify those names in PAPERSIZ. For example, you may add a new paper name called NEWSIZ which has the dimensions of 7 by 8 inches. If you then specify PAPERSIZ=NEWSIZ in your initialization parameters, printer profile, or extended JCL, XPAF will reference the NEWSIZ dimensions in the currently active paper name table and format the document for the paper size of 7 by 8 inches.

NOTE: For these examples to work, you must specify the paper name table in which you have defined LEGAL or NEWSIZ in the PAPNAMTB initialization parameter, printer profile parameter, or extended JCL keyword.

Table processing

XPAF looks up the paper name specified in the PAPERSIZ initialization parameter, printer profile parameter, or extended JCL keyword in the currently active paper name table. However, if you enter the width, height, and unit dimensions in the PAPERSIZ printer profile parameter or extended JCL keyword, XPAF uses those dimensions and not the ones from the paper name table.

If you specify a paper name (such as LEGAL) for PAPERSIZ, XPAF checks to see if a paper name table has been specified through the PAPNAMTB initialization parameter, printer profile parameter, or extended JCL keyword.

- If no paper name table is specified, XPAF uses the default paper name table (DEFAULT) to determine the paper dimensions for the document.
- If a paper name table is specified or if the default paper name table is used, XPAF looks in that table to determine the paper dimensions to use for the document.
  - If the specified paper name exists in the currently active paper name table, XPAF uses the paper size defined for that paper name.
  - If the specified paper name is not defined in the currently active paper name table but is defined through PAPERSIZ (for example, LEGAL is predefined as 8.5 by 14 inches), XPAF uses PAPERSIZ's definition for the paper dimensions.
  - If the specified paper name is not defined either in the currently active paper name table or through PAPERSIZ, XPAF uses the hard-coded default value of 8.5 by 11 inches for the paper dimensions.

Table 20-3 summarizes the overrides for paper size processing as related to the paper name table.

Table 20-3. Paper name table processing overrides

IF PAPERSIZ value is ...	And paper name table is ...	And paper name in table ...	The value used is...
Width, Height, Units (for printer profile parameter and extended JCL keyword only)	ignored	not applicable	Width, Height, Units
Example: PAPERSIZ=(9P5,11P0,IN)			9.5 by 11 inches
Paper name	specified	does exist	Dimensions defined for LEGAL in paper name table
Example: PAPERSIZ=LEGAL	PAPNAMTB=PAPER01	LEGAL (8.5 by 20 inches[1])	8.5 by 20 inches
Paper name	specified	does not exist	Default dimensions defined for A4 in PAPERSIZ
Example: PAPERSIZ=A4	PAPNAMTB=PAPER01	no entry for A4	8.27 by 11.69 inches
Paper name	specified	does not exist	Default value of 8.5 by 11 inches
Example: PAPERSIZ=NEWSIZ	PAPNAMTB=PAPER01	no entry for NEWSIZ	8.5 by 11 inches
Paper name	not specified or invalid table	not applicable	Dimensions defined for LEGAL in PAPERSIZ
Example: PAPERSIZ=LEGAL	PAPNAMTB=		8.5 by 14 inches
Paper name	not specified or invalid table	not applicable	Default value of 8.5 by 11 inches
Example: PAPERSIZ=NEWSIZ	PAPNAMTB=		8.5 by 11 inches

[1] You updated the value of LEGAL in PAPER01 to be 8.5 by 20 inches.

Varying paper size table

An AFP document can use more than one paper size if you specify a different bin number for each paper size in the MMC structured field of the copy subgroup within the medium map. For example, you may include oversized statement sheets with a cover letter.

For XPAF to process this type of document, each bin number must be mapped to a paper name in the varying paper size table. The paper name is then mapped to a paper size in the paper name table.

This section provides the following information about the varying paper size table:

- The default values supplied with XPAF
- How to define and use values other than the supplied defaults for the varying paper size table
- How XPAF processes the varying paper size table

Default table values

A default varying paper size table called DEFAULT is supplied with XPAF in TABLELIB. Table 20-4 shows the values defined for the default varying paper size table. The first row is the table's default entry and is used if a bin number error is encountered during processing.

Table 20-4. Default varying paper size table values

AFP bin #	Paper name	Tray Select	CEP FEED	JDE	JDL
00	LETTER	1	MAIN	PGMODE	DFAULT
01	LETTER	1	MAIN	PGMODE	DFAULT
02	A4	1	MAIN	PGA4	DFAULT
03	LEGAL	1	MAIN	PG14	DFAULT
04	LONG	1	MAIN	PG1711	DFAULT

NOTE: The paper name for the default entry (AFP Bin # 00) defaults to LETTER. To set the default paper name to A4 (which also changes the JDE to PGA4), specify OPTIONS=A4 in the #GENRSC macro. For further information, refer to *Section Two: Installing and Customizing XPAF*.

Table specification

To enable this feature, you must specify a varying paper size table using the VARPAPTB initialization parameter, printer profile parameter, or extended JCL keyword.

For varying paper size table processing to work correctly, you must add a table entry using the Maintain Paper Tables option to the varying paper size table for each AFP bin number specified in the MMC structured fields. This table entry includes a paper name, an XES printer tray value, a centralized FEED command, and the associated JDE and JDL commands.

When userlibs are used in conjunction with varying paper size tables, and a JDL/JDE switch occurs, the RSTACK initialization parameter may affect document processing. For RSTACK settings E, N, or O, resources may be referenced across JDL/JDE environments. For RSTACK settings S, B, or G, resources referenced in the previous JDL/JDE environment will not be valid because a program and printer reset is performed when the RSTACK is processed. You must determine the correct setting for your environment.

NOTE: The JDE/JDL commands from the varying paper size table will be included in the data stream. The corresponding JDE/JDL on the printer must specify paper size dimensions which match the paper size dimensions obtained from the paper name table for this paper name.

Table processing

When XPAF encounters an AFP bin number in a data stream, processing for the varying paper sizes occurs as follows:

- If the bin number matches an entry in the varying paper size table, the paper name in the varying paper size table is matched to a paper name in the paper name table to determine the paper size.
- If the bin number does not match an entry in the varying paper size table, XPAF uses the default entry in the varying paper size table to determine the paper size. The first entry is always the default entry in a varying paper size table.

  NOTE: The default paper name for the default entry in the varying paper size table is either LETTER or A4, depending on your entry in the OPTIONS parameter of the #GENRSC macro. However, if you have modified either the paper name value in this table or the dimensions specified for this paper name in a paper name table, the modified value is used as the paper size.

- If any errors are encountered while processing the paper name or varying paper size tables, XPAF uses the value from the PAPERSIZ initialization parameter, printer profile parameter, or extended JCL keyword.

Once a paper name is obtained from PAPERSIZ, XPAF matches it to a paper name in the paper name table to determine the paper size.

Table 20-5 shows examples of the relationship between the varying paper size table, the paper name table, and the PAPERSIZ value.

Table 20-5. Varying paper size table processing examples

Varying paper size table entries	Paper name table specified?	Paper name found in table?	PAPERSIZ value	Actual paper size used
AFP Bin #: 1 Paper Name: NEWSIZ	Yes	Yes	Not applicable	Dimensions for NEWSIZ from paper name table
AFP Bin #: 1 Paper Name: NEWSIZ	Yes	No	LETTER	Dimensions for LETTER from paper name table
AFP Bin #: 1 Paper Name: NEWSIZ	No	Not applicable	A4	Dimensions for A4 from PAPERSIZ
AFP Bin #: undefined Paper Name: uses default value (LETTER)	Yes	Yes	Not applicable	Dimensions for LETTER from paper name table
AFP Bin #: undefined Paper Name: uses default value (LETTER)	Yes	No	LEGAL	Dimensions for LEGAL from paper name table
AFP Bin #: undefined Paper Name: uses default value (LETTER)	No	Not applicable	A4	Dimensions for A4 from PAPERSIZ
No varying paper size table defined	Yes[1]	Not applicable[1]	LEGAL[2]	Dimensions for LEGAL from paper name table

[1] If there is no valid varying paper size table defined, XPAF looks at PAPERSIZ to obtain a paper name. Then, XPAF looks at the currently active paper name table to determine the paper size associated with the paper name.

[2] The tray selection processing described in "Tray selection for undefined/invalid varying paper size table conditions" later in this chapter takes affect when the varying paper size table is not valid or undefined.

Tray selection for undefined/invalid varying paper size table conditions

If the varying paper size table is either not specified, invalid, or specified but cannot be opened, tray selection is determined in the following manner:

- For centralized printers, XOSF uses the bin number specified in the MMC structured field to generate a DJDE FEED command. Table 20-6 shows the DJDE FEED command generated for each bin number.

Table 20-6. AFP paper tray selection without varying paper size table for centralized printers

Bin number	DJDE FEED command
0, 1	MAIN
2	AUX
3	TRAY3[1]
4	TRAY4[1]
5	TRAY5[1]
6	TRAY6[1]
7	TRAY7[1]
8	TRAY8[1]
9	TRAY9[1]

[1] If bins 3 through 9 are specified in the MMC structured field, these cluster names must be valid for the printer on which the document will be printed.

- For decentralized and PCL-capable printers, XOSF issues a tray select command based on three criteria:
  - AFP bin number within the copy group
  - Paper name specified in PAPERSIZ
  - Printer type

Table 20-7 lists the tray select command XOSF issues to PCL-capable printers based on whether the primary or auxiliary feed is used and based on the paper name specified in PAPERSIZ.

For both decentralized and PCL-capable printers, if no AFP bin number or AFP bin number 1 is specified within the copy group, XOSF uses the primary feed. If any AFP bin number other than 1 is specified within the copy group, XOSF uses the auxiliary feed.

For example, as shown in table 20-7, if AFP bin number 1 is specified within the copy group and LEGAL is specified in PAPERSIZ, XOSF will issue tray select command 1 to a DocuSP printer. If AFP bin number 2 is specified within the copy group and LEGAL is specified in PAPERSIZ, XOSF will issue tray select command 4 to a DocuSP printer 2.

Table 20-7. AFP paper tray selection without varying paper size table for PCL-capable printers

PAPER- SIZ value	NPS printers		DocuSP printers		N-series printers	
	Prim	Aux	Prim	Aux	Prim	Aux
#10			2	2	EF/BF[3]	
#7			2	2	EF/BF	
A3			1	4	1-3	
A4	1		1	4	1-5	
A5			1	2	1	
A6			1	4	BF	
B4			1	4		
B5			2	2	EF/BF	
C5			2	2	EF/BF	
DL			2	2	EF/BF	
EXEC			1	4	1	
LEGAL	1		1	4	1-3	
LEGL13			1	4	1-3	
LETTER	1		1	4	1-5	
LONG			1	4	1-3	
POST			2	2		
STATMT			1	4	1	

Cluster mapping table

When printing DJDE data streams on decentralized or PCL-capable printers, XPAF uses cluster mapping tables to map a centralized paper tray cluster name to a paper tray on the decentralized or PCL-capable printer. Each cluster name is mapped to an XES or PCL tray select code.

NOTE: Remapping paper trays on the printer is not supported by XPAF. Use the cluster mapping tables instead to map a centralized paper tray cluster name to a paper tray on a decentralized or PCL-capable printer.

This section provides the following information about the cluster mapping table:

- The default values supplied with XPAF
- How to define and use values other than the supplied defaults for the cluster mapping table
- How XPAF processes the cluster mapping table

Default table values

A default cluster mapping table is supplied with XPAF in TABLELIB for each decentralized or PCL-capable printer model. Each table is named DEFAULT*xxxx*, where *xxxx* represents the first four characters of the printer model.

Once the cluster mapping table name has been determined, the entry within that table with blanks for the cluster name is the default entry and will be used when a cluster name is referenced that is not in the table.

A default cluster mapping table named DEFAULT is also supplied in TABLELIB. This default table, shown in table 20-8, is used by XOAF and represents a generic printer.

Table 20-8. Default cluster mapping table values

Cluster name	Paper name	Tray Select
	LETTER	1
AUX	LETTER	2
MAIN	LETTER	1
OPR	LETTER	1
TRAY1	LETTER	1
TRAY2	LETTER	2
TRAY3	LETTER	3
TRAY4	LETTER	4

The paper name for each entry defaults to LETTER. To set the default paper name to A4, specify OPTIONS=A4 in the #GENRSC macro during the resource installation. For more information, refer to *Section Two: Installing and Customizing XPAF*.

Table specification

You can create new cluster mapping tables using the Maintain Paper Tables option and specify them in the CLUSTRTB printer profile parameter or extended JCL keyword. Printers configured with the same paper tray definitions can share the same cluster mapping table.

For cluster mapping table processing to work correctly, each value specified in the FEED DJDE or extended JCL keyword must match a cluster name in the cluster mapping table.

Table processing

CAUTION: If you specify a value for PAPERSIZ in your extended JCL, that value overrides all paper name values in your currently active cluster mapping table. Therefore, the paper name processing described in this section does not apply. However, all other cluster mapping table processing occurs normally.

When XPAF encounters a value for the FEED= parameter (in PDLLIB, a DJDE, or extended JCL), while processing a data stream being sent to a decentralized or PCL-capable printer, cluster mapping table processing occurs as follows:

- If the cluster name matches an entry in the cluster mapping table, the tray select code is retrieved. The tray select code is used to select the correct paper tray on the decentralized or PCL-capable printer.
- If the cluster name does not match an entry in the cluster mapping table, XPAF uses the default entry (with a blank cluster name) to determine the tray select code.
- If any errors are encountered while processing the paper name table, XPAF uses the value from the PAPERSIZ initialization or printer profile parameter to determine the paper size.

Tray selection for invalid/override paper name conditions

If the paper name entry that matches the cluster name field in the cluster mapping table is not used because of an invalid or override condition, XPAF still determines tray selection based on the valid cluster name in the table. You must ensure that the correct size paper is loaded in the correct tray of the target printer. For example, if you specify FEED=MAIN and PAPERSIZ=LEGAL in your extended JCL, XPAF would assume that legal size paper is loaded in tray 1 for this cluster mapping table:

Cluster name	Paper name	Tray Select
	LETTER	1
AUX	LEGAL	2
MAIN	LETTER	1

Font tables

The font tables are a set of tables related to font processing. The font tables are stored in the native library identified by the XOAF and XOSF DD statements that were specified by your systems programmer during installation using the FNTTBLDD initialization parameter. For more information about this parameter, refer to *Section Five: XPAF Parameter and Keyword Reference*.

The font table members can be categorized as follows:

- Xerox font-related tables. These tables are used by XPAF when converting centralized fonts to decentralized fonts, for printing centralized (DJDE) documents on decentralized printers, and for printing page-formatted documents.
- Replica font-related tables. These tables are used by XPAF when printing AFP documents on Xerox printers.

Some of the table members can be updated through various XOAF options and their TSO/batch equivalents. Those members that cannot be updated through XOAF can be viewed through the Display a Directory of Library Members option on the Manage Libraries menu. Refer to chapter 27, "Managing XPAF libraries" for information about how to use this option.

The role of each table during XPAF processing and the XOAF options available to update each table are discussed in detail later in this chapter. The conditions under which you will need to update one or more of the tables also are identified.

NOTE: If you plan to use only the XPAF-distributed Xerox and replica fonts without any modification, you do need to update these tables.

Concepts

Before you can update the font table members, you should be familiar with the following concepts.

Character identifier

A character identifier (also known as a CHARID) is a unique 8-character name that identifies a single IBM character. A given character identifier will map to the same character. For example, the character identifier LA020000 always maps to "A".

Character set

A character set is a collection of character properties and raster images for a group of character identifiers. A character set may contain any number of characters.

The character set properties define characteristics at two levels:

- Those that apply to all characters within the character set. This includes the following information:
  - Typeface name
  - Point size
  - Weight, style, and font width (such as condensed) of the characters
- Those that apply to individual characters. This includes the following information:
  - Baseline of a character showing its general alignment
  - Dimensions of the character
  - Position of the raster within the character cell

Character map

A character map links a character identifier to an ASCII or EBCDIC value that identifies a location within a font.

Code page

A code page links a code point (X'00' – X'FF') to a character identifier. This disassociation of the code point from the raster pattern allows for the dynamic mapping of hexadecimal values to the same or different images, depending on the code page mapping.

A code page can contain a complete character set or a subset of that character set. A single IBM code page can identify up to 256 code point/character identifier pairs.

For fonts used on a centralized printer, the code page (which is also called a character map) can define no more than 240 printable characters. For fonts used on a decentralized printer, the code page definition cannot exceed 192 printable characters. In the Xerox environment, some characters are reserved for print commands such as Form Feed.

A default character is defined in each code page. This character is printed if an undefined code point is encountered during printing.

Coded font

A coded font links a code page, which typically is EBCDIC, to a character set, as shown in this example.

Coded font			
Code page		Character set	
Code point	CHARID	CHARID	Raster
X'81'	LA010000	LA010000	a
X'C1'	LA020000	LA020000	A
X'82'	LB010000	LB010000	b
X'C2'	LB020000	LB020000	B
X'83'	LC010000	LC010000	c
...		...	
X'C9'	LI020000	LI020000	I
...		...	
X'7B'	SM010000	SM010000	#

Plane mapping

The Xerox printer architecture limits the size of each centralized font to a maximum of 240 printable characters and 256K of raster data. For decentralized fonts, the size limit is a maximum of 192 printable characters and 64K of raster data.

To accommodate character sets that exceed the size limitations, one font must be split into multiple fonts; these resulting fonts are called planes. For example, more than one replica font may be required for an IBM character set because a single IBM character set can have over 800 rasters.

XPAF uses plane mapping, which is the linking of more than one font to a character set, to place characters into centralized or decentralized fonts. To accommodate both centralized and decentralized fonts, Xerox limits the font mapping size to a maximum of 192 printable characters and 64K of raster data.

XPAF uses two types of plane mapping:

- Centralized-to-decentralized plane mapping, which allows a centralized font to be linked to a maximum of 8 decentralized planes. All planes (planes 01 through 08) can be used by your site. For more information about this type of plane mapping, refer to “Converting centralized fonts to decentralized fonts” in chapter 22, “Converting resources.”

- ISO8859-1 plane mapping, which allows more than 192 characters of a replica font to be associated together. ISO8859-1 plane mapping provides for up to 16 planes for one replica font:

  — Planes 0 to 11 (‘0’ to ‘B’) are reserved for Xerox use.
  — Planes 12 to 15 (‘C’ to ‘F’) can be used by your site.

  For more information about this type of plane mapping, refer to “Using custom replica fonts” in chapter 25, “Managing custom fonts.” Refer to “ISO8859-1 split plane mapping” later in this chapter for information about how XPAF handles the 64K of raster data limitation.

All characters to be defined are assigned a unique character identifier. Each character identifier (CHARID) is allocated to a certain ASCII code point. For example:

- The character “A” (CHARID LA020000) is assigned to plane 0, code point X'41'.
- The character “™” (CHARID SM540000) is assigned to plane 2, code point X'C1'.

Different characters can be assigned the same code points in different planes. For example, the uppercase I, the semicolon, the left brace, and the equal sign may have the same code point but reside in different planes.

ISO8859-1 split plane mapping

For IBM character sets above the 14 point size, the 64K raster area in a plane is quickly exceeded. Therefore, the characters assigned to each plane will not fit into one replica font.

Because of this, each plane for font point sizes above 14 must be split further into more replica fonts. Each replica font will contain a subset of characters from the original plane. For example, if plane 0 is split into two split planes:

- Some characters will be placed in split plane 1 for plane 0.
- The rest of the characters will be placed in split plane 2 for plane 0.

The planes are named in this manner: the split number is followed by the number of the original plane (‘0’ to ‘F’). For example:

- 00: No split, plane 0
- 10: Split 1 of plane 0
- 21: Split 2 of plane 1
- 0F: No split, plane 15
- 4F: Split 4 of plane 15

Xerox uses a defined split plane mapping for each type of replica font:

- For standard replica fonts, a single plane is split into several split planes. The number of split planes depends on the point size of the font. For example, an 18-to-22 point font requires plane 0 to be split into two split planes. A 36-point font requires 4 split planes for each plane 0 to 3.
- To minimize the number of split planes, Xerox places characters in the fonts so that as much of raster area is filled as possible.

- For custom replica fonts, if the point size is greater than 13, planes 12 to 15 (‘C’ to ‘F’) are divided evenly into split planes:

Point size	No. of splits per original plane
4–12	0
13–17	2
18–24	4
25–36	8

Xerox font-related tables

The font table members used during the processing of Xerox fonts are summarized in table 20-9 and discussed in detail following the table.

Table 20-9. Xerox font processing tables

Member name	Description	Function
XPAFA2A	ASCII-to-ASCII	Links the character mapping of the centralized version of the font to the character mapping of the decentralized version of the font.
XPAFEFW	EBCDIC font widths	Contains information that is needed to position characters in Xerox fonts correctly at print time for a page-formatted document.
XPAFE2A	EBCDIC-to-ASCII	Links EBCDIC values for IBM code pages to ASCII values for Xerox fonts specified in a page-formatted document. ***NOTE:*** A Xerox font can use either a Xerox code page or an IBM code page.
XPAFFFI	Font family information	Contains information used to create a font descriptor structured field when a Xerox font is converted for use in a DCF document.
XPAFXFI	Xerox font information	Contains information about centralized and decentralized fonts, including character mapping information.
Various	Character mapping	Consists of a number of character mapping tables. Some of these tables contain centralized and decentralized ASCII character mapping; others contain EBCDIC mapping.

ASCII-to-ASCII (XPAFA2A) table

The XPAFA2A table is used when printing centralized (DJDE) documents on decentralized printers to determine where a character is mapped within the decentralized version of the font being used.

Entries within the XPAFA2A table are created or modified only when the XPAFXFI table is updated. Each entry is created using the character mapping tables for the centralized and decentralized formats in the XPAFXFI table entries.

EBCDIC font widths (XPAFEFW) table

The XPAFEFW table contains the Xerox font widths for a given IBM character set in order based on the code page width (X'00' – X'FF') of each character. Typically, this arrangement is in EBCDIC format.

XPAF uses this table when processing page-formatted documents to position characters correctly at print time. If a particular code page/character set pair is encountered that does not have an XPAFEFW table entry, XPAF attempts to build an entry dynamically before terminating processing and requeueing the document.

The XPAFEFW table is created and updated during installation by RJOB105. For Xerox fonts that will be used in page-formatted documents, the XPAFE2A table also can be created or updated by using either the Update Xerox Font Characteristics Information option on the Xerox Page Format Editor menu or the CONVERT FONT TSO/batch command. Refer to *Section Eight: Xerox Page Format Editor User Guide* for more information about using this option or command.

NOTE: The XPAFEFW also is used when processing replica fonts. Refer to “Replica font-related tables” later in the chapter for more information.

EBCDIC-to-ASCII (XPAFE2A) table

The XPAFE2A table translates EBCDIC values for IBM code pages to ASCII values for Xerox fonts. XPAF uses this table to translate the incoming IBM code point to the appropriate code point in the correct plane.

NOTE: If a document references a code page for which there is no XPAFE2A table entry, the printing of the document is terminated, and the document is requeued.

The XPAFE2A table is created or updated during installation by running RJOB105. For Xerox fonts that will be used in page-formatted documents, the XPAFE2A table also can be created or updated by using either the Update Xerox Font Characteristics Information option on the Xerox Page Format Editor menu or the CONVERT FONT TSO/batch command. Refer to *Section Eight: Xerox Page Format Editor User Guide* for more information about using this option or command.

Each XPAFE2A table entry contains the IBM code page name, Xerox centralized or decentralized character mapping name, and the EBCDIC code point of the character defined as the default character in the named code page.

NOTE: The XPAFE2A also is used when processing replica fonts. Refer to “Replica font-related tables” later in the chapter for more information.

Font family information (XPAFFFI) table

The XPAFFFI table supports the use of Xerox centralized fonts in IBM’s DCF/SCRIPT software product. This table provides font characteristics that are used with .DF control words and that permit the font to be referenced by font type as well as by font name.

When Xerox font characteristics are converted to IBM format during the processing of the Convert Xerox Fonts to IBM Format option on the Convert Resources menu or the CONVERT FONT TSO/batch command, this table is used to create the font descriptor structured field in the character set member.

XPAF provides font family information table entries for Universe and Press Roman fonts. If you use any fonts other than these, you must update the font family information table.

You can display, create, or modify the XPAFFFI table by using the Maintain the Font Family Information (XPAFFFI) Table option on the Maintain Font Tables menu. Refer to chapter 24, “Managing XPAF tables” for more information about this option.

Xerox font information (XPAFXFI) table

The XPAFXFI table contains font naming and metrics information (for example, typeface, weight, width, point size, and print direction) for centralized and decentralized fonts stored in native font libraries. This table also identifies the name of the character mapping tables that contain the centralized and decentralized character mappings and the code page for each font.

The XPAFXFI table is used under these conditions:

- Whenever a DJDE application is printed on a decentralized printer.
- When fonts are converted from centralized to decentralized format. XPAF uses the centralized and decentralized formats to determine where to place the centralized characters in the decentralized font. It uses the values associated with the code page to determine which characters to include in the decentralized font.
- During the conversion of Xerox fonts for use in IBM DCF documents. This table is referenced during the processing of the Convert Xerox Fonts to IBM Format option on the Convert Resources menu, which makes Xerox fonts available to IBM's DCF product.

Entries to this table are generated automatically for each font that you load using either the Load Centralized Fonts option on the Load Resources menu or the LOAD FONT TSO/batch command. Optionally, entries can be generated for this table when you load fonts using the Load Decentralized Fonts option on the Load Resources menu or the LOAD FONT TSO/batch command.

You can display, create, or modify the XPAFXFI table by using the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu. Refer to chapter 24, "Managing XPAF tables" for more information about this option.

Character mapping tables

Character mapping tables contain mapping information for characters within a character mapping variation. These tables link a character identifier to a location within a font in ASCII or EBCDIC representation. Each entry in a character mapping table contains a character identifier (CHARID) and a corresponding code point.

Character mapping tables can be categorized as follows:

- Centralized and decentralized character mapping tables define code points, which typically are ASCII.
  - — A centralized character mapping table is a mapping variation that relates a character ID to a location, expressed as an ASCII value, in the centralized font map.
  - — A decentralized character mapping table is a mapping variation that relates a character ID to a location within a specific plane number, expressed as an ASCII value, in the decentralized font map.

  The centralized and decentralized mapping tables are used during centralized-to-decentralized font conversion to determine the character mapping of the resulting decentralized font. Refer to chapter 22, "Converting resources" for more information about centralized-to-decentralized font conversion.
- Code page tables define code points, which typically are EBCDIC. A code page mapping relates a character ID to a location, expressed as an EBCDIC value, in the centralized font map. These tables are used to replicate an IBM code page during a conversion of Xerox fonts for use in a DCF document.

Appendix D describes the naming conventions for XPAF-supplied character mapping tables and identifies the default tables used during the centralized-to-decentralized font and DCF conversions. The source for the character mapping tables is distributed with XPAF in XPFSAMP.

You can display or create new character mapping tables or add entries to existing tables by using the Maintain Character Mapping Tables option on the Maintain Font Tables menu. Refer to chapter 24, "Managing XPAF tables" for more information about this option.

Replica font-related tables

The font table members used during the processing of replica fonts for AFP data streams are summarized in table 20-10 and discussed in detail following the table.

Table 20-10. Replica font processing tables

Member name	Description	Function
CPGID	Code page global identifier	Contains the code page names and corresponding character set global identifier/code page global identifier pair for each name.
FGID	Font global identifier	Contains the character set names and the corresponding font global identifier and space character width for each name.
IPDFLT	IPDFLT	Contains the default version of the IPSTND table.
IPSTND	IPSTND	Links an IBM character identifier (CHARID) to a particular plane and ASCII code point within that plane.
XPAFAFW	ASCII font widths	Contains information about each replica font, including the widths of all characters within that font.
XPAFCFN	Coded font name	Contains the code page/character set pair to be used for each IBM coded font.
XPAFEFW	EBCDIC font widths	Contains the width (at 300 dpi) of each character contained in the IBM font.
XPAFE2A	EBCDIC-to-ASCII	Links each character in a Xerox or replica font to a split/plane and the ASCII code point within that split/plane.
XPAFIFW	IBM font widths	Contains the widths (at 240 dpi) of each character in the IBM font.
XPAFIFW3	IBM font widths	Contains the widths (at 300 dpi) of each character in the IBM font.
XPAFI2I	IBM-to-IBM	Contains identification text taken from the IBM character set.
XPAFI2X	IBM-to-Xerox	Links each IBM character set to a group of replica fonts. Each replica font references one plane or split of a plane.

Throughout this section, references are made to RJOB105, which is a batch job that is run when XPAF resources are installed. This job creates or modifies the following font table members to ensure that the table information is in synchronization with the information contained in your IBM font library:

- CPGID
- FGID
- XPAFCFN
- XPAFEFW
- XPAFE2A
- XPAFIFW
- XPAFIFW3

Thereafter, XPAF provides several options you can use to create or update the IBM font table entries. You should run the appropriate IBM font table update option to ensure synchronization whenever changes are made to the IBM font library or additional replica fonts are installed:

- If you change an IBM coded font or add new fonts to your IBM font library, use one of these options to update the tables:
  - Update IBM Font Characteristics Information on the Manage Tables menu
  - CONVERT IBM TSO/batch command

  Refer to chapter 24, "Managing XPAF tables" for information about using this option or command.
- If you install custom replica fonts, you must run one of these options to rebuild the tables:
  - Update IBM Font Characteristics Information on the Install Custom Replica Fonts (version 5 encoding or below) menu or the CONVERT IBM TSO/batch command
  - Install Custom Replica Fonts (version 6 encoding or above) on the Manage Custom Replica Fonts menu

  Refer to chapter 25, "Managing custom fonts" for information about how to use these options when installing custom replica fonts.

Code page global identifier (CPGID) table

The CPGID table contains IBM code page names and the corresponding graphic character set global identifier and code page global identifier for each code page name. XPAF uses the CPGID table to support the processing of MCF-2 structured fields that contain global resource identifiers (GRIDs).

When an MCF-2 structured field is encountered by XPAF during the processing of an AFP data stream, XPAF examines the repeating group for the Fully Qualified Name triplet to determine whether it specifies a code page name type. If a code page name type exists, XPAF uses the specified code page name for the processing of the current font.

If the repeating group for the Fully Qualified Name triplet does not contain a code page name type but does contain a GRID, XPAF uses the graphic character set global identifier and code page global identifier values in the GRID to obtain the code page name of the font being processed from the CPGID table. If XPAF does not find the graphic character set global identifier or code page global identifier value in this table, document processing is terminated, an error message is issued, and the document is requeued.

The CPGID table is created during installation by running RJOB105. The CPGID table also is created or updated automatically whenever you run one of XPAF's IBM font table update options. RJOB105 and the update options extract the graphic character set global identifier and code page global identifier values from the code page descriptor record of each code page member in your IBM font library. XPAF uses these values to create an entry in the CPGID table.

You can create or update entries in this table manually by using the Maintain the Code Page Global Identifier (CPGID) Table option on the Maintain Font Tables menu. Refer to chapter 24, "Managing XPAF tables" for more information about this option. Manual updates may be necessary if, for example, an entry cannot be found in the CPGID table when XPAF processes an MCF-2 structured field's GRID.

Font global identifier (FGID) table

The FGID table contains IBM character set names and the corresponding font global identifier and width of the space character for each character set name. XPAF uses the FGID table to support the processing of MCF-2 structured fields that contain GRIDs.

When an MCF-2 structured field is encountered by XPAF during the processing of an AFP data stream, XPAF examines the repeating group for the Fully Qualified Name triplet to determine whether it specifies a character set name type. If a character set name type exists, XPAF uses the specified character set for the processing of the current font.

If the repeating group for the Fully Qualified Name triplet does not contain a character set name type but does contain a GRID, XPAF uses the font global identifier and space character width values in the GRID to obtain the character set name from the FGID table. If XPAF does not find the font global identifier value in this table, document processing is terminated, an error message is issued, and the document is requeued.

Once a valid entry is retrieved from the FGID table, the character set name is adjusted. To adjust the name, the code page name value for the font being processed is used as a key into an internal XPAF table to determine a font family complement ID value. The complement ID value is then substituted as the sixth character of the character set name. This revised character set name is the name used by XPAF for the processing of the current font. Refer to figure 20-1 for an example of this substitution process.

The FGID table is created during installation by running RJOB105. The FGID table also is created or updated automatically whenever you run one of XPAF's IBM font table update options. RJOB105 and the update options extract the font global identifier and the nominal horizontal font size values for each character set name from the font descriptor record in your IBM font library. XPAF uses these values to create an entry in the FGID table.

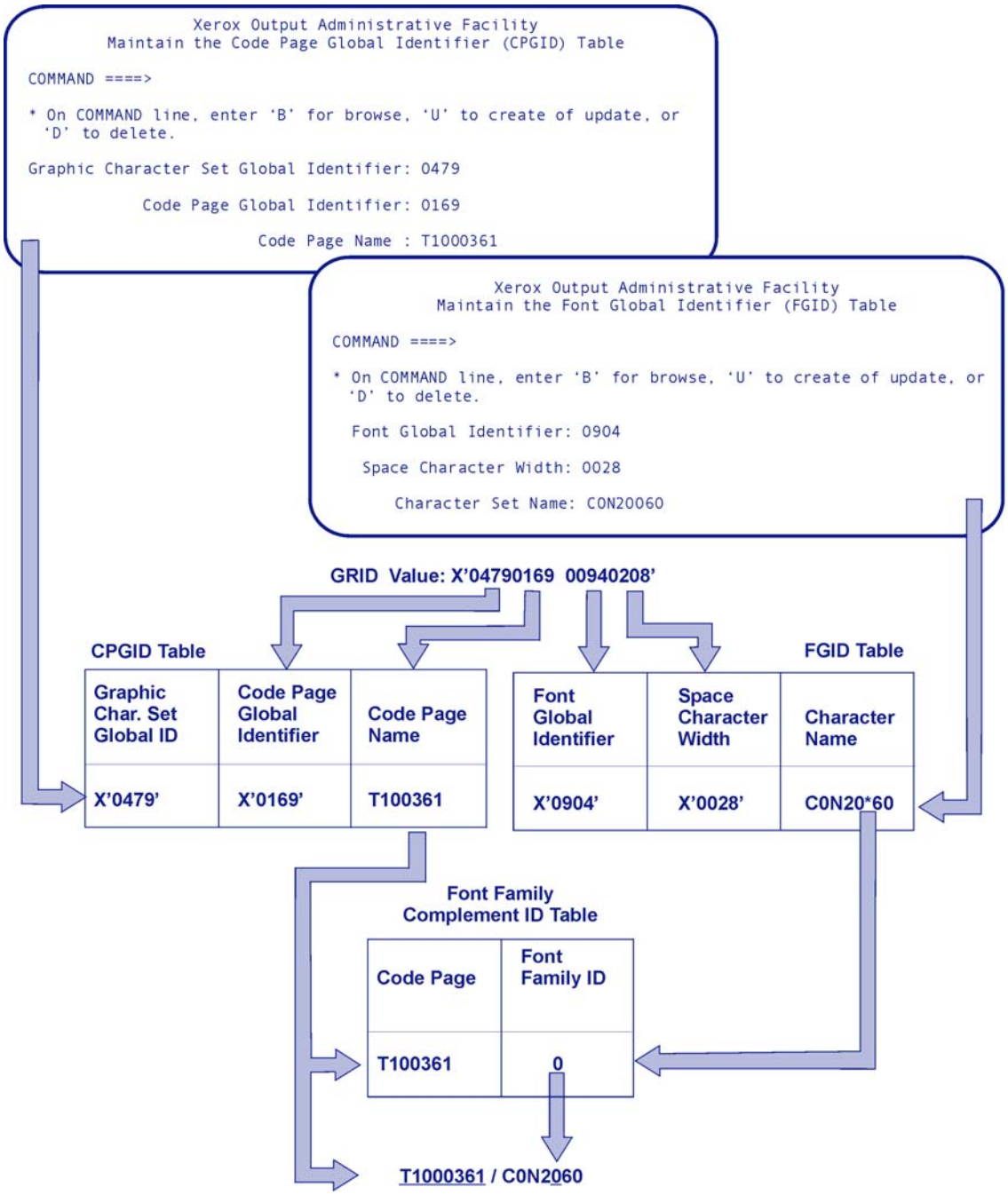
NOTE: XPAF stores the nominal horizontal font size in the font global identifier table as the space character width.

You can create or update entries in this table manually by using the Maintain the Font Global Identifier (FGID) Table option on the Maintain Font Tables menu. Refer to chapter 24, "Managing XPAF tables" for more information about this option. Manual updates may be necessary if, for example, an entry cannot be found in the FGID table when XPAF processes an MCF-2 structured field's GRID.

IPDFLT table

The IPDFLT table is identical to the IPSTND table that is supplied with XPAF in TABLELIB. However, it cannot be altered and is retained as the default version of the IPSTND table.

Figure 20-1. CPGID and FGID table processing for GRIDs



IPSTND table

The IPSTND table defines every character for each IBM font supported by replica fonts. For each character, this table links the IBM character identifier (CHARID) value to a Xerox plane number and an ASCII code point location within that plane. RJOB105 uses this table to build the XPAFE2A table.

NOTE: If a character identifier does not appear in this table, XPAF cannot support that character. During printing, any unsupported character prints using the default character for that code page.

The IPSTND table is supplied with XPAF in TABLELIB. If you install custom replica fonts, you must run one of these options on the Manage Custom Replica Fonts menu to update the table:

- Update the IPSTND Table on the Install Custom Replica Fonts (version 5 encoding or below) menu
- Install Custom Replica Fonts (version 6 encoding or above)

Refer to chapter 25, “Managing custom fonts” for information about how to use these options.

ASCII font widths (XPAFAFW) table

The XPAFAFW table contains an entry for every replica font. Each entry contains the replica font name, general information about the font (for example, baseline to top of cell and kerning information), and the width of every character in that font.

XPAF uses this table to correct the positioning of characters when converting character placements from 240 to 300 dpi. If an XPAFAFW table entry cannot be found for a font during processing, XPAF terminates processing and requeues the document.

The XPAFAFW table is supplied with XPAF in TABLELIB and is updated automatically whenever additional replica fonts are loaded into the centralized font library using the Install Custom Replica Fonts (version 6 encoding or above) option on the Manage Custom Replica Fonts menu.

You also can update the XPAFAFW table when you load replica fonts into the decentralized font library using either the Load Custom Replica Fonts option on the Install Custom Replica Fonts (version 5 encoding or below) menu or the LOAD FONT TSO/batch command.

Coded font name (XPAFCFN) table

The XPAFCFN table provides XPAF with the names of the code page and character set that make up the IBM coded fonts in your IBM font library. XPAF uses this table to determine which code page/character set pair is required for a specified coded font. If a coded font is found that does not have a XPAFCFN table entry, XPAF searches the IBM font library identified by the XOSF DD statement that was specified using the IBMFONTDD initialization parameter and creates an entry dynamically.

The XPAFCFN table is created during installation by running RJOB105. The XPAFCFN table also is created or updated automatically whenever you run one of XPAF's IBM font table update options. RJOB105 and the update options create an entry in this table for every coded font contained in the referenced IBM font library. Each table entry contains the IBM coded font name followed by the code page name and character set name specified in that coded font.

You can use Maintain the Coded Font Name (XPAFCFN) Table on the Maintain Font Tables menu if you need to make a small amount of changes or additions to this table. Otherwise, use the Update IBM Font Characteristics Information option on the Manage Tables menu or the CONVERT IBM TSO/batch command to rebuild the XPAFCFN table and other tables that are needed to support replica fonts.

Refer to chapter 24, "Managing XPAF tables" for more information about using these options.

EBCDIC font widths (XPAFEFW) table

The XPAFEFW table contains the Xerox font widths for a given IBM character set in order based on the code page width (X'00' – X'FF') of each character. Typically, this arrangement is in EBCDIC format.

XPAF uses this table in conjunction with the XPAFIFW table to calculate where each character from the replica font should be placed when emulating the spacing of an IBM font. If a particular code page/character set pair is encountered that does not have an XPAFEFW table entry, XPAF attempts to build an entry dynamically before terminating processing and requeueing the document.

The XPAFEFW table is created and updated during installation by RJOB105 using data from the XPAFAFW table, the IBM code page, and the XPAFI2X table. The XPAFEFW table also is created or updated automatically whenever you run one of XPAF's IBM font table update options.

Each table entry contains a code page name, character set name, and font information (that is, baseline to top of cell, kern values etc.) for each plane used to replicate that code page/character set pair.

The table also contains the widths at 300 dpi of each character referenced in the code page/character set pair. The width information in this table is calculated by dividing the corresponding width from the XPAFIFW table entry by 240 and then multiplying by 300. The result is rounded down to the nearest whole number.

EBCDIC-to-ASCII (XPAFE2A) table

The XPAFE2A table translates EBCDIC values for IBM code pages to ASCII values for Xerox and replica fonts. XPAF uses this table to translate the incoming IBM code point to the appropriate code point in the correct plane. The XPAFI2X table is then used to establish which Xerox or replica font should be used for the plane specified in the XPAFE2A table.

NOTE: If a document references a code page for which there is no XPAFE2A table entry, the printing of the document is terminated, and the document is requeued.

The XPAFE2A table is created or updated during installation by running RJOB105. The XPAFE2A table also is created or updated automatically when you run one of XPAF's IBM font table update options. RJOB105 and the update options create or update table entries, each of which contains the IBM code page name, Xerox centralized or decentralized character mapping name, and the EBCDIC code point of the character defined as the default character in the named code page.

If you load a new centralized font, you must run either the Convert Xerox Fonts to IBM Format option on the Convert Resources menu or CONVERT FONT TSO/batch command before you use a centralized or decentralized version of the font in a DCF/SCRIPT document. This ensures that the XPAFEFW table is updated with information that is needed to position characters correctly at print time. Refer to chapter 22, "Converting resources" for more information about using this option or command.

IBM font widths (XPAFIFW) table

The XPAFIFW table contains the width of each IBM character in an IBM character set/code page pair. The widths in this table are used for text string placement comparisons to ensure that an XPAF formatted document prints the same as an AFP document.

XPAF uses this table to establish the widths of the characters referenced in the specified IBM code page/character set pair. If a particular code page/character set pair is found that does not have an XPAFIFW table entry, XPAF searches the IBM font library identified by the XOSF DD statement that was specified using the IBMFONTDD initialization parameter and creates an entry dynamically. If the character set cannot be found in the IBM font library, the processing of the document is terminated, and the document is requeued.

The XPAFIFW table is created and updated during installation by RJOB105 and XPAF. The XPAFIFW table also is created or updated automatically when you run one of XPAF's IBM font table update options.

This table contains the widths at 240 dpi of all characters referenced by each code page/character set pair found by RJOB105 when processing the coded font members of the IBM font library referenced. Each entry contains the code page name and character set name followed by width information for each character referenced by the named code page.

IBM font widths (XPAFIFW3) tables

The XPAFIFW3 table contains the width of each IBM character in an IBM character set/code page pair. The widths in this table are used for text string placement comparisons to ensure that an XPAF formatted document prints the same as an AFP document.

XPAF uses this table to establish the widths of the characters referenced in the specified IBM code page/character set pair. If a particular code page/character set pair is found that does not have an XPAFIFW3 table entry, XPAF searches the IBM font library identified by the XOSF DD statement that was specified using the IBMFONTDD initialization parameter and creates an entry dynamically. If the character set cannot be found in the IBM font library, the processing of the document is terminated, and the document is requeued.

The XPAFIFW3 table is created and updated during installation by RJOB105 and XPAF. The XPAFIFW table also is created or updated automatically when you run one of XPAF's IBM font table update options.

This table contains the widths at 300 dpi of all characters referenced by each code page/character set pair found by RJOB105 when processing the coded font members of the IBM font library referenced. Each entry contains the code page name and character set name followed by width information for each character referenced by the named code page.

IBM-to-IBM (XPAFI2I) table

The XPAFI2I table contains an entry for every IBM character set distributed with XPAF (that is, every character set supported as standard). Each table entry contains the character set name followed by the first 36 bytes of data from the font descriptor structured field in that character set.

The XPAFI2I table is supplied with XPAF in TABLELIB. This table is used to allow the standard IBM character sets to be renamed without having to create new XPAFI2X table entries.

IBM-to-Xerox (XPAFI2X) table

The XPAFI2X table identifies the Xerox fonts needed to replicate the fonts represented by an IBM character set. The XPAFI2X table links each IBM character set to a group of replica fonts. Each replica font references a specific plane or split of a plane. A plane is split when all of the characters specified in that plane do not fit into one replica font.

NOTE: Even if a plane is empty, it may still be listed in the XPAFI2X table in order to reserve the name for future use.

The XPAFI2X table also contains the point size of the IBM character set. This value is used by XPAF to establish which characters are in which split. RJOB105 uses this table in conjunction with the IPSTND table to build the XPAFE2A table.

NOTE: During document processing, if XPAF encounters a character set that does not have a corresponding XPAFI2X table entry, XPAF searches the XPAFI2I table for a matching entry. This allows XPAF to recognize a character set that is a copy of a supported font.

The XPAFI2X table is supplied with XPAF in TABLELIB. If you install custom replica fonts, you must run one of these options to update the table:

- Update the IBM-to-Xerox (XPAFI2X) Table on the Install Custom Replica Fonts (version 5 encoding or below) menu
- Install Custom Replica Fonts (version 6 encoding or above) on the Manage Custom Replica Fonts menu

Refer to chapter 25, “Managing custom fonts,” for information about how to use these options.

Color cross-reference tables

The color cross-reference tables are a set of tables used to support Xerox highlight color printing capabilities for centralized printers. Highlight color is the use of a single solid (spot) color to accentuate or contrast material from monochromatic (usually black) printed areas. Xerox uses the term “highlight color” to mean printing with black plus one color.

DJDE, page-formatted, or AFP documents can be set up for a particular color. If the colors in your document do not match the colors on your highlight printer, you can use a color-cross reference table to map the color specified in the document to the color specified in the printer ink source language (ISL).

For example, you can map blue to red. Or, let’s say a page-formatted document references the colors turquoise and green, but the printer ISL defines the highlight color as red. Using a color cross-reference table, you can map both turquoise and green to red. For more information about how to use highlight color in documents, refer to *Section Four: Printing Documents with XPAF*.

NOTE: Xerox printers that support full color printing do not require color cross-reference tables.

Library and default table definition

The color cross-reference tables are stored in the library which was identified by the XOSF DD statement specified by your systems programmer during installation using the INKXLIB initialization or printer profile parameter. During installation, your systems programmer also may have identified a default color cross-reference table by specifying the INKXREF initialization or printer profile parameter.

For more information about these parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Table maintenance

Your application programmers will need to identify the highlight color to be substituted for colors specified in DJDE, page-formatted, or AFP documents. You can then use the Maintain Color Cross-Reference Tables option on the Manage Tables menu to create and maintain color cross-reference tables. Each table you create can be used by multiple highlight color printers. Refer to Chapter 24, “Managing XPAF tables” for information about using this option.

Color conversion table

The color conversion table maps highlight colors to decentralized color values, allowing you to print DJDE documents that contain highlight color on PCL printers and convert to PDF without modifying the documents. XPAF uses the color conversion table to map centralized printer ink names to RGB color values which are then used to define PCL or PDF colors.

Library and default table definition

XPAF provides a default color conversion table, named COLR4700, in XPFSAMP. The color conversion table is preloaded for you and resides in the native library specified in the XOSF start-up proc DD statement named by the INKXLIB initialization parameter or printer profile parameter. For more information about the INKXLIB parameter, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Table maintenance

You can modify a copy of the color conversion table to add custom colors. If you do, you must then reload it using one of these options:

- Maintain the Color Conversion Table option on the Manage Tables menu
- LOAD INKS TSO/batch command

Refer to chapter 24, “Managing XPAF tables,” for information about maintaining the color conversion table.

21. Loading resources to a native library

This chapter describes how to use the options available through the Load Resources menu to load these types of resources:

- Fonts. Use the Load Centralized Fonts and Load Decentralized Fonts options to load fonts to the native centralized and decentralized font libraries. These options must be performed for any .FNT or sixelized (2700 format) font files that are referenced in a document but not resident on the selected printer.

  For centralized fonts, XPAF automatically builds XPAFXFI table entries for the fonts during the load process. For decentralized fonts, you can specify whether you want XPAF to build the table entries.

  NOTE: You do not want to build XPAFXFI table entries for a decentralized font if a centralized version of the font already exists in the native centralized font library.

- Forms. Use the Load Centralized Forms and Load Decentralized Forms options to load forms to the native centralized and decentralized form libraries. These options must be performed for any .FRM or XES form files that are referenced in a document but not resident on the selected printer.
- Images. Use the Load Centralized Images and Load Decentralized Images options to load images to the native centralized and decentralized image libraries. These options must be performed for any .IMG or sixelized image files that are referenced in a document but not resident on the selected printer.
- Logos. Use the Load Centralized Logos option to load .LGO files to the native centralized logo library. This option must be performed for any .LGO file that is referenced in a form but not resident on the selected printer.
- PDL. Use the Load PDL option to load PDL members to a native PDL library. Whenever you change PDL on a printer, you also must update it on the host and use this option to load the updated host version to a native library.

Before resource files can be processed by any of the options on the Load Resources menu, they must be transferred from their existing location, such as on a printer, by file and stored in the same format as on the file. After the files have been transferred, they can be loaded to a native library. Refer to *Section Two: Installing and Customizing XPAF* for information about uploading printer resources.

Loading centralized fonts

To load fonts to the centralized font library, enter **1** on the Load Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                 Load Centralized Fonts to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:

  XPAFXFI TABLE SPECIFICATIONS
      Centralized Character Mapping Name:
    Decentralized Character Mapping Name:
                          Code Page Name:
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS, sequential dataset, or native centralized font library that contains the centralized font(s) to be loaded. If you have multiple fonts concatenated in a single file, they must be loaded from a sequential dataset with valid headers. All fonts within the sequential dataset will be loaded. The dataset specifications for a PDS or sequential dataset are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Member Name	• Enter a 1- to 8-character member name if the font is stored in a PDS or a 1- to 20-character member name if the font is stored in a native library. You can enter a specific font name in this field, or use a wildcard character to select all fonts or fonts beginning with a certain prefix. For example: * Selects all members. RX* Selects all members that begin with RX. RX?ABC Selects all members that begin with RX, end with ABC, and have one character in between RX and ABC. RX1ABC Selects the single member RX1ABC. • Leave this field blank if the font is stored in a sequential dataset.

Field	Action
OUTPUT **Dataset Name**	Enter the name of the native centralized font library. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the centralized font library by the CFONTLIB initialization parameter or the FONTLIB printer profile parameter. For each font loaded, the output member name is constructed from the name in the font header record.
XPAFXFI TABLE SPECIFICATIONS **Centralized Character Mapping Name**	Enter the 1- to 6-character name of the character mapping table that contains the centralized character mapping of the font. For each character in the font, this table contains the character ID and its ASCII hexadecimal mapping value. This name is passed to the 'Centralized Character Mapping Name' field in the XPAFXFI table. Default: CCMV01
Decentralized Character Mapping Name	Enter the 1- to 6-character name of the character mapping table that contains the decentralized character mapping of the font. For each character in the font, this table contains the character ID, plane number, and its ASCII hexadecimal mapping value. This name is passed to the 'Decentralized Character Mapping Name' field in the XPAFXFI table. Default: DCMV60
Code Page Name	• Enter the 1- to 6-character name of the character mapping table that contains the code page mapping for the font (for example, XCP5). This name is passed to the 'Code Page Name' field in the XPAFXFI table. ***NOTE:*** You can specify either the name of an XPAF-supplied code page mapping, the name of an IBM code page mapping, or the name of a code page mapping that you have created. Refer to Chapter 29, "Character mapping tables" for more information about XPAF-supplied code page mappings. Refer to chapter 24, "Managing XPAF tables," for information about using IBM code pages or creating your own character mapping tables. • Leave this field blank if an entry already exists in the XPAFXFI table for this font. Default: Six space characters

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Load Centralized Fonts option:

LOAD FONT('*input-dataset-name*[(*member-name* | *)]')

[TO]('*output-dataset-name*') TYPE(LCDS) [IFORMAT(*centralized-format* | *CCMV01*)

OFORMAT(*decentralized-format* | *DCMV60*) CODEPAGE(*code-page-name*)]

A customized sample XOAF Batch job for loading LCDS (centralized) fonts can be found in the STAGE2 library as member RLFNTLD.

Loading centralized forms

To load forms to the centralized form library, enter **2** on the Load Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                Load or Compile Centralized Forms to a Native Library


COMMAND ===>


  INPUT
    Dataset Name: FSLLIB
     Member Name:             Input will be loaded if source is 128-bytes
                              Input will be compiled if source is 80-bytes

  OUTPUT
    Dataset Name: 'XPAF50.TESTING.CFORMLIB'
     Member Name:


  NOTE:
     OUTPUT Member Name is required if INPUT file is sequential
            with no tape header label record.

     OUTPUT Member Name is ignored if FSL source is being compiled.
            (Input source is 80-bytes)
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS or sequential dataset that contains the centralized form(s) to be loaded. If you have multiple forms concatenated in a single file, they must be loaded from a sequential dataset with valid headers. The dataset specifications are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Member Name	• Enter a 1- to 8-character member name if the form is stored in a PDS. • Enter an asterisk (*) to load all forms in a PDS. • Leave this field blank if the form is stored in a sequential dataset.
OUTPUT **Dataset Name**	Enter the name of the native centralized form library. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the centralized form library in the CFORMLIB initialization parameter or FORMLIB printer profile parameter.

Field	Action
Member Name	• Enter the 1- to 6-character name of the form as it will be known to the printer. • The output member name is required when the input is from a sequential dataset with no centralized form header record. • Leave this field blank if you want the output member name to be constructed from the form name in the centralized form header record. The member name must conform to the form naming conventions required for your centralized printer. Refer to your centralized printer manual for more information.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Load Centralized Forms option:

LOAD FORM('*input-dataset-name*[({ *member-name* | * })]')

[TO]('*output-dataset-name*[(*member-name*)]') LCDS

A customized sample XOAF Batch job for loading LCDS (centralized) forms can be found in the STAGE2 library as member RLFRMLD.

Loading centralized images

To load images to the centralized image library, enter **3** on the Load Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Load Centralized Images to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     Member Name:
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS or sequential dataset that contains the centralized image(s) to be loaded. If you have multiple images concatenated in a single file, they must be loaded from a sequential dataset with valid headers. The dataset specifications are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Member Name	• Enter a 1- to 8-character member name if the image is stored in a PDS. • Enter an asterisk (*) to load all images in a PDS. • Leave this field blank if the image is stored in a sequential dataset.
OUTPUT **Dataset Name**	Enter the name of the native centralized image library. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the centralized image library by the CIMAGELIB initialization parameter or the IMAGELIB printer profile parameter.
Member Name	• Enter the 1- to 6-character image name as it will be known to the printer. • The output member name is required when the input is from a sequential dataset with no centralized image header record. • Leave this field blank if you want the output member name to be constructed from the image name in the centralized image header record.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Load Centralized Images option:

LOAD IMAGE('*input-dataset-name*[({ *member-name* | * })]')

[TO]('*output-dataset-name*[(*member-name*)]') LCDS

A customized sample XOAF Batch job for loading LCDS (centralized) images can be found in the STAGE2 library as member RLIMGLD.

Loading centralized logos

To load logos to the centralized logo library, enter **4** on the Load Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Load Centralized Logos to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     Member Name:
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS or sequential dataset that contains the logo(s) to be loaded. If you have multiple logos concatenated in a single file, they must be loaded from a sequential dataset with valid headers. The dataset specifications are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Member Name	• Enter a 1- to 8-character member name if the logo is stored in a PDS. • Enter an asterisk (*) to load all logos in a PDS. • Leave this field blank if the logo is stored in a sequential dataset.
OUTPUT **Dataset Name**	Enter the name of the native centralized logo library. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the centralized logo library by the CLOGOLIB initialization parameter or the LOGOLIB printer profile parameter.
Member Name	• Enter the 1- to 6-character logo name as it will be known to the printer. • Leave this field blank if you want the output member name to be constructed from the logo name in the centralized logo header record. The member name must conform to the logo naming conventions required for your centralized printer. Refer to your centralized printer manual for more information.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Load Centralized Logos option:

LOAD LOGO('*input-dataset-name*[(*member-name* | *)]')

[TO]('*output-dataset-name*[(*member-name*)]')

A customized sample XOAF Batch job for loading LCDS (centralized) logos can be found in the STAGE2 library as member RLLGOLD.

Loading decentralized fonts

To load fonts to the decentralized font library, enter **5** on the Load Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Load Decentralized Fonts to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:

  XPAFXFI TABLE SPECIFICATIONS
    Create Table Entry? (Y/N):
               Code Page Name:
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS, sequential dataset, or native decentralized font library that contains the decentralized font(s) to be loaded. If you have multiple fonts concatenated in a single file, they must be loaded from a sequential dataset with valid headers. All fonts within the sequential dataset will be loaded. The dataset specifications for a PDS or sequential dataset are: RECFM=F or FB LRECL=80 BLKSIZE=A value appropriate for your site
Member Name	• Enter a 1- to 8-character member name if the font is stored in a PDS or a 1- to 20-character member name if the font is stored in a native library. You can enter a specific font name in this field, or use a wildcard character to select all fonts or fonts beginning with a certain prefix. For example: * Selects all members. RX* Selects all members that begin with RX. RX?ABC Selects all members that begin with RX, end with ABC, and have one character in between RX and ABC. RX1ABC Selects the single member RX1ABC. • Leave this field blank if the font is stored in a sequential dataset.

Field	Action
OUTPUT **Dataset Name**	Enter the name of the native decentralized font library. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the decentralized font library by the DFONTLIB initialization parameter or the FONTLIB printer profile parameter. For each font loaded, the output member name is constructed from the font name in the font header record.
XPAFXFI TABLE SPECIFICATIONS **Create Table Entry?**	Specify whether you want a XPAFXFI table entry created automatically for this font. Valid values: Y Automatically creates an XPAFXFI table entry for this font. Select this value only if you are not loading a centralized version of this font. N Does not create an entry. Default: N ***NOTE:*** The name of the table entry is constructed from the first six characters of the font name in the font header record.
Code Page Name	If you specified a value of Y in the 'Create Table Entry?' field, enter the 1- to 6-character name of the character mapping table that contains the code page mapping for the font (for example, XCP12). ***NOTE:*** You can specify either the name of an XPAF-supplied code page mapping, the name of an IBM code page mapping, or the name of a code page mapping that you have created. Refer to Chapter 29, "Character mapping tables" for more information about XPAF-supplied code page mappings. Refer to chapter 24, "Managing XPAF tables," for information about using IBM code pages or creating your own character mapping tables. Default: None

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Load Decentralized Fonts option:

LOAD FONT('*input-dataset-name*[({ *member-name* | * })]')

[TO]('*output-dataset-name*') TYPE { *(2700)* | (270X) CODEPAGE(*code-page-name*) }

Loading decentralized forms

To load forms to the decentralized form library, enter **6** on the Load Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Load Decentralized Forms to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     Member Name:



NOTE: Output member name is required if input file is sequential with no file
header label record.
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS that contains the decentralized form(s) to be loaded. Decentralized forms must be stored in a PDS. The dataset specifications are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Member Name	• Enter a 1- to 8-character member name. • Enter an asterisk (*) to load all forms in a PDS.
OUTPUT **Dataset Name**	Enter the name of the native decentralized form library. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the decentralized form library by the DFORMLIB initialization parameter or the FORMLIB printer profile parameter.
Member Name	• Enter the 1- to 20-character form name as it will be known to the printer. • Leave this field blank if you want the output member name to be the same as the input member name. The member name must conform to the form naming conventions required for your decentralized printer. Refer to your decentralized printer manual for more information.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Load Decentralized Forms option:

LOAD FORM('*input-dataset-name*({ *member-name* | * })')

[TO]('*output-dataset-name*[(*member-name*)]') DECENTRALIZED

Loading decentralized images

To load images to the decentralized image library, enter **7** on the Load Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                 Load Decentralized Images to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     Member Name:



NOTE: Output member name is required if input file is sequential with no file
header label record.
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS that contains the decentralized image(s) to be loaded. The recommended dataset specifications are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Member Name	• Enter a 1- to 8-character member name. • Enter an asterisk (*) to load all images in a PDS.
OUTPUT **Dataset Name**	Enter the name of the native decentralized image library. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the decentralized image library by the DIMAGELIB initialization parameter or the IMAGELIB printer profile parameter.
Member Name	• Enter the 1- to 20-character image name as it will be known to the printer. • Leave this field blank if you want the output member name to be the same as the input member name. The member name must conform to the image naming conventions required for your decentralized printer. Refer to your decentralized printer manual for more information.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Load Decentralized Images option:

LOAD IMAGE('*input-dataset-name*({ *member-name* | * })')

[TO]('*output-dataset-name*[(*member-name*)]') DECENTRALIZED

Loading PDL

To load a PDL member, enter **8** on the Load Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Load PDL to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     PCL Version:

NOTE:
   Use the following PCL versions if using JDL with large paper size
   or color options:
                        V3A FOR 11 X 17 (4635)
                        V37 FOR COLOR   (4890)
                        V35 FOR NORMAL  (4090) - Default
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS where the source members are stored. The recommended dataset specifications are: RECFM=FB For JSL source files, use RECFM=FB, LRECL=80 For PDL object files, use RECFM=FB, LRECL=128 BLKSIZE=A value appropriate for your site ***NOTE:*** The PDL loader identifies text in 80-byte records as JSL source files. 128-byte records containing binary data with a standard file header preceding them are identified as PDL objects.
Member Name	Enter the 1- to 8-character name of the member in which the PDL resides. Wild cards may be specified in the input member name to facilitate mass loading. The * and ? wild cards may be specified. Any text following an “ * “ is considered to match the member name character position. Any text in the position indicated with a “ ? “is considered to match.

Field	Action
OUTPUT **Dataset Name**	Enter the name of the native library to which the PDL member is being loaded. This is the dataset in the XOSF start-up proc DD statement named by the PDLLIB initialization or printer profile parameter.
PCL Version	Enter the version of the printer control language software running on the centralized printer. Any eight characters can be used to indicate the software version. Default: V35 For PDL object files the PCLVER is saved as a part of the member name. When an attempt is made to match the PCLVER to the printer definition LPSRELEASE and an exact match cannot be found, the first object with the correct name and type will be used. Refer to chapter 19, "XPAF resources," for more information. ***CAUTION:*** If incorrect default values are entered, unpredictable results may occur. ***NOTE:*** Specify V37 when PDL object files contain color references. Specify V3A when you have specified large paper sizes such as 11x17 inches.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Load PDL option:

LOAD PDL('*input-dataset-name*(*member-name*)')

[TO]('*output-dataset-name*')[PCLVER({ V*nn* / V35 })]

A customized sample XOAF Batch job for loading LCDS (centralized) PDL can be found in the STAGE2 library as member RLJSLLD.

PDL loader member naming conventions

When you load PDL to the native library, the PDL loader creates a separate member for each labeled statement included in the PDL and assigns it a 20-byte name. The format is as follows:

Table 21-1. PDL member name processing

File type	Member name format
JSL format	Each member name is a 20-byte name constructed using the JDL name, the statement identifier, and the type separated by periods. The first 6 characters contain the JDL name, which may be padded with space characters at the end of the name if it is not 6 characters. After a period, the next 6 characters contain the statement identifier, which may be padded with space characters at the end of the name if it is not 6 characters. After a period, the 3-character type is followed by 3 space characters. For example, if the JDL name is DFAULT, the statement identifier is DFLT, and the type is JDE, the member name generated would be “DFAULT.DFLT .JDE ”.
Cataloged member format	Each member name is a 20-byte name constructed using a constant string, the statement identifier, and the type separated by periods. The first 6 characters is the constant string ‘$GLOB$’. After a period, the next 6 characters is the statement identifier, which may be padded with space characters at the end of the name if it is not 6 characters. After a period, the 3-character type is followed by 3 space characters. For example, if the statement identifier is FMT1 and the type is PDE, the member name generated would be “$GLOB$.FMT1 .PDE ”.
PDL object files	Each object name is a 20-byte name constructed using the file name, the file type, and the PCL version separated by periods. The first 6 characters is the file name, which may be padded with space characters at the end of the name if it is not 6 characters. After a period the next 3 characters are the file type. After a period, the PCL version may be padded with space characters if it is not 8 characters. For example, if the file name is DFAULT, the file type is JDL, and the PCL version is 3.5, the PDL object name would be “DFAULT.JDL.V35 ”.

PDL processing considerations

The PDL loader loads PDL as coded. The loader is not designed to handle PDL coding errors. Should errors exist within the PDL, the results may be unpredictable.

In addition, note these considerations when using the PDL loader:

- If your PDL contains statements with duplicate names, they will be flagged as errors during the loading process.
- If you have used the PDL loader to load an updated PDL member, you must drain and restart the printer before using the updated PDL.
- If you simultaneously load PDL members to a native library and print documents through XOSF, you may receive error messages indicating that a requested resource is unavailable. As a result, decentralized documents may be printed incorrectly. If there are errors in a document, resubmit the print job after PDL loading has completed and the printer has been restarted.
- If you reload a PDL object member and a corresponding JSL source member and are using AUTOREV, you must drain and restart the printer for the source object to remain in sync.

PDL compile function

XPAF will now, optionally, compile any JSL loaded with the PDL Loader. Compiled JSL (PDL Objects) have been a loadable resource with the PDL XPAF/XPSC V3R0 Maintenance Bulletin for WA5201 (05/20/2005) 4-21 Technical notes

Loader for some time. XOAF now has the ability to invoke the PDL Compiler and then load the output PDL Objects into the PDLLIB without any user intervention.

This function is invoked when the LOAD PDL command is used in the batch XOAF environment or option 1.8 (Load PDL) is used in the on-line TSO environment.

Enabling the PDL Compiler

A new XINSXOAF XINPARM parameter, XPDL=YES will enable the PDL Compiler. Additionally, six new system information files must be installed from the XPAF Maintenance file and their DDs must be added to your XOAF JCL (TSO CLIST or Batch) as follows:

```
//CON DD DISP=SHR,DSN=your.hlq.XPDLCNF
//MSG DD DISP=SHR,DSN=your.hlq.XPDLMSG
//INVXLT DD DISP=SHR,DSN=your.hlq.INVXLT
//PCCFIL DD DISP=SHR,DSN=your.hlq.PCCFIL
//TYPFIL DD DISP=SHR,DSN=your.hlq.TYPFIL
//XPDLDFT DD DISP=SHR,DSN=your.hlq.XPDLDFT
```

Instructions for unloading these files are included in section 3 of this Maintenance Bulletin under the heading XPDL Resource datasets.

In addition to the new DDs in your TSO CLIST, you must also specify a FREE FILE(SYSPRINT) to avoid some file allocation issues. A sample of an updated XOAF CLIST follows:

```
PROC 0
CONTROL NOFLUSH NOMSG
OUTDES XXX REUSE CLASS(X)
ALLOC FILE(XINPARM) DA('your.hlq.XINPARM') SHR
ALLOC FILE(TABLELIB) DA('your.hlq.TABLELIB') SHR
ALLOC FILE(CON) DA('your.hlq.XPDLCNF') SHR
ALLOC FILE(MSG) DA('your.hlq.XPDLMSG') SHR
ALLOC FILE(INVXLT) DA('your.hlq.INVXLT') SHR
ALLOC FILE(PCCFIL) DA('your.hlq.PCCFIL') SHR
ALLOC FILE(TYPFIL) DA('your.hlq.TYPFIL') SHR
ALLOC FILE(XPDLDFT) DA('your.hlq.XPDLDFT') SHR
ALLOC FILE(UJLLIST) OUTDES(XXX) SYSOUT REU
FREE FILE(SYSPRINT)
ISPEXEC SELECT PGM(XOASPF00) NEWPOOL
FREE FILE(CON)
FREE FILE(MSG)
FREE FILE(INVXLT)
FREE FILE(PCCFIL)
FREE FILE(TYPFIL)
FREE FILE(XPDLDFT)
FREE FILE(UJLLIST)
FREE FILE(SYSPRINT)
FREE FILE(TABLELIB)
FREE FILE(XINPARM)
EXIT
```

PDL loader report

The PDL loader generates a report that shows the contents of each PDL library member created during loading. Figure 21-1 shows a sample report.

The report is written to a dataset with the DD name UJLLIST, included in the XOAF logon proc and XOAF batch JCL. As shown in the following examples, you can specify a dataset name in place of SYSOUT.

```
//XOAFBAT   PROC   CORE=4096K,USER=
//XOAF      EXEC   PGM=XOASUP00,REGION=&CORE,PARM=(&USER)
                      .
            additional DD statements
                      .
//UJLLIST   DD     SYSOUT=*,DCB=(RECFM=FBA,LRECL=133,BLKSIZE=1330)
//XOAIN     DD     DDNAME=SYSIN
```

```
//XOAFBAT   PROC   CORE=4096K,USER=
//XOAF      EXEC   PGM=XOASUP00,REGION=&CORE,PARM=(&USER)
                     .
            additional DD statements
                     .
//UJLLIST   DD     DSN=prefix.UJLLIST,DISP=SHR
//XOAIN     DD     DDNAME=SYSIN
```

If you specify a dataset name in the XOAF logon proc or batch JCL, you must preallocate a sequential dataset with these specifications:

RECFM=FBA
LRECL=133
BLKSIZE=1330

Deleting obsolete PDL members

You can delete the obsolete members from a native PDL library by using either the Display a Directory of Library Members option or the Delete a Member option on the Manage Libraries menu. Refer to chapter 27, “Managing XPAF libraries,” for information about how to use these options.

Alternatively, you can use the LIBRARY DIRECTORY or LIBRARY DELETE TSO/batch commands to display or delete obsolete members. Refer to chapter 27, “Managing XPAF libraries,” for the format for these commands.

Figure 21-1. Sample PDL loader report

```
                  X E R O X   P D L   L O A D E R   R E P O R T        PAGE   1
 INPUT-DSN=XPAF30.PDLSOURCE                                INPUT-MEMBER=SAMPLE1
OUTPUT-DSN=XPAF30.PDLLIB                                          PCLVER=V35
************************   DFAULT.DFLT  .JDE   ************************
DFLT:   JDE;
        ACCT         USER=NONE;
        BANNER       HCOUNT=1,
                     HJOBNO=(12,5),
                     HRPTNA=(18,8),
                     TCOUNT=1,
                     TEST=(C1 OR C2);
        IDEN         OFFSET=0,
                     OPRINFO=NO,
                     PREFIX='@@@DJDE',
                     SKIP=8;
        LINE         DATA=(0,250),
                     FCB=IGNORE,
                     UCSB=IGNORE,
                     VFU=VFU1;
        OUTPUT       DUPLEX=YES,
                     FORMAT=FMT01,
                     GRAPHICS=YES,
                     OFFSET=NONE,
                     STAPLE=NO,
                     STOCKS=STK2;
        RAUX         TEST=(C1 OR C5);
        RECORD       LENGTH=214;
        RSTACK       ACCTINFO=(32,20),
                     DELIMITER=YES,
                     HRPTNA=(16,16),
                     PRINT=NONE,
                     TEST=(C4);
*********************************************************************
************************   $GLOB$.FMT1  .PDE   ************************
FMT1:   PDE          BEGIN=(.18,.66),
                     FONT=L0112B,
                     PMODE=LANDSCAPE;
*********************************************************************
************************   $GLOB$.FMT2  .PDE   ************************
FMT2:   PDE          BEGIN=(.18,.50),
                     FONT=L0212A,
                     PMODE=LANDSCAPE;
*********************************************************************
UJL0701I PDL LOADER COMPLETED SUCCESSFULLY
```

22. Converting resources

This chapter describes how to use the options available through the Convert Resources menu to perform these types of conversions:

- Convert centralized fonts in .FNT format to decentralized (sixelized) format. You must use this option when you want to print a document that was originally coded for a centralized printer on an XES printer

NOTE: XPAF 7.0 will automatically convert LCDS fonts to an intermediate format and then to PCL or PDF as required. There is no need to manually preconvert fonts. Refer to the FNTLGOCONV initialization parameter for information on how to disable this feature.

- Convert logos in .LGO format to decentralized fonts. You must use this option when you want to print a document that was originally coded for a centralized printer on an XES printer. Any logos included in a LCDS form must be converted separately and made available to the printer prior to printing the job.

NOTE: XPAF 7.0 will automatically convert LCDS logos to an intermediate format and then to PCL or PDF as required. There is no need to manually preconvert logos. Refer to the FNTLGOCONV initialization parameter for information on how to disable this feature.

- Convert a Xerox font to IBM format for use in a DCF/SCRIPT document.
- Preconvert AFP page segments to .IMG or RES .IMG format and load them to native libraries. By preconverting the page segments, your document can be printed without having to wait for a dynamic conversion during processing.

Converting centralized fonts to decentralized fonts

Before using this option, you should be aware of certain considerations related to performing a centralized-to-decentralized font conversion. You also should verify that the XPAFXFI table contains valid character mapping information for the fonts to be converted.

Conversion considerations

Note these considerations when performing a centralized-to-decentralized font conversion:

- Inverse portrait and inverse landscape centralized replica fonts cannot be converted to decentralized fonts. Decentralized inverse

portrait and inverse landscape fonts are actually portrait and landscape fonts with the rasters inverted. When these fonts are converted for use with AFP documents they will be positioned incorrectly in your document. You must obtain the correct versions of these fonts from Xerox Font Services or a third-party vendor.

- One centralized font can be mapped to up to eight decentralized fonts, also known as planes, during centralized-to-decentralized font conversion. While a centralized font can contain up to 240 characters, a decentralized font can contain only a maximum of 192 characters. For example, DCMV60, the default decentralized character mapping table provided with XPAF, places the most commonly used 192 code points in plane 01, also known as the primary plane. The remaining code points are placed in plane 02.
- If you are converting a centralized font that contains more than 192 characters to a decentralized font, you may want to adjust which characters will reside in the primary plane, plane 01, and which characters will be mapped to the remaining planes (02 through 08). Refer to "Adjusting your decentralized character mapping tables" later in this chapter for instructions about how to adjust the way characters in your font are distributed in each plane.
- When XPAF automatically converts a font, each plane can contain a maximum of 1M of raster data. This is more than sufficient to successfully convert any centralized font.

  If you manually convert a centralized font to decentralized fomrat with XOAF, each plane can contain a maximum of 64K of raster data. During XOAF centralized-to-decentralized font conversion, if a font contains more than 64K of raster data, its characters must be placed in more than one plane. If the 64K storage memory limit for a decentralized font is reached during conversion, this means that a plane is full. XPAF issues a message telling you which plane is full and stops processing all remaining character IDs. You must edit the appropriate decentralized character mapping table, change the plane numbers for the remaining character IDs and code points to a plane number that is not full, and run the centralized-to-decentralized conversion again.
- If you attempt to manually convert a font and exceed the 64K storage limit, refer to "Adjusting your decentralized character mapping tables" later in this chapter for information about the steps you must take to perform the conversion successfully.
- Some ASCII code points are reserved for XPAF or printer use, and therefore cannot have any characters assigned to them. For more information about reserved code points, refer to the discussions about creating character mapping tables from a dataset and online in chapter 24, "Managing XPAF tables."
- If you have two character IDs mapped to the same code point and plane number combination, XPAF issues a message telling you which character ID in the font is in error. Font conversion continues, but the character ID that tried to use an existing code point/plane number combination is dropped from font processing and will not be found in the new font. You must edit the appropriate decentralized character mapping table, change the plane number of the character ID in error to an unused code point and plane number combination, and run centralized-to- decentralized font conversion again.

Verifying XPAFXFI table entries

Before you use this option, you must ensure that the XPAFXFI table entry for the centralized font contains valid centralized and decentralized character mapping names. During centralized-to-decentralized conversion, XOAF uses the centralized and decentralized character mapping names to determine where to place the centralized characters in the decentralized font. If the XPAFXFI table does not contain valid centralized and decentralized character mapping name entries, XOAF terminates centralized-to-decentralized font conversion and issues an error message.

To ensure that the XPAFXFI table contains the necessary entries, complete these steps:

Step 1. Use the Load Centralized Fonts option on the Load Resources menu or the LOAD FONT TSO/batch command to load the centralized version of the font to the centralized font library. Specify the centralized and decentralized character mapping table names here. If none are specified, default names are generated to the XPAFXFI table during loading. Refer to chapter 21, "Loading resources to a native library," for more information about this option.

Step 2. Use the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu to verify that the appropriate character mapping table names are listed in the 'Centralized Character Mapping Name' and 'Decentralized Character Mapping Name' fields. Refer to chapter 24, "Managing XPAF tables," for more information about this option.

Step 3. Use the Maintain the Character Mapping Tables option on the Maintain Font Tables menu to verify that all expected character IDs exist in the centralized character mapping table, and that the character IDs in the decentralized character mapping table are mapped to the desired code point and plane number combinations. Refer to chapter 24, "Managing XPAF tables," for more information about this option.

If you need to modify the decentralized character mapping table, refer to "Adjusting your decentralized character mapping tables" later in this chapter before performing centralized-to-decentralized font conversion.

Using this option

To convert fonts from centralized to decentralized format, enter **1** on the Convert Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                Convert Centralized Fonts to Decentralized Fonts

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:

  OUTPUT SPECIFICATIONS
        Message Listing:
    Font Sample (Y/N/R):
      Lower Range Limit:
      Upper Range Limit:
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS, sequential dataset, or native centralized font library that contains the centralized font you want to convert. If you have multiple fonts concatenated in a single file, they must be converted from a sequential dataset with valid headers. All fonts within the sequential dataset will be converted. The dataset specifications for a PDS or sequential dataset are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site

Field	Action
Member Name	• Enter the 1- to 8-character member name if the font is stored in a PDS or native library. The member name may or may not match the logical font name. You can enter a specific font name in this field, or use a wildcard character to select all fonts or fonts beginning with a certain prefix. For example: * Selects all members. RX* Selects all members that begin with RX. RX?ABC Selects all members that begin with RX, end with ABC, and have one character in between RX and ABC. RX1ABC Selects the single member RX1ABC. • Leave this field blank if the font is stored in a sequential dataset. ***NOTE:*** Remember that you cannot convert a licensed centralized font to a decentralized font. Instead, you must obtain a licensed decentralized version of the font.
OUTPUT **Dataset Name**	Enter the name of the native decentralized font library where the converted font will be stored. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the decentralized font library by the DFONTLIB initialization parameter or FONTLIB printer profile parameter. The decentralized font name is constructed from the name in the centralized font header record.
OUTPUT SPECIFICATIONS **Message Listing**	Enter the name of the sequential dataset to which you want conversion messages to be written. The dataset contents are in XES format and can be sent to any decentralized printer. Do not specify the XOAF message dataset. Refer to *Section Six: XPAF Messages* for an explanation of font conversion messages and any required user action. The recommended dataset specifications are: RECFM=FB LRECL=133 BLKSIZE=A value appropriate for your site Default: None

Field	Action
Font Sample	Identify the type of font information to be stored in the dataset specified in the 'Message Listing' field. It can be either the font sample for the converted decentralized font, the font sample plus a raster breakdown for each character in a specified range, or nothing. Valid values: Y Generates the font sample for the converted decentralized font and stores it in the dataset identified in the 'Message Listing' field. N Does not generate anything in the message listing dataset. R Generates the font sample for the converted decentralized font plus a raster breakdown for each character in a specified range. This information is stored in the dataset identified in the 'Message Listing' field. You also must specify values in the 'Lower Range Limit' and 'Upper Range Limit' fields. Default: None
Lower Range Limit	Enter the ASCII code point starting value for the raster breakdown, which will be stored in the dataset identified in the 'Message Listing' field. Valid values: A 2-digit hexadecimal value from 20 through FF. To select all characters, enter **20** here and **FF** in the 'Upper Range Limit' field. Default: None ***NOTE:*** Some ASCII code points are reserved for XPAF or printer use, and therefore cannot have any characters assigned to them. For more information about reserved code points, refer to the discussions about creating character mapping tables from a dataset and online in chapter 24, "Managing XPAF tables."
Upper Range Limit	Enter the ASCII code point ending value for the raster breakdown, which will be stored in the dataset identified in the 'Message Listing' field. Valid values: A 2-digit hexadecimal value from 20 through FF. To select all characters, enter **20** in the 'Lower Range Limit' field and **FF** here. Default: None ***NOTE:*** The output created by the 'Lower Range Limit' and 'Upper Range Limit' fields may be large depending upon the font size and the number of characters specified in these fields.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Convert Centralized Fonts to Decentralized Fonts option:

CONVERT XFONT('*input-dataset-name*[({ *member-name* | * })]')

[TO]('*output-dataset-name*') SAMPLE({ Y | N | R }) [LIST('list-dataset-name')

LOWER(*nn*) UPPER(*nn*)]

NOTE: If SAMPLE is set to Y, LIST is required. If SAMPLE is set to R, LIST, LOWER, and UPPER are required. *nn* is a hexadecimal value from 20 to FF.

Adjusting your decentralized character mapping tables

You will need to adjust your character mapping tables under these conditions:

- If you exceed the 64K storage limitation during the centralized-to-decentralized font conversion
- If you want to adjust the way the characters in your font are distributed to which planes for greater printing performance

Adjusting to accommodate the 64K storage limitation

Perform one of these procedures if XPAF issues a message during the centralized-to-decentralized font conversion telling you the plane is full.

- If you specified DCMV01 as the decentralized character mapping table for the font in the XPAFXFI table and exceeded the 64K storage limitation during font conversion, perform these steps:
  1. Use the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu to specify DCMV02 in the ‘Decentralized Character Mapping Name’ field for the font. DCMV02 more evenly distributes the code points for large fonts between two planes rather than placing the most commonly used 192 code points in plane 01.
  2. Run the centralized-to-decentralized font conversion again using either the Convert Centralized Font to Decentralized Fonts option on the Convert Resources menu or the CONVERT XFONT TSO/batch command.

3. Use the Convert Xerox Fonts to IBM Format option on the Convert Resources menu or the CONVERT FONT TSO/batch command to ensure that the XPAFEFW and XPAFE2A tables are updated with information that is needed to position characters correctly at print time. Refer to "Converting Xerox fonts to IBM format" later in this chapter for more information.

- If you specified DCMV02 as the decentralized character mapping table for the font in the XPAFXFI table and exceeded the 64K storage limitation during font conversion, perform these steps:

  1. Create a site-specific decentralized character mapping table which maps the code points for the font across more than two planes. Then load the table using the Create/Update a Character Mapping Table from a Dataset option on the Maintain Character Mapping Tables menu. Refer to chapter 24, "Managing XPAF tables," for more information about creating and loading character mapping tables.

  2. Use the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu to specify the name of the new decentralized character mapping table in the 'Decentralized Character Mapping Name' field for the font.

  3. Run the centralized-to-decentralized font conversion again using either the Convert Centralized Font to Decentralized Fonts option on the Convert Resources menu or the CONVERT XFONT TSO/batch command.

  4. Use the Convert Xerox Fonts to IBM Format option on the Convert Resources menu or the CONVERT FONT TSO/batch command to ensure that the XPAFEFW and XPAFE2A tables are updated with information that is needed to position characters correctly at print time. Refer to "Converting Xerox fonts to IBM format" later in this chapter for more information.

- If you specified your site-specific character mapping table as the decentralized character mapping table for the font in the XPAFXFI table and exceeded the 64K storage limitation during font conversion, perform these steps:

  1. Edit the PDS member that is the input source for the decentralized character mapping table you want to modify. Change the plane numbers for the remaining character IDs and code points to a plane number that is not full. Then load the table using the Create/Update a Character Mapping Table from a Dataset option on the Maintain Character Mapping Tables menu. Refer to chapter 24, "Managing XPAF tables," for more information about creating and loading character mapping tables.

  2. Use the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu to specify the name of the new decentralized character mapping table in the 'Decentralized Character Mapping Name' field for the font.

3. Run the centralized-to-decentralized font conversion again using either the Convert Centralized Font to Decentralized Fonts option on the Convert Resources menu or the CONVERT XFONT TSO/batch command.

4. Use the Convert Xerox Fonts to IBM Format option on the Convert Resources menu or the CONVERT FONT TSO/batch command to ensure that the XPAFEFW and XPAFE2A tables are updated with information that is needed to position characters correctly at print time. Refer to "Converting Xerox fonts to IBM format" later in this chapter for more information.

Adjusting for performance optimization

If all of your converted characters fit into one plane, you can either leave them in this configuration, or you can move the characters you do not use frequently into a second plane. You must determine if you receive greater printing performance by loading one large font, or by loading two smaller fonts and switching between them during a print job.

If more than one plane is needed to represent a font, place all of your most commonly used characters in the primary plane. The less font switching that occurs during a print job, the greater printing performance you will receive. For example, if the 26 characters of the English alphabet are mapped to plane 01 and the é character is mapped to plane 02, moving the é character to the primary plane would result in less font switching when printing documents containing French text.

To adjust a decentralized character mapping table, follow this procedure.

Step 1. Offload your existing font tables so that you have a backup. Refer to chapter 27, "Managing XPAF libraries," for instructions about offloading members of a library.

Step 2. Edit the PDS member that is the input source for the decentralized character mapping table you want to modify. Adjust which code point and plane number each character ID will reside in after conversion. Then load the table using the Create/Update a Character Mapping Table from a Dataset option on the Maintain Character Mapping Tables menu.

Step 3. Run the centralized-to-decentralized font conversion using either the Convert Centralized Font to Decentralized Fonts option on the Convert Resources menu or the CONVERT XFONT TSO/batch command.

Step 4. Use the Convert Xerox Fonts to IBM Format option on the Convert Resources menu or the CONVERT FONT TSO/batch command to ensure that the XPAFEFW and XPAFE2A tables are updated with information that is needed to position characters correctly at print time. Refer to "Converting Xerox fonts to IBM format" later in this chapter for more information.

Step 5. For all printers using font lists, use the REVFONT extended JCL keyword to download the newly converted font.

Font conversion sample

As part of the XPAF centralized-to-decentralized font conversion, you can specify that a sample of the converted font be generated to a message dataset. The sample can be generated with just a decentralized code points table and font sample or with these items plus a raster sample.

On the following pages, a centralized-to-decentralized font conversion scenario is given. In this example, the contents of the XPAFXFI table, centralized character mapping table, and decentralized character mapping table for font RA12BP are shown. Then the Convert Centralized Fonts to Decentralized Fonts panel entries which initiate the font conversion are shown. Lastly, the contents of the resulting message dataset are shown and explained.

NOTE: This example is meant only to explain the contents of the message dataset generated during centralized-to-decentralized font conversion. You already should be familiar with the required components and procedures related to centralized-to-decentralized font conversion before you read this example.

Sample Xerox font information table requirements

The font RA12BP must have the XPAFXFI table set up with entries for its centralized and decentralized character mapping tables. In this example, the centralized character mapping table for RA12BP is CSAMP1, and its decentralized character mapping table is DSAMP1. A sample panel is shown below.

Refer to chapter 24, “Managing XPAF tables,” for more information about updating the XPAFXFI table.

```
                    Xerox Output Administrative Facility
                Maintain the Xerox Font Information (XPAFXFI) Table

COMMAND ===>

* On COMMAND line, enter 'U' to create or update an entry.

  Logical Font Name: RA12BP

  SPECIFICATIONS
                                 Font Name: RA12BP
      Centralized Character Mapping Name: CSAMP1
    Decentralized Character Mapping Name: DSAMP1
                           Code Page Name: RXCP08
                               Font Width: 0017
                              Font Height: 0024
                  Baseline to Top of Cell: 0019
                  Decentralized Font Name:
```

Sample centralized character mapping table requirements

The contents of the sample centralized character mapping table CSAMP1 are:

```
CHARID=LA010000  ASCII=61
CHARID=LA020000  ASCII=41
CHARID=LB010000  ASCII=62
CHARID=LB020000  ASCII=42
CHARID=LC010000  ASCII=63
CHARID=LC020000  ASCII=43
CHARID=LD010000  ASCII=64
CHARID=LD020000  ASCII=44
CHARID=LE010000  ASCII=65
CHARID=LE020000  ASCII=45
CHARID=LF010000  ASCII=66
CHARID=LF020000  ASCII=46
CHARID=LG010000  ASCII=67
CHARID=LG020000  ASCII=47
CHARID=LH010000  ASCII=68
CHARID=LH020000  ASCII=48
CHARID=LI010000  ASCII=69
CHARID=LI020000  ASCII=49
CHARID=LJ010000  ASCII=6A
CHARID=LJ020000  ASCII=4A
CHARID=LK010000  ASCII=6B
CHARID=LK020000  ASCII=4B
CHARID=LL010000  ASCII=6C
CHARID=LL020000  ASCII=4C
CHARID=LM010000  ASCII=6D
CHARID=LM020000  ASCII=4D
CHARID=LN010000  ASCII=6E
CHARID=LN020000  ASCII=4E
CHARID=LO010000  ASCII=6F
CHARID=LO020000  ASCII=4F
CHARID=LP010000  ASCII=70
CHARID=LP020000  ASCII=50
CHARID=LQ010000  ASCII=71
CHARID=LQ020000  ASCII=51
CHARID=LR010000  ASCII=72
CHARID=LR020000  ASCII=52
CHARID=LS010000  ASCII=73
CHARID=LS020000  ASCII=53
CHARID=LT010000  ASCII=74
CHARID=LT020000  ASCII=54
CHARID=LU010000  ASCII=75
CHARID=LU020000  ASCII=55
CHARID=LV010000  ASCII=76
CHARID=LV020000  ASCII=56
CHARID=LW010000  ASCII=77
CHARID=LW020000  ASCII=57
CHARID=LX010000  ASCII=78
CHARID=LX020000  ASCII=58
CHARID=LY010000  ASCII=79
CHARID=LY020000  ASCII=59
CHARID=LZ010000  ASCII=7A
CHARID=LZ020000  ASCII=5A
```

Sample decentralized character mapping table requirements

The contents of the decentralized character mapping table DSAMP1 are:

```
CHARID=LA010000  ASCII=41  PLANE=01
CHARID=LA020000  ASCII=41  PLANE=02
CHARID=LB010000  ASCII=42  PLANE=01
CHARID=LB020000  ASCII=42  PLANE=02
CHARID=LC010000  ASCII=43  PLANE=01
CHARID=LC020000  ASCII=43  PLANE=02
CHARID=LD010000  ASCII=44  PLANE=01
CHARID=LD020000  ASCII=44  PLANE=02
CHARID=LE010000  ASCII=45  PLANE=01
CHARID=LE020000  ASCII=45  PLANE=02
CHARID=LF010000  ASCII=46  PLANE=01
CHARID=LF020000  ASCII=46  PLANE=02
CHARID=LG010000  ASCII=47  PLANE=01
CHARID=LG020000  ASCII=47  PLANE=02
CHARID=LH010000  ASCII=48  PLANE=01
CHARID=LH020000  ASCII=48  PLANE=02
CHARID=LI010000  ASCII=49  PLANE=01
CHARID=LI020000  ASCII=49  PLANE=02
CHARID=LJ010000  ASCII=4A  PLANE=01
CHARID=LJ020000  ASCII=4A  PLANE=02
CHARID=LK010000  ASCII=4B  PLANE=01
CHARID=LK020000  ASCII=4B  PLANE=02
CHARID=LL010000  ASCII=4C  PLANE=01
CHARID=LL020000  ASCII=4C  PLANE=02
CHARID=LM010000  ASCII=4D  PLANE=01
CHARID=LM020000  ASCII=4D  PLANE=02
CHARID=LN010000  ASCII=4E  PLANE=01
CHARID=LN020000  ASCII=4E  PLANE=02
CHARID=LO010000  ASCII=4F  PLANE=01
CHARID=LO020000  ASCII=4F  PLANE=02
CHARID=LP010000  ASCII=50  PLANE=01
CHARID=LP020000  ASCII=50  PLANE=02
CHARID=LQ010000  ASCII=51  PLANE=01
CHARID=LQ020000  ASCII=51  PLANE=02
CHARID=LR010000  ASCII=52  PLANE=01
CHARID=LR020000  ASCII=52  PLANE=02
CHARID=LS010000  ASCII=53  PLANE=01
CHARID=LS020000  ASCII=53  PLANE=02
CHARID=LT010000  ASCII=54  PLANE=01
CHARID=LT020000  ASCII=54  PLANE=02
CHARID=LU010000  ASCII=55  PLANE=01
CHARID=LU020000  ASCII=55  PLANE=02
CHARID=LV010000  ASCII=56  PLANE=01
CHARID=LV020000  ASCII=56  PLANE=02
CHARID=LW010000  ASCII=57  PLANE=01
CHARID=LW020000  ASCII=57  PLANE=02
CHARID=LX010000  ASCII=58  PLANE=01
CHARID=LX020000  ASCII=58  PLANE=02
CHARID=LY010000  ASCII=59  PLANE=01
CHARID=LY020000  ASCII=59  PLANE=02
CHARID=LZ010000  ASCII=5A  PLANE=01
CHARID=LZ020000  ASCII=5A  PLANE=02
```

Notice how the lowercase characters (LA010000, LB010000, and so on) in the decentralized character mapping table will be mapped to different ASCII code points after font conversion than they are mapped to in the centralized character mapping table. Also, all lowercase characters will be mapped to plane 01, and all uppercase characters will be mapped to plane 02 after font conversion.

Sample Convert Centralized Fonts to Decentralized Fonts panel requirements

The sample panel entries for the Convert Centralized Fonts to Decentralized Fonts option are shown below.

```
                    Xerox Output Administrative Facility
                Convert Centralized Fonts to Decentralized Fonts

COMMAND ===>

  INPUT
    Dataset Name: 'XRESC.XPAF30.CFONTLIB'
     Member Name: RA12BP

  OUTPUT
    Dataset Name: 'XRESC.XPAF30.DFONTLIB'

  OUTPUT SPECIFICATIONS
        Message Listing: 'TJONES.XPAF30.FONTSAMP'
    Font Sample (Y/N/R): R
      Lower Range Limit: 40
      Upper Range Limit: 42
```

In this example, a sample of the converted font, including raster samples, was requested by entering R in the ‘Font Sample’ field. The message dataset in which the font sample will be produced is TJONES.XPAF30.FONTSAMP. A raster sample of code points 40, 41, and 42 will be produced in this message dataset if those code points exist in the decentralized character mapping table for this font.

Sample message dataset produced

Given the contents of the XPAFXFI table, centralized character mapping table, and decentralized character mapping table for font RA12BP shown previously, and the entries made on the sample Convert Centralized Fonts to Decentralized Fonts panel, the output shown in figures 22-1 through 22-8 is representative of what would be generated to the message dataset TJONES.XPAF30.FONTSAMP. These figures follow an explanation of the output. Each figure represents one page of output in the message dataset, and the order in which the information is presented in this example is the same order that you would find in the message dataset.

In this example, the centralized font RA12BP was converted into two planes, as specified in its decentralized character mapping table. Figures 22-1 through 22-4 represent the output for plane 01, and figures 22-5 through 22-8 represent the output for plane 02.

The decentralized font name shown in all these figures is the centralized font name appended with the @ symbol and a number. This number represents the plane number to which this information pertains. For example, RA12BP@1 is plane 01 of the converted font, and RA12BP@2 is plane 02 of the converted font.

Since R was specified in the ‘Font Sample’ field on the XOAF panel, there are three sections of information produced in the message dataset:

- A raster sample of the specified decentralized code points
- A decentralized code points table
- A font sample

This font information is listed in this order for each plane of the converted font.

NOTE: If Y had been specified in the ‘Font Sample’ field, only the decentralized code points table and font sample for each plane would be produced in the message dataset. If N had been specified in the ‘Font Sample’ field, nothing would be generated to a message dataset, but the centralized font would still have been converted to decentralized format based on the entries in the centralized and decentralized character mapping tables.

Raster sample for plane 01

The first item in the message dataset, the raster sample, consists of a representation of each character in the specified code point range, one page per code point. Each page gives the font statistics in the upper left, the character statistics in the upper right, and a raster sample of the converted character at the bottom of the page. Figures 22-1 and 22-2 show the raster samples for the decentralized code points 41 and 42, respectively.

Only the applicable statistics for a font are listed. This list contains all possible fields, but not all of these statistics will be relevant for every font:

- Kerning
- Orientation
- Pitch
- Line spacing (in dots)
- Top of cell to baseline (in dots)
- Bottom of cell to baseline (in dots)
- Highest character code
- Centralized character mapping name
- Decentralized character mapping name

The decentralized font name, which includes the plane number, is given on the first line in the upper left. Other important fields to note are the 'Highest character code' field which reflects the largest code point listed in the decentralized character mapping table. For example, the highest code point in the DSAMP1 table is 5A. The 'Centralized Character Mapping' field and the 'Decentralized Character Mapping' field correspond to the 'Centralized Character Mapping Name' field and the 'Decentralized Character Mapping Name' field, respectively, in the XPAFXFI table.

The statistics for the character that is shown at the bottom of the page are listed in the upper right under the heading 'Glyph characteristics.' These fields are included:

- Code point
- Bytes per raster
- Number of rasters
- Escapement
- Alignment
- Scaling
- Kerning

The value listed in the 'Code point' field is the centralized code point of the character shown in the raster sample. However, the character shown in the raster sample is a decentralized character, which is assigned a decentralized code point. The code point of the same character in the centralized and decentralized character mapping tables may or may not match.

The raster sample shown in figure 22-1 is the lowercase letter 'a', which is character ID LA010000. This character ID is assigned to code point 61 in the centralized character mapping table, and it is assigned to code point 41 and plane 01 in the decentralized character mapping table. Because code point 41 was specified to be part of the raster sample range, the lowercase letter 'a' is shown in the raster sample area, and the value of '61' is shown in the 'Code Point' field in the font statistics section.

Similarly, figure 22-2 shows the lowercase 'b' character, which is stored at code point 62 in the centralized character mapping table and at code point 42 and plane 01 in the decentralized character mapping table. Note that regardless of the contents of the decentralized character mapping table, the space character is always mapped to code point 20. Also, there can be no decentralized characters stored in code points 00 through 1F.

Each raster sample shown at the bottom of the page is a character that matches a decentralized code point value that falls in the range entered in the 'Lower Range Limit' and 'Upper Range Limit' fields on the XOAF panel. If a value entered here does not exist in the decentralized character mapping table, it will not be included in the message dataset. For this example, code points 40 through 42 were requested. Since there is no code point 40 in this font's decentralized character mapping table, there is no raster sample generated for it.

Decentralized code points table for plane 01

The next item in the message dataset shows the code points that were converted in the decentralized code points table with their widths. The decentralized code points table for font RA12BP@1 is shown in figure 22-3.

The code point values are read by starting with a number on the Y-axis and then reading a number on the X-axis. For example, the entry for code point 20 is shown in the third row and the first column of the table, and its width is 17. Code points that were not converted either have no entry or two dots.

The information at the bottom of the decentralized code points table gives you all the statistics about the decentralized font that are applicable. These are the same statistics that are listed in the upper left of each raster sample page.

Font sample for plane 01

The last item in the message dataset shows the font sample. The font sample for font RA12BP@1 is shown in figure 22-4. A font sample consists of a box for each converted code point that contains the decentralized code point number in the lower left, the font width in the lower right, and a representation of the actual character in the top of the box. Note that in this example, the decentralized code point 41 is the lowercase letter ‘a’ which you saw in the raster sample in figure 22-1.

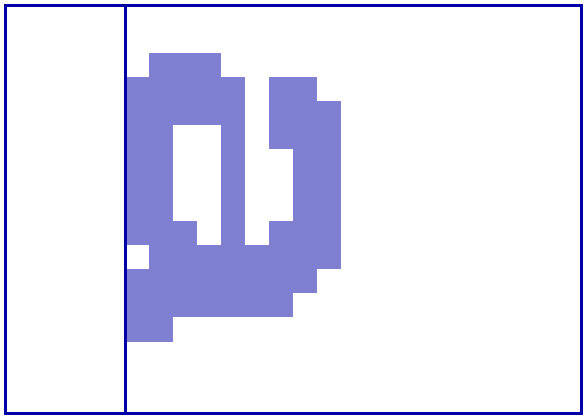
Dataset contents for plane 02

For plane 02, the raster samples of the specified decentralized code points, a decentralized code points table, and a font sample are shown in figures 22-5 through 22-8. These figures contain the same type of information that was previously described for plane 01. For more information about how plane numbers are used with decentralized fonts, refer to “Adjusting your decentralized character mapping tables” earlier in this chapter.

Figure 22-1. Raster sample for decentralized code point 41, plane 01

```
Font Characteristics for RA12BP@1
    Orientation:  PORTRAIT
    Pitch:  FIXED
    Linespacing:  24
    Top of Cell to Baseline:  19
    Bottom of cell to Baseline:  5
    Highest character code:  5A
    Centralized character mapping:  CSAMP1
    Decentralized character mapping:  DSAMP1
```

```
Glyph characteristics
     Code point:  61
     Bytes per raster:  2
     Number of rasters  14
     Escapement:  17
     Alignment:  5
     Scaling:  30
     Kerning:  0
```

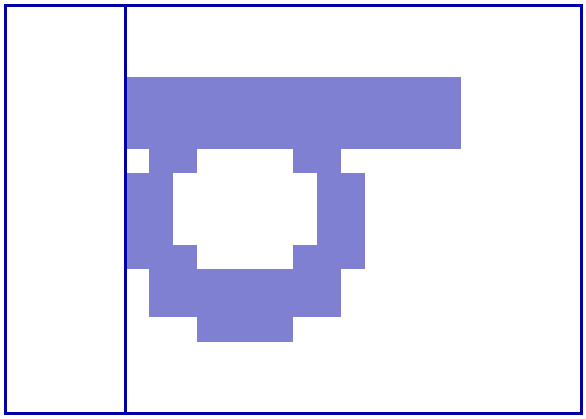



```
BC = BOTTOM OF CELL
BL = BASELINE
TC = TOP OF CELL
```

Figure 22-2. Raster sample for decentralized code point 42, plane 01

```
Font Characteristics for RA12BP@1
    Orientation:  PORTRAIT
    Pitch:  FIXED
    Linespacing:  24
    Top of Cell to Baseline:  19
    Bottom of cell to Baseline:  5
    Highest character code:  5A
    Centralized character mapping:  CSAMP1
    Decentralized character mapping:  DSAMP1
```

```
Glyph characteristics
     Code point:  62
     Bytes per raster:  2
     Number of rasters  14
     Escapement:  17
     Alignment:  5
     Scaling:  30
     Kerning:  0
```



```
BC      BL                              TC
```

```
BC = BOTTOM OF CELL
BL = BASELINE
TC = TOP OF CELL
```

Figure 22-3. Decentralized code points table for converted font RA12BP, plane 01

```
XFC0310I FONT RA12BP@1 CONVERTED WITH 27 CHARACTERS.
Decentralized code points (Widths Table)
    -0   -1   -2   -3   -4   -5   -6   -7   -8   -9   -A   -B   -C   -D   -E   -F
0-
1-
2-  17    ..   ..   ..   ..   ..   ..  ..   ..   ..   ..   ..   ..   ..    ..   ..
3-  ..    ..   ..   ..   ..   ..   ..  ..   ..   ..   ..   ..   ..   ..    ..   ..
4-  ..   17   17   17   17   17   17   17   17   17   17   17   17   17   17   17
5-  17   17   17   17   17   17   17   17   17   17   17
6-
7-
8-
9-
A-
B-
C-
D-
E-
F-
Font Characteristics for RA12BP@1
    Orientation: PORTRAIT
    Pitch: FIXED
    Linespacing: 24
    Top of Cell to Baseline: 19
    Bottom of cell to Baseline: 5
    Highest character code:  5A
    Input Format: CSAMP1
    Output Format: DSAMP1
```

Figure 22-4. Font sample for converted font RA12BP, plane 01

RA12BP@1

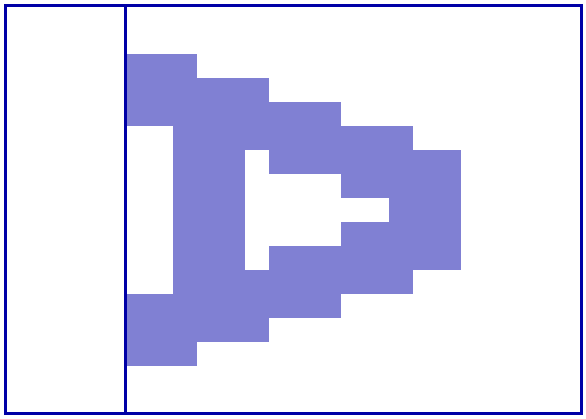
20 17	

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
	41 17	42 17	43 17	44 17	45 17	46 17	47 17	48 17	49 17	4A 17	4B 17	4C 17	4D 17	4E 17	4F 17
p	q	r	s	t	u	v	w	x	y	z					
50 17	51 17	52 17	53 17	54 17	55 17	56 17	57 17	58 17	59 17	5A 17					

Figure 22-5. Raster sample for decentralized code point 41, plane 02

```
Font Characteristics for RA12BP@2
    Orientation:  PORTRAIT
    Pitch:  FIXED
    Linespacing:  24
    Top of Cell to Baseline:  19
    Bottom of cell to Baseline:  5
    Highest character code:  5A
    Centralized character mapping:  CSAMP1
    Decentralized character mapping:  DSAMP1
```

```
Glyph characteristics
     Code point:  41
     Bytes per raster:  2
     Number of rasters  15
     Escapement:  17
     Alignment:  5
     Scaling:  30
     Kerning:  0
```



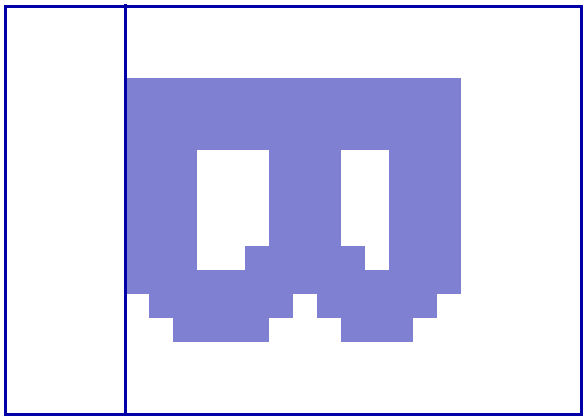
```
BC      BL                              TC
```

```
BC = BOTTOM OF CELL
BL = BASELINE
TC = TOP OF CELL
```

Figure 22-6. Raster sample for decentralized code point 42, plane 02

```
Font Characteristics for RA12BP@2
    Orientation:  PORTRAIT
    Pitch:  FIXED
    Linespacing:  24
    Top of Cell to Baseline:  19
    Bottom of cell to Baseline:  5
    Highest character code:  5A
    Centralized character mapping:  CSAMP1
    Decentralized character mapping:  DSAMP1
```

```
Glyph characteristics
     Code point:  42
     Bytes per raster:  2
     Number of rasters  14
     Escapement:  17
     Alignment:  5
     Scaling:  30
     Kerning:  0
```



```
BC      BL                              TC
```

```
BC = BOTTOM OF CELL
BL = BASELINE
TC = TOP OF CELL
```

Figure 22-7. Decentralized code points table for converted font RA12BP, plane 02

```
XFC0310I FONT RA12BP@2 CONVERTED WITH 27 CHARACTERS.
Decentralized code points (Widths Table)
    -0   -1   -2   -3   -4   -5   -6   -7   -8   -9   -A   -B   -C   -D   -E   -F
0-
1-
2-  17    ..   ..   ..   ..   ..   ..  ..   ..   ..   ..   ..   ..   ..    ..   ..
3-  ..    ..   ..   ..   ..   ..   ..  ..   ..   ..   ..   ..   ..   ..    ..   ..
4-  ..   17   17   17   17   17   17   17   17   17   17   17   17   17   17   17
5-  17   17   17   17   17   17   17   17   17   17   17
6-
7-
8-
9-
A-
B-
C-
D-
E-
F-
Font Characteristics for RA12BP@2
    Orientation: PORTRAIT
    Pitch: FIXED
    Linespacing: 24
    Top of Cell to Baseline: 19
    Bottom of cell to Baseline: 5
    Highest character code:  5A
    Input Format: CSAMP1
    Output Format: DSAMP1
```

Figure 22-8. Font sample for converted font RA12BP, plane 02

RA12BP@2

20 17	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	41 17	42 17	43 17	44 17	45 17	46 17	47 17	48 17	49 17	4A 17	4B 17	4C 17	4D 17	4E 17	4F 17
P	Q	R	S	T	U	V	W	X	Y	Z					
50 17	51 17	52 17	53 17	54 17	55 17	56 17	57 17	58 17	59 17	5A 17					

Converting centralized logos to decentralized fonts

To manually convert centralized logos to decentralized fonts, enter **2** on the Convert Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                 Convert Centralized Logos to Decentralized Fonts

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:

  OUTPUT SPECIFICATIONS
    Message Listing:
       Logo Sample (Y/N):
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS, sequential dataset, or native logo library that contains the centralized logo(s) you want to convert. If you have multiple logos concatenated in a single file, they must be converted from a sequential dataset with valid headers. The dataset specifications for a PDS or sequential dataset are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Member Name	• Enter the 1- to 8-character member name if the logo is stored in a PDS or native library. The logo name must be unique and must not match a decentralized font name. • Enter an asterisk (*) to load all logos in the PDS or native library. • Leave this field blank if the logo is stored in a sequential dataset.

Field	Action
OUTPUT **Dataset Name**	Enter the name of the native decentralized font library where the converted logos will be stored. In the XOSF start-up proc, this is the dataset name in the DD statement specified for the decentralized font library by the DFONTLIB initialization parameter or the FONTLIB printer profile parameter. The name of the converted font is constructed from the name in the logo header record.
OUTPUT SPECIFICATIONS **Message Listing**	Enter the name of the sequential dataset to which you want conversion-related messages to be written. The recommended dataset specifications are: RECFM=FB LRECL=133 BLKSIZE=A value appropriate for your site The dataset contents are in XES format and can be sent to a decentralized printer with duplexing capability (for example, the 4213 printer). Do not specify the XOAF log dataset. Refer to *Section Six: XPAF Messages* for an explanation of logo conversion messages and any required user action. The message dataset contains a code point table for each logo you convert. This table is similar to the sample shown in figure 22-9.
Logo Sample	Indicate whether you want XPAF to generate a sample of the converted logo and store that sample in the message dataset identified in the 'Message Listing' field. Valid values: Y Generates a sample of the converted logo and stores it in the dataset identified in the 'Message Dataset Name' field. N Does not generate a sample in the message listing dataset. Default: N

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Convert Centralized Logos to Decentralized Fonts option:

CONVERT LOGO('*input-dataset-name*[({ *member-name* | * })]')

[TO]('*output-dataset-name*') SAMPLE({ Y | N }) [LIST('*list-dataset-name*')]

NOTE: If SAMPLE is set to Y, LIST is required.

Sample logo code points table

Figure 22-9 shows a sample code points table. The code points table indicates the available decentralized code points for the centralized logo you converted. The bottom of the code point table provides additional information about the logo, including:

- Orientation
- Logo height and width
- Highest character code used
- Coding sequence for first and second lines

Figure 22-9. Sample logo code points table

```
Processing begins for logo 1; EAGLE
 XLC0321I LOGO EAGLE CONVERTED WITH 7 CHARACTERS.
  Decentralized code points (Widths Table)
      -0   -1   -2   -3   -4   -5   -6   -7   -8   -9   -A   -B   -C   -D   -E   -F
  0-
  1-
  2- 100   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..
  3-  ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..   ..
  4-  ..  100  100  100  100  100  100   ..
  5-
  6-
  7-
  8-
  9-
  A-
  B-
  C-
  D-
  E-
  F-
  Logo Characteristics
      Orientation: PORTRAIT
      Logo Height: 184
      Logo Width: 285
      Highest character code:  47
      Coding Sequence for 1st line: ABC
             Sequence for 2nd line: DEF
  Note: The origin must be set before each line.
```

Converting Xerox fonts to IBM format

Before using this option to convert a Xerox font to a format that is recognized by DCF/SCRIPT, you must ensure that you have entered a code page name for the font in the XPAFXFI table. If a code page name is not specified, the conversion will fail and a series of messages will be displayed indicating that a member was not found.

To ensure that the XPAFXFI table contains the necessary entries, complete these steps:

Step 1. Use the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu to enter a valid code page name for the font(s).

Step 2. Reconvert the Xerox font to IBM format using either the Convert Xerox Fonts to IBM Format option or the CONVERT FONT TSO/batch command.

Using this option

To convert Xerox fonts to IBM format, enter **3** on the Convert Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Convert Xerox Fonts to IBM Format

COMMAND ===>

  INPUT
         Dataset Name:
    Logical Font Name:

  OUTPUT
    Dataset Name:
```

Complete these fields and press **ENTER**:

NOTE: This conversion requires a region of at least eight megabytes to run successfully.

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS or native centralized library in which the font is stored. The dataset specifications for a PDS are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Logical Font Name	• Enter the 1- to 6-character name of the Xerox centralized font that you want to use in a DCF document. The name must match the logical font name in the XPAFXFI table. • Enter an asterisk (*) to convert all fonts in the PDS or native centralized library.
OUTPUT **Dataset Name**	Enter the name of the PDS set up to store the IBM-format fonts to be referenced by DCF/SCRIPT. The dataset specifications are: RECFM=VBM LRECL=8205 or greater BLKSIZE=A value equal to the LRECL value plus 4 The name of the font in the output dataset is constructed from the name in the font header record of the font in the input dataset.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Convert Xerox Fonts to IBM Format option:

CONVERT FONT('*input-dataset-name*({ *member-name* | * })')

[TO]('*output-dataset-name*')

Making a new Xerox font available to DCF/SCRIPT

Follow this procedure to make a new Xerox font available to DCF/SCRIPT:

NOTE: You do not need to run this procedure for the set of replica fonts distributed with XPAF. XPAF provides the converted version of these fonts in the AFPFONTS dataset.

Step 1. Offload your existing font tables so that you have a backup. Refer to chapter 27, "Managing XPAF libraries," for instructions about how to offload resources.

Step 2. Upload the centralized font to a PDS or sequential dataset on the host. Refer to *Section Two: Installing and Customizing XPAF* for instructions about how to upload resources.

Step 3. Load the font from the PDS or sequential dataset to the centralized font library using either the Load Centralized Fonts option on the Load Resources menu or the LOAD FONT TSO/batch command. The system automatically generates entries to the XPAFXFI table. Refer to chapter 21, "Loading resources to a native library," for more information about using this option.

Step 4. If necessary, create an entry for the font in the XPAFFFI table, using the Maintain the Font Family Information (XPAFFFI) Table option on the Maintain Font Tables menu. Refer to chapter 24, "Managing XPAF tables," for more information about using this option.

Step 5. Update the XPAFXFI table with the character mapping and code page information for the font, using the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu. Refer to chapter 24, "Managing XPAF tables," for more information about using this option.

To reference the font by an alias, enter the alias name as the logical font name. This is the name by which the font is known to DCF.

Step 6. Convert the Xerox font using either the Convert Xerox Font to IBM Format option on the Convert Resources menu or the CONVERT FONT TSO/batch command. This conversion creates an IBM look-alike version of the font that DCF recognizes. If you use an IBM code page with this font, the code page must reside in the same library in which the converted font is stored.

Step 7. Create a DCF index with the new font by executing the JCL provided with DCF.

Associating a Xerox font with a code page

A Xerox font can use either a Xerox code page or an IBM code page. If you use an IBM code page, ensure that the Xerox font supports the characters defined in the code page.

If you change the code page used by a Xerox font, you must make the new code page information available to DCF/SCRIPT. To do this, perform these steps:

Step 1. Update the XPAFXFI table with the character mapping and code page information for the font, using the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu. Refer to chapter 24, "Managing XPAF tables," for more information about using this option.

To reference the font by an alias, enter the alias name as the logical font name. This is the name by which the font is known to DCF.

Step 2. Convert the Xerox font using either the Convert Xerox Font to IBM Format option on the Convert Resources menu or the CONVERT FONT TSO/batch command. This conversion creates an IBM look-alike version of the font that DCF recognizes. If you use an IBM code page with this font, the code page must reside in the same library in which the converted font is stored.

Converting IBM AFP page segments to Xerox .IMG and/or RES format

This option can be used to convert all the AFP page segments in a PDS to .IMG and/or RES .IMG format and load the resulting images to a native image library. The option converts AFP page segments from their original resolution to images in either Xerox .IMG or Xerox RES .IMG format. The conversion method is specified by the 'Conversion Type' field. By using this option to preconvert page segments to images instead of letting XPAF perform the conversion dynamically at print time, you will save processing time when you print the images for the first time.

NOTE: The utility, XRFBATCH, also can be used to perform this function. Refer to Chapter 30, "XRFBATCH utility" for more information about XRFBATCH.

You can include IOCA-encoded images in your page segment library. However, these images will be converted only into .IMG format. They cannot be converted to RES .IMG format.

There is no revision support in XOAF. After you convert a page segment using this option, it will not be reconverted if you change it. To use a revised version of a page segment, you must perform either of these actions:

- Delete the converted version from the native image library and rerun this option.
- Revise the page segment via XOSF by specifying the REVPSEG extended JCL keyword when you print the document. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the REVPSEG extended JCL keyword.

Using this option

To convert IBM AFP page segments to .IMG and/or RES .IMG format, enter **4** on the Convert Resources menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
              Convert IBM AFP Page Segments to Xerox .IMG and/or RES Format

COMMAND ===>

  INPUT
    Dataset Name:

  OUTPUT
    Dataset Name:

  SPECIFICATIONS
          Message Dataset Name:
    Destination Printer (C/D): C
    Maximum Images (1 to 999): 16
      Conversion Type (0/1/3): 1
        Orientation (P/L/I/J): P
    Print Environment (M/C/B): M
```

NOTE: Additional keywords not covered by this panel display may be entered when the Edit JCL option is presented. At that point enter E to see Appendix E for additional keywords.

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS that contains the IBM page segments that you want to convert to Xerox images. The recommended dataset specifications are: RECFM=VBM or VBA LRECL=A value greater than or equal to the length of the longest record within a resource contained in the library BLKSIZE=A value equal to the LRECL value plus 4 All page segments in the named library will be converted to 300-dpi Xerox images with scaling based on the value you specify in the 'Conversion Type' field. ***NOTE:*** XPAF does not convert page segments that have names which start with the letter O.
OUTPUT **Dataset Name**	Enter the name of the native centralized or decentralized image library that has been allocated and formatted to contain images. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the CIMAGELIB or DIMAGELIB initialization parameter or by the IMAGELIB printer profile parameter.
SPECIFICATIONS **Message Dataset Name**	Enter the name of the dataset to be used for logging messages. You can specify the XOAF log dataset, or enter the name of a sequential dataset with these specifications: RECFM=VB LRECL=256 BLKSIZE=4096 If you leave this field blank, you may specify a message dataset name in the XPAFXLOG DD statement in the generated JCL. The dataset name defaults to XPAFXLOG, preceded by the prefix you specified for the XPAF load library. If you specify a message dataset in this field, it will override the dataset name specified in the XPAFXLOG DD statement. If you do not want to log XPAF messages, edit the generated JCL and specify **DD DUMMY** for XPAFXLOG.
Destination Printer	Specify whether the page segments should be converted to images in centralized or decentralized format. Valid values: C Specifies that your destination printer is a centralized printer. D Specifies that your destination printer is a decentralized printer. Default: C
Maximum Images	Enter the maximum number of images within a single page segment in the library that is to be converted. Valid values: 1 through 999. Default: 16

Field	Action
Conversion Type	Specify the image resolution conversion type. Valid values: 0 Does not scale the image dimension but does scale the position of the image. Image position scaling allows the image to print in the correct relative location on the page when printed on a Xerox printer as opposed to printing on an IBM printer. Image position scaling is increased by a factor of 25%. 1 Scales the image dimension and image position of an AFP image to 300 dpi before sending it to the printer. IOCA-encoded images are scaled from any resolution to 300 dpi. All other AFP images are scaled from 240-to-300 dpi, an increase of 25%. 3 Scales the image dimension and image position of an AFP image to 300 dpi based on the current L-units value specified in the IDD or IID structured field of the image. IOCA-encoded images are scaled from any resolution to 300 dpi. For IM-type images, any L-units value that does not specify 300 dpi is assumed to be 240 dpi. Default: 1 **NOTE:** If you specify 0, the size of the converted image will print smaller in XPAF (by a factor of 20%) than the original 240 dpi image printed in AFP.

Field	Action
Orientation	Specify the hardware orientation for the page. Valid values: P Portrait. Use P if PMODE=PORT and the image will be printed on a simplex or duplex page or on the front of a tumble duplex page. L Landscape. Use L if PMODE=LAND or the printer uses short-edge feed and the image will be printed on a simplex or duplex page or on the front of a tumble duplex page. I Inverse portrait. Use I if PMODE=PORT and the image will be printed on the back of a tumble duplex page. J Inverse landscape. Use J if PMODE=LAND or the printer uses short-edge feed and the image will be printed on the back of a tumble duplex page. Default: P ***NOTE:*** AFP images that were generated for IBM printers are rotated 0 degrees. For these images, regardless of document orientation, be sure to specify a rotation of P.
Print Environment	Identify the type of centralized printers you use to print AFP data streams through XPAF. This field is used to determine how XPAF converts images colorized via the IID structured field for printing on a centralized printer. This field only applies to AFP data streams containing images colorized via the IID structured field that will be sent to centralized printers. Valid values: M Specifies that XPAF jobs are printed only on monochrome printers. XPAF converts any colorized images to monochrome black .IMG files. C Specifies that XPAF jobs are printed only on highlight color printers. XPAF converts any colorized images to color RES .IMG files. B Specifies that XPAF jobs are printed on both monochrome and highlight color printers. XPAF converts any colorized images to both monochrome black .IMG and color RES .IMG files. Default: M

After you enter all necessary field values and press ENTER, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
              Convert IBM AFP Page Segments to Xerox .IMG and/or RES Format

COMMAND ===>

  DATASET PREFIX
    XPFLOAD Library:

  JOB CARD INFORMATION
  ===> //JOBNAME JOB (ACCOUNT),'NAME',CLASS=A
  ===> //*
  ===> //*
  ===> //*
```

Complete these fields and press **ENTER**:

Field	Action
DATASET PREFIX **XPFLOAD Library**	Enter the high-level and mid-level qualifiers for your system load library.
JOB CARD INFORMATION	Enter site-specific job card information.

After you verify the information and press ENTER, this panel appears:

```
                    Xerox Output Administrative Facility
                Convert IBM AFP Page Segments to Xerox .IMG and/or RES Format

OPTION ===>

  C.  Cancel JCL

  E.  Edit JCL

  K.  Keep JCL

  S.  Submit JCL
```

On this panel, select the option you want to use and press **ENTER**. Valid values are:

C Cancels the generated JCL and returns to the initial Convert IBM Page Segments to Xerox .IMG Format panel.

E Displays the generated JCL for editing purposes.

K Keeps the generated JCL in a sequential dataset. After you save the JCL, you can access this dataset and submit the job without regenerating the JCL each time.

S Submits the JCL. Standard TSO/ISPF JCL submission error or confirmation messages are displayed.

NOTE: You cannot use the END command or the PF3 key to exit this panel. If you want to return to the previous panel and do not want to display, submit or keep the JCL, you must enter **C** on the COMMAND line and press **ENTER**.

Editing the JCL

If you enter E in the OPTION line on the JCL options panel, a panel containing JCL similar to this appears:

```
//job-name JOB job-information
//*
//*
//*
//*********************************************************************/
//*                                                                   */
//*   DESCRIPTION: CONVERT PAGE SEGMENTS TO .IMG/RES FORMAT - XOAJ0260.*/
//*                                                                   */
//*********************************************************************/
//XRFBATCH EXEC PGM=XRFBATCH,COND=(0,NE),
//             PARM=('DESTPRTR=destination-printer',
//             'MAXIMGPS=nnn',
//             'CONVTYPE=conversion-type',
//             'ROTATION=rotation',
//             'PRINTENV=printer-environment')
//STEPLIB    DD DSN=prefix.XPFLOAD,DISP=SHR
//INFILE     DD DSN=input-dataset-name,DISP=SHR
//IMAGELIB   DD DSN=output-dataset-name,DISP=SHR
//XPAFXLOG   DD DSN=prefix.XPAFXLOG,DISP=OLD
//
```

You can edit and save the JCL and cancel or submit the job using standard TSO/ISPF commands.

Keeping the JCL

If you enter K in the OPTION line on the JCL options panel, this panel appears:

```
                    Xerox Output Administrative Facility
                Convert IBM AFP Page Segments to Xerox .IMG and/or RES Format

COMMAND ===>

* To keep the JCL, enter a new sequential dataset name.

  Dataset Name:
```

Complete this field and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the sequential dataset that is not currently cataloged. This is the dataset in which your JCL will be stored.

To return to the previous panel, enter **END** and press **ENTER**.

23. Managing resource lists

This chapter describes how to use the options available on the Manage Resource Lists menu to maintain printer-resident font, form, image, and logo lists. XOSF uses the lists to determine whether a requested resource must be downloaded. For more information about XPAF list processing, refer to "Printer-resident resource lists" in chapter 19, "XPAF resources."

Managing resident font lists

To create, delete, or update resident font lists, enter **1** on the Manage Resource Lists menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                         Manage Resident Font Lists

COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a list.

  Dataset Name:

     List Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

- C Create a new list.
- D Delete an existing list.
- U Update an existing list.

Then complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the native library that contains all the resident resource lists. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the LIBRARY printer profile parameter.
List Name	Enter the name of the font list to be created or updated. The name can be one of the following: • A 1- to 20-character name that matches the name assigned to the FONTLIST printer profile parameter • FONT*cuu* for an existing list that was generated by XOSF for a channel-attached centralized printer • FONT*slu* for an existing list that was generated by XOSF for a remotely-attached centralized printer or a decentralized printer ***NOTE:*** Font list names are case-sensitive. When deleting or updating a list, type the name exactly as it was entered originally (uppercase/lowercase letters).

Creating a resident font list

If you enter C on the COMMAND line of the Manage Resident Font Lists panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                        Creating List - FONTPRT1

COMMAND ===>

      NAME                  PERMANENT?       NAME                  PERMANENT?
   1.                           Y        2.                           Y
   3.                           Y        4.                           Y
   5.                           Y        6.                           Y
   7.                           Y        8.                           Y
   9.                           Y       10.                           Y
  11.                           Y       12.                           Y
  13.                           Y       14.                           Y
  15.                           Y       16.                           Y
  17.                           Y       18.                           Y
  19.                           Y       20.                           Y
  21.                           Y       22.                           Y
  23.                           Y       24.                           Y
  25.                           Y       26.                           Y

                                   Element Count = 0
```

In the sample panel, a resident font list named FONTPRT1 is being created.

The numbers provided on the panel are for convenience. Use these conventions when entering font names:

- Enter one or more font names and press **ENTER**:
  - Enter a 1- to 20-character, case-sensitive font name in the 'NAME' field.
  - Enter **N** in the 'PERMANENT?' field if the font is not a cartridge or resident font. Otherwise, leave Y in the 'PERMANENT?' field.
  - You can enter font names in any order on the panel. Although the panel displays 26 fields for entering fonts, you can enter more than 26 font names. Each time you press ENTER, XPAF processes the fonts and clears the panel. You may then enter additional font names.
  - When you press ENTER, 'Element Count' displays the number of fonts added to the list during this session. This is a display-only field.
  - Enter **END** on the COMMAND line and press **ENTER** to save the list and return to the preceding option panel.
- Enter **CANCEL** or **ABORT** on the COMMAND line and press **ENTER** to end the session without creating the list.

Before you modify a list, you must stop all printers using that list. When you restart the printer, XPAF activates the new list.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Font Lists option to create a new font list:

TABLE LOAD('*list-dataset-name*(*list-name*)')

FROM('*input-dataset-name*[(*member-name*)]') TYPE(FNTL)

The format of the records within the dataset must be fixed-length records that are 21 bytes long. The first 20 bytes of each record is the font name. The last byte (Y or N) indicates whether the font is permanent.

Deleting a resident font list

Enter **D** on the COMMAND line of the Manage Resident Font Lists panel, and enter the name of the library in which the list resides and the list name. Then press **ENTER**.

XOAF displays a message indicating whether the list was deleted successfully.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Font Lists option to delete a font list:

TABLE DELETE('*list-dataset-name*(*list-name*)')

Updating a resident font list

If you enter U on the COMMAND line of the Manage Resident Font Lists panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                        Update a Resident Font List

COMMAND ===>

* On COMMAND line, enter 'A' to add an entry.
* Next to name, enter 'D' to delete an entry.

  NAME                PERMANENT?          NAME                PERMANENT?
  UN107A                  N               UN104A                  N
  UN107B                  N               UN107C                  N
  PR111A                  N               L01BOA                  N
```

Under the ‘NAME’ headings, XOAF displays the names of the fonts that have been entered in the list. A Y in the ‘PERMANENT?’ field indicates that the font is permanent. In the sample panel, the list being updated already contains the font names UN107A, UN104A, UN107B, UN107C, PR111A, and L01BOA.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Font Lists option to update a font list:

TABLE UPDATE('*list-dataset-name*(*list-name*)') TYPE(FNTL)

FUNCTION(ADD | DELETE) NAME(*font-name*)[(P)]

Use the (P) option after *font-name* to indicate that the font being added is a permanent font, either printer-resident or cartridge.

Adding a new font to the list

Enter **A** on the COMMAND line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                        Updating List - FONTPRT1

COMMAND ===>

      NAME                    PERMANENT?       NAME                    PERMANENT?
   1.                             Y         2.                             Y
   3.                             Y         4.                             Y
   5.                             Y         6.                             Y
   7.                             Y         8.                             Y
   9.                             Y        10.                             Y
  11.                             Y        12.                             Y
  13.                             Y        14.                             Y
  15.                             Y        16.                             Y
  17.                             Y        18.                             Y
  19.                             Y        20.                             Y
  21.                             Y        22.                             Y
  23.                             Y        24.                             Y
  25.                             Y        26.                             Y
```

In the sample panel, the resident font list named FONTPRT1 is being updated.

The numbers provided on the panel are for convenience. Use these conventions when entering font names:

- Enter one or more font names and press **ENTER**:
  - — Enter a 1- to 20-character, case-sensitive font name in the 'NAME' field.
  - — Enter **N** in the 'PERMANENT?' field if the font is not a cartridge or resident font. Otherwise, leave Y in the 'PERMANENT?' field.
  - — You can enter font names in any order on the panel. Although the panel displays 26 fields for entering fonts, you can enter more than 26 font names. Each time you press ENTER, XPAF processes the fonts and clears the panel. You may then enter additional font names.
- After you add all your new fonts to the list, press **ENTER**. The system returns to the Update a Resident Font List panel and displays

  * ADDED *

  to the right of each new font added to the list. To add more fonts to the font list, enter **A** on the COMMAND line and repeat this procedure.

Deleting a font from the list

Tab to the font name and enter **D** to the left of each font name you want to delete. Press **ENTER**. The system deletes the font from the list and displays

DELETED

to the right of the font name deleted from the list.

Managing a PCL font list

Each printer profile can contain a PCL font list (a PDS member contained in the XINPARM dataset). The printer profile parameter, FONTLIST=, points to the PDS member name.

PDS member names are entered in the following manner:

FONTLIST=*membername*

where

membername The PDS member name.

Within the PDS member, the PCL fonts are listed as:

fontname 0

or

fontname nnn

where

fontname 0 Indicates a named font on the printer.

fontname nnn Indicates a permanent soft font identified by a unique 3-digit number.

The following list is an example of a PCL font list.

```
L0112B  0
P0612B  0
XGT50L  700
XGT50P  701
```

In the example above, the first two fonts, L0112B and P0612B, already exist on the printer's hard drive and will be invoked by name within the XPAF generated PCL data stream. They will not be downloaded by XPAF.

Fonts XGT50L and XGT50P are permanent soft fonts and are only downloaded after the XPAF printer is started. These fonts are downloaded with he first job to reference them. Subsequent jobs will invoke the fonts with the 3-digit font identification number assigned in the FONTLIST member (700, or 701 in the sample above).

NOTE: For XPAF to use named fonts, they must be based on XPAF generated 2700 type fonts. This is required to correctly calculate page positioning. The PCL transform calculates positioning within a page on font metrics, therefore, XPAF must use the same font as loaded on the printer.

A sample REXX procedure, FONTEXTR, is included in SAMPLIB. FONTEXTR extracts and formats a font suitable for downloading.

Keeping permanent soft fonts in printer memory

As long as the printer remains powered on, permanent soft fonts will remain in the printer's memory and XPAF does not have to download them for each job. In the event that the XPAF printer is powered off, the XPAF printer must be drained and restarted. Draining and restarting the XPAF printer will reload the fonts into the printer's memory when they are first referenced in a document, and will maintain your data integrity.

Managing resident form lists

To create, delete, or update resident forms lists, enter **2** on the Manage Resource Lists menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                        Manage Resident Form Lists

COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a list.

  Dataset Name:

     List Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

- C Create a new list.
- D Delete an existing list.
- U Update an existing list.

Then complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the native library that contains all the resident resource lists. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the LIBRARY printer profile parameter.
List Name	Enter the name of the form list to be created or updated. The name can be one of the following: • A 1- to 20-character name that matches the name assigned to the FORMLIST printer profile parameter • FORM*cuu* for an existing list that was generated by XOSF for a channel-attached centralized printer • FORM*slu* for an existing list that was generated by XOSF for a remotely-attached centralized printer or a decentralized printer ***NOTE:*** Form list names are case-sensitive. When deleting or updating a list, type the name exactly as it was entered originally (uppercase/ lowercase letters).

Creating a resident form list

If you enter C on the COMMAND line of the Manage Resident Form Lists panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                        Creating List - FORMPRT1

COMMAND ===>

      NAME                PERMANENT?      NAME                PERMANENT?
  1.                         Y        2.                         Y
  3.                         Y        4.                         Y
  5.                         Y        6.                         Y
  7.                         Y        8.                         Y
  9.                         Y       10.                         Y
 11.                         Y       12.                         Y
 13.                         Y       14.                         Y
 15.                         Y       16.                         Y
 17.                         Y       18.                         Y
 19.                         Y       20.                         Y
 21.                         Y       22.                         Y
 23.                         Y       24.                         Y
 25.                         Y       26.                         Y

                                                Element Count = 0
```

In the sample panel, a resident form list named FORMPRT1 is being created.

The numbers provided on the panel are for convenience. Use these conventions when entering form names:

- Enter one or more form names and press **ENTER**:
  - Enter a 1- to 6-character, case-sensitive form name in the 'NAME' field.
  - Enter **N** in the 'PERMANENT?' field if the form is not a cartridge or resident form. Otherwise, leave Y in the 'PERMANENT?' field.
  - You can enter form names in any order on the panel. Although the panel displays 26 fields for entering forms, you can enter more than 26 form names. Each time you press ENTER, XPAF processes the forms and clears the panel. You may then enter additional form names.
  - When you press ENTER, 'Element Count' displays the number of forms added to the list during this session. This is a display-only field.
- Enter **END** on the COMMAND line and press **ENTER** to save the list and return to the preceding option panel.
- Enter **CANCEL** or **ABORT** on the COMMAND line and press **ENTER** to end the session without creating the list.

Before you modify a list, you must stop all printers using that list. When you restart the printer, XPAF activates the new list.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Form Lists option to create a new form list:

TABLE LOAD('*list-dataset-name*(*list-name*)')

FROM('*input-dataset-name*[(*member-name*)]') TYPE(FRML)

The format of the records within the dataset must be fixed-length records that are 7 bytes long. The first 6 bytes of each record is the form name. The last byte (Y or N) indicates whether the form is permanent.

Deleting a resident form list

Enter **D** on the COMMAND line of the Manage Resident Form Lists panel, and enter the name of the library in which the list resides and the list name. Then press **ENTER**.

XOAF displays a message indicating whether the list was deleted successfully.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Form Lists option to delete a form list:

TABLE DELETE('*list-dataset-name*(*list-name*)')

Updating a resident form list

If you enter U on the COMMAND line of the Manage Resident Form Lists panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                      Update a Resident Form List

COMMAND ===>

* On COMMAND line, enter 'A' to add an entry.
* Next to name, enter 'D' to delete an entry.

  NAME                PERMANENT?      NAME                PERMANENT?
  ORDER                   N           SUPPLY                  N
  MEDICAL                 N           ADDRESS                 N
  DENTAL                  N
```

Under the ‘NAME’ headings, XOAF displays the names of the forms that have been entered in the list. A Y in the ‘PERMANENT?’ field indicates that the form is permanent. In the sample panel, the list being updated already contains the form names ORDER, SUPPLY, MEDICAL, ADDRESS, and DENTAL.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Form Lists option to update a form list:

TABLE UPDATE('*list-dataset-name*(*list-name*)') TYPE(FRML)

FUNCTION(ADD | DELETE) NAME(*form-name*)[(P)]

Use the (P) option after *form-name* to indicate that the form being added is a permanent form, either printer-resident or cartridge.

Adding a new form to the list

Enter **A** on the COMMAND line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                       Updating List - FORMPRT1

COMMAND ===>

      NAME                  PERMANENT?       NAME                  PERMANENT?
   1.                           Y         2.                           Y
   3.                           Y         4.                           Y
   5.                           Y         6.                           Y
   7.                           Y         8.                           Y
   9.                           Y        10.                           Y
  11.                           Y        12.                           Y
  13.                           Y        14.                           Y
  15.                           Y        16.                           Y
  17.                           Y        18.                           Y
  19.                           Y        20.                           Y
  21.                           Y        22.                           Y
  23.                           Y        24.                           Y
  25.                           Y        26.                           Y
```

In the sample panel, the resident form list named FORMPRT1 is being updated.

The numbers provided are for convenience. Use these conventions when entering form names:

- Enter one or more form names and press **ENTER**:
  - — Enter a 1- to 6-character, case-sensitive form name in the 'NAME' field.
  - — Enter **N** in the 'PERMANENT?' field if the form is not a cartridge or resident form. Otherwise, leave Y in the 'PERMANENT?' field.
  - — You can enter form names in any order on the panel. Although the panel displays 26 fields for entering forms, you can enter more than 26 form names. Each time you press ENTER, XPAF processes the forms and clears the panel. You may then enter additional form names.
- After you add the first group of form names, press **ENTER**. The system returns to the Update a Resident Form List panel and displays

  * ADDED *

  to the right of each new form added to the list. To add more forms to the form list, enter **A** on the COMMAND line and repeat this procedure.

Deleting a form from the list

Tab to the form name and enter **D** to the left of each form name you want to delete. Press **ENTER**. The system deletes the form from the list and displays

DELETED

to the right of the form deleted from the list.

Managing resident image lists

To create, delete, or update resident image lists, enter **3** at the Manage Resource Lists menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                      Manage Resident Image Lists

COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a list.

  Dataset Name:

     List Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

C Create a new list.
D Delete an existing list.
U Update an existing list.

Then complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the native library that contains all the resident resource lists. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the LIBRARY printer profile parameter.
List Name	Enter the name of the image list to be created or updated. The name can be one of the following: • A 1- to 20-character name that matches the name assigned to the IMAGELIST printer profile parameter • IMAG*cuu* for an existing list that was generated by XOSF for a channel-attached centralized printer • IMAG*slu* for an existing list that was generated by XOSF for a remotely-attached centralized printer or a decentralized printer ***NOTE:*** Image list names are case-sensitive. When deleting or updating a list, type the name exactly as it was entered originally (uppercase/lowercase letters).

Creating a resident image list

If you enter C on the COMMAND line of the Manage Resident Image Lists panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                        Creating List - IMAGPRT1

COMMAND ===>

      NAME                  PERMANENT?      NAME                  PERMANENT?
   1.                           Y        2.                           Y
   3.                           Y        4.                           Y
   5.                           Y        6.                           Y
   7.                           Y        8.                           Y
   9.                           Y       10.                           Y
  11.                           Y       12.                           Y
  13.                           Y       14.                           Y
  15.                           Y       16.                           Y
  17.                           Y       18.                           Y
  19.                           Y       20.                           Y
  21.                           Y       22.                           Y
  23.                           Y       24.                           Y
  25.                           Y       26.                           Y

                                                  Element Count = 0
```

In the sample panel, a resident image list named IMAGPRT1 is being created.

- Enter one or more image names and press **ENTER**:
  - — Enter a 1- to 6-character, case-sensitive image name in the ‘NAME’ field.
  - — Enter **N** in the ‘PERMANENT?’ field if the image is not a cartridge or resident image. Otherwise, leave Y in the ‘PERMANENT?’ field.
  - — You can enter image names in any order on the panel. Although the panel displays 26 fields for entering images, you can enter more than 26 image names. Each time you press ENTER, XPAF processes the images and clears the panel. You may then enter additional image names.
  - — When you press ENTER, ‘Element Count’ displays the number of images added to the list during this session. This is a display-only field.
- Enter **END** on the COMMAND line and press **ENTER** to save the list and return to the preceding option panel.
- Enter **CANCEL** or **ABORT** on the COMMAND line and press **ENTER** to end the session without creating the list.

Before you modify a list, you must stop all printers using that list. When you restart the printer, XPAF activates the new list.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Image Lists option to create a new image list:

TABLE LOAD('*list-dataset-name*(*list-name*)')

FROM('*input-dataset-name*[(*member-name*)]') TYPE(IMGL)

The format of the records within the dataset must be fixed-length records that are 7 bytes long. The first 6 bytes of each record is the image name. The last byte (Y or N) indicates whether the image is permanent.

Deleting a resident image list

Enter **D** on the COMMAND line of the Manage Resident Images List panel, and enter the name of the library in which the list resides and the list name. Then press **ENTER**.

XOAF displays a message indicating whether the list was deleted successfully.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Image Lists option to delete an image list:

TABLE DELETE('*list-dataset-name*(*list-name*)')

Updating a resident image list

If you enter U on the COMMAND line of the Manage Resident Images Lists panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                      Update a Resident Image List

COMMAND ===>

* On COMMAND line, enter 'A' to add an entry.
* Next to name, enter 'D' to delete an entry.

  NAME                PERMANENT?      NAME                PERMANENT?
  PLANE                   N           CAR                     N
  TRAIN                   N           BOAT                    N
  BIKE                    N
```

Under the ‘NAME’ headings, XOAF displays the names of the images that have been entered in the list. A Y in the ‘PERMANENT?’ field indicates that the image is permanent. In the sample panel, the list being updated already contains the image names PLANE, CAR, TRAIN, BOAT, and BIKE.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Image Lists option to update an image list:

TABLE UPDATE('*list-dataset-name*(*list-name*)') TYPE(IMGL)

FUNCTION(ADD | DELETE) NAME(*image-name*)[(P)]

Use the (P) option after *image-name* to indicate that the image being added is a permanent image, either printer-resident or cartridge.

Adding a new image to the list

Enter **A** on the COMMAND line and press **ENTER**. A panel similar to this appears.

```
                    Xerox Output Administrative Facility
                        Updating List - IMAGPRT1

COMMAND ===>

     NAME                PERMANENT?      NAME                PERMANENT?
  1.                        Y        2.                        Y
  3.                        Y        4.                        Y
  5.                        Y        6.                        Y
  7.                        Y        8.                        Y
  9.                        Y       10.                        Y
 11.                        Y       12.                        Y
 13.                        Y       14.                        Y
 15.                        Y       16.                        Y
 17.                        Y       18.                        Y
 19.                        Y       20.                        Y
 21.                        Y       22.                        Y
 23.                        Y       24.                        Y
 25.                        Y       26.                        Y
```

In the sample panel, the resident image list named IMAGPRT1 is being updated.

The numbers provided are for convenience. Use these conventions when entering image names:

- Enter one or more image names and press **ENTER**:
  - — Enter a 1- to 6-character, case-sensitive image name in the ‘NAME’ field.
  - — Enter **N** in the ‘PERMANENT?’ field if the image is not a cartridge or resident image. Otherwise, leave Y in the ‘PERMANENT?’ field.
  - — You can enter image names in any order on the panel. Although the panel displays 26 fields for entering images, you can enter more than 26 image names. Each time you press ENTER, XPAF processes the images and clears the panel. You may then enter additional image names.
- After you add the first group of image names, press **ENTER**. The system returns to the Update a Resident Image List panel and displays

  * ADDED *

  to the right of each new image added to the list. To add more images to the image list, enter **A** on the COMMAND line and repeat this procedure.

Deleting an image from the list

Tab to the image name and enter **D** to the left of each image name you want to delete. Press **ENTER**. The system deletes the image from the list and displays

DELETED

to the right of the image name deleted from the list.

Managing resident logo lists

To create, delete, or update resident logo lists, enter **4** at the Manage Resource Lists menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                       Manage Resident Logo Lists

COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a list.

  Dataset Name:

     List Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

C Create a new list.
D Delete an existing list.
U Update an existing list.

Then complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the native library that contains all the resident resource lists. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the LIBRARY printer profile parameter.
List Name	Enter the name of the logo list to be created or updated. The name can be one of the following: • A 1- to 20-character name that matches the name assigned to the LOGOLIST printer profile parameter • LOGO*cuu* for an existing list that was generated by XOSF for a channel-attached centralized printer • LOGO*slu* for an existing list that was generated by XOSF for a remotely-attached centralized printer ***NOTE:*** Logo list names are case-sensitive. When deleting or updating a list, type the name exactly as it was entered originally (uppercase/lowercase letters).

Creating a resident logo list

If you enter C on the COMMAND line of the Manage Resident Logo Lists panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                         Creating List - LOGOPRT1

COMMAND ===>

      NAME                  PERMANENT?      NAME                  PERMANENT?
   1.                           Y        2.                           Y
   3.                           Y        4.                           Y
   5.                           Y        6.                           Y
   7.                           Y        8.                           Y
   9.                           Y       10.                           Y
  11.                           Y       12.                           Y
  13.                           Y       14.                           Y
  15.                           Y       16.                           Y
  17.                           Y       18.                           Y
  19.                           Y       20.                           Y
  21.                           Y       22.                           Y
  23.                           Y       24.                           Y
  25.                           Y       26.                           Y

                                                   Element Count = 0
```

In the sample panel, a resident logo list named LOGOPRT1 is being created.

The numbers provided on the panel are for convenience. Use these conventions when entering logo names:

- Enter one or more logo names and press **ENTER**:
  - — Enter a 1- to 6-character, case-sensitive logo name in the ‘NAME’ field.
  - — Enter **N** in the ‘PERMANENT?’ field if the logo is not a cartridge or resident logo. Otherwise, leave Y in the ‘PERMANENT?’ field.
  - — You can enter logo names in any order on the panel. Although the panel displays 26 fields for entering logos, you can enter more than 26 logo names. Each time you press ENTER, XPAF processes the logos and clears the panel. You may then enter additional logo names.
  - — When you press ENTER, ‘Element Count’ displays the number of logos added to the list during this session. This is a display-only field.
- Enter **END** on the COMMAND line and press **ENTER** to save the list and return to the preceding option panel.
- Enter **CANCEL** or **ABORT** on the COMMAND line and press **ENTER** to end the session without creating the list.

Before you modify a list, you must stop all printers using that list. When you restart the printer, XPAF activates the new list.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Logo Lists option to create a new logo list:

TABLE LOAD('*list-dataset-name*(*list-name*)')

FROM('*input-dataset-name*[(*member-name*)]') TYPE(LGOL)

The format of the records within the dataset must be fixed-length records that are 7 bytes long. The first 6 bytes of each record is the logo name. The last byte (Y or N) indicates whether the logo is permanent.

Deleting a resident logo list

Enter **D** on the COMMAND line of the Manage Resident Logo Lists panel, and enter the name of the library in which the list resides and the list name. Then press **ENTER**.

XOAF displays a message indicating whether the list was deleted successfully.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Logo Lists option to delete a logo list:

TABLE DELETE('*list-dataset-name*(*list-name*)')

Updating a resident logo list

If you enter U on the COMMAND line of the Manage Resident Logo Lists panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                      Update a Resident Logo List

COMMAND ===>

* On COMMAND line, enter 'A' to add an entry.
* Next to name, enter 'D' to delete an entry.

  NAME                PERMANENT?      NAME                PERMANENT?
  BIKE                    N           car                     N
  PLANE                   N           Train                   N
  TRUCK                   N
```

Under the ‘NAME’ headings, XOAF displays the names of the logos that have been entered in the list. A Y in the ‘PERMANENT?’ field indicates that the logo is permanent. In the sample panel, the list being updated already contains the logo names BIKE, car, PLANE, Train, and TRUCK.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Manage Resident Logo Lists option to update a logo list:

TABLE UPDATE('*list-dataset-name*(*list-name*)') TYPE(FRML)

FUNCTION({ ADD | DELETE }) NAME(*logo-name*)[(P)]

Use the (P) option after *logo-name* to indicate that the logo being added is a permanent logo, either printer-resident or cartridge.

Adding a new logo to the list

Enter **A** on the COMMAND line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                        Updating List - LOGOPRT1

COMMAND ===>

      NAME                  PERMANENT?       NAME                  PERMANENT?
   1.                           Y        2.                           Y
   3.                           Y        4.                           Y
   5.                           Y        6.                           Y
   7.                           Y        8.                           Y
   9.                           Y       10.                           Y
  11.                           Y       12.                           Y
  13.                           Y       14.                           Y
  15.                           Y       16.                           Y
  17.                           Y       18.                           Y
  19.                           Y       20.                           Y
  21.                           Y       22.                           Y
  23.                           Y       24.                           Y
  25.                           Y       26.                           Y
```

In the sample panel, the resident logo list named LOGOPRT1 is being updated.

The numbers provided are for convenience. Use these conventions when entering logo names:

- Enter one or more logo names and press **ENTER**:
  - — Enter a 1- to 6-character, case-sensitive logo name in the ‘NAME’ field.
  - — Enter **N** in the ‘PERMANENT?’ field if the logo is not a cartridge or resident logo. Otherwise, leave Y in the ‘PERMANENT?’ field.
  - — You can enter logo names in any order on the panel. Although the panel displays 26 fields for entering logos, you can enter more than 26 logo names. Each time you press ENTER, XPAF processes the logos and clears the panel. You may then enter additional logo names.
- After you add the first group of logo names, press **ENTER**. The system returns to the Update a Resident Logo List panel and displays

  * ADDED *

  to the right of each new logo added to the list. To add more logos to the logo list, enter **A** on the COMMAND line and repeat this procedure.

Deleting a logo from the list

Tab to the logo name and enter **D** to the left of each logo name you want to delete. Press **ENTER**. The system deletes the logo from the list and displays

DELETED

to the right of the logo name deleted from the list.

24. Managing XPAF tables

This chapter describes how to use the options available on the Manage Tables menu to maintain these XPAF tables:

- Paper-related
- XPAFXFI
- Character mapping
- XPAFFFI
- XPAFCFN
- CPGID
- FGID
- XPAFEFW
- XPAFE2A
- XPAFIFW
- XPAFIFW3
- Color cross-reference
- Color conversion

The chapter also identifies an option that is available for deleting font tables or table entries.

Maintaining paper-related tables

To access the paper-related tables, enter **1** on the Manage Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                         Maintain Paper Tables

OPTION ===>

  1.  Maintain the Paper Name Table

  2.  Maintain the Varying Paper Size Table

  3.  Maintain the Cluster Mapping Table
```

Enter the number of the option you want to select and press **ENTER**.

Paper name table

To access a paper name table, enter **1** on the Maintain Paper Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Maintain the Paper Name Table

COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a table.

  Dataset Name:

   Member Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

C Create a new table.
D Delete an existing table.
U Update an existing table.

Then complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the native library that contains the paper-related tables. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the PAPTBLDD initialization or printer profile parameter.
Member Name	• Enter the 1- to 16-character member name of the paper name table you want to maintain. The name can include alphanumeric or national ($, #, @) characters. • When creating a new table or updating an existing table, leave this field blank to select the default paper name table. • When deleting an existing table, a member name is required.

Creating or updating a paper name table

If you enter C or U on the COMMAND line of the Maintain the Paper Name Table panel, complete the fields, and press ENTER, a panel similar to this appears:

```
                    Xerox Output Administrative Facility Row 1 to 13 of 17
                              Maintain Paper Name Table

COMMAND ===>                                                SCROLL===> PAGE

* Next to entry, enter 'A' to add, 'D' to delete, or 'U' to update.

  Table Name: TAB01

                                            UNIT
  PAPER NAME                WIDTH HEIGHT  MEASURE
  #10                        4.25    9.5  IN
  #7                         3.78    7.5  IN
  A3                        11.69  16.54  IN
  A4                         8.27  11.69  IN
  A5                         5.83   8.27  IN
  A6                         4.12   5.83  IN
  B4                         9.84   13.9  IN
  B5                         6.93   9.84  IN
  C5                         6.38   9.02  IN
  DL                         4.33   8.66  IN
  EXEC                       7.25   10.5  IN
  LEGAL                       8.5     14  IN
  LEGL13                      8.5     13  IN
```

You can use this panel to add a new entry, delete an entry, or update an entry:

- To add a new entry, use one of two methods:
  - — Enter **A** on the COMMAND line and press **ENTER**.

    NOTE: If you enter A on the COMMAND line, all other table entries listed are ignored.

  - — Tab to the table entry that has attributes similar to the entry you want to add, enter **A** to the left of the entry, and press **ENTER**.

  For both options, XPAF displays the Add Entry panel for the paper name table.
- To delete an entry, tab to the table entry you want to delete, enter **D** to the left of the entry, and press **ENTER**. No other panel is displayed.
- To update an entry, tab to the table entry you want to update, enter **U** to the left of the entry, and press **ENTER**. XPAF displays the Update Entry panel for the paper name table.

Adding or updating a paper name table entry

If you enter A on the COMMAND line or next to a table entry on the Maintain Paper Name Table panel and press ENTER, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Add Entry to Paper Name Table

COMMAND ===>

    Table Name: TAB01

    Paper Name:

         Width:

        Height:

  Unit Measure:
```

If you enter U next to a table entry on the Maintain Paper Name Table panel and press ENTER, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Update Entry in Paper Name Table

COMMAND ===>

    Table Name: TAB01

    Paper Name: LETTER

         Width: 8.5

        Height: 11

  Unit Measure: IN
```

NOTE: If you entered A on the COMMAND line, the panel is displayed without any field entries. If you entered A or U next to a table entry, the information for the selected entry is displayed on the panel.

Complete these fields and press **ENTER**:

Field	Action
Table Name	Displays the name of the paper name table for which this entry will be added or updated.
Paper Name	• On the Add panel, enter the name associated with the specified page dimensions. This must be a unique name. Valid values: A 1- to 6-character name. The name can include alphanumeric or national ($, #, @) characters. • On the Update panel, this field displays the paper name to be updated. This field cannot be changed.
Width	Enter the length of the short edge side of the page. Valid values: A 1- to 5-digit number in decimal format (for example, 11.25).
Height	Enter the length of the long edge side of the page. Valid values: A 1- to 5-digit number in decimal format (for example, 11.25).
Unit Measure	Enter the unit of measure in which the height and width are defined. Valid values: CM Centimeters DOTS 300 dots per inch IN Inches MM Millimeters XDOTS 600 dots per inch

You should be aware of the following items when using this panel:

- The dimensions entered in the ‘Width’, ‘Height’, and ‘Unit Measure’ fields for the paper name will be converted into dots for use by XPAF. In the conversion process, some rounding may occur. The Add or Update panel will show the actual value used by XPAF after rounding. For example, if you enter a ‘Width’ value of 11.269 and a ‘Unit Measure’ value of INCHES, XPAF converts and rounds the dimension from INCHES to DOTS. Then, when converted back to inches, XPAF displays a value of 11.27 in the ‘Width’ field, which is the nearest rounded value.
- The value entered for the ‘Height’ field must be equal to or greater than the value entered in the ‘Width’ field. If the ‘Width’ value is greater than the ‘Height’ value, XPAF will exchange the two values (that is, place the greater value in the ‘Height’ field).
- If you change the ‘Unit Measure’ field and press **ENTER**, the values in the ‘Width’ and ‘Height’ fields are now expressed in the newly entered unit of measure. If the values in these fields are not correct, enter the correct values.

- The maximum dimensional value, based on ‘Unit Measure,’ that can be entered in either the ‘Width’ or the ‘Height’ field is:
  - 277.42 CM
  - 32767 DOTS
  - 109.22 IN
  - 2774.5 MM
  - 65534 XDOTS

After you enter the required information and press **ENTER**, XPAF either adds this new entry to the specified table, or updates the selected existing entry, and returns to the previous panel.

NOTE: If XOAF displays a message when you press ENTER, review the values in the ‘Width’ and ‘Height’ fields. Press ENTER to accept the displayed values, or enter the correct values in the fields and then press **ENTER**. To ignore the changes you made, and return to the previous panel, press **PF3**.

Deleting a paper name table

If you enter D on the COMMAND line of the Maintain the Paper Name Table panel, complete the fields, and press ENTER. XPAF displays a message indicating whether the table was deleted successfully.

Varying paper size table

To access a varying paper size table, enter **2** on the Maintain Paper Tables menu OPTION line, and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Maintain the Varying Paper Size Table

COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a table.

  Dataset Name:

   Member Name:
```

On the COMMAND line, specify the function you want to perform. Valid functions are:

C Create a new table.
D Delete an existing table.
U Update an existing table.

Then complete these fields, and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the native library that contains the paper-related tables. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the PAPTBLDD initialization or printer profile parameter.
Member Name	• Enter the 1- to 16-character member name of the varying paper size table you want to maintain. The name can include alphanumeric or national ($, #, @) characters. • When creating a new table or updating an existing table, leave this field blank to select the default paper name table. • When deleting an existing table, a member name is required.

Creating or updating a varying paper size table

If you enter C or U on the COMMAND line of the Maintain the Varying Paper Size Table panel, complete the fields, and press ENTER, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Maintain Varying Paper Size Table

COMMAND ===>

* Next to entry, enter 'A' to add, 'D' to delete, or 'U' to update.

  Table Name: TAB02

   AFP                          TRAY   CEP
  BIN #  PAPER NAME             SELECT FEED  JDE     JDL
     00  LETTER                    1   MAIN  PGMODE  DFAULT
     01  LETTER                    1   MAIN  PGMODE  DFAULT
     02  A4                        1   MAIN  PGA4    DFAULT
     03  LEGAL                     1   MAIN  PG14    DFAULT
     04  LONG                      1   MAIN  PG1711  DFAULT
     **** END OF VARYING PAPER SIZE TABLE ****
```

You can use this panel to add a new entry, delete an entry, or update an entry:

- To add a new entry, use one of these two methods:
  - — Enter **A** on the COMMAND line and press **ENTER**.

    NOTE: If you enter A on the COMMAND line, all other table entries listed are ignored.

  - — Tab to the table entry that has attributes similar to the entry you want to add, enter **A** to the left of the entry, and press **ENTER**.

  For both options, XPAF displays the Add Entry panel for the varying paper size table.
- To delete an entry, tab to the table entry you want to delete, enter **D** to the left of the entry, and press **ENTER**. No other panel is displayed.
- To update an entry, tab to the table entry you want to update, enter **U** to the left of the entry, and press **ENTER**. XPAF displays the Update Entry panel for the varying paper size table.

Adding or updating a varying paper size table entry

If you enter A on the COMMAND line or next to a table entry on the Maintain Varying Paper Size Table panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Add Entry to Varying Paper Size Table

COMMAND ===>

  Table Name: TAB02

   AFP Bin #:

  Paper Name:

    XES Tray:

    CEP FEED:

         JDE:

         JDL:
```

If you enter U next to a table entry on the Maintain Varying Paper Size Table panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Update Entry in Varying Paper Size Table

COMMAND ===>

        Table Name: TAB02

         AFP Bin #: 00

        Paper Name: LETTER

  Tray Select Code: 1

         CEP FEED: MAIN

              JDE: PGMODE

              JDL: DFAULT
```

NOTE: If you entered A on the COMMAND line, the panel is displayed without any field entries. If you entered A or U next to a table entry, the information for the selected entry is displayed on the panel.

Complete these fields and press **ENTER**:

Field	Action
Table Name	Displays the name of the varying paper size table for which this entry will be added or updated.
AFP Bin #	• On the Add panel, enter the AFP bin number within the copy subgroup in the form definition medium map you want to map to the specified paper trays. This must be a unique number. Valid values: A 2-digit hexadecimal value from 00 through FF. Default: 00 • On the Update panel, this field displays the AFP bin number to be updated. This field cannot be changed.
Paper Name	Enter the name of the paper size to be used in this tray. This name must be defined in a paper name table. Valid values: A 1- to 6-character name. The name can include alphanumeric or national ($, #, @) characters.
Tray Sel	Enter the parameter for the XES or PCL tray select command you want to map to the specified AFP bin number. The actual paper tray this command maps to depends on your printer's setup. For example, a 3 XES tray select command could map to tray 4 on your printer. Refer to your printer's PDL reference manual for paper tray mapping information. Valid values: A 1-character command (0 through 9, A through F).
CEP FEED	Enter the centralized paper tray cluster name to map to the specified AFP bin number. Valid values: A 1- to 6-character name.
JDE	Enter the JDE name to be used for this copy subgroup. Valid values: A 1- to 6-character name.
JDL	Enter the JDL name to be used for this copy subgroup. Valid values: A 1- to 6-character name.

After you enter the required information and press ENTER, XPAF adds this entry to the specified table or updates the selected entry and returns to the previous panel.

Deleting a varying paper size table

If you enter D on the COMMAND line of the Maintain the Varying Paper Size Table panel, complete the fields, and press ENTER. XPAF displays a message indicating whether the table was deleted successfully.

Cluster mapping table

To access a cluster mapping table, enter **3** on the Maintain Paper Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Maintain the Cluster Mapping Table

COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a table.

  Dataset Name:

   Member Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

C Create a new table.
D Delete an existing table.
U Update an existing table.

Then complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the native library that contains the paper-related tables. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the PAPTBLDD initialization or printer profile parameter.
Member Name	• Enter the 1- to 16-character member name of the cluster mapping table you want to maintain. The name can include alphanumeric and national ($, #, @) characters. • If the member name is left blank for a create or update function, the default member name (DEFAULT) will be assumed. • When deleting an existing table, a member name is required.

Creating or updating a cluster mapping table

If you enter C or U on the COMMAND line of the Maintain the Cluster Mapping Table panel, complete the fields, and press ENTER, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Maintain Cluster Mapping Table

COMMAND ===>

* Next to entry, enter 'A' to add, 'D' to delete, or 'U' to update.

  Table Name: TAB03


  CLUSTER NAME  PAPER NAME            TRAY SEL
                LETTER                      1
  AUX           LETTER                      2
  MAIN          LETTER                     21
  OPR           LETTER                      1
  TRAY1         LETTER                      1
  TRAY2         LETTER                      2
  TRAY3         LETTER                      3
  TRAY4         LETTER                      4
****  END OF CLUSTER MAPPING TABLE  ****
```

You can use this panel to add a new entry, delete an entry, or update an entry:

- To add a new entry, use one of two methods:
  - Enter **A** on the COMMAND line and press **ENTER**.

    NOTE: If you enter A on the COMMAND line, all other table entries listed are ignored.

  - Tab to the table entry that has attributes similar to the entry you want to add, enter **A** to the left of the entry, and press **ENTER**.

  For both options, XPAF displays the Add Entry panel for the cluster mapping table.
- To delete an entry, tab to the table entry you want to delete, enter **D** to the left of the entry, and press **ENTER**. No other panel is displayed.
- To update an entry, tab to the table entry you want to update, enter **U** to the left of the entry, and press **ENTER**. XPAF displays the Update Entry panel for the cluster mapping table.

Adding or updating a cluster mapping table entry

If you enter A on the COMMAND line or next to a table entry on the Maintain Cluster Mapping Table panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Add Entry to Cluster Mapping Table

COMMAND ===>

      Table Name: TAB03

    Cluster Name:

      Paper Name:

Tray select code:
```

If you enter U next to a table entry on the Maintain Cluster Mapping Table panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Update Entry in Cluster Mapping Table

COMMAND ===>

        Table Name: TAB03

      Cluster Name: MAIN

        Paper Name: LETTER

  Tray select code: 21
```

NOTE: If you entered A on the COMMAND line, the panel is displayed without any field entries. If you entered A or U next to a table entry, the information for the selected entry is displayed on the panel.

Complete these fields and press **ENTER**:

Field	Action
Table Name	Displays the name of the cluster mapping table for which this entry will be added or updated.
Cluster Name	• On the Add panel, enter the centralized paper tray cluster name that this entry is being created for. This name must be unique. Valid values: Any combination of alphanumeric and/or national ($, #, @) characters. All blanks are also valid and define the entry to be used as the default when a user referenced cluster name does not exist. • On the Update panel, this field displays the centralized paper tray cluster name entry that is being updated. This field cannot be changed.
Paper Name	Enter the name of the paper size to be used in this tray. This name must be defined in a paper name table. Valid values: A 1- to 6-character name. The name can include alphanumeric and national ($, #, @) characters. ***NOTE:*** The Paper Name value is no longer used to determine the size of the paper in the tray. The size of the paper is determined by the PAPERSIZE= parameter in the active JDE. The Paper Name filed in the cluster mapping table has been retained for compatibility with previous releases.
Tray Select Code	Enter the value for the XES or PCL tray select command which will select the desired paper tray on the decentralized or PCL-capable printer. The values used will depend on the specific printer being used. For example, a 4 XES tray select command maps to physical tray 2 on a 4517 printer. Refer to your printer's PDL reference manual for paper tray mapping information. Valid values: A 1- to 3-character command code. The command code can be any valid tray select character, but cannot be all spaces or include imbedded spaces.

After you enter the required information and press ENTER, XPAF adds this entry to the specified table or updates the selected entry and returns to the previous panel.

Deleting a cluster mapping table

If you enter D on the COMMAND line of the Maintain the Cluster Mapping Table panel, complete the fields, and press ENTER. XPAF displays a message indicating whether the table was deleted successfully.

Maintaining font tables

XPAF font tables can be viewed and/or modified. Using this option, you can:

- Display or maintain the XPAFXFI table, which contains information about fonts used by XPAF.
- Display or update the character mapping tables, which map the characters in the centralized and decentralized versions of a font.
- Display or maintain the XPAFFFI table, which permits the font to be referred to by font type as well as by font name.
- Display or maintain the XPAFCFN table, which maps IBM coded font names to code page names and character set names.
- Browse, create, update, or delete entries in the CPGID and FGID tables. The CPGID and FGID tables are used by XPAF to support the processing of MCF-2 structured fields that contain process global resource identifier (GRID) values.

To access the font table options, enter **2** on the Manage Tables menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                          Maintain Font Tables

OPTION ===>

  1.  Maintain the Xerox Font Information (XPAFXFI) Table

  2.  Maintain the Character Mapping Tables

  3.  Maintain the Font Family Information (XPAFFFI) Table

  4.  Maintain the Coded Font Name (XPAFCFN) Table

  5.  Maintain the Code Page Global Identifier (CPGID) Table

  6.  Maintain the Font Global Identifier (FGID) Table
```

Enter the number of the option you want to select and press **ENTER**.

XPAFXFI table

To access the XPAFXFI table, enter **1** on the Maintain Font Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                Maintain the Xerox Font Information (XPAFXFI) Table

COMMAND ===>

* Enter font name, or leave blank for a member list.

  Font Name:
```

Complete this field and press **ENTER**:

Field	Action
Font Name	• Enter the 1- to 6-character name of the logical font for which you want to create or update an entry. • Leave this field blank to display a selection list.

If you leave the ‘Font Name’ field blank, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                  Selection List of Font Table Members

COMMAND ===>

* Next to name, enter 'S' to select a member.

  FFMT01
  FFMT02
  FFMT10
  FFMT11
  FORMSL
  FORMSP
```

To select an XPAFXFI table entry from this list, tab to the appropriate member name, enter **S**, and then press **ENTER**.

Updating or creating an XPAFXFI table entry

After you enter a font name on the Maintain the Xerox Font Information (XPAFXFI) Table panel or select a font from the Selection List of Font Table Members panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                Maintain the Xerox Font Information (XPAFXFI) Table

COMMAND ===>

* On COMMAND line, enter 'U' to create or update an entry.

  Logical Font Name: L02BOA

  SPECIFICATIONS
                                Font Name: FFMT01
      Centralized Character Mapping Name: CCMV01
    Decentralized Character Mapping Name: DCMV01
                          Code Page Name: XCP5
                              Font Width: 0020
                             Font Height: 0037
                 Baseline to Top of Cell: 0029
                 Decentralized Font Name:
```

Enter **U** on the COMMAND line to either change the font characteristics or create a new logical font name with the same or different characteristics. You can type over the existing entries.

Complete these fields and press **ENTER**:

Field	Action
Logical Font Name	Enter the 1- to 6-character logical name of the font. This is the name by which the font is known to XPAF: • For fonts used in native mode documents, this name must be the same as the value in the 'Font Name' field. • For fonts used in page-formatted documents or AFP documents at 300 dpi using Xerox fonts, XPAF uses this name to determine which code page to use. By changing the logical font name and the code page name, you can use different character mappings for the same font. • If you are using a licensed font and the true centralized font name is entered in the 'Font Name' field, you can enter an alternate name for the centralized version of the font. This allows you to use the name of your choice rather than the licensed font name, which may not conform to your font naming conventions. When you change the logical font name and the new font name is unique, the system creates a new member in the XPAFXFI table.
SPECIFICATIONS **Font Name**	Enter the 1- to 6-character Xerox font name. This is the name of the font as it resides in the font library. During native mode processing, this field is not examined.
Centralized Character Mapping Name	Enter the 1- to 6-character name of the character mapping table that contains the centralized character mapping of the font. This table contains the character ID and ASCII hexadecimal mapping value for each character in the font. Default: CCMV01
Decentralized Character Mapping Name	Enter the 1- to 6-character name of the character mapping table that contains the decentralized character mapping of the font. This table contains the character ID, plane number, and ASCII hexadecimal mapping value for each character in the font. Default: DCMV60
Code Page Name	Enter the 1- to 6-character name of the character mapping table that contains the code page mapping for this font. The code page contains the character IDs and their associated EBCDIC code points when used in an AFP document.
Font Width	Enter the average width in dots of the characters in the font.
Font Height	Enter the height in dots of the font.
Baseline to Top of Cell	Enter the number of dots between the baseline and the top of the font cell.
Decentralized Font Name	If the font is a licensed font, enter the 1- to 20-character name of the decentralized version of the font.

Deleting an XPAFXFI table entry

To delete entries from this table, use the Delete a Font Table or Table Entry option on the Manage Tables menu panel. Refer to "Deleting a font table or table entry" later in this chapter for information about using this option.

Specifying the code page for a Xerox font

You can associate a Xerox font with one or more code pages by creating new aliases through the XPAFXFI table and assigning a different code page to each alias. Follow this procedure:

Step 1. Create a character mapping table that contains the new code page information. Follow the procedure described in "Creating a new character mapping table from a dataset" later in this chapter.

Step 2. Use Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu to update the XPAFXFI table to reference the new code page name.

Step 3. If you are associating the font with more than one code page, enter the new logical name for this font when used with the code page specified in step 2.

If the font is used in DCF documents, perform the next two steps:

Step 4. Convert the Xerox font by using the Convert Xerox Font to IBM Format option on the Convert Resources menu. This conversion creates an IBM look-alike version of the font that DCF recognizes.

NOTE: If you use an IBM code page with this font, the code page must reside in the output font library in which the converted font is stored.

Step 5. Create a DCF index for the new font by executing the JCL provided with DCF.

Character mapping tables

To access the character mapping table options, enter **2** on the Maintain Font Tables menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                    Maintain the Character Mapping Tables

OPTION ===>

  1.  Display an Existing Character Mapping Table

  2.  Create/Update a Character Mapping Table from a Dataset

  3.  Create/Update a Character Mapping Table On-line
```

Enter the number of the option you want to perform and press **ENTER**.

Displaying an existing character mapping table

To display the values assigned to each character identifier in a character mapping table, enter **1** on the Maintain the Character Mapping Tables menu OPTION line. Press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Display an Existing Character Mapping Table

COMMAND ===>

  Character Mapping Name:

   Table Type (CC/DC/CP):
```

Complete these fields and press **ENTER**:

Field	Action
Character Mapping Name	Enter the name of the centralized character mapping, decentralized character mapping, or code page table you want to display.
Table Type	Enter the type of table you want to display. Valid values: CC Specifies a centralized character mapping table which shows each character ID in the table with its associated ASCII value. DC Specifies a decentralized character mapping table which shows each character ID in the table with its associated ASCII value and plane number. CP Specifies a Xerox code page table which shows each character ID in the table with its associated EBCDIC value. Default: None ***NOTE:*** If you select a table type other than the type of table you want to display, the displayed information will not be correct. For example, if you want to display a decentralized character mapping table, and you enter CC instead of DC, XPAF will display the information for a centralized character mapping table, which will not be accurate.

After you press ENTER, a panel similar to the panel shown below will appear.

```
                    Xerox Output Administrative Facility
                    Display an Existing Character Mapping Table

COMMAND ===>

  Character Mapping Name: CCMV01

  CHARACTER ID        ASCII VALUE
  CEPHEXBA            BA
  CEPHEXBF            BF
  CEPHEXB2            B2
  CEPHEXDF            DF
  CEPHEXD2            D2
  CEPHEXEA            EA
  CEPHEXEB            EB
  CEPHEXEC            EC
  CEPHEXED            ED
```

The sample panel shown above displays information for a centralized character mapping.

NOTE: The column headings that appear on the panel will differ, depending on the type of table selected:

- *The ASCII VALUE column appears only for centralized or decentralized character mappings.*
- *The PLANE NUMBER column appears only for decentralized character mappings.*
- *The EBCDIC VALUE column appears only for Xerox code pages.*

The following fields/columns may appear on this panel:

Field/Column	Action
Character Mapping Name	Displays the name of the centralized mapping, decentralized mapping, or code page table you want to display.
CHARACTER ID	Displays the standard font character identifier that uniquely identifies each character.
PLANE NUMBER	Displays the plane number in which the associated code point resides.
ASCII VALUE	Displays the location of the character, in ASCII representation, in the centralized or decentralized font.
EBCDIC VALUE	Displays the location of the character, in EBCDIC representation, in the Xerox code page.

The following panel displays information for a decentralized character mapping:

```
                    Xerox Output Administrative Facility
                    Display an Existing Character Mapping Table

COMMAND ===>

  Character Mapping Name: DCMV01

  CHARACTER ID       PLANE NUMBER       ASCII VALUE
  CEPHEXBA           02                 46
  CEPHEXBF           02                 47
  CEPHEXB2           02                 45
  CEPHEXDF           02                 49
  CEPHEXD2           02                 48
  CEPHEXEA           02                 4A
  CEPHEXEB           02                 4B
  CEPHEXEC           02                 4C
  CEPHEXED           02                 4D
```

The following panel displays information for a code page:

```
                    Xerox Output Administrative Facility
                    Display an Existing Character Mapping Table

COMMAND ===>

  Character Mapping Name: RXCP08

  CHARACTER ID       EBCDIC VALUE
  GF020000           0F
  LA010000           81
  LA020000           C1
  LA110000           52
  LA120000           DF
  LA130000           49
  LA140000           DB
  LA150000           48
  LA160000           DA
```

Creating a new character mapping table from a dataset

Use this option to create or update character mapping tables by loading character mapping information from a dataset. The input data must be stored in a PDS.

During the load process, if the character mapping name you provide does not correspond to an existing table, XPAF creates a new table. If you are updating a table, XPAF replaces the existing table with the revised table. For this reason, the input dataset must contain character mapping information for both the existing entries and new entries you are adding.

To create or update a character mapping table using a PDS as the input source, use either a new PDS or an existing PDS. The steps for each method are discussed in the following sections.

Using a new PDS

Step 1. Create a PDS with these attributes:

RECFM=FB
LRECL=80

Step 2. Within a member of the PDS, enter the character mapping information that you want to load to an XPAF character mapping table.The member name within the PDS must be the same as the character mapping name you want to use. The member name becomes the character mapping name when you load the information to XPAF.

The format of the data in the input PDS member varies depending on the character information you load. For centralized font information, include the character ID and ASCII value. For decentralized font information, include the character ID, ASCII value, and plane number.

You should use the primary plane, plane 01, for your most commonly used characters. Characters that will not fit in plane 01 should be placed in plane 02 until it is full, and then planes 03-08 should be used in ascending order. For code page information, include the character ID and EBCDIC value.

The format for a centralized character mapping table entry is:

CHARID=*xxxxxxxx* ASCII=*nn*

The format for a decentralized character mapping table entry is:

CHARID=*xxxxxxxx* ASCII=*nn* PLANE=*nn*

The format for a Xerox code page table entry is:

CHARID=*xxxxxxxx* EBCDIC=*nn*

where

- *xxxxxxxx* is the 8-digit character ID name.
- *nn* is the 2-digit ASCII or EBCDIC hexadecimal value, or the 2-digit decimal value for the plane number (01 to 08).
- One or more spaces separate each value in the PDS member.

Note these restrictions when creating or updating table entries:

- Do not assign EBCDIC X'40' or ASCII X'20' to a character other than a space. The ASCII X'20' code point always represents the space character in a decentralized font, whether the code point X'20' is listed in the decentralized character mapping table or not.
- Decentralized character mapping tables cannot map characters to these ASCII code points:

  X'00' through X'1F'

- When printing documents on decentralized printers in EBCDIC mode, do not map characters in decentralized character mapping tables to these ASCII code points:

  X'80' through X'97'
  X'D6' through X'DB'
  X'E5'

The following example shows an entry for a centralized character mapping table:

```
CHARID=LA010000  ASCII=61
CHARID=LA020000  ASCII=41
```

The following example shows an entry for a decentralized character mapping table:

```
CHARID= LA010000  ASCII=61  PLANE=01
CHARID= LA020000  ASCII=41  PLANE=01
```

The following example shows an entry for a Xerox code page table:

```
CHARID=LA010000  EBCDIC=81
CHARID=LA020000  EBCDIC=C1
```

Using an existing PDS

Edit an existing PDS member to change the appropriate character mapping values. You can edit a PDS you created previously or one of the sample character mapping tables provided in XPFSAMP.

After completing either your entries to the input PDS or your changes to the character mapping table in XPFSAMP, you can load the information to XPAF.

Enter **2** on the Maintain the Character Mapping Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                 Create/Update a Character Mapping Table from a Dataset

COMMAND ===>

  Character Mapping Name:

            Dataset Name:
```

Complete these fields and press **ENTER**:

Field	Action
Character Mapping Name	• Enter the character mapping name. This is the name of the character mapping table you are creating or updating. This name must correspond to a member name in the input PDS. • Leave this field blank to create or update a character mapping table for each member contained in the input PDS.
Dataset Name	Enter the name of the PDS that contains the character mapping information that will be loaded to XPAF. Do not include the member name; XPAF uses the 'Character Mapping Name' value as the input member name.

Creating a new character mapping table online

This option allows you to define characters one at a time. You can create a new table or add entries to an existing table, but you cannot modify existing entries.

NOTE: To delete entries from this table, use the Delete a Font Table or Table Entry option on the Manage Tables menu panel. Refer to "Deleting a font table or table entry" later in this chapter for information about using this option.

To create a new character mapping online, enter **3** on the Maintain the Character Mapping Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                 Create/Update a Character Mapping Table On-line

COMMAND ===>

        Character Mapping Name:

                  Character ID:

  EBCDIC Value or Plane Number:

                   ASCII Value:
```

Complete the following fields and press **ENTER**:

NOTE: Enter only the values required for the appropriate type of character mapping table:

- The required fields for centralized character mapping tables are: 'Character Mapping Name', 'Character ID', and 'ASCII Value'.
- The required fields for decentralized character mapping tables are: 'Character Mapping Name', 'Character ID', 'Plane Number', and 'ASCII Value'.
- The required fields for Xerox code page tables are: 'Character Mapping Name', 'Character ID', and 'EBCDIC Value'.

Field	Action
Character Mapping Name	Enter the centralized or decentralized character mapping name as found in the XPAFXFI table.
Character ID	Enter the 8-character standard font character identifier that uniquely identifies each character. This name is used to match characters between centralized fonts and decentralized fonts as well as centralized mapping variations and code pages.
EBCDIC Value or Plane Number	• For Xerox code page tables, enter the 2-digit hexadecimal EBCDIC value which represents the location of the character in the Xerox code page. ***NOTE:*** Do not assign EBCDIC X'40' to a character other than a space or your font conversion results may be unpredictable. • For decentralized character mapping tables, enter the 2-digit plane number (01–08).
ASCII Value	Enter the 2-digit hexadecimal ASCII value which represents the location of the character in either the centralized or the decentralized font. Note these restrictions: • Do not assign ASCII X'20' to a character other than a space. The ASCII X'20' code point always represents the space character in a decentralized font, whether the code point X'20' is listed in the decentralized character mapping table or not. • Decentralized character mapping tables cannot map characters to these ASCII code points: X'00' through X'1F' • When printing documents on decentralized printers in EBCDIC mode, do not map characters in decentralized character mapping tables to these ASCII code points: X'80' through X'97' X'D6' through X'DB' X'E5'

XPAFFFI table

To access the font family information table, enter **3** on the Maintain Font Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                Maintain the Font Family Information (XPAFFFI) Table

COMMAND ===>

* Enter font family name, or leave blank for a member list.

  Font Family Name:
```

Complete this field and press **ENTER**:

Field	Action
Font Family Name	• Enter the 1- to 6-character name of the font family for which you want to display, create, or update an entry. • Leave this field blank to display a selection list.

If you leave the ‘Font Family Name’ field blank, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                  Selection List of Font Table Members

COMMAND ===>

* Next to name, enter 'S' to select a member.

  L00TPA
  L00TPB
  L00TPC
  L01BOA
  L01BOB
  L01ITA
```

To select the font family you want to update, tab to the appropriate member name, enter **S**, and press **ENTER**.

When you enter a font name on the Maintain the Font Family Information (XPAFFFI) Table panel, or select a font from the Selection List of Font Table Members panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                Maintain the Font Family Information (XPAFFFI) Table

COMMAND ===>

* On COMMAND line, enter 'U' to create or update an entry.

  Font Name: L00TPC

  FONT CHARACTERISTICS
                      Typeface: TRENDPS
                        Weight: MEDIUM
                    Font Width: NORMAL
                    Point Size: 12
    Rotation (000/090/180/270): 000
         Orientation (P/L/I/J): L

  FONT ATTRIBUTES
       Italics (Y/N): N
      Outlined (Y/N): N
    Overstruck (Y/N): N
    Underlined (Y/N): N
```

Enter **U** on the COMMAND line to either update or create a table entry. Then complete these fields and press **ENTER**:

Field	Action
Font Name	This field displays the name of the font: • Do not change this name if you want to update an existing table. • Enter a unique 1- to 6-character font name if you want to create a new table. • Enter the name of an existing font in the table if you want to display information for a different font.
FONT CHARACTERISTICS **Typeface**	Enter the descriptive name of the font family.

Field	Action
Weight	Enter the weight of the font. Valid values: ULTRALIGHT EXTRALIGHT LIGHT SEMILIGHT MEDIUM SEMIBOLD BOLD EXTRABOLD ULTRABOLD
Font Width	Enter the width of the font. Valid values: ULTRACONDENSED EXTRACONDENSED CONDENSED SEMICONDENSED NORMAL SEMIEXPANDED EXPANDED EXTRAEXPANDED ULTRAEXPANDED
Point Size	Enter the actual point size of the font.
Rotation	Enter the angle of rotation of the characters in degrees relative to the baseline. Valid values: 000 090 180 270
Orientation	Enter the print direction. Valid values: P Portrait L Landscape I Inverse portrait J Inverse landscape
FONT ATTRIBUTES **Italics**	Indicate whether the font's attributes include italics. Valid values: Y Includes the italics font attribute. N Does not include the italics font attribute.

Field	Action
Outlined	Indicate whether the font's attributes include outline. Valid values: Y Includes the outline font attribute. N Does not include the outline font attribute.
Overstruck	Indicate whether the font's attributes include overstruck. Valid values: Y Includes the overstruck font attribute. N Does not include the overstruck font attribute.
Underlined	Indicate whether the font's attributes include underline. Valid values: Y Includes the underline font attribute. N Does not include the underline font attribute.

XPAFCFN table

To access the coded font name table, enter **4** on the Maintain Font Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                 Maintain the Coded Font Name (XPAFCFN) Table

COMMAND ===>

* Enter coded font name, or leave blank for a member list.

  Coded Font Name:
```

Complete this field and press **ENTER**:

Field	Action
Coded Font Name	• Enter the 1- to 8-character name of the coded font for which you want to update table entries. • Leave this field blank to display a selection list.

NOTE: To delete entries from this table, use the Delete a Font Table or Table Entry option on the Manage Tables menu panel. Refer to “Deleting a font table or table entry” later in this chapter for information about using this option.

If you leave the ‘Coded Font Name’ field blank, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Selection List of Font Table Members

COMMAND ===>

* Next to name, enter 'S' to select a member.

  X0AD0A
  X0AD0B
  X0AD10
  X0AD2A
  X0AD2B
  X0AE10
  X0AG0A
```

To select a coded font from this list, tab to the appropriate member name, enter **S**, and press **ENTER**.

When you enter a font name on the Maintain the Coded Font Name (XPAFCFN) Table panel, or select a font from the Selection List of Font Table Members panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Maintain the Coded Font Name (XPAFCFN) Table

COMMAND ===>

* On COMMAND line, enter 'U' to create or update an entry.

     Coded Font Name: X0AD0A

      Code Page Name: T1000293

  Character Set Name: C0L0AD10
```

Enter **U** on the COMMAND line to either update or create a table entry. Then complete these fields and press **ENTER**:

Field	Action
Coded Font Name	Enter the 1- to 8-character IBM coded font name. Include the X*n* prefix, where: • *n* = 0 for 3820 fonts • *n* = 1, 2, 3, or 4 for 3800 fonts
Code Page Name	Enter the 1- to 8-character IBM code page name associated with this coded font name. Include the T1 prefix.
Character Set Name	Enter the 1- to 8-character IBM character set name associated with this coded font name. Include the C*n* prefix, where: • *n* = 0 for 3820 fonts • *n* = 1, 2, 3, or 4 for 3800 fonts

If the coded font name is a new name, a new coded font will be added to the table.

CPGID table

To access the CPGID table, enter **5** on the Maintain Font Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                Maintain the Code Page Global Identifier (CPGID) Table

COMMAND ===>

* On COMMAND line, enter 'B' to browse, 'U' to create or update, or
  'D' to delete.

  Graphic Character Set Global Identifier:

              Code Page Global Identifier:

                            Code Page Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

B Browse an entry. You also must enter values in the ‘Graphic Character Set Global Identifier’ and the ‘Code Page Global Identifier’ fields to browse an entry.

U Create or update an entry. You also must enter values in all three fields to create or update an entry.

D Delete an entry. You also must enter values in the ‘Graphic Character Set Global Identifier’ and the ‘Code Page Global Identifier’ fields to delete an entry.

NOTE: The default option is B (browse).

Depending on the value you selected, complete these fields and press **ENTER**:

Field	Action
Graphic Character Set Global Identifier	Enter the graphic character set global identifier. This value must specify a 2-byte hexadecimal number (for example, 0479). Valid values: A 4-digit hexadecimal value from 0000 through FFFF.
Code Page Global Identifier	Enter the code page global identifier. This value must specify a 2-byte hexadecimal number (for example, 0169). Valid values: A 4-digit hexadecimal value from 0000 through FFFF.
Code Page Name	Enter the 8-character IBM code page name. The name must begin with the letter “T” (for example, T1000361).

NOTE: If you update or delete an entry using this option and later run any of XPAF’s IBM font table update options, the original entry that you updated or deleted may be recreated or changed in the CPGID table. This will occur because the values in your IBM font library will override any value in the CPGID table.

FGID table

To access the FGID table, enter **6** on the Maintain Font Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                Maintain the Font Global Identifier (FGID) Table

COMMAND ===>

* On COMMAND line, enter 'B' to browse, 'U' to create or update, or
  'D' to delete.

  Font Global Identifier:

   Space Character Width:

      Character Set Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

B Browse an entry. You also must enter values in the ‘Font Global Identifier’ and the ‘Space Character Width’ fields to browse an entry.

U Create or update an entry. You also must enter values in all three fields to create or update an entry.

D Delete an entry. You also must enter values in the ‘Font Global Identifier’ and the ‘Space Character Width’ fields to delete an entry.

NOTE: The default option is B (browse).

Depending on the value you selected, complete these fields and press **ENTER**:

Field	Action
Font Global Identifier	Enter the font global identifier. This value must specify a 2-byte hexadecimal number (for example, 0904). Valid values: A 4-digit hexadecimal value from 0000 through FFFF.
Space Character Width	Enter the width of the space character. This value must specify a 2-byte hexadecimal number (for example, 0028). The value should match the nominal horizontal font size specified for the character set in the font descriptor record in your IBM font library. Valid values: A 4-digit hexadecimal value from 0000 through FFFF.
Character Set Name	Enter the 8-character name of the IBM character set. The name must begin with the letter “C” (for example, C0N20060).

NOTE: If you update or delete an entry using this option and later run any of XPAF’s IBM font table update options, the original information you updated or the entry you deleted may be recreated or changed in the FGID table. This will occur because the values in your IBM font library will override any value in the FGID table.

Updating IBM font characteristics information

Use this option to submit a batch job that creates entries to the font tables containing IBM font information required by XPAF. The batch job creates entries for these font tables:

- CPGID
- FGID
- XPAFCFN
- XPAFEFW
- XPAFE2A
- XPAFIFW
- XPAFIFW3

The font tables are built by RJOB105 during resource installation. Use this option to rebuild the tables if you change the code page assigned to a font or if you add new IBM fonts.

Submit a job for each library included in the IBM font library concatenation in your XOSF start-up proc. Execute the jobs in the reverse order of the library concatenation (that is, the first library included must be the last converted). Because the table entries created by this option replace any duplicate entries already present in the font tables, this procedure ensures that the table entries created for the first library in your concatenation are not overwritten.

Using this option

To update IBM font characteristics information, enter **3** on the Manage Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                  Update IBM Font Characteristics Information

COMMAND ===>

  IBM FONT LIBRARY
    Dataset Name:

  DATASET PREFIX
       XPFLOAD Library:
       XINPARM Library:
    Font Table Library:

  JOB CARD INFORMATION
  ===> //JOBNAME JOB (ACCOUNT),'NAME',CLASS= ,MSGCLASS=
  ===> //*
  ===> //*
  ===> //*
```

Complete these fields:

Field	Action
IBM FONT LIBRARY **Dataset Name**	Enter the name of the IBM font library dataset, including the high-level qualifier. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the IBMFONTDD initialization parameter. Be sure to enclose the dataset name in single quotation marks.
DATASET PREFIX **XPFLOAD Library**	Enter the high-level and mid-level qualifiers for your system load library.
XINPARM Library	Enter the high-level and mid-level qualifiers (if different from XPFLOAD) for the library containing your initialization parameters.
Font Table Library	Enter the high-level and mid-level qualifiers (if different from XPFLOAD) for the library in which the font tables are stored. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the FNTTBLDD initialization parameter.
JOB CARD INFORMATION	Enter site-specific job card information.

Press **ENTER**, and this panel appears:

```
                    Xerox Output Administrative Facility
                    Update IBM Font Characteristics Information

OPTION ===>

  C.  Cancel JCL

  E.  Edit JCL

  K.  Keep JCL

  S.  Submit JCL
```

Select the option you want to perform and press **ENTER**. Valid values are:

C Cancels the generated JCL and returns to the initial Update IBM Font Characteristics panel.

E Displays the generated JCL for editing purposes.

K Keeps the generated JCL in a sequential dataset. After you save the JCL, you can access this dataset and submit the job without regenerating the JCL each time.

S Submits the JCL. Standard TSO/ISPF JCL submission error or confirmation messages are displayed.

NOTE: You cannot use the END command or the PF3 key to exit this panel. If you want to return to the previous panel and do not want to display, submit, or keep the JCL, you must enter **C** on the COMMAND line and press **ENTER**.

Editing the JCL

If you enter E in the OPTION line on the JCL options panel, a panel containing JCL similar to this appears:

```
// job-name JOB job-information
//*
//*************************************************************/
//*  CREATE IBM FONT CHARACTERISTICS - XOAJ0360               */
//*************************************************************/
//*
//S1 EXEC  PGM=XOASUP00,REGION=8192K,PARM=userid
//STEPLIB   DD  DISP=SHR,
//       DSN=prefix.XPFLOAD
//SYSPRINT  DD  SYSOUT=X
//TABLELIB  DD  DISP=SHR,
//       DSN=prefix.font-table-library-name
//XINPARM   DD  DISP=SHR,
//       DSN=prefix.XINPARM
//XOAPRINT  DD  SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//XOAIN     DD  *
CONVERT IBM('ibm-font-library-dataset-name')
/*
```

You can edit and save the JCL and cancel or submit the job by using standard TSO/ISPF commands.

Keeping the JCL

If you enter K in the OPTION line on the JCL options panel, this panel appears:

```
                    Xerox Output Administrative Facility
                 Update IBM Font Characteristics Information

COMMAND ===>

* To keep the JCL, enter a new sequential dataset name.

  Dataset Name:
```

Complete this field and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the sequential dataset that is not currently cataloged. This is the dataset in which your JCL will be stored.

To return to the previous panel, enter **END** and press **ENTER**.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Update IBM Font Characteristics Information option:

CONVERT IBM('*ibm-font-library-dataset-name*')

Deleting a font table or table entry

You can use this option to delete any of the XPAF font tables listed below. You also can use this option to delete entries that are used by XPAF within these tables.

- CPGID
- FGID
- XPAFAFW
- XPAFA2A
- XPAFCFN
- XPAFEFW
- XPAFE2A
- XPAFFFI
- XPAFIFW
- XPAFIFW3
- XPAFI2X
- XPAFXFI
- Character mapping tables you have created

CAUTION: Do not delete any XPAF-generated tables without a thorough understanding of their use or without providing a replacement table, if appropriate. For example, the XPAFEFW and XPAFE2A tables that are distributed with XPAF contain information which is required for successful processing of page-formatted documents. Therefore, these tables must not be deleted.

Deleting a font table

To delete a font table, enter **4** on the Manage Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Delete a Font Table or Table Entry

COMMAND ===>

* On COMMAND line, enter '1' to delete a table or '2' to delete a table entry.

  Dataset Name:

    Table Name:
```

Enter **1** on the COMMAND line to delete a table. Then complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the dataset containing the tables to be processed. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the FNTTBLDD initialization parameter.
Table Name	Enter the name of the table you are deleting. Select a table name from this list or enter the name of a character mapping table: CPGID FGID XPAFAFW XPAFA2A XPAFCFN XPAFEFW XPAFE2A XPAFFFI XPAFIFW XPAFIFW3 XPAFI2X XPAFXFI

NOTE: If you delete an entry in the CPGID or FGID tables using this option and later run any of XPAF's IBM font table update options, the entry you deleted may be recreated in the table. This will occur because the values in your IBM font library will override any value in the CPGID or FGID tables.

Deleting a table entry

To delete a font table entry, enter **4** at the Maintain XPAF Tables menu OPTION line and press **ENTER**. The Delete a Font Table or Table Entry panel (already shown) appears.

Enter **2** on the COMMAND line to delete a table entry. Then complete these fields:

Field	Action
Dataset Name	Enter the name of the dataset containing the tables to be processed. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the FNTTBLDD initialization parameter.
Table Name	Enter the name of the table from which you want to delete an entry. Select a table name from this list or enter the name of a character mapping table: CPGID FGID XPAFAFW XPAFA2A XPAFCFN XPAFEFW XPAFE2A XPAFFFI XPAFIFW XPAFIFW3 XPAFI2X XPAFXFI

After you complete your entries, press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                          Delete a Table Entry

COMMAND ===>

* Next to name, enter 'D' to delete an entry.

  FFMT01                                    FFMT02
  FFMT03                                    FFMT04
  FFMT10                                    FFMT11
  FORMSL                                    FORMSP
  FRMS7L                                    FRMS7P
  L00TPA                                    L00TPB
  L00TPC                                    L01BOA
```

Tab to the table entry you want to delete and enter **D** to the left of the entry. Press **ENTER**. The system deletes the entry from the table and displays

* DELETED *

to the right of the entry.

Maintaining color cross-reference tables

To create, delete, or update color cross-reference tables, enter **5** on the Manage Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Maintain Color Cross-Reference Tables

COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a table.

  Dataset Name:

    Table Name:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

- C Create a new color cross-reference table.
- D Delete an existing color cross-reference table.
- U Update an existing color cross-reference table.

Then complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the native library where the color cross-reference table is or will be stored. This is the dataset name referenced by the INKXLIB initialization or printer profile parameter, or extended JCL keyword.
Table Name	Enter the 1- to 8-character name of the table you are creating or updating. This is the table name referenced by the INKXREF initialization or printer profile parameter, or extended JCL keyword.

Creating/Updating a color cross-reference table

If you enter C (create) or U (update) on the COMMAND line of the Maintain Color Cross-Reference Tables panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                        Creating Table - COLOR

COMMAND ===>                                          SCROLL ===>

* On COMMAND line, enter 'A' to add an entry.
* Next to “Set“ field, enter 'U' to update an entry, then overtype value
  in “To“ field.
* Next to “Set“ field, enter 'D' to delete an entry.

Set: BLACK
 To: BLACK

Set: BLUE
 To: BLUE

Set: BROWN
 To: BROWN

Set: GREEN
 To: GREEN

Set: PINK
 To: PINK
```

If you are creating a new table, the title reads “Creating Table - NAME”. If you are updating an existing table, the title reads “Updating Table - NAME”. In either case, NAME is the table name you specified on the previous panel. For example, in the sample panel, a cross-reference table named COLOR is being created.

Use this panel to add, update, or delete color cross-references within the table.

- If you are creating a new table, the default values are displayed in the ‘Set’ and ‘To’ fields, as shown in the sample panel.
- If you are updating a table, the previously established cross-references are displayed.

You can page forward or backward using standard scroll commands.

Adding a new color cross-reference entry

To add a new color cross-reference entry to the table, enter **A** on the COMMAND line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                         Updating Table - COLOR

COMMAND ===>

Set:
 To:

Set:
 To:

Set:
 To:

Set:
 To:

Set:
 To:
```

Add the new color cross-reference entries to the table. You can page forward or backward using standard scroll commands.

Complete these fields:

Field	Action
Set	Enter the ink color that you want to change.
To	Enter the Xerox color to which you are cross-referencing the color named in the 'Set' field. For example: Set: CAT.NEW PALETTE.ORANGE To: CAT2.OLD PALETTE.LIGHT PINK

After you complete your entries, press **ENTER**. XOAF returns to the Updating Table panel. The new entries are displayed at the beginning of the table. The next time you update the table, all of the entries will be displayed in alphabetic order.

Updating a color cross-reference entry

To update a color cross-reference entry in the table, enter **U** to the left of the 'Set' field, type the new name over the existing color cross-reference name in the 'To' field, and press **ENTER**.

Use these fields on the panel:

Field	Action
Set	Displays the color that you want to change.
To	Enter the Xerox color to which you are cross-referencing the color named in the 'Set' field. This must be a color name that exists in your printer ISL. The color cross-reference name can be specified in this format: *inkcat.palette.color* where *inkcat* Name of the ink catalog defined in the printer ISL. This name, which is optional, can be up to 6 characters long. *palette* Name of a palette defined in the ink catalog. This name, which also is optional, can be up to 32 characters long. *color* Name of the color within the palette. This name can be up to 32 characters long. For example, PROD.SOLID.RED refers to the red ink in the solid palette in the catalog named PROD.

Deleting a color cross-reference entry

To delete a color cross-reference entry from the table, enter **D** to the left of the 'Set' field for the color cross-reference entry you want to delete and press **ENTER**. No additional panels are displayed.

Deleting a color cross-reference table

To delete a color cross-reference table, enter **D** on the COMMAND line on the Maintain Color Cross-Reference Tables panel. Then enter the name of the library in which the table resides and the table name. Press **ENTER**.

XOAF displays a message indicating whether the table was deleted. No additional panels are displayed.

Maintaining the color conversion table

To modify the default color conversion table to add custom colors, follow this procedure:

Step 1. Make a copy of the default table. The default color conversion table, named COLR4700, is provided with XPAF and is stored in XPFSAMP.

Step 2. Edit the new PDS member.

Step 3. Load the edited color conversion table using either of these methods:

- Use the Maintain the Color Conversion Table option on the Manage Tables menu. Refer to the next section, "Using this option," for detailed information about how to use the Maintain the Color Conversion Table option.
- Use the LOAD INKS TSO/batch command. Refer to "TSO/Batch command" later in this chapter for the format for this command.

Using this option

To load the color conversion table, enter **6** on the Manage Tables menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Maintain the Color Conversion Table

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS where the color conversion table is stored. The recommended dataset specifications are: RECFM=FB LRECL=80 BLKSIZE=A value appropriate to your site
Member Name	Enter the 1- to 8-character name of the member in which the color conversion table resides.
OUTPUT **Dataset Name**	Enter the name of the native library to which the color conversion table is being loaded. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the INKXLIB initialization parameter or printer profile parameter.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Maintain the Color Conversion Table option:

LOAD INKS('*input-dataset-name*(*member-name*)')

[TO]('*output-dataset-name*')

Color conversion table loader report

The color conversion table loader automatically generates a report that shows the ISL source as it is read from the PDS member. Figure 24-1 shows a sample report.

The report is written to a dataset with the DD name UJLLIST, included in the XOAF logon proc and XOAF batch JCL. As shown in the following examples, you can specify a dataset name in place of SYSOUT.

```
//XOAFBAT   PROC   CORE=4096K,USER=
//XOAF      EXEC   PGM=XOASUP00,REGION=&CORE,PARM=(&USER)
                     .
            additional DD statements
                     .
//UJLLIST   DD   SYSOUT=*,DCB=(RECFM=FBA,LRECL=133,BLKSIZE=1330)
//XOAIN     DD    DDNAME=SYSIN
```

```
//XOAFBAT   PROC   CORE=4096K,USER=
//XOAF      EXEC   PGM=XOASUP00,REGION=&CORE,PARM=(&USER)
                     .
                   additional DD statements
                     .
//UJLLIST   DD     DSN=prefix.UJLLIST,DISP=SHR
//XOAIN     DD     DDNAME=SYSIN
```

If you specify a dataset name in the XOAF logon proc or batch JCL, you must preallocate a sequential dataset with these specifications:

RECFM=FBA
LRECL=133
BLKSIZE=1330

Figure 24-1. Sample color conversion table loader report

```
                        XEROX COLOR CONVERSION TABLE LOADER REPORT         PAGE   1
   INPUT-DSN=XPAF30.XPFSAMP                                INPUT-MEMBER=COLR4700
  OUTPUT-DSN=XPAF30.TABLELIB
OUTPUT-TABLE=COLOR-CONV-4850-4700

 /* BLACKS */
'K0'                   : COLOR GRAY=0;
'WHITE'                : COLOR GRAY=0;
'K1'                   : COLOR GRAY=0.06666;
'K3'                   : COLOR GRAY=0.13333;
'K9'                   : COLOR GRAY=0.20000;
'EXTREMELY LIGHT GRAY': COLOR GRAY=0.20000;
'K15'                  : COLOR GRAY=0.26666;
'K23'                  : COLOR GRAY=0.33333;
'DARK GRAY'            : COLOR GRAY=0.80000;
'K95'                  : COLOR GRAY=0.86666;
'VERY DARK GRAY'       : COLOR GRAY=0.86666;
'K98'                  : COLOR GRAY=0.93333;
'K100'                 : COLOR GRAY=1.00000;
'BLACK'                : COLOR GRAY=1.00000;

 /* CYAN */
'CYAN'                 : COLOR RGB=(-0.1458,0.3090,0.7985);
'TURQ'                 : COLOR RGB=(-0.1500,0.4450,0.7880);
'TURQUOISE'            : COLOR RGB=(-0.1500,0.4450,0.7880);

 /* MAGENTA */
'MAGENTA'              : COLOR RGB=(0.83266,-0.039,0.4142);
'PINK'                 : COLOR RGB=(0.83266,-0.039,0.4142);

 /* OTHERS */
'BROWN'                : COLOR RGB=(0.30000,0.0600,0.0170);
'YELLOW'               : COLOR RGB=(1.05570,0.8865,-0.083);
'MUSTARD'              : COLOR RGB=(1.02000,0.7200,0.1600);
'ORANGE'               : COLOR RGB=(0.95010,0.2511,0.0048);
'PURPLE'               : COLOR RGB=(0.18000,-0.030,0.3940);

 /* BLUES */
'B1K96'                : COLOR RGB=(0.07480,0.0779,0.0818);
'B2K20'                : COLOR RGB=(0.78521,0.7972,0.8006);
'B2K93'                : COLOR RGB=(0.08348,0.0922,0.1002);
'B3K75'                : COLOR RGB=(0.23677,0.2502,0.2625);
END;
UIL0701I COLOR CONVERSION TABLE LOADER COMPLETED SUCCESSFULLY
```

25. Managing custom fonts

This chapter describes how to make custom Xerox or custom replica fonts (that is, fonts which were purchased from Xerox or a third-party vendor) available to XPAF.

Using custom Xerox fonts

Before using Xerox fonts that were not provided with XPAF, you must use various XOAF options to load the fonts and update the appropriate XPAF font tables. To print documents prepared for a centralized printer on a decentralized or PCL-capable printer or converted to PDF, you must load both centralized and decentralized versions of the font to native libraries.

Follow this procedure to load custom Xerox fonts to native libraries.

Step 1. Offload your existing font tables so that you have a backup. Refer to chapter 27, "Managing XPAF libraries," for instructions about offloading members of a library.

Step 2. Upload the fonts to a PDS or sequential dataset on the host. The dataset can contain either centralized fonts or decentralized fonts; you cannot store both types of fonts in the same dataset. Refer to *Section Two: Installing and Customizing XPAF* for instructions about uploading datasets.

Step 3. Load the fonts from the PDS or sequential dataset to the native font library using either the Load Centralized Fonts option or Load Decentralized Fonts option on the Load Resources menu or the LOAD FONT TSO/batch command.

When loading centralized fonts, the system automatically generates entries to the XPAFXFI table; when loading decentralized fonts, you optionally specify whether entries are generated to this table.

You can view and update the XPAFXFI table using the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu. Refer to chapter 24, "Managing XPAF tables," for information about how to use this option.

Step 4. Create character mapping tables for each of the following using the Maintain Character Mapping Tables option on the Maintain Font Tables menu:

- Centralized mapping which contains the character IDs and the ASCII mapping values for the centralized font.
- Decentralized mapping which contains the character IDs, plane numbers, and the ASCII mapping values for the decentralized font.
- Code page that contains the character IDs and the EBCDIC mapping values. This table defines the characters that are available in the font.

Be sure to use the same name for these tables that you used when you loaded the font to the native font library.

Step 5. Update the XPAFXFI table with information for the font using the Maintain the Xerox Font Information (XPAFXFI) Table option on the Maintain Font Tables menu. If the decentralized font name is different from the centralized font name, enter the name in the 'Decentralized Font Name' field. You also can set up a different logical font name that allows you to use the same font with a different code page.

Step 6. If you do not have a decentralized version of the font, but want to use that same font in documents printed on a decentralized or PCL-capable printer, convert the centralized font using either the Convert Centralized Fonts to Decentralized Fonts option on the Convert Resources menu or the CONVERT XFONT TSO/batch command.

Using custom replica fonts

Before using custom replica fonts (that is, replica fonts which were not provided with XPAF), you must use the options on the Manage Custom Replica Fonts menu to load the fonts and update the appropriate XPAF font tables.

Limitations and considerations

Review these limitations and considerations before adding custom replica fonts to your XPAF system.

IBM resources

You cannot use the Manage Custom Replica Fonts menu options to add Xerox fonts to XPAF to be used in the 240 dpi environment. You must have the necessary IBM character sets and associated code pages.

To add Xerox fonts for which corresponding IBM resources do not exist, refer to "Converting Xerox fonts to IBM format" in chapter 22, "Converting resources."

Font names

If you have acquired custom replica fonts from Xerox Font Services, a third-party vendor, or a software utility, use this naming convention:

CU*nnno*

where

CU*nnn*	A unique 5-character font name.
o	The orientation, either P, L, I, or J.

CAUTION: To avoid name conflicts with existing and future XPAF-provided fonts, use CU as the first two characters for all custom font names.

The 5-character font name limitation also applies to decentralized fonts. Even though decentralized fonts can have 20-character font names, you must adhere to this font naming convention because the XPAFAFW table is keyed from the first 5 characters of the font name.

Truncation of fractional differences

Before you load custom fonts to a native font library, ensure that the widths of the characters in the input dataset have been truncated rather than rounded. At print time, your documents will contain lateral positioning errors if the character widths are rounded.

When printing AFP documents, XPAF performs an error correction to compensate for font truncation. It calculates the accumulated loss due to truncation and adjusts for it by adding a pel as needed. Font rounding causes the current position to be greater than expected, leading to placement problems.

If you did not acquire your fonts from Xerox Font Services, check with your typestroke vendor to verify that the fonts they generate are truncated.

Orientation

To use all four IBM orientations, you must create a separate font for each orientation (landscape, portrait, inverse landscape, and inverse portrait).

Split fonts (version 5 encoding or below only)

Before you can load a custom font to XPAF, you must create a replica font using ISO8859-1 mapping. ISO8859-1 mapping limits character data to 64K. Therefore, 18-point or larger fonts must be split over several planes. For example, to add a 36-point font, you might use 3 planes (10, 20, and 30, where 1, 2, and 3 represent the split planes within plane 0).

If you add a new typeface that uses an existing character name, you must adopt the split convention. If you add a character set that contains only new characters, you do not need to use the split convention. When creating the XPAFI2X table entry using the Maintain the IBM-to-Xerox (XPAFI2X) Table option on the Install Custom Replica Fonts menu, use your own mapping convention and specify a point size of zero (P00). The point size value is used only to determine whether to use the split convention.

Font widths (version 5 encoding or below only)

To use both centralized and decentralized fonts, you must be aware of how the XPAFAFW table is generated and how it is used. This table contains information from the font header that XPAF requires to correctly position characters on the page. For example, XPAF requires the left and right kerning values of the font to align italic fonts correctly.

When you load a centralized custom font, an XPAFAFW table entry is automatically generated, and both left and right kerning values are available. When you load a decentralized custom font, you can optionally generate an XPAFAFW table entry.

NOTE: For both centralized and decentralized custom replica fonts using version 5 encoding and below, the orientation specified by the last character of the font name must match the orientation specified by the ‘Orientation’ field in the Load Custom Replica Fonts option. Otherwise, an XPAFAFW table entry will not be generated.

If you do not generate an XPAFAFW table entry, only the right kerning value is available. XPAF requires both kerning values. To provide XPAF with the required left and right kerning values, load a centralized version of each custom replica font.

To produce a decentralized version of the font, use either the Convert Centralized Fonts to Decentralized Fonts option on the Convert Resources menu or the CONVERT XFONT TSO/batch command.

Selecting custom font support

To access the Manage Custom Replica Fonts menu, enter **5** on the System Services menu OPTION line and press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                    Manage Custom Replica Fonts

OPTION ===>

  1.  Install Custom Replica Fonts (version 5 encoding or below)

  2.  Install Custom Replica Fonts (version 6 encoding or above)
```

Select the option you want to perform and press **ENTER**:

- Enter **1** to load custom replica fonts using version 5 encoding or below from a PDS or sequential dataset to a native library.
- Enter **2** to load custom replica fonts using version 6 encoding or above from a PDS or sequential dataset to a native library.

Installing custom replica fonts (version 5 encoding or below)

Select option **1** on the Manage Custom Replica Fonts menu if you are installing custom replica fonts using version 5 encoding or below. Press **ENTER**. This menu appears:

```
                    Xerox Output Administrative Facility
                Install Custom Replica Fonts (version 5 encoding or below)

OPTION ===>

  1.  Load Custom Replica Fonts

  2.  Update the IPSTND Table (optional)

  3.  Update the IBM-to-Xerox (XPAFI2X) Table (optional)

  4.  Update IBM Font Characteristics Information
```

Use this menu to load the font to XPAF as you perform the following steps:

NOTE: For each font you load, you must have these two corresponding AFP resources:

Appropriate character sets (C0xxxxxx)

Associated code pages (T1xxxxxx)

Step 1. Obtain the replica font from Xerox Font Services or a third-party vendor. This step is required to generate a custom replica of the IBM font you want to use.

Step 2. Upload the font from the delivery file into a PDS or a sequential dataset. This dataset can contain either centralized fonts or decentralized fonts. Refer to *Section Two: Installing and Customizing XPAF* for information about uploading datasets.

NOTE: You cannot store both types of fonts in the same dataset.

Step 3. Use the Load Custom Replica Fonts option on the Install Custom Replica Fonts menu or the LOAD FONT TSO/batch command to load the font to XPAF from a PDS or a sequential dataset into the appropriate native font library. During the load process, an entry is made in the XPAFAFW table to provide XPAF with font metrics information.

Step 4. Use the Update the IPSTND Table option on the Install Custom Replica Fonts menu to update the IPSTND table. The IPSTND table provided with XPAF contains the character identifiers that are supported by XPAF.

If the font you are loading contains characters that are not included in the standard IPSTND table, add the new characters to the table using this option. This table reflects your site's variance from ISO8859-1.

To help prevent the possibility of corrupting existing font information, you cannot update entries for the XPAF-supported character identifiers.

Step 5. Use the Update the IBM-to-Xerox (XPAFI2X) option on the Install Custom Replica Fonts menu to update the XPAFI2X table. This table links an IBM font character set name to the corresponding custom replica font name(s). This step is required only if you are adding a new character set or modifying an existing replica font.

Step 6. Use the either the Update IBM Font Characteristics Information option on the Install Custom Replica Fonts menu or the CONVERT IBM TSO/batch command to create IBM font characteristics for the custom replica font. This step submits a batch job that generates entries for the IBM fonts to these XPAF tables:

- CPGID
- FGID
- XPAFCFN
- XPAFEFW
- XPAFIFW3
- XPAFE2A
- XPAFIFW

Loading custom replica fonts

To load custom replica fonts to a native library, enter **1** on the Install Custom Replica Fonts menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Load Custom Replica Fonts

COMMAND ===>

  Processing Mode (BG/FG):

  INPUT
    Dataset Name:
     Member Name:

  INPUT SPECIFICATIONS
                         Orientation (P/L/I/J):
    Centralized or Decentralized Fonts (C/D):

  OUTPUT
    Dataset Name:

  OUTPUT SPECIFICATIONS
    Create XPAFAFW Table Entry? (Y/N):
```

Complete these fields and press **ENTER**:

Field	Action
Processing Mode	Specify the processing mode in which to load fonts. Valid values: BG Loads the fonts in batch mode. The Load Custom Replica Fonts batch job panel appears. FG Load the fonts in foreground. ***NOTE:*** Loading a large number of fonts may take a significant amount of time.
INPUT **Dataset Name**	Enter the name of the PDS or sequential dataset that contains the fonts to be loaded. This dataset must contain either centralized fonts or decentralized fonts; you cannot mix font types in the same dataset. If you have multiple fonts concatenated in a single file, they must be loaded from a sequential dataset with valid headers. The dataset specifications are: Centralized: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site Decentralized: RECFM=F or FB LRECL=80 BLKSIZE=A value appropriate for your site
Member Name	• Enter the 1- to 8-character member name if the font is stored in a PDS. • Enter an asterisk (*) to load all fonts in a PDS. • Leave this field blank if the font is stored in a sequential dataset.
INPUT SPECIFICATIONS **Orientation**	Enter the font orientation. If the orientation specified by the last character of the font name does not match the value for this field, an XPAFAFW table entry will not be generated. Valid values: P Portrait L Landscape I Inverse portrait J Inverse landscape Default: L
Centralized or Decentralized Fonts?	Specify the type of fonts to be loaded. Valid values: C Loads centralized fonts. D Loads decentralized fonts.

Field	Action
OUTPUT **Dataset Name**	Enter the name of the native centralized or decentralized font library to which the fonts will be loaded. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the CFONTLIB or DFONTLIB initialization parameter or the FONTLIB printer profile parameter.
OUTPUT SPECIFICATIONS **Create XPAFAFW Table Entry?**	If you are loading a decentralized font, indicate whether you want to generate entries to the XPAFAFW table. If you are loading a centralized font, an XPAFAFW table entry automatically will be generated; any entry in this field will be ignored. Valid values: Y Generates entries to the XPAFAFW table. Enter this value if you are not loading the equivalent centralized version of this font. N Does not generate entries to the XPAFAFW table. Enter this value if you have loaded or intend to load the equivalent centralized version of this font.

Using background mode

When you load fonts in background mode, this panel appears:

```
                    Xerox Output Administrative Facility
                    Load Custom Replica Fonts

COMMAND ===>

  DATASET PREFIX
       XPFLOAD Library:
       XINPARM Library:
    Font Table Library:

  JOB CARD INFORMATION
  ===> //JOBNAME JOB (ACCOUNT),'NAME' ,CLASS= ,MSGCLASS=
  ===> //*
  ===> //*
  ===> //*
```

Complete these fields:

Field	Action
DATASET PREFIX **XPFLOAD Library**	Enter the high-level and mid-level qualifiers for your system load library.
XINPARM Library	Enter the high-level and mid-level qualifiers (if different from XPFLOAD) for the library containing your initialization parameters.
Font Table Library	Enter the high-level and mid-level qualifiers (if different from XPFLOAD) for the library in which the font tables are stored. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the FNTTBLDD initialization parameter.
JOB CARD INFORMATION	Enter site-specific job card information.

Press **ENTER**, and this panel appears:

```
                    Xerox Output Administrative Facility
                    Load Custom Replica Fonts

OPTION ===>

  C.  Cancel JCL

  E.  Edit JCL

  K.  Keep JCL

  S.  Submit JCL
```

Select the option you want to perform and press **ENTER**. Valid values are:

C Cancels the generated JCL and returns to the initial Load Custom Fonts to a Native Library panel.

E Displays the generated JCL for editing purposes.

K Keeps the generated JCL in a sequential dataset. After you save the JCL, you can access this dataset and submit the job without regenerating the JCL each time.

S Submits the JCL. Standard TSO/ISPF JCL submission error or confirmation messages are displayed.

NOTE: You cannot use the END command or the PF3 key to exit this panel. If you want to return to the previous panel and do not want to display, submit, or keep the JCL, you must enter **C** on the COMMAND line and press **ENTER**.

Editing the JCL

If you enter E in the OPTION line on the JCL options panel, a panel containing JCL similar to this appears:

```
//job-name JOB job-information
//*
//*
//************************************************************/
//*  CUSTOM REPLICA FONT LOADER  -  XOAJ0381                 */
//************************************************************/
//*
//S1 EXEC  PGM=XOASUP00,REGION=8192K,PARM=userid
//STEPLIB   DD  DISP=SHR,
//       DSN=prefix.XPFLOAD
//SYSPRINT  DD  SYSOUT=X
//TABLELIB  DD  DISP=SHR,
//       DSN=prefix.font-table-library-name
//XINPARM   DD  DISP=SHR,
//       DSN=prefix.XINPARM
//XOAPRINT  DD  SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//XOAIN     DD  *
LOA FONT('prefix.input-dataset-name') ('prefix.output-dataset-name')
   TYPE(type) ORIEN(orientation)
/*
```

You can edit and save the JCL and cancel or submit the job using standard TSO/ISPF commands.

Keeping the JCL

If you enter K in the OPTION line on the JCL options panel, this panel appears:

```
                    Xerox Output Administrative Facility
                    Load Custom Replica Fonts

COMMAND ===>

* To keep the JCL, enter a new sequential dataset name.

  Dataset Name:
```

Complete this field and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the sequential dataset that is not currently cataloged. This is the dataset in which your JCL will be stored.

To return to the previous panel, enter **END** and press **ENTER**.

TSO/Batch command

You can use this TSO/batch command as an alternative to the Load Custom Replica Fonts option:

LOAD FONT('*input-dataset-name*[({ *member-name* | * })]')

[TO]('*output-dataset-name*') TYPE({ REPL | 270R }) ORIEN({ P | L | I | J })

NOTE: Specify one of these options for TYPE:

- REPL (for centralized replica fonts)
- 270R (for decentralized replica fonts, create an ASCII font widths table entry)

Updating the IPSTND table (optional)

The IPSTND table shipped with XPAF contains the standard character set supported by XPAF. If the fonts you are loading include new characters that are not currently contained in the existing ISO8859-1 character set supported by XPAF, you must add them to the IPSTND table. If the new fonts do not contain new characters, you do not need to perform this step.

You can add or update custom replica font entries in this table. You cannot update the entries for the XPAF-provided replica fonts. This limitation reduces the possibility of corrupting existing font entries.

Using this option

To update the IPSTND table, enter **2** on the Install Custom Replica Fonts menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                         Update the IPSTND Table

COMMAND ===>

* On COMMAND line, enter 'U' to create or update an entry, or 'D' to
  delete an existing entry.
* Leave COMMAND line blank to view an existing entry.

  Character ID:

  Plane Number:

   ASCII Value:
```

On the COMMAND line, specify the function you want to perform. Valid values are:

U	Create or update a table entry. You also must enter values in all three fields to create or update an entry.
D	Delete a table entry. You also must enter values in all three fields to delete an entry.
blank	Display an existing table entry. You also must enter a value in the ‘Character ID’ field to display an entry.

Then complete these fields and press **ENTER**:

Field	Action
Character ID	Enter the 8-character IBM identifier for the character you are displaying, creating, updating, or deleting.
Plane Number	Enter the number of the plane to which you are adding this character or where the character is stored. Valid values: A 2-character value between 0C and 0F. ***NOTE:*** Planes 00 through 0B are reserved for future character support; therefore, you must add your characters to planes 0C through 0F. This will ensure that added characters will not be overwritten as new support is added to the XPAF-supplied default table.
ASCII Value	Enter the 2-digit hexadecimal ASCII code that represents the character's position in the plane defined above.

Updating the XPAFI2X table (optional)

If you are loading a character set that is completely new to XPAF, you must update the XPAFI2X table. The XPAFI2X table provides a link between the IBM font character set name and its corresponding replica font(s).

You can add or update entries for the custom replica fonts in the XPAFI2X table. After an entry is made, XPAF verifies that the specified fonts associated with the new character set have been loaded into the appropriate font library. You cannot update the entries for the XPAF-provided replica fonts.

Using this option

To update the XPAFI2X table, enter **3** on the Install Custom Replica Fonts menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Update the IBM-to-Xerox (XPAFI2X) Table

COMMAND ===>

* On COMMAND line, enter 'C' to create an entry, or 'D' to delete an
  existing entry.
* Leave COMMAND line blank to view an existing entry.

  Character Set Name:
```

You can add a new entry, update an entry, or delete an entry:

- To create a new entry, use one of two methods:
  - Enter **C** on the COMMAND line, a unique name in the ‘Character Set Name’ field, and press **ENTER**.
  - Leave the COMMAND line blank and, in the ‘Character Set Name’ field, enter the name of an existing character set that you want to use as a model for the new character set you are creating. Press **ENTER**.
- To delete an existing entry, enter **D** on the COMMAND line and the character set name in the ‘Character Set Name’ field. Press **ENTER**.
- To update an existing entry, enter the character set name in the ‘Character Set Name’ field and press **ENTER**. To display a list of members, leave this field and the COMMAND line blank, and press **ENTER**.

If you leave the ‘Character Set Name’ field blank, a member selection panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Selection List of Font Table Members

COMMAND ===>

* Next to name, enter 'S' to select a member.

  A055A0
  A055B0
  A055D0
  A055F0
  A055H0
  A055J0
```

To select a character set name from this list, tab to the field next to the character set name, enter **S**, and press **ENTER**.

When you enter a character set name on the Update the IBM-to-Xerox (XPAFI2X) Table panel or select a character set from the Selection List of Font Table Members panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Update the IBM-to-Xerox (XPAFI2X) Table

COMMAND ===>

* On COMMAND line, enter 'U' to create or update an entry.

  IBM Character Set Name: A055A0          Replica Font Point Size: P11

  NO.   FONT NAME         PLANE           NO.     FONT NAME      PLANE
   1    XAR80             00              11
   2    XAR81             01              12
   3    XAR82             02              13
   4    XAR83             03              14
   5    XAR84             04              15
   6                                      16
   7                                      17
   8                                      18
   9                                      19
  10                                      20
```

If you are creating a new table, the panel is blank with the exception of the IBM character set name. If you are displaying an existing table, the information for the character set is displayed.

- To update the table, enter **U** in the COMMAND line and type over the existing entries with the new information. Do not change the IBM character set name.
- To create a new table from an existing one, first type over the existing entries with the new information. Then enter **U** in the COMMAND line and a new name in the 'IBM Character Set Name' field.

Complete these fields and press **ENTER**:

Field/Column	Action
IBM Character Set Name	Enter the name of the IBM character set you are updating. This is the name of the IBM font as found in the IBM system font library, excluding the C*n* prefix.
Replica Font Point Size	Enter the point size of the custom replica font in the format P*nn*, where *nn* is the point size. For a character set that has only new characters, use a point size of zero (P00).
FONT NAME	Enter the 1- to 5-character name of the custom replica font. Do not include a suffix to indicate the font orientation. You can enter up to 20 replica fonts for a single IBM character set name.
PLANE	Enter a 2-character value specifying the plane where the custom replica font is stored. The first character represents the split plane to which split fonts are loaded. The second character identifies the plane. For example, to add a custom replica font to plane C, enter 0C. If you are not entering a split plane font, the first character must be a zero. ***NOTE:*** Planes 00 through 4B are reserved for Xerox use.

Updating IBM font characteristics information

Use this option to submit a batch job that creates entries to the font tables containing IBM font information required by XPAF. The batch job creates entries for these font tables:

- CPGID
- FGID
- XPAFCFN
- XPAFEFW
- XPAFE2A
- XPAFIFW
- XPAFIFW3

The font tables are built by RJOB105 during resource installation. Use this option to rebuild the tables if you change the code page assigned to a font or if you add new IBM fonts.

Submit a job for each library included in the IBM font library concatenation in your XOSF start-up proc. Execute the jobs in the reverse order of the library concatenation (that is, the first library included must be the last converted). Because the table entries created by this option replace any duplicate entries already present in the font tables, this procedure ensures that the table entries created for the first library in your concatenation are not overwritten.

Using this option

To update IBM font characteristics information in the appropriate font tables, enter **4** on the Install Custom Replica Fonts menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                  Update IBM Font Characteristics Information

COMMAND ===>

  IBM FONT LIBRARY
    Dataset Name:

  DATASET PREFIX
       XPFLOAD Library:
       XINPARM Library:
    Font Table Library:

  JOB CARD INFORMATION
  ===> //JOBNAME JOB (ACCOUNT),'NAME' ,CLASS= ,MSGCLASS=
  ===> //*
  ===> //*
  ===> //*
```

Complete these fields:

Field	Action
IBM FONT LIBRARY **Dataset Name**	Enter the name of the IBM font library dataset, including the high-level qualifier. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the IBMFONTDD initialization parameter. Be sure to enclose the dataset name in single quotation marks.
DATASET PREFIX **XPFLOAD Library**	Enter the high-level and mid-level qualifiers for your system load library.
XINPARM Library	Enter the high-level and mid-level qualifiers (if different from XPFLOAD) for the library containing your initialization parameters.

Field	Action
Font Table Library	Enter the high-level and mid-level qualifiers (if different from XPFLOAD) for the library in which the font tables are stored. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the FNTTBLDD initialization parameter.
JOB CARD INFORMATION	Enter site-specific job card information.

Press **ENTER**, and this panel appears:

```
                    Xerox Output Administrative Facility
                    Update IBM Font Characteristics Information

OPTION ===>

  C.  Cancel JCL

  E.  Edit JCL

  K.  Keep JCL

  S.  Submit JCL
```

Select the option you want to perform and press **ENTER**. Valid values are:

C Cancels the generated JCL and returns to the initial Update IBM Font Characteristics panel.

E Displays the generated JCL for editing purposes.

K Keeps the generated JCL in a sequential dataset. After you save the JCL, you can access this dataset and submit the job without regenerating the JCL each time.

S Submits the JCL. Standard TSO/ISPF JCL submission error or confirmation messages are displayed.

NOTE: You cannot use the END command or the PF3 key to exit this panel. If you want to return to the previous panel and do not want to display, submit, or keep the JCL, you must enter **C** on the COMMAND line and press **ENTER**.

Editing the JCL

If you enter E in the OPTION line on the JCL options panel, a panel containing JCL similar to this appears:

```
//job-name JOB job-information
//*
//*****************************************************************/
//*  CREATE IBM FONT CHARACTERISTICS - XOAJ0360                   */
//*****************************************************************/
//*
//S1 EXEC  PGM=XOASUP00,REGION=8192K,PARM=userid
//STEPLIB   DD  DISP=SHR,
//       DSN=prefix.XPFLOAD
//SYSPRINT  DD  SYSOUT=X
//TABLELIB  DD  DISP=SHR,
//       DSN=prefix.font-table-library-name
//XINPARM   DD  DISP=SHR,
//       DSN=prefix.XINPARM
//XOAPRINT  DD  SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//XOAIN     DD  *
CONVERT IBM('ibm-font-library-dataset-name')
/*
```

You can edit and save the JCL and cancel or submit the job by using standard TSO/ISPF commands.

Keeping the JCL

If you enter K in the OPTION line on the JCL options panel, this panel appears:

```
                    Xerox Output Administrative Facility
                    Update IBM Font Characteristics Information

COMMAND ===>

* To keep the JCL, enter a new sequential dataset name.

  Dataset Name:
```

Complete this field and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the sequential dataset that is not currently cataloged. This is the dataset in which your JCL will be stored.

To return to the previous panel, enter **END** and press **ENTER**.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Update IBM Font Characteristics Information option:

CONVERT IBM('*ibm-font-library-dataset-name*')

Example

This example illustrates the procedure for adding a custom replica font to XPAF. The example is based on these assumptions:

- X0MKSIG1 is the IBM coded font that you want to use with XPAF.
- X0MKSIG1 points to character set C0CSSIG1 and code page T1SIG1.
- C0CSSIG1 contains the raster patterns and related information that define two character s SIGMK001 and SIGMK002.
- T1SIG1 maps SIGMK001 and SIGMK002 to the EBCDIC code points X'C1' and X'C2'.
- X0MKSIG1 is currently used in DCF to add a signature to memos, as illustrated by these DCF commands in the DCF source:

```
.
.
.df sig1 font X0MKSIG1  [df = define font, define a font to DCF with a DCF name of SIG1]
.bf sig1           [bf = begin font, tells DCF to start using the font defined as SIG1]
AB                 ["A" = X'C1' and "B" = X'C2']
.pf                [pf = previous font, tells DCF to restore the previous font]
.
.
```

- The point size is 14.
- Four custom replica fonts are created, one for each rotation: CMKSGI, CMKSGJ, CMKSGL, and CMKSGP.

NOTE: The sixth character of the font name identifies the character rotation.

Follow this procedure to load this font:

Step 1. To use X0MKSIG1 with XPAF, first obtain a custom replica font that contains the new characters (SIGMK001 and SIGMK002). You can obtain a custom replica font from Xerox Font Services or a third-party vendor.

During font conversion, the two new characters (SIGMK001 and SIGMK002) are converted and placed in CMKSGI, CMKSGJ, CMKSGL, and CMKSGP in positions X'41' and X'42', respectively. It is your responsibility to instruct Xerox Font Services or the third-party vendor which positions to use for the new characters.

Step 2. After you receive the custom replica fonts from your vendor, you are ready to add them to XPAF. Begin by offloading the font table dataset so you have a backup.

Step 3. Upload the fonts to a PDS or a sequential dataset on the host. This dataset can contain either centralized fonts or decentralized fonts; you cannot store both types of fonts in the same dataset. This example assumes that CMKSGI, CMKSGJ, CMKSGL, and CMKSGP are centralized fonts.

Step 4. Use the Load Custom Replica Fonts option on the Install Custom Replica Fonts menu to load the fonts into the native centralized font library. This step generates an XPAFAFW table entry, which makes the custom replica fonts' characteristics available to XPAF.

You can browse the XPAFAFW table to ensure that the new entries have been correctly created.

Step 5. Use the Update the IPSTND Table option on the Install Custom Replica Fonts menu to add character mapping entries for the two new characters (SIGMK001 and SIGMK002). The sample shown here illustrates the type of entries you must make on this panel:

Character ID: SIGMK001

Plane Number: 0F

ASCII Value: 41

Step 6. Use the Update the IBM-to-Xerox (XPAFI2X) Table option on the Install Custom Replica Fonts menu to create an entry to indicate that CMKSG is related to IBM character set C0CSSIG1. The sample shown here illustrates the type of entries you must make on this panel:

IBM Character Set Name: CSSIG1 Replica Font Point Size: P14

NO.	FONT NAME	PLANE	NO.	FONT NAME	PLANE
1	CMKSG	0F	11		
2			12		

Omit the sixth character of the font name (the rotation).

Step 7. Use the Update IBM Font Characteristics Information option on the Install Custom Replica Fonts menu to generate and then submit the JCL to extract the necessary information from the IBM font library and create entries to these tables:

- CPGID
- FGID
- XPAFCFN
- XPAFEFW
- XPAFE2A
- XPAFIFW
- XPAFIFW3

After the job completes successfully, you can begin using font X0MKSIG1 in documents that are printed through XPAF.

Installing custom replica fonts (version 6 encoding or above)

Select option **2** on the Manage Custom Replica Fonts menu to install custom replica fonts using version 6 encoding or above. This option loads the specified fonts into the appropriate native font library and generates entries to these tables:

- CPGID
- FGID
- IPSTND
- XPAFAFW
- XPAFCFN
- XPAFEFW
- XPAFE2A
- XPAFIFW
- XPAFIFW3
- XPAFI2X

If you have already uploaded the fonts from file to a PDS or sequential dataset on the host, you can use this option to install your custom fonts from disk. Otherwise, you can use this option to install the fonts directly from file.

Custom replica font distribution file

Xerox Font Services distributes custom replica fonts (version 6 encoding or above) on a file containing these three files:

Table 25-1. Version 6 encoding or above file files for custom fonts

File	Function
File 1 (FNTFILE)	Contains the centralized or decentralized fonts to be installed.
File 2 (I2XFILE)	Identifies the IBM character set you are updating, the replica font(s) corresponding to the IBM character set, and the point size(s) of the custom replica font(s). The information in this file is used to update the XPAFI2X table.
File 3 (CD#FILE)	Identifies the character identifiers (CHARIDs) for this character set. The information in this file is used to update the IPSTND table if the font contains character identifiers that are not already in the table.

Font library space requirements

Before you use this option, use the following guidelines to determine the amount of space required in the native font libraries to load custom replica fonts successfully.

On average, centralized fonts require about four blocks of storage per font, and decentralized fonts require about five blocks of storage per font. However, a font can require as much as 18 blocks of storage.

To calculate the approximate space required for a font, multiply the file block size by the number of blocks in the font, then divide by the record size used to define the native font library. Increase the value by 15% to handle variations within the fonts. Add the final amount to the REC value in the JCL used to allocate the native library.

For example, if the decentralized font Z2Y8AP has a block size of 80, the decentralized font library is defined with a record size of 4089, and there are 107 blocks in the font, then:

80 x 107 = 8560

8560 / 4089 = 2.10

2.10 x .15 = 0.32

2.10 + 0.32 = 2.42, which rounds up to a value of 3

Therefore, you will need 3 free records in the decentralized font library dataset. Refer to *Section Two: Installing and Customizing XPAF* for more information on determining the size of and expanding native libraries.

Using this option

To install custom replica fonts (version 6 encoding or above), enter **2** on the Manage Custom Replica Fonts menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                Install Custom Replica Fonts (version 6 encoding or above)

COMMAND ===>

  Font Name(s):

  Centralized Font (Y/N):

  INSTALL INPUT FROM DISK
              Font Dataset Name:
    XPAFI2X Table Dataset Name:
    Character Map Dataset Name:

  INSTALL INPUT FROM file
    Storage Unit:
          VOLSER:

  OUTPUT
    Native Font Library Name:
        Message Dataset Name:
       IBM Font Library Name:
```

You must complete the ‘Font Name(s)’ and ‘Centralized Font’ fields whether you are installing your fonts from file or disk. Then complete either the section for disk or file, but not both.

- If you install your custom fonts from disk, enter the names of the font, XPAFI2X table, and character mapping datasets, and omit the unit and volume serial number.
- If you install your custom fonts from file, you must specify the unit and volume serial number for the file. Do not enter values for the font, XPAFI2X table, and character mapping datasets. XOAF will automatically locate the files on the file.

CAUTION: Depending on the number of fonts on your custom font distribution file, installing custom replica fonts using this option can be a lengthy process. While the fonts are being installed, you cannot print documents though XPAF. Therefore, you should schedule your custom font installation for a time when print jobs are not run.

Complete these fields:

Field	Action
Font Name(s)	Enter the name of the font(s) to be loaded. You can enter a specific font name in this field, or use a wildcard character to select all fonts or fonts beginning with a specified prefix. For example: * Selects all fonts. AF* Selects fonts beginning with AF. AF1?JP Selects fonts that begin with AF1, end with JP, and have one character between AF1 and JP. AF18JP Selects the single font AF18JP.
Centralized Font	Indicate whether you are loading centralized or decentralized fonts. Valid values: Y Loads centralized fonts. N Loads decentralized fonts. ***NOTE:*** If you are installing both centralized and decentralized versions of a custom replica font, you must install the decentralized version BEFORE the centralized version to ensure that the correct font widths information is made available to XPAF.
INSTALL INPUT FROM DISK **Font Dataset Name**	Enter the name of the PDS or sequential dataset that contains the fonts to be loaded. This dataset must contain either centralized fonts or decentralized fonts; you cannot mix font types within a dataset. If you have multiple fonts concatenated in a single file, they must be loaded from a sequential dataset with valid headers. The dataset specifications are: Centralized: RECFM=FB LRECL=128 BLKSIZE=A value appropriate for your site Decentralized: RECFM=FB LRECL=80 BLKSI ZE=A value appropriate for your site
XPAFI2X Table Dataset Name	Enter the name of the sequential dataset that contains the XPAFI2X table entries. The dataset specifications are: RECFM=FB LRECL=168 BLKSIZE=A value appropriate for your site

Field	Action
Character Map Dataset Name	• Enter the name of the sequential dataset that contains the character mapping table entries. The dataset specifications are: RECFM=FB LRECL=12 BLKSIZE=A value appropriate for your site • Leave this field blank if there are no new character IDs to be added to the IPSTND table.
INSTALL INPUT FROM file **Storage Unit**	Enter the unit for the device on which the files from the file will be read.
VOLSER	Enter the 6-character volume serial number of the file that contains the fonts to be installed. This name is displayed at the system operator console to identify the file to be mounted. Because custom font files are non-labeled, this field is optional. Examples: C6X034 FONTS1 XPAFNT Default: FONTAP
OUTPUT **Native Font Library Name**	Enter the name of the native centralized or decentralized font library to which the fonts will be loaded. In the XOSF start-up proc, this is the dataset in the DD statement specified by the CFONTLIB or DFONTLIB initialization parameter or the FONTLIB printer profile parameter. For each font loaded, the member name is constructed from the name in the font header.
Message Dataset Name	Enter the name of the sequential dataset to which you want custom font installation-related messages to be written. The dataset specifications are: RECFM=FB LRECL=133 BLKSIZE=A value appropriate for your site Do not specify the XOAF log dataset. Refer to *Section Six: XPAF Messages* for an explanation of custom font installation-related messages and any required user actions.

Field	Action
IBM Font Library Name	Enter the name of the library that contains the IBM fonts. This is the dataset identified by the IBMFONT DD statement in the XOSF start-up proc. Verify that the IBM fonts have already been loaded into this library before you install custom replica fonts. Information from the IBM font library is used to generate entries to these font tables: • CPGID • FGID • XPAFCFN • XPAFEFW • XPAFE2A • XPAFIFW • XPAFIFW3 These tables make the IBM fonts' characteristics available to XPAF.

After you complete your entries on the Install Custom Fonts panel, press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                Install Custom Replica Fonts (version 6 encoding or above)

COMMAND ===>

  DATASET PREFIX
       XPFLOAD Library:
       XINPARM Library:
     Font Table Library:

  JOB CARD INFORMATION
  ===> //JOBNAME JOB (ACCOUNT),'NAME',CLASS=A
  ===> //*
  ===> //*
  ===> //*
```

The dataset prefixes you enter on this panel are used when generating the custom font installation JCL.

Complete these fields and press **ENTER**:

Field	Action
DATASET PREFIX **XPFLOAD Library**	Enter the high-level and mid-level qualifiers for your system load library.
XINPARM Library	Enter the high-level and mid-level qualifiers (if different from XPFLOAD) for the library containing your initialization parameters. This is the dataset identified by the XINPARM DD statement in the XOSF start-up proc.
Font Table Library	Enter the high-level and mid-level qualifiers (if different from XPFLOAD) for the library in which the font tables are stored. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the FNTTBLDD initialization parameter.
JOB CARD INFORMATION	Enter site-specific job card information.

After you verify the information and press **ENTER**, this panel appears:

```
                    Xerox Output Administrative Facility
                Install Custom Replica Fonts (version 6 encoding or above)

OPTION ===>

  C.  Cancel JCL

  E.  Edit JCL

  K.  Keep JCL

  S.  Submit JCL
```

Select the option you want to perform and press **ENTER**. Valid values are:

C Cancels the generated JCL and returns to the Install Custom Fonts batch job card panel.

E Displays the generated JCL for editing purposes.

K Keeps the generated JCL in a sequential dataset. After you save the JCL, you can access this dataset and submit the job without regenerating the JCL each time.

S Submits the JCL. Standard TSO/ISPF JCL submission error or confirmation messages are displayed.

NOTE: You cannot use the END command or the PF3 key to exit this panel. If you want to return to the previous panel and do not want to display, submit, or keep the JCL, you must enter **C** on the COMMAND line and press **ENTER**.

Editing the JCL

If you enter E in the OPTION line on the JCL options panel, a panel containing JCL similar to this appears (this panel contains dataset names that were generated based on the entries you made on the previous panels):

```
//job-name JOB job-information
//*
//*
//*
//*****************************************************************
//*  You are installing Xerox DECENTRALIZED fonts from DISK.
//*  Ensure you are installing to a DECENTRALIZED library.
//*  Centralized and Decentralized fonts must not be mixed.
//*  Selection criteria: (*)
//*****************************************************************
//STEP1    EXEC PGM=XOASUP00,REGION=8192K,PARM=userid
//STEPLIB  DD  DISP=SHR,DSN=prefix.XPFLOAD
//SYSPRINT DD  SYSOUT=X
//XINPARM  DD  DISP=SHR,DSN=prefix.XINPARM
//TABLELIB DD  DISP=SHR,DSN=prefix.font-table-library-name
//XOAPRINT DD  SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//FNTFILE  DD DISP=SHR,DSN=font-dataset-name
//I2XFILE  DD DISP=SHR,DSN=xpafi2x-table-dataset-name
//CD#FILE  DD DISP=SHR,DSN=character-mapping-dataset-name
//XOAIN    DD  *
INSTALL FONTS (*,XCCM5,XFONT,XCP12,N,)
              (native-font-library-name)
              (message-dataset-name)
/*
//STEP2    EXEC PGM=XOASUP00,REGION=8M,PARM=(userid),COND=(4,LT)
//STEPLIB  DD  DISP=SHR,DSN=prefix.XPFLOAD
//SYSPRINT DD  SYSOUT=X
//XINPARM  DD  DISP=SHR,DSN=prefix.XINPARM
//TABLELIB DD  DISP=SHR,DSN=prefix.font-table-library-name
//XOAPRINT DD  SYSOUT=*,DCB=(LRECL=121,RECFM=FB,BLKSIZE=6050)
//XOAIN    DD  *
CONVERT IBM('ibm-font-library-name')
/*
```

Keeping the JCL

If you enter K in the OPTION line on the JCL options panel, this panel appears:

```
                    Xerox Output Administrative Facility
                Install Custom Replica Fonts (version 6 encoding or above)

COMMAND ===>

* To keep the JCL, enter a new sequential dataset name.

  Dataset Name:
```

Complete this field and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the sequential dataset that is not currently cataloged. This is the dataset in which your JCL will be stored.

To return to the previous panel, enter **END** and press **ENTER**.

TSO/Batch command

You should access the INSTALL FONTS batch command only through the JCL generated by the XOAF option to ensure that the proper datasets are defined and that the JCL is set up correctly.

26. Displaying printer status information

Displaying the status of printers

To display printer status, enter 1 on the Display Printer Status menu OPTION line. Press **ENTER**. A panel similar to this appears:

```
Xerox Output Administrative Facility
Display the Status of PDS(s) and Printers

COMMAND ===> NEXT                                        SCROLL===>   1

  Address Space (Job) Name: XP92       Display Number:     1 of   10
    PRINTERS
  PRT1182          PRT1900
```

The following fields appear on the Display the Status of PDS(s) and Printers panel. Use the COMMAND line in conjunction with the 'SCROLL' field to move between address spaces.

Field	Action
COMMAND	Enter a value to scroll through the display. Valid values: NEXT Pages forward through the XOSF address spaces. BACK Pages backward through address spaces. END Terminates the display.

Field	Action
SCROLL	Enter a value to scroll through the display. Valid values: MAX Pages to the beginning or end of an address space. *integer* Pages a specific number of address spaces forward or backward. Default: 1

Address Space (Job) Name	Displays the job name for the address space.
Display Number of	Displays the current and maximum available address spaces. For example, 3 of 15 means that this is the third address space being displayed of a possible 15.
PRINTERS	Displays the status of all printers assigned to this address space. If a printer is active, the job number is displayed. Printers that have been drained do not appear on the display.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Display Printers option:

DISPLAY PRINTERS

27. Managing XPAF libraries

This chapter describes how to use the options available on the Manage Libraries menu. These options enable you to perform these functions:

- Display a list of members of a PDS or native library and browse, delete, or offload members on the list
- Browse a member of a PDS or native library
- Delete a member of a PDS or native library
- Reload a member to a native library

Displaying a directory of library members

Enter **1** on the Manage Libraries menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Display a Directory of Library Members

COMMAND ===>

  Dataset Name:
```

Complete this field:

Field	Action
Dataset Name	Enter the dataset name of the library for which you want to list members. The dataset can be either a PDS or a native library.

After you complete the dataset name, press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Selection List of Library Members

COMMAND ===>                                                SCROLL ===> PAGE
  Library Name:                                 Library  Total  Used  Avail
  XPAF30.TESTING.PDLLIB                         Blocks:    360   210    150

* Next to name, enter 'B' to browse, 'D' to delete, or 'O' to offload.
|
 v NAME                  CREATE   DATE/TIME  UPDATE   DATE/TIME  RECORDS  DIRLEN
  $GLOB$.FMT1  .PDE    1996.081 15:47:25   1996.081 15:47:25        3       0
  $GLOB$.FMT1A .PDE    1996.081 15:47:27   1996.081 15:47:27        3       0
  $GLOB$.FMT10 .PDE    1996.081 15:47:26   1996.081 15:47:26        3       0
  $GLOB$.FMT10A.PDE    1996.081 15:47:28   1996.081 15:47:28        3       0
  $GLOB$.FMT10B.PDE    1996.081 15:47:26   1996.081 15:47:26        3       0
  $GLOB$.FMT11 .PDE    1996.081 15:47:26   1996.081 15:47:26        3       0
  $GLOB$.FMT11A.PDE    1996.081 15:47:28   1996.081 15:47:28        3       0
  $GLOB$.FMT12 .PDE    1996.081 15:47:27   1996.081 15:47:27        3       0
  $GLOB$.FMT13 .PDE    1996.081 15:47:27   1996.081 15:47:27        3       0
  $GLOB$.FMT2  .PDE    1996.081 15:47:26   1996.081 15:47:26        3       0
  $GLOB$.FMT2A .PDE    1996.081 15:47:27   1996.081 15:47:27        3       0
  $GLOB$.FMT3  .PDE    1996.081 15:47:26   1996.081 15:47:26        3       0
  $GLOB$.FMT3A .PDE    1996.081 15:47:27   1996.081 15:47:27        3       0
  $GLOB$.FMT4  .PDE    1996.081 15:47:26   1996.081 15:47:26        3       0
```

Use this panel to perform the following functions:

- To browse a member, enter **B** (browse) next to the name of the member you want to browse. Then press **ENTER**.
- To delete a member, enter **D** next to the name of the member you want to delete. Then press **ENTER**.

> ***NOTE:*** If you try to delete a member of a resource library using this option, XPAF will not allow the member to be deleted if the printer FSS is active.

- To offload a member, enter **O** next to the name of the member you want to offload. Then press **ENTER**. The offloaded member will be placed in the *userid*.XLDWORK.OFFLOAD dataset. To offload more than one member at a time, enter **O** next to the names of the members that you want to offload. Then press **ENTER**.

When using this option, members are offloaded without user directory information. Check the value under the 'DIRLEN' column and verify that the resource will function correctly without the user directory information. If unusable resources are produced, use the LDM batch offload/reload process as an alternative.

NOTE: When offloading a native library member to a PDS library, XOAF may change the member name to a valid PDS member name. A message with the resulting PDS member name is issued indicating a successful offload. If you intend to reload the PDS member, note the altered member name given in the offload message. You will need to use this altered name as well as the original native library member name during the reload process.

After completing the desired functions, enter **END** and press **ENTER** to return to the display of the directory of members in that library.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Display a Directory of Library Members option:

LIBRARY DIRECTORY('*library-dataset-name*')

NOTE: This command only lists the contents of the library; you cannot use this command to browse, delete, or offload library members.

Browsing a copy of a member

Enter **2** on the Manage Libraries menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                              Browse a Member

COMMAND ===>

  Dataset Name:

   Member Name:
```

Complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the dataset in which the member you want to browse resides.
Member Name	Enter the name of the member you want to browse.

An ISPF browse panel similar to this is displayed:

```
-----------------------------------------------------------------
BROWSE    XPAF.XLDWORK                        Line 00000000 Col 001 080
Command ===>                                        Scroll ===> PAGE
************************** Top of Data ********************************
DSN=library-name  LIST=member-name
member-name               .j.?.....l.................
/* ******************************************************* */
/* *********             V F U 'S              ********** */
/* ******************************************************* */

VFU1:   VFU      ASSIGN=(1,1),
                 TOF=1,
                 BOF=255;


/* ******************************************************* */
/* *********             P D E 'S              ********** */
/* ******************************************************* */
                 FONTS=L0112B,
                 BEGIN=(.18,.66);
************************** Bottom of Data  ****************************
```

Input is not allowed. Standard ISPF browse options, such as scroll forward and backward, are available. To exit this panel and return to the previous panel, enter **END** and press **ENTER**.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Browse a Member option:

LIBRARY DISPLAY('*library-dataset-name*(*member-name*)')

HEX({ OFF / ON })

NOTE: In the XPAF PDLLIB, each member name may be padded with space characters to the right of the double entry name. If you do not include the complete member name in the TSO/batch command, XOAF will be unable to locate the member. For more information about PDL member names, refer to chapter 21, “Loading resources to a native library.”

Deleting a member

Enter **3** on the Manage Libraries menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                              Delete a Member

COMMAND ===>

  Dataset Name:

   Member Name:
```

Complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the dataset in which the member you want to delete resides.
Member Name	Enter the name of the member you want to delete.

NOTE: If you try to delete a member of a resource library using this option, XPAF will not allow the member to be deleted if the printer FSS is active.

TSO/Batch command

You can use this TSO/batch command as an alternative to using the Delete a Member option:

LIBRARY DELETE('*library-dataset-name*(*member-name*)')

Reloading a member to a native library

Enter **4** on the Manage Libraries menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility
                    Reload a Member to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     Member Name:
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Name**	Enter the name of the PDS from which the resource is being loaded.
Member Name	Enter the name of the PDS member to be loaded. ***NOTE:*** When you offloaded a native library member to a PDS library, XOAF may have changed the member name to make it a valid PDS member name. If this is the case, enter the altered member name here.
OUTPUT **Dataset Name**	Enter the name of the native library to which the resource will be loaded.
Member Name	Enter a name only if it is different than the input PDS member. ***NOTE:*** When you offloaded a native library member to a PDS library, XOAF may have changed the member name to make it a valid PDS member name. If this is the case, enter the original native library member name here, or print jobs referencing the member could fail.

After you load a member, XOAF automatically creates a report and writes it to a dataset that can be browsed or printed. The dataset is defined by the DD name UJLLIST in the XOAF logon procedure. The report shows the contents of the newly created library member(s).

When using this option, members are reloaded without user directory information. Verify that the resource will function correctly without the user directory information. If unusable resources are produced, use the LDM batch offload/reload process as an alternative.

NOTE: This option reloads only individual members of a dataset to a native library. If you need to reload multiple members or all members to a native library, use the LDM batch utility. Refer to *Section Two: Installing and Customizing XPAF* for more information about this utility.

28. Supported IBM character sets

This chapter lists the IBM character sets that can be used in documents sent to Xerox printers. For a more current list of fonts that are available to XPAF, contact your local support representative.

Proportionally spaced character sets

Helvetica:

- Roman Medium (H200A0, H200B0, H200D0, H200F0, H200H0, H200J0, H200N0, H200T0, H200Z0, H20000, H20060, H20070, H20080, H20090, H202A0, H202B0, H202D0, H202F0, H202H0, H202J0, H202N0, H202T0, H202Z0, H20200, H20020, H20270, H20280, H20290, H203A0, H203B0, H203D0, H203F0, H203H0, H203J0, H203N0, H203T0, H203Z0, H20300, H20360, H20370, H20380, H20390)
- Roman Bold (H400A0, H400B0, H400D0, H400F0, H400H0, H400J0, H400N0, H400T0, H400Z0, H40000, H40060, H40070, H40080, H40090, H402A0, H402B0, H402D0, H402F0, H402H0, H402J0, H402N0, H402T0, H402Z0, H40200, H40020, H40270, H40280, H40290, H403A0, H403B0, H403D0, H403F0, H403H0, H403J0, H403N0, H403T0, H403Z0, H40300, H40360, H40370, H40380, H40390)
- Italic Medium (H300A0, H300B0, H300D0, H300F0, H300H0, H300J0, H300N0, H300T0, H300Z0, H30000, H30060, H30070, H30080, H30090, H302A0, H302B0, H302D0, H302F0, H302H0, H302J0, H302N0, H302T0, H302Z0, H30200, H30020, H30270, H30280, H30290, H303A0, H303B0, H303D0, H303F0, H303H0, H303J0, H303N0, H303T0, H303Z0, H30300, H30360, H30370, H30380, H30390)
- Italic Bold (H500A0, H500B0, H500D0, H500F0, H500H0, H500J0, H500N0, H500T0, H500Z0, H50000, H50060, H50070, H50080, H50090, H502A0, H502B0, H502D0, H502F0, H502H0, H502J0, H502N0, H502T0, H502Z0, H50200, H50020, H50270, H50280, H50290, H503A0, H503B0, H503D0, H503F0, H503H0, H503J0, H503N0, H503T0, H503Z0, H50300, H50360, H50370, H50380, H50390)

Pi Serif:

- Roman Medium (Q05500, Q05560, Q05580, Q055B0)
- Roman Bold (Q07500, Q07560, Q07580, Q075B0)

Pi Sans Serif:

- Roman Medium (P05500, P05560, P05580, P055B0)
- Roman Bold (P07500, P07560, P07580, P075B0)

Sonoran Display (J055J0, J055Z0)

Sonoran Petite (Z05640)

Sonoran Sans Serif:

- Roman Medium (A05500, A05560 A05570, A05580, A05590, A055A0, A055B0, A055D0, A055F0, A055J0, A055N0, A055T0, A055Z0)
- Roman Bold (A07500, A07560 A07570, A07580, A07590, A075A0, A075B0, A075D0, A075F0, A075J0, A075N0, A075T0, A075Z0)
- Italic Medium (A15500, A15560 A15570, A15580, A15590, A155A0, A155B0, A155D0, A155F0, A155J0, A155N0, A155T0, A155Z0)
- Italic Bold (A17500, A17560 A17570, A17580, A17590, A175A0, A175B0, A175D0, A175F0, A175J0, A175N0, A175T0, A175Z0)

Sonoran Serif:

- Roman Medium (T05500, T05560 T05570, T05580, T05590, T055A0, T055B0, T055D0, T055F0, T055J0, T055N0, T055T0, T055Z0)
- Roman Bold (T07500, T07560 T07570, T07580, T07590, T075A0, T075B0, T075D0, T075F0, T075J0, T075N0, T075T0, T075Z0)
- Italic Medium (T15500, T15560 T15570, T15580, T15590, T155A0, T155B0, T155D0, T155F0, T155J0, T155N0, T155T0, T155Z0)
- Italic Bold (T17500, T17560 T17570, T17580, T17590, T175A0, T175B0, T175D0, T175F0, T175J0, T175N0, T175T0, T175Z0)

Times New Roman:

- Roman Medium (N200A0, N200B0, N200D0, N200F0, N200H0, N200J0, N200N0, N200T0, N200Z0, N20000, N20060, N20070, N20080, N20090, N202A0, N202B0, N202D0, N202F0, N202H0, N202J0, N202N0, N202T0, N202Z0, N20200, N20020, N20270, N20280, N20290, N203A0, N203B0, N203D0, N203F0, N203H0, N203J0, N203N0, N203T0, N203Z0, N20300, N20360, N20370, N20380, N20390)
- Roman Bold (N400A0, N400B0, N400D0, N400F0, N400H0, N400J0, N400N0, N400T0, N400Z0, N40000, N40060, N40070, N40080, N40090, N402A0, N402B0, N402D0, N402F0, N402H0, N402J0, N402N0, N402T0, N402Z0, N40200, N40020, N40270, N40280, N40290, N403A0, N403B0, N403D0, N403F0, N403H0, N403J0, N403N0, N403T0, N403Z0, N40300, N40360, N40370, N40380, N40390)
- Italic Medium (N300A0, N300B0, N300D0, N300F0, N300H0, N300J0, N300N0, N300T0, N300Z0, N30000, N30060, N30070, N30080, N30090, N302A0, N302B0, N302D0, N302F0, N302H0, N302J0, N302N0, N302T0, N302Z0, N30200, N30020, N30270, N30280, N30290, N303A0, N303B0, N303D0, N303F0, N303H0, N303J0, N303N0, N303T0, N303Z0, N30300, N30360, N30370, N30380, N30390)
- Italic Bold (N500A0, N500B0, N500D0, N500F0, N500H0, N500J0, N500N0, N500T0, N500Z0, N50000, N50060, N50070, N50080, N50090, N502A0, N502B0, N502D0, N502F0, N502H0, N502J0, N502N0, N502T0, N502Z0, N50200, N50020, N50270, N50280, N50290, N503A0, N503B0, N503D0, N503F0, N503H0, N503J0, N503N0, N503T0, N503Z0, N50300, N50360, N50370, N50380, N50390)

Uniformly spaced character sets

APL (S0AE10, S0AE20)

Document (S0DOTR)

Boldface (S0BRTR) Bold

Boldface Italic (S0BITR) Bold Italic

Courier:

- Medium (S0CR10, S0CR12, S0CR15)
- Bold (S0CB10, S0CB12, S0CB15)
- Italic (S0CI10, S0CI12, S0CI15)
- Ultra Expanded (S0CD15)
- Ultra Expanded Italic (S0CW15)
- Overstrike (S0CO10)
- Extended (S0CE10)
- Overstruck (S0CH10)
- Courier12 (S0CR12)
- Roman Medium (4200B0, 4200D0, 4200J0, 420000, 420070, 420080, 4202B0, 4202D0, 4202J0, 420200, 420270, 420280, 4203B0, 4203D0, 4203J0, 420300, 420370, 420380)
- Roman Bold (4400B0, 4400D0, 4400J0, 440000, 440070, 440080, 4402B0, 4402D0, 4402J0, 440200, 440270, 440280, 4403B0, 4403D0, 4403J0, 440300, 440370, 440380)
- Italic Medium (4300B0, 4300D0, 4300J0, 430000, 430070, 430080, 4302B0, 4302D0, 4302J0, 430200, 430270, 430280, 4303B0, 4303D0, 4303J0, 430300, 430370, 430380)
- Italic Bold (4500B0, 4500D0, 4500J0, 450000, 450070, 450080, 4502B0, 4502D0, 4502J0, 450200, 450270, 450280, 4503B0, 4503D0, 4503J0, 450300, 450370, 450380)

Dump (L0DUMP)

Essay (S0ESTR)

Essay (S0ELTR) Light

Essay (S0EBTR) Bold

Essay (S0EITR) Italic

Essay (S0EOTR) Overstruck

Gothic (D0GT10, D0GT12, D0GT15, D0GT18, D0GT20, D0GT24)

Gothic (D0GL10, D0GL12, D0GL15) Semilight

Gothic (D0GC15) Semicondensed

Gothic (D0GB10, D0GB12) Bold

Gothic (D0GI12) Italic

Gothic Proportional (D0GP12)

Gothic Reverse (D0GR10)

Gothic Uppercase (L00GSC) Condensed

Gothic Uppercase (L00GUC) Condensed Underscored

Gothic Uppercase (L0GU10, L0GU12, L0GU15) Underscored

ISIL Gothic (Bookmaster)

- Medium (0005ZA, 0007ZA, 0008ZA, 0009ZA, 0010ZA, 0011ZA, 0012ZA, 0014ZA, 0016ZA, 0018ZA)
- Bold (0007ZB, 0008ZB, 0009ZB, 0010ZB, 0011ZB, 0012ZB, 0014ZB, 0016ZB, 0018ZB)
- Italic (0007ZC, 0008ZC, 0009ZC, 0010ZC, 0011ZC, 0012ZC, 0014ZC, 0016ZC, 0018ZC)
- Bold italic (0007ZD, 0008ZD, 0009ZD, 0010ZD, 0011ZD, 0012ZD, 0014ZD, 0016ZD, 0018ZD)
- Reverse medium (0007ZE, 0008ZE, 0009ZE, 0010ZE, 0011ZD, 0012ZE, 0014ZE, 0016ZE, 0018ZE)
- Specials (0007XA, 0008XA, 0009XA, 0010XA, 0011XA, 0012XA, 0014XA, 0016XA, 0018XA)
- Specials reverse (0007XE, 0008XE, 0009XE, 0010XE, 0011XE, 0012XE, 0014XE, 0016XE, 0018XE)
- Screen Corner (0018SC)

Katakana (L0KATA)

Letter Gothic (S0LR12)

Letter Gothic (S0LB12) Bold

OCR AOA (L00AOA)

OCR AON (L00AON)

OCR BOA (L00BOA)

OCR OAB (L00OAB)

Orator (S0OR10)

Orator (S0OB10) Bold

Prestige (S0PR10, S0PR12)

Prestige (S0PB12) Bold

Prestige (S0PI12) Italic

Roman (D0RT10)

Script (S0SR12)

Serif (D0ST10, D0ST12, D0ST15)

Serif (D0SB12) Bold

Serif (D0SI10, D0SI12) Italic

Serif (D0SO12) Overstruck

Symbols (S0S193, S0S198)

Symbols OS6 (S0S192)

Text (L00T11)

Text (L0TU10) Underscored

29. Character mapping tables

This chapter describes some of the character mapping tables that relate to XPAF font processing.

Table naming conventions

Character mapping tables are named in the following manner:

- For centralized and decentralized character mapping tables, names beginning with “C” indicate a centralized font mapping and names beginning with “D” indicate a decentralized font mapping.
- For code page tables, names beginning with “X” or “XC” indicate the A03 (American) family of fonts. Names beginning with “RX” indicate the R03 (European) family of fonts.
- A name including the characters CM indicates that the table is a character mapping table and can be specified in either the ‘Centralized Mapping Name’ or the ‘Decentralized Mapping Name’ field of an XPAFXFI entry.
- A name including the characters CP (instead of CM) indicates that the table is a code page table and can be specified in the ‘Code Page Name’ field of an XPAFXFI table entry.
- The last two digits indicate the number of the table in *A03 Font Reference Manual* or *R03 Font Reference Manual* that details the character set. For example, the name RXCM08 indicates a code page table containing the character mapping for the R03 character set, which is defined in table 8 of the *R03 Font Reference Manua*l.

Xerox code page tables (XCP1 through XCP19)

Table 29-1 identifies the code pages which are supplied with XPAF in TABLELIB for the A03 family of fonts. These tables are used for printing DCF/SCRIPT documents. The source for the code page tables is distributed with XPAF in XPFSAMP.

Table 29-1. Xerox code page tables (XCP1 through XCP19)

Table name	Description
XCP1	A03 character set 1
XCP2	A03 character set 2
XCP3	A03 character set 3
XCP4	A03 character set 4
XCP5	A03 character set 5
XCP6	A03 character set 6
XCP7	A03 character set 6 with extension 1
XCP8	A03 character set 7
XCP9	A03 character set 8
XCP10	A03 character set 8 with extension 1
XCP11	A03 character set 8 with extension 2
XCP12	A03 character set 9
XCP13	A03 character set 10
XCP14	A03 character set 10A
XCP15	A03 character set 10B
XCP16	A03 character set 14
XCP17	A03 character set 15
XCP18	A03 extension 1
XCP19	A03 extension 2

NOTE: XPAF provides a set of code page tables (RXCP07 through RXCP34) in TABLELIB for the R03 family of fonts. These tables also can be used for printing DCF documents. The source for these tables is distributed with XPAF in XPFSAMP.

Centralized-to-decentralized font conversion character mapping tables

XPAF supplies character mapping tables in TABLELIB which are used when XPAF converts centralized fonts to decentralized fonts:

- CCMV01 for the centralized character mapping of the font
- DCMV60 (planes 01 and 02) the default decentralized character mapping table used by XPAF 6.0 and higher
- DCMV01 (planes 01 and 02) for the decentralized character mapping of the font, used in XPAF 5.0 and earlier.

XPAF also supplies the decentralized character mapping table, DCMV02 (planes 01 and 02), in TABLELIB. This table can be used for mapping fonts that exceed the 64K storage memory limit during XOAF centralized-to- decentralized font conversion. Refer to chapter 25, "Managing custom fonts" for more information about the function of this table.

The contents of CCMV01, DCMV01, and DCMV02 are shown in tables 29-2 through 29-11. These tables provide the following information:

- The ASCII hexadecimal mapping value for each character in the font
- The actual character that resides in each ASCII location
- The standard font character identifier that uniquely identifies the character

The shaded areas in tables 29-2 through 29-11 identify ASCII code points to which characters cannot be mapped. Refer to chapter 24, "Managing XPAF tables" for information about the restrictions for character mapping.

NOTE: The source for CCMV01, DCMV01, DCVM02, and DCMV60 is distributed with XPAF in XPFSAMP.

Table 29-2. CCMV01 character mapping table (x0 to x9)

	*x*0	*x*1	*x*2	*x*3	*x*4	*x*5	*x*6	*x*7	*x*8	*x*9
0*x*										
1*x*	SA520000	SA530000	SM490000	CEPHEX13	CEPHEX14	CEPHEX15	SS680000	SF040000	CEPHEX18	CEPHEX19
2*x*	SP010000	! SP020000	“ SP040000	# SM010000	$ SC030000	% SM020000	& SM030000	‘ SP050000	(SP060000	) SP070000
3*x*	0 ND100000	1 ND010000	2 ND020000	3 ND030000	4 ND040000	5 ND050000	6 ND060000	7 ND070000	8 ND080000	9 ND090000
4*x*	@ SM050000	A LA020000	B LB020000	C LC020000	D LD020000	E LE020000	F LF020000	G LG020000	H LH020000	I LI020000
5*x*	P LP020000	Q LQ020000	R LR020000	S LS020000	T LT020000	U LU020000	V LV020000	W LW020000	X LX020000	Y LY020000
6*x*	¢ SC040000	a LA010000	b LB010000	c LC010000	d LD010000	e LE010000	f LF010000	g LG010000	h LH010000	i LI010000
7*x*	p LP010000	q LQ010000	r LR010000	s LS010000	t LT010000	u LU010000	v LV010000	w LW010000	x LX010000	y LY010000
8*x*	ND101000	¹ ND011000	² ND021000	³ ND031000	ND041000	ND051000	ND061000	ND071000	ND081000	ND091000
9*x*	SM340000	SM350000	SM570000	SM470000	SF050000	SA540000	¡ SP030000	¿ SP160000	CEPHEX98	CEPHEX99
A*x*	Á LA120000	Ã LA200000	À LA140000	Â LA160000	Ä LA180000	Å LA280000	Æ LA520000	Ç LC420000	É LE120000	È LE140000
B*x*	IJ LI520000	Ñ LN200000	CEPHEXB2	Ó LO120000	Õ LO020000	Ò LO140000	Ô LO160000	Ö LO180000	Ø LO620000	Œ LO520000
C*x*	á LA110000	ã LA190000	à LA130000	â LA150000	ä LA170000	å LA270000	æ LA510000	ç LC410000	é LE110000	è LE130000
D*x*	ij LI510000	ñ LN190000	CEPHEXD2	ó LO110000	õ LO190000	ò LO130000	ô LO150000	ö LO170000	ø LO610000	œ LO510000
E*x*	´ SD120000	˜ SD200000	` SD140000	ˆ SD160000	¨ SD180000	° SD280000	f GF010000	¸ SD410000	y GP610000	w GO310000
F*x*	´ SD110000	˜ SD190000	` SD130000	ˆ SD150000	¨ SD170000	° SD290000	ª SM210000	º SM200000	I LI610000	÷ SA060000

Table 29-3. CCMV01 character mapping table (xA to xF)

	*x*A	*x*B	*x*C	*x*D	*x*E	*x*F
0*x*						
1*x*	{ SM110000	| SM130000	} SM140000	¬ SM660000	¼ NF040000	½ NF010000
2*x*	* SM040000	+ SA010000	, SP080000	- SP100000	. SP110000	/ SP120000
3*x*	: SP130000	; SP140000	< SA030000	= SA040000	> SA050000	? SP150000
4*x*	J LJ020000	K LK020000	L LL020000	M LM020000	N LN020000	O LO020000
5*x*	Z LZ020000	[SM060000	\ SM070000	] SM080000	^ SS390000	_ SP090000
6*x*	j LJ010000	k LK010000	l LL010000	m LM010000	n LN010000	o LO010000
7*x*	z LZ010000	° SM190000	SA020000	SF020000	SF010000	SF030000
8*x*	SP061000	SA011000	SA001000	SP071000	SM250000	§ SM240000
9*x*	£ SC020000	Fr XC357243	CEPHEX9C	*ƒ* SC070000	$^1/_3$ XC357375	$^2/_3$ XC357376
A*x*	Ê LE160000	Ë LE180000	Í LI120000	Ì LI140000	Î LI160000	Ï LI180000
B*x*	CEPHEXBA	Ú LU120000	Ù LU140000	Û LU160000	Ü LU180000	CEPHEXBF
C*x*	ê LE150000	ë LE170000	í LI110000	ì LI130000	î LI150000	ï LI170000
D*x*	ß LS610000	ú LU110000	ù LU130000	û LU150000	ü LU170000	CEPHEXDF
E*x*	CEPHEXEA	CEPHEXEB	CEPHEXEC	CEPHEXED	CEPHEXEE	CEPHEXEF
F*x*	© SM520000	F GF020000	• SD270000	¾ NF050000	µ SM170000	a LA011000

Table 29-4. DCMV01 (plane 01) character mapping table (x0 to x9)

	*x*0	*x*1	*x*2	*x*3	*x*4	*x*5	*x*6	*x*7	*x*8	*x*9
0*x*										
1*x*										
2*x*	 SP010000	! SP020000	“ SP040000	# SM010000	$ SC030000	% SM020000	& SM030000	‘ SP050000	(SP060000	) SP070000
3*x*	0 ND100000	1 ND010000	2 ND020000	3 ND030000	4 ND040000	5 ND050000	6 ND060000	7 ND070000	8 ND080000	9 ND090000
4*x*	@ SM050000	A LA020000	B LB020000	C LC020000	D LD020000	E LE020000	F LF020000	G LG020000	H LH020000	I LI020000
5*x*	P LP020000	Q LQ020000	R LR020000	S LS020000	T LT020000	U LU020000	V LV020000	W LW020000	X LX020000	Y LY020000
6*x*	¢ SC040000	a LA010000	b LB010000	c LC010000	d LD010000	e LE010000	f LF010000	g LG010000	h LH010000	i LI010000
7*x*	p LP010000	q LQ010000	r LR010000	s LS010000	t LT010000	u LU010000	v LV010000	w LW010000	x LX010000	y LY010000
8*x*										
9*x*									¼ NF040000	½ NF010000
A*x*	Á LA120000	Ã LA200000	À LA140000	Â LA160000	Ä LA180000	Å LA280000	Æ LA520000	Ç LC420000	É LE120000	È LE140000
B*x*	IJ LI520000	Ñ LN200000	² ND0210000	Ó LO120000	Õ LO020000	Ò LO140000	Ô LO160000	Ö LO180000	Ø LO620000	Œ LO520000
C*x*	á LA110000	ã LA190000	à LA130000	â LA150000	ä LA170000	å LA270000	æ LA510000	ç LC410000	é LE110000	è LE130000
D*x*	ij LI510000	ñ LN190000	¡ SP030000	ó LO110000	õ LO190000	ò LO130000				
E*x*	´ SD120000	˜ SD200000	` SD140000	ˆ SD160000	¨ SD180000		f GF010000	¸ SD410000	y GP610000	w GO310000
F*x*	´ SD110000	˜ SD190000	` SD130000	ˆ SD150000	¨ SD170000	° SD290000	ª SM210000	º SM200000	¦ LI610000	÷ SA060000

Table 29-5. DCMV01 (plane 01) character mapping table (xA to xF)

	*x*A	*x*B	*x*C	*x*D	*x*E	*x*F
0*x*						
1*x*						
2*x*	* SM040000	+ SA010000	, SP080000	- SP100000	. SP110000	/ SP120000
3*x*	: SP130000	; SP140000	< SA030000	= SA040000	> SA050000	? SP150000
4*x*	J LJ020000	K LK020000	L LL020000	M LM020000	N LN020000	O LO020000
5*x*	Z LZ020000	[SM060000	\ SM070000	] SM080000	^ SS390000	_ SP090000
6*x*	j LJ010000	k LK010000	l LL010000	m LM010000	n LN010000	o LO010000
7*x*	z LZ010000	° SM190000	{ SM110000	| SM130000	} SM140000	¬ SM660000
8*x*						
9*x*	£ SC020000	Fr XC357243	¹ ND011000	*ƒ* SC070000	$^1/_3$ XC357375	$^2/_3$ XC357376
A*x*	Ê LE160000	Ë LE180000	Í LI120000	Ì LI140000	Î LI160000	Ï LI180000
B*x*	³ ND031000	Ú LU120000	Ù LU140000	Û LU160000	Ü LU180000	§ SM240000
C*x*	ê LE150000	ë LE170000	í LI110000	ì LI130000	î LI150000	ï LI170000
D*x*			ù LU130000	û LU150000	ü LU170000	¿ SP160000
E*x*	ô LO150000	ö LO170000	ø LO610000	œ LO510000	ß LS610000	ú LU110000
F*x*	© SM520000	F GF020000	• SD270000	¾ NF050000	µ SM170000	a LA011000

Table 29-6. DCMV01 (plane 02) character mapping table (x0 to x9)

	*x*0	*x*1	*x*2	*x*3	*x*4	*x*5	*x*6	*x*7	*x*8	*x*9
0*x*										
1*x*										
2*x*	SP010000	° SD280000	SA520000	SA530000	SM490000	CEPHEX13	CEPHEX14	CEPHEX15	SS680000	SF040000
3*x*	ND101000	ND041000	ND051000	ND061000	ND071000	ND081000	ND091000	SP061000	SA011000	SA001000
4*x*	SF050000	SA540000	CEPHEX98	CEPHEX99	CEPHEX9C	CEPHEXB2	CEPHEXBA	CEPHEXBF	CEPHEXD2	CEPHEXDF
5*x*										
6*x*										
7*x*										
8*x*										
9*x*										
A*x*										
B*x*										
C*x*										
D*x*										
E*x*										
F*x*										

Table 29-7. DCMV01 (plane 02) character mapping table (xA to xF)

	*x*A	*x*B	*x*C	*x*D	*x*E	*x*F
0*x*						
1*x*						
2*x*	CEPHEX18	CEPHEX19	SA020000	SF020000	SF010000	SF030000
3*x*	SP071000	SM250000	SM340000	SM350000	SM570000	SM470000
4*x*	CEPHEXEA	CEPHEXEB	CEPHEXEC	CEPHEXED	CEPHEXEE	CEPHEXEF
5*x*						
6*x*						
7*x*						
8*x*						
9*x*						
A*x*						
B*x*						
C*x*						
D*x*						
E*x*						
F*x*						

Table 29-8. DCMV02 (plane 01) character mapping table (x0 to x9)

	*x*0	*x*1	*x*2	*x*3	*x*4	*x*5	*x*6	*x*7	*x*8	*x*9
0*x*										
1*x*										
2*x*	SP010000	! SP020000	“ SP040000	# SM010000	$ SC030000	% SM020000	& SM030000	‘ SP050000	(SP060000	) SP070000
3*x*	0 ND100000	1 ND010000	2 ND020000	3 ND030000	4 ND040000	5 ND050000	6 ND060000	7 ND070000	8 ND080000	9 ND090000
4*x*	@ SM050000	A LA020000	B LB020000	C LC020000	D LD020000	E LE020000	F LF020000	G LG020000	H LH020000	I LI020000
5*x*	P LP020000	Q LQ020000	R LR020000	S LS020000	T LT020000	U LU020000	V LV020000	W LW020000	X LX020000	Y LY020000
6*x*	¢ SC040000	a LA010000	b LB010000	c LC010000	d LD010000	e LE010000	f LF010000	g LG010000	h LH010000	i LI010000
7*x*	p LP010000	q LQ010000	r LR010000	s LS010000	t LT010000	u LU010000	v LV010000	w LW010000	x LX010000	y LY010000
8*x*										
9*x*										
A*x*										
B*x*										
C*x*										
D*x*										
E*x*										
F*x*										

Table 29-9. DCMV02 (plane 01) character mapping table (xA to xF)

	*x*A	*x*B	*x*C	*x*D	*x*E	*x*F
0*x*						
1*x*						
2*x*	* SM040000	+ SA010000	, SP080000	- SP100000	. SP110000	/ SP120000
3*x*	: SP130000	; SP140000	< SA030000	= SA040000	> SA050000	? SP150000
4*x*	J LJ020000	K LK020000	L LL020000	M LM020000	N LN020000	O LO020000
5*x*	Z LZ020000	[SM060000	\ SM070000	] SM080000	^ SS390000	_ SP090000
6*x*	j LJ010000	k LK010000	l LL010000	m LM010000	n LN010000	o LO010000
7*x*	z LZ010000	° SM190000	{ SM110000	| SM130000	} SM140000	¬ SM660000
8*x*						
9*x*						
A*x*						
B*x*						
C*x*						
D*x*						
E*x*						
F*x*						

Table 29-10. DCMV02 (plane 02) character mapping table (x0 to x9)

	*x*0	*x*1	*x*2	*x*3	*x*4	*x*5	*x*6	*x*7	*x*8	*x*9
0*x*										
1*x*										
2*x*	SP010000	SA520000	SA530000	SM490000	CEPHEX13	CEPHEX14	CEPHEX15	SS680000	SF040000	CEPHEX18
3*x*	SF030000	ND101000	¹ ND011000	² ND021000	³ ND031000	ND041000	ND051000	ND061000	ND071000	ND081000
4*x*	§ SM240000	SM340000	SM350000	SM570000	SM470000	SF050000	SA540000	¡ SP030000	¿ SP160000	CEPHEX98
5*x*	$^{2}/_{3}$ XC357376	Á LA120000	Ã LA200000	À LA140000	Â LA160000	Ä LA180000	Å LA280000	Æ LA520000	Ç LC420000	É LE120000
6*x*	Ï LI180000	IJ LI520000	Ñ LN200000	CEPHEXB2	Ó LO120000	Õ LO020000	Ò LO140000	Ô LO160000	Ö LO180000	Ø LO620000
7*x*	CEPHEXBF	á LA110000	ã LA190000	à LA130000	â LA150000	ä LA170000	å LA270000	æ LA510000	ç LC410000	é LE110000
8*x*										
9*x*									ï LI170000	ij LI510000
A*x*	ö LO170000	ø LO610000	œ LO510000	ß LS610000	ú LU110000	ù LU130000	û LU150000	ü LU170000	CEPHEXDF	´ SD120000
B*x*	¸ SD410000	y GP610000	w GO310000	CEPHEXEA	CEPHEXEB	CPEHEXEC	CEPHEXED	CEPHEXEE	CEPHEXEF	´ SD110000
C*x*	° SM200000	I LI610000	÷ SA060000	© SM520000	F GF020000	• SD270000	¾ NF050000	µ SM170000	a LA011000	
D*x*										
E*x*										
F*x*										

Table 29-11. DCMV02 (plane 02) character mapping table (xA to xF)

	*x*A	*x*B	*x*C	*x*D	*x*E	*x*F
0*x*						
1*x*						
2*x*	CEPHEX19	¼ NF040000	½ NF010000	SA020000	SF020000	SF010000
3*x*	ND091000	SP061000	SA011000	SA001000	SP071000	SM250000
4*x*	CEPHEX99	£ SC020000	Fr XC357243	CEPHEX9C	*ƒ* SC070000	$^{1}/_{3}$ XC357375
5*x*	È LE140000	Ê LE160000	Ë LE180000	Í LI120000	Ì LI140000	Î LI160000
6*x*	Œ LO520000	CEPHEXBA	Ú LU120000	Ù LU140000	Û LU160000	Ü LU180000
7*x*	è LE130000	ê LE150000	ë LE170000	í LI110000	ì LI130000	î LI150000
8*x*						
9*x*	ñ LN190000	CEPHEXD2	ó LO110000	õ LO190000	ò LO130000	ô LO150000
A*x*	˜ SD200000	` SD140000	ˆ SD160000	¨ SD180000	° SD280000	f GF010000
B*x*	˜ SD190000	` SD130000	ˆ SD150000	¨ SD170000	° SD290000	ª SM210000
C*x*						
D*x*						
E*x*						
F*x*						

30. XRFBATCH utility

This chapter describes the utility, XRFBATCH, that can be used to convert all AFP page segments in a PDS to .IMG and/or RES .IMG format and load the resulting images to a native library. XRFBATCH, which is distributed in XPFSAMP, performs the same function as the Convert IBM AFP Page Segments to Xerox .IMG and/or RES Format option on the Convert Resources menu. Refer to chapter 22, "Converting resources" for more information about this option.

XRFBATCH converts only standard page segment libraries. It does not convert overlays or composed text. Also, XRFBATCH does not convert page segments that have names starting with the letter O.

There is no revision support in XOAF. After you convert a page segment using this utility, it will not be automatically reconverted if you change it.

To use a revised version of a previously converted page segment re-run XRFBATCH with the REPLACE=Y option, then specify AUTOREV=X in the printer profile to send the new image to the printer.

XRFBATCH does not convert page segments to native decentralized images when IMGNUM=IMG. To accomplish this you must first convert them as centralized images to the Centralized Native XPAF Image Library. In the printer profile of the decentralized printer specify SIMAGELIB= the centralized library and specify AUTOREV=X. XPAFwill perform the conversion dynamically at print time.

Setting up XRFBATCH

You can specify the following parameters in the JCL.

NOTE: You cannot specify all of the parameters at one time because the IBM JCL PARM= statement limits the number of characters within the parentheses to no more than 100 characters. Therefore, you should specify a parameter only if you require a value other than the default value.

CAUTION: If you use XRFBATCH to preconvert page segment resources that are images common to AFP and DJDE print jobs, use of IMAGENUM=IMG may cause unexpected results.

Parameter	Action
COMPMODE	Specify the image compression mode used for converting the image file. Use this parameter only if COMPTYPE=TIME. Valid values: ENC Run-length encoded compression mode. LIN Line-predicted compression mode. Default: LIN
COMPTYPE	Specify the image optimization compression type when converting raster data. Valid values: SIZE Compresses images to the smallest possible size, regardless of the length of processing time involved. TIME Compresses images in the quickest way, as specified in the COMPMODE parameter. Default: SIZE
CONVTONE	Specify whether the image resolution conversion algorithm will use dark or light dots at certain decision points. This will cause images that are very dark or very light to be printed slightly darker or lighter and may be required if an image has characteristics which do not convert satisfactorily using the default. This parameter takes effect only if you specify 1 or 3 for the CONVTYPE parameter. Valid values: 1 (darkest) through 240 (lightest). Default: 120
CONVTYPE	Specify the image resolution conversion type. Valid values: 0 Does not scale the image dimension but does scale the position of the image. Image position scaling allows the image to print in the correct relative location on the page when printed on a Xerox printer as opposed to printing on an IBM printer. Image position scaling is increased by a factor of 25%. 1 Scales the image dimension and image position of an AFP image to 300 dpi before sending it to the printer. IOCA-encoded images are scaled from any resolution to 300 dpi. All other AFP images are scaled from 240-to-300 dpi, an increase of 25%. 3 Scales the image dimension and image position of an AFP image to 300 dpi based on the current L-units value specified in the IDD or IID structured field of the image. IOCA-encoded images are scaled from any resolution to 300 dpi. For IM-type images, any L-units value that does not specify 300 dpi is assumed to be 240 dpi. Default: 1 ***NOTE:*** If you specify 0, the size of the converted image will print smaller in XPAF (by a factor of 20%) than the original 240 dpi image printed in AFP.

Parameter	Action
DESTPRTR **or** **DEST**	Specify whether the page segments should be converted to images in centralized or decentralized format. Valid values: C Specifies that your destination printer is a centralized printer. D Specifies that your destination printer is a decentralized printer. Default: C
IMAGEDDN **or** **ODDN**	Specify the native library where the converted page segments will be stored. This name must match the name in the IMAGELIB DD statement in the JCL. Default: IMAGELIB
IMGNM	Specify the image output name to use. Valid values: AFP Generates full 20-character names and is required for resources used in AFP print jobs. IMG Uses the pseg member name without the *s1* prefix if one exists. This allows the image name to be used directly in a DJDE IMAGE= statement. (This is not supported on decentralized images.) ***NOTE:*** XRFBATCH does not convert page segments to native decentralized images when IMGNUM=IMG. To accomplish this you must first convert them as centralized images to the Centralized Native XPAF Image Library. In the printer profile of the decentralized printer specify SIMAGELIB= the centralized library and specify AUTOREV=X. XPAFwill perform the conversion dynamically at print time. Default: AFP
INPUTDDN **or** **IDDN**	Specify the IBM resource library containing the page segments to be converted. This name must match the name in the INFILE DD statement in the JCL. Default: INFILE ***NOTE:*** XRFBATCH does not convert page segments that have names that begin with the letter O.

Parameter	Action
LOGDSN	Specify the dataset to be used for logging messages. This sequential dataset must have the same specifications as your XLOG dataset, but the XLOG dataset itself should not be used with this parameter. ***NOTE:*** If you do not specify the LOGDSN parameter, the dataset specified in the XPAFXLOG DD statement is used. If neither of these is specified, messages are displayed on the system console. If you do not want to use logging, change the JCL to specify DD DUMMY in the XPAFXLOG DD statement. Valid values: A 1- to 44-character dataset name. Default: None
MAXIMGPS **or** **MIPS**	Specify the maximum number of images within a single page segment in the library that will be converted. Valid values: 1 through 999. Default: 16
PAPERSIZ **or** **PSIZ**	Specify the paper size to be used by the printed image. Valid values: LETTER LEGAL LONG A3 A4 Default: LETTER
PRINTENV **or** **PENV**	Identify the type of centralized printers you use to print AFP data streams through XPAF. This parameter is used to determine how XPAF converts images colorized via the IID structured field for printing on a centralized printer. This parameter only applies to AFP data streams containing images colorized via the IID structured field that will be sent to centralized printers. Valid values: MONO Specifies that XPAF jobs are printed only on monochrome printers. XPAF converts any colorized images to monochrome black .IMG files. COLR Specifies that XPAF jobs are printed only on highlight color printers. XPAF converts any colorized images to color RES .IMG files. BOTH Specifies that XPAF jobs are printed on both monochrome and highlight color printers. XPAF converts any colorized images to both monochrome black .IMG and color RES .IMG files. Default: MONO

Parameter	Action
REPLACE **or** **REPL**	Specify if existing images will be overwritten with the new image. Valid values: Y Specifies that existing members are to be replaced. N Specifies that existing members will not be replaced. Default: N
REVVIDEO **or** **RVID**	Specify whether to translate the image into reverse video on output. This translation consists of reversing the printing of all pixels in the image. For black images, all white pixels are printed as black, and all black pixels are printed as white. This parameter is not supported for color images. Valid values: Y Reverses all pixels. N Does not reverse pixels. Default: N
ROTATION **or** **ROT**	Specify the orientation for the image. Valid values: P Portrait L Landscape I Inverse portrait J Inverse landscape Default: P ***NOTE:*** AFP images that were generated for IBM printers are rotated 0 degrees. For these images, regardless of document orientation, be sure to specify a rotation of P.

Executing XRFBATCH

After entering the necessary parameter values, submit the job. If you enter an incorrect value for any parameter, XRFBATCH uses the default.

Sample JCL

Sample JCL for XRFBATCH is shown below. Sample JCL also is provided for XRFBATCH in XPFSAMP.

```
//job-name JOB job-information
//*
//*
//*          ************************************************************
//*          *   THIS SAMPLE JCL IS PROVIDED TO EXECUTE THE BATCH       *
//*          *   UTILITY FOR PRE-CONVERTING IBM AFP PAGE SEGMENTS       *
//*          *   BEFORE PRINTING.  CHANGE THIS JOB AS NECESSARY TO      *
//*          *   NAME THE LIBRARIES AND PARAMETERS OF YOUR CHOICE.      *
//*          ************************************************************
//*
//*
//XRFBATCH EXEC PGM=XRFBATCH,COND=(0,NE),          <---  PSEG CONVERT PGM
//       PARM=('COMPTYPE=SIZE',     SIZE OR TIME   <---  COMPRESSION TYPE
//             'CONVTYPE=1',        0 OR 1 OR 3    <---  CONVERSION TYPE
//             'DESTPRTR=C',        C OR D         <---  DESTINATION PRTR
//             'IMAGEDDN=IMAGELIB', IMAGELIB       <---  IMAGE LIB DDNAME
//             'INPUTDD=INFILE',    INFILE         <---  PSEG PDS DDNAME
//             'MAXIMGPS=16',       1-999          <---  MAX # PSEG IMGS
//             'PAPERSIZ=LETTER',   A3/4,LEGAL,LONG<---  PAPER SIZE NAME
//             'PRINTENV=MONO',     MONO,COLR,BOTH <---  PRTR ENVIRONMENT
//             'ROTATION=P')        P, L, I, OR J  <---  IMG ORIENTATION
//STEPLIB    DD DSN=prefix.XPFLOAD,DISP=SHR        <---  XPAF LOAD LIB
//INFILE     DD DSN=prefix.PSEGLIB,DISP=SHR        <---  INPUT PSEG PDS
//IMAGELIB   DD DSN=prefix.CIMGLIB,DISP=SHR        <---  OUTPUT IMAGE LIB
//XPAFXLOG   DD DSN=prefix.XPAFXLOG,DISP=OLD       <---  XPAF MESSAGE LOG
//
```

Section Four: Printing Documents with XPAF

This section provides the information you need to know in order to print documents through XPAF. For each supported type of document, it addresses these topics:

- Preparing and using resources
- Modifying document processing and format
- Using advanced features, such as color
- Converting data streams to other formats
- Troubleshooting printing problems

Before you begin to use XPAF's printing facilities, verify that XPAF has been installed and that the IVPs can be run successfully.

As the systems or application programmer responsible for printing documents through XPAF, you should be familiar with the IBM z/OS JCL concepts needed to code and submit jobs successfully (for example, you must use standard JCL syntax).

31. General information

This chapter explains how XPAF determines the processing mode for a document after it is submitted for printing, and how XPAF uses system-level features, such as banner pages and user exits, which were set up at installation time. In addition, it explains how to:

- Change the processing mode for a document
- Print pass-through documents to PCL-capable printers
- Download resources to a printer independently of any document

How does XPAF select the document processing mode?

Whenever you print a document, XPAF must examine the inbound data to determine what type of document has been submitted. During dataset open processing, XPAF examines the data and assigns a document type.

Document types

XPAF classifies each document it processes as belonging to one of six types: NM, DJDE, JCL, XES, PCL5, AFPX, or AFPA. This section describes each document type and how it is selected.

NM Indicates a native mode (printer-ready) document. If a document is created and submitted without any extended JCL keywords, DJDE packets, XES criteria, or AFP attributes, then XPAF will process it as native mode.

DJDE Indicates a DJDE document. If a document includes one or more of these characteristics, then XPAF will process it as DJDE mode:

- The keyword PRMODE=DJDE is specified on the OUTPUT statement in the JCL.
- The first record in the data stream contains a valid IDEN, and that IDEN matches the IDEN value specified in the initialization parameter.

For any dataset that contains DJDE extended JCL keywords or a valid IDEN in the first data record, XPAF assumes DJDE processing even if PRMODE=LINE. However, if any AFP attributes are associated with the document, then AFP mode will override DJDE mode.

JCL Indicates a document that uses extended JCL keywords. If a document includes one or more extended JCL keywords, XPAF will process it as JCL mode. However, if any AFP attributes are associated with the document, then AFP mode will override JCL mode.

NOTE: JCL type is equivalent to DJDE because XPAF uses the extended JCL keyword values to build DJDEs for the outbound data stream destined for a Xerox printer.

XES Indicates an XES document. If a document includes one or more of these characteristics in the first record, then XPAF will process it as XES mode:

- It includes a X'27' carriage control value.
- It includes the '=UDK=' character string.

If any AFP attributes are associated with the document, then AFP mode will override XES mode.

AFPX Indicates a page-formatted document. Refer to the description of AFPA below. Although page-formatted and AFP documents are two different types of data streams, XPAF uses the same code for converting each type of document to a format supported by Xerox printers. Therefore, this explanation uses the term "AFP attributes" to refer to characteristics that may apply to either page-formatted or AFP documents.

AFPA Indicates an AFP document. If a document includes one or more of these characteristics, XPAF will process it as AFP:

- Any record within the data stream includes a X'5A' carriage control value.
- The keywords FCB and/or UCS are included on the DD statement in the JCL.
- The keywords CHARS, FCB, FORMDEF, PAGEDEF, PRMODE=PAGE, and/or UCS are included on the OUTPUT statement in the JCL.

For any dataset that contains AFP extended JCL keywords or contains a 5A carriage control in the first data record, XPAF assumes AFP processing, no matter what value has been specified for the PRMODE.

Processing hierarchy

AFP attributes take precedence over all other document characteristics. If a document contains any AFP attributes, then it will be processed as AFP, regardless of any other factors. For example, if a document contains embedded DJDEs, but the DD statement in the JCL specifies PAGEDEF=A06420, then XPAF will process the document as AFP. The DJDEs will be printed as data and not interpreted as DJDEs.

AFP processing exceptions

Certain conditions can alter the standard processing type hierarchy:

- If SYSFCB=**** is coded in the XINSXOSF member of XINPARM, XPAF discards the value specified by either the PAGEDEF or FCB IBM JCL keyword.
- If SYSFLSH=**** is coded in the XINSXOSF member of XINPARM, XPAF discards the value specified by the FLASH IBM JCL keyword.
- If SYSFONT=**** is coded in the XINSXOSF member of XINPARM, XPAF discards the value specified by either the CHARS or UCS IBM JCL keyword.

Depending on the document, these values can disable AFP processing. For example, assume you submitted a document that included only one JCL keyword on the OUTPUT statement: PAGEDEF=ABCD. By definition, this would have normally caused XPAF to use AFP processing. However, because you coded SYSFCB=**** in the XINSXOSF member of XINPARM, XPAF discarded the PAGEDEF value. The document was then processed as native mode rather than AFP.

FCB Processing Clarification

The use of the FCB extended JCL keyword will function differently, depending on how the XPAF system is configured.

If the JCL for an AFP data stream includes the FCB IBM JCL keyword but not the PAGEDEF IBM JCL keyword, the FCB value is used as a PAGEDEF value. However, the FCB value is not used as a PAGEDEF value if any of these conditions exist:

- If FCB=Y is included in the initialization or printer profile parameters
- If XJCF simulation processing is in effect

If the JES printer definition has an FCB specified, XPAF will use this FCB as a PAGEDEF if a PAGEDEF has not been specified via extended JCL, even if the JES printer FCB value matches the SYSFCB= value in the initialization parameters. Set FCB=NONE on the JES printer definition to instruct XPAF to use the default PAGEDEF if no FCB has been specified via extended JCL.

The Printer Profile parameter FCB=Y is a processing option for centralized printers that instructs XPAF to download a Forms Control Buffer (FCB) to the printer whenever it changes. For any such (centralized) printer that has FCB=Y specified (either through the initialization parameters or in its Printer Profile), an FCB will be downloaded to the printer from SYS1.IMAGELIB whenever the FCB name changes from the last one downloaded. This processing does not occur for decentralized, PCL-capable or PDF printers because they do not recognize the FCB string. However, specifying FCB=Y in the Printer Profile for these printer types will cause XPAF not to consider an FCB name as a PAGEDEF.

If you specify FCB=Y for a centralized printer it will prevent XPAF from treating an FCB name as a PAGEDEF and considering a document an AFP document based on that criteria only. However, XPAF will attempt to download an FCB with the current FCB name and you will get an error message if that FCB name does not exist in SYS1.IMAGELIB.

XPAF is compliant with PSF and processes the FCB parameter in the same way that PSF does.

Using user exit 02 to change the processing mode

You can select the processing mode for a data stream by defining certain test criteria in user exit 02. You can use any of the fields available in the XDIB control block to build your test criteria and determine the desired document type. For example, you may test FORMS, CLASS, and FCB to decide if a document should be printed as native mode or AFP.

For more information on user exits and how to code them, refer to *Section Two: Installing and Customizing XPAF*.

Processing modes available

You must code user exit 02 to update the XDIBDFMT field with the desired format type:

blank XPAF determines what processing mode to use based on the extended JCL and the data stream.

NM Forces the job through native mode processing. No extended JCL processing is provided, and no DJDE processing is provided for decentralized and PCL-capable printers.

DJDE Forces the job through DJDE processing. No extended JCL processing is provided.

JCL Forces the job through extended JCL processing. For decentralized printers, DJDE-to-XES processing also is included.

XES Forces the job through XES processing to decentralized printers.

PCL5 Forces pass-through processing to PCL-capable printers.

AFPX Forces page-formatted processing.

AFPA Forces AFP processing.

NOTE: NM and DJDE processing are equivalent for centralized printers.

Sample user exit

A sample user exit (XUXIT02A) is provided in XPFSAMP to demonstrate this feature.

Printing pass-through documents to PCL-capable printers

You can send a data stream specifying pass-through mode to any XPAF-supported decentralized or PCL-capable printer if the printer supports the printer command language of the data stream. (For example, the data stream for a PCL document does not require a print command conversion by XPAF before being sent to a PCL-capable printer.) Data streams which may be printed in pass-through mode include:

- HPGL
- PCL
- PostScript
- XES

CAUTION: If you try to print a pass-through document through XPAF to a non-Xerox printer, results will be unpredictable.

Resource processing

XPAF does not perform any conditioning on resources included in a pass-through document. All of the information required to print the document must be contained within the data stream because the data stream is sent directly to the printer without being altered.

Font availability for banner pages

When printing banner pages for pass-through documents, XPAF uses the default font specified in the PORTFONT or LANDFONT printer profile parameter. The default fonts for PCL-capable printers are P0612A and L0112B, which are supplied in the decentralized font library. If you have changed the values for your default portrait and/or landscape fonts, you may need to update the PORTFONT and/or LANDFONT printer profile parameters to specify fonts that are available in the decentralized font library.

Color processing

If the HPGL and PostScript emulators in your Xerox printer support color, then HPGL and PostScript pass-through documents also will be printed in color.

Printer commands

Since XPAF performs no verification on the document, you can include any available HPGL, PCL, PostScript, or XES commands in your data stream.

However, if a pass-through data stream contains commands that are not supported by the target printer, unpredictable results may occur. For example, unpredictable results will occur if you send a document containing PCL color commands to a PCL-capable printer that does not support color.

Job submission

To print a pass-through document through XPAF, perform these steps:

Step 1. On the system where the pass-through document was created, print the document to disk.

Step 2. Upload the file from the PC or disk to the host system. Be sure to use a binary upload.

NOTE: If you use any upload procedure besides binary, you may not be able to print the file.

Step 3. Ensure that you have specified PCLREQ=PASS in either the printer's profile or the extended JCL to indicate that the document prints in pass-through mode.

Step 4. Ensure that you have specified a value for the PCLDS extended JCL keyword to indicate the type of data stream to be printed.

Step 5. Submit the job for printing through XPAF. Make sure you include a DD statement, similar to this one, in the JCL used to submit the job:

```
//OUTDD  OUTPUT  PCLDS=PCL5,PCLREQ=PASS
```

Troubleshooting problems

Occasionally, your output may not print as you expected. If this happens, review the items in table 31-1 for information to help you resolve the problem.

Table 31-1. Common printing errors for pass-through documents

Symptom	Explanation	Steps to take
Printer commands are printed as text.	The printer does not support the specified printer command.	If a PJL command is printed, remove the command from the data stream.
When printing pass-through documents, the output prints incorrectly.	The data stream in pass-through mode was changed by JES because blank truncation was specified.	Ensure that BLNKTRNC=NO is specified for the output class to indicate that blank truncation has not been set.

Downloading resources

You can download resources to a printer that supports downloading independently of any documents that may reference them. To do this, specify the REVFONT, REVFORM, REVIMAGE, and REVLOGO extended JCL keywords in the data stream.

For example, to download a form named ‘INV1’ and any fonts, images, or logos that it references, use JCL similar to this:

```
//job-name JOB job-information
//DOWNLD EXEC PGM=IEBGENER
//OUT  OUTPUT REVFONT=*,REVFORM=*,REVIMAGE=*,REVLOGO=*
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=*,OUTPUT=*.OUT
//SYSUT1   DD *
@@@DJDE FORMS=INV1,END;
TEST RESOURCE DOWNLOAD.
/*
```

This JCL enables you to download a resource with a minimum of printed text.

Using system-level features

Some features that affect XPAF's processing of your documents are set up at installation. This section provides a brief description of these features to ensure that you are aware of them.

Banner pages

Banner pages, also known as separator pages, are issued with each print job and contain job information, such as the user ID, job ID, and print date. A banner page may be issued as a header page, a trailer page, and/or a separator page between datasets.

Selecting the banner page format

XPAF uses its default format for banner pages unless your systems programmer specified another format during installation. The format of banner pages at your site may have been changed through parameters, keywords, or user exits. For information on setting up banner pages, refer to *Section Two: Installing and Customizing XPAF*.

Changing the banner page format

To request a different format for the banner pages for your print jobs, contact your systems programmer.

Checkpoint restart

For DJDE, page-formatted, and AFP documents sent to centralized, decentralized, and PCL-capable printers, XPAF supports a checkpoint restart.

Initiating a checkpoint restart

The console operator can initiate a checkpoint restart using standard JES2 or JES3 printer commands for interrupting or halting a printer, or the XPAF-exclusive command TERMINATE TASK. For each type of document, processing resumes from the most recent checkpoint as specified in the CKPTPAGE JES printer parameter.

Refer to *Section Seven: XPAF Operator Guide* for more information about using operator commands.

Changing the checkpoint interval

At the system level, your systems programmer may have set the interval between checkpoints using the CKPTPAGE JES printer parameter in the JES printer definition. Contact your systems programmer if you need the system-level interval changed.

For a particular document, you can set the interval between checkpoints by including the CKPTPAGE IBM JCL keyword in the JCL used to submit the job. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the CKPTPAGE IBM JCL keyword.

Forward spacing and backspacing a document

For line-mode, DJDE, XES, page-formatted, and AFP documents sent to centralized, decentralized, and PCL-capable printers, XPAF supports forward spacing and backspacing. For each type of document, the printer forward spaces or backspaces to a specified page number from the current page being printed by XOSF (this may not be the actual page that is being printed by the printer).

Initiating forward spacing and backspacing

The console operator initiates forward spacing and back spacing using standard JES2 or JES3 printer commands for forward spacing or backspacing documents.

Limitation

When using this feature, forward spacing or backspacing to a specified line number or across dataset boundaries is not supported.

Printing to file or disk

In addition to printing, you can direct any line-mode, DJDE, page-formatted, or AFP document that XPAF has prepared for a centralized printer to disk and/or file. This allows you to archive printable output for later use. For example, you could use this feature to create a disk backup of an important document, or to store your output to file and send it to a service bureau for printing.

Enabling this feature

This feature must be enabled at installation using a combination of initialization and printer profile parameters:

- You must specify values for the OPDALLOC, OPDUNIT, OPHLQ, OPTEXPDT, OPTUNIT, OPTVOLCT, and OPVOLSER initialization parameters to enable dynamic allocation of file and/or disk datasets.
- You also must specify the WRITER printer profile parameter to specify the output destination (printer, file, and/or disk).

For more information about setting up XPAF to print to file and/or disk, refer to *Section Two: Installing and Customizing XPAF*. For a complete description of the identified parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Selecting the destination for a particular document

At print time, you can direct a specific document to any supported combination of printer, file, and/or disk by specifying the OPWRITER extended JCL keyword in the JCL used to submit the job. For more information about this keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Before you attempt to direct a particular document to file and/or disk, contact your systems programmer to verify that this feature has been enabled.

Printing output from file

To print a document that was written to file using the output-to-file option, the DFAULT PDL distributed in XPFSAMP must have been downloaded to the printer and compiled using the PDL printer command. Mount the file on the printer's file drive, then at the printer console, enter this command:

START file,DEFAULT

Limitation — maximum record length

When using this feature, note that the maximum output record length supported is 256 bytes. If your input record length is greater than 256 bytes, data will be truncated in the output record that is written to file or disk. However, when the data is printed on a centralized printer, the output is not truncated.

SMF recording

XPAF supports IBM's System Management Facility (SMF) recording capability for line-mode, DJDE, XES, page formatted, and AFP document types. SMF recording is not supported for pass-through documents.

XPAF writes an enhanced SMF type 6 PSF record when document processing is complete, and stores it in the system SMF dataset, if recording has been activated.

While XPAF supports SMF recording for printing via TCP or BARR configurations and other intermediate spooling devices, note that for these configurations, your SMF records will reflect job creation information instead of actual printing information. Therefore, you may see differences in your SMF statistics for these types of jobs. For example, the SMF record will be updated even if the job did not print.

XPAF also supports SMF recording when running in either XPSC-compatibility mode or XPAF full-client mode:

- In XPSC-compatibility mode, XPAF writes one SMF record in the XPSM format.
- In XPAF full-client mode, you may choose to have XPSM write either an SMF record for XPAF processing; an SMF record for XPSM processing; or two records, one for each type of processing. The SMF record written by XPSM is not a type 6 record.

For further information on SMF recording for XPSM, refer to the XPSM user documentation.

Activating

You can activate SMF recording at installation based on the system for which you wish to receive information:

- For XPAF, specify the SMF initialization parameter.
- For XPSC-compatibility mode or XPAF full-client mode, specify the XPSMBRS and/or XPSMSRS initialization parameters.

For each type of system, SMF recording also can be controlled through the SET SMF RECORDING ON|OFF operator command.

For more information about these initialization parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*. For more information about the SET SMF RECORDING ON|OFF operator command, refer to *Section Seven: XPAF Operator Guide*.

Accessing SMF accounting information

If you need access to SMF accounting information, contact your systems programmer. For more information about SMF processing, refer to *Section Two: Installing and Customizing XPAF*.

SMF accounting for VIPP documents

SMF impression and page counts for VIPP documents are based on a simple count of 'Skip to Channel 1' carriage control characters and may

not reflect the actual number of pages that are printed with the associated JDT.

A true page count should be determined from the printer accounting logs.

User exits

Your site may use user exits to modify XPAF processing (for example, to modify banner page processing).

Implementing

Typically, user exits are coded and SMP/E-installed during XPAF installation, although user exits also may be added or changed at a later date. For information on coding and installing user exits, refer to *Section Two: Installing and Customizing XPAF*.

Getting information about user exits at your site

Contact your systems programmer to determine if any user exits are currently implemented at your site, or to request that a user exit be implemented.

32. Printing line-mode documents

This chapter contains the information you need to print line-mode documents through XPAF. It addresses these topics:

- Verifying that your resources have been set up correctly
- Including resources in your documents
- Modifying the processing of your documents
- Using advanced features, such as color
- Processing line-mode documents as DJDE or AFP documents

In addition, it provides troubleshooting tips for resolving some of the common problems you may encounter as you print line-mode documents.

Data stream definition

Line-mode (or 3211) documents are data streams which consist of carriage control commands and line data.

If you enhance the look of your line-mode data streams by using extended JCL keywords, XPAF no longer considers the data stream a line-mode data stream. XPAF will process it as the relevant data stream type.

XPAF support

You can print line-mode documents through XPAF to any supported centralized, decentralized, PCL-capable printer or convert them to PDF.

Preparing resources

For many types of documents, there are issues related to resource preparation that you need to address before you submit jobs for printing. However, because line-mode documents contain no printer control commands, they are printed using the fonts, forms, images, logos, colors, and paper trays in effect at the printer at the time the document is printed.

- For centralized printers, these attributes are determined by the started JDE/JDL on the printer or the environment set up by the previous job or job step.
- For decentralized and PCL-capable printers or PDF devices, these attributes are determined by the setup values of the specific printer.

Using resources

Just as there are no steps needed to prepare resources for line-mode documents, there are also no procedures for specifying resources.

Modifying document processing

For line-mode documents, extended JCL keywords are not used. If you use extended JCL keywords, XPAF no longer considers it a line-mode document. XPAF will process it as the relevant data stream type.

Using advanced features

Because line-mode documents contain no printer control commands, advanced features, such as using color or selecting paper trays, are limited to the defaults at the printer as defined by the started JDE/JDL, printer setup, or operator command(s).

Printing documents

Submit your documents for printing using standard JCL. Make sure your output class specifies a supported centralized, decentralized, or PCL-capable printer or PDF device.

Processing line-mode documents as DJDE or AFP documents

You can cause XPAF to process a line-mode document as a DJDE or AFP document by specifying the DEFLINE initialization or printer profile parameter or the PRMODE IBM JCL keyword.

For more information about how XPAF determines the processing mode for a document, refer to chapter 31, “General information.”

For DJDE processing

To change the processing mode to DJDE, use one of these options:

- For all documents or documents directed to a particular printer, specify DEFLINE=DJDE in your initialization parameters or printer’s profile to force XPAF to process all line-mode documents as DJDE documents using the default JDE/JDL.
- For a particular document, specify PRMODE=DJDE in the JCL to cause the line-mode document to be processed as a DJDE document using the default JDE/JDL.

This processing applies only for decentralized and PCL-capable printers or converting to PDF, because centralized printers always print in DJDE mode. If the document is directed to a decentralized or PCL-capable printer or converting to PDF, XPAF will process it through the DJDE-to-XES conversion. The font will then be determined by the default JDE/JDL rather than the active font on the decentralized printer, ensuring that you receive consistent line-mode output from both centralized and decentralized printers.

For AFP processing

To change the processing mode to AFP, use one of these options:

- For all documents or documents directed to a particular printer, specify DEFLINE=PAGE in your initialization parameters or printer’s profile to force XPAF to process all line-mode documents as AFP documents using the default PAGEDEF, FORMDEF, and CHARS values.
- For a particular document, specify PRMODE=PAGE in the JCL to cause the line-mode document to be processed as an AFP document using the default PAGEDEF, FORMDEF, and CHARS values.

Troubleshooting problems

Occasionally, your output may not print as you expected. If this happens, review the items in table 32-1 for information to help you resolve the problem.

Table 32-1. Common printing errors for line-mode documents

Symptom	Explanation	Steps to take
The document does not fit on the correct number of pages, or lines do not break correctly on a page.	The active font on the printer uses more space than you expected. Typically, a monospaced font uses more space than a proportional font. For example: This is text (arial 10 pt) This is text (monotype.com 10 pt)	For a centralized printer, review the PDL to determine the font in use. Once you have made any changes needed, recompile the PDL on the printer. For a decentralized printer, check the default font on the printer, and select a new font if necessary. For a PCL-capable printer or conversion to PDF, check the default font specified in the PORTFONT or LANDFONT printer profile parameter, and specify a new font if necessary.
The document prints in the incorrect orientation.	The print orientation for line-mode documents is determined as follows: • For centralized printers, orientation is based on the started JDL on the printer. • For decentralized printers, orientation is based on the orientation of the active font. • For PCL-capable printers and PDF conversion, orientation is determined by the last active font on the printer. If you use the XPAF default banner page, this will be a landscape font.	For a centralized printer, review the PMODE parameter in the active PDE. Once you have made any changes needed, recompile the PDL on the printer. For a decentralized printer, check the orientation of the default font on the printer. • To print a document in portrait orientation, ensure that a portrait font is selected. • To print a document in landscape orientation, ensure that a landscape font is selected. For a PCL-capable printer or PDF conversion, update your banner page if necessary to specify a font in the correct orientation.
When printing to a highlight color printer, the document prints in highlight color instead of black.	Someone has issued the SUBSTITUTE INK command at the highlight color printer's console to select the highlight color.	Issue another SUBSTITUTE INK command to change the color back to black.

33. Printing DJDE documents

This chapter contains the information you need to print DJDE documents through XPAF. It addresses these topics:

- Verifying that your resources have been set up correctly
- Including resources in your documents
- Modifying the processing of your documents
- Using advanced features, such as color
- Converting DJDE documents to XES documents

In addition, it provides troubleshooting tips for resolving some of the common problems you may encounter as you print DJDE documents.

Data stream definition

DJDE documents contain embedded Xerox printing commands called Dynamic Job Descriptor Entries (DJDEs). DJDEs are control statements that specify how a document should be printed on a centralized printer. They allow you to dynamically modify the centralized printing environment established by the PDL on the printer.

DJDE processing enables certain printer parameters to be changed from one job, page, or record boundary to the next. For example, if the PDL on your printer specified COPIES=2, but you needed five copies of a report, you could override the PDL setting for that one report by coding a DJDE in the input data stream to specify COPIES=5.

You can generate DJDE data streams in one of three ways:

- Format a line-mode data stream using standard IBM and XPAF extended JCL.
- Code DJDEs directly in a data stream or use an application to produce a data stream containing DJDEs. In addition, you can modify the initial DJDE packet using standard IBM and XPAF extended JCL.
- Build an XJCFSIM table to generate the DJDEs. Refer to chapter 38, “Using XPAF extended features,” for information on XJCF processing.

For detailed information about using PDL and DJDEs, refer to your centralized printer’s reference manual.

XPAF support

You can print DJDE documents on supported centralized, decentralized, and PCL-capable printers or convert them to PDF. During document processing, XPAF converts any JCL keywords to DJDEs.

- For documents sent to a centralized printer, no further processing is required.
- For documents sent to a decentralized printer, the DJDEs are converted to XES commands.
- For documents sent to a PCL-capable printer, the DJDEs are converted to XES commands, then the XES commands are converted to PCL commands.
- For documents converted to PDF, the DJDEs are converted to XES commands, then the XES commands are converted to PDF.

DJDE/Extended JCL keyword processing

Extended JCL keywords override DJDE parameters in the initial packet of the data stream, which in turn override the PDL printer commands. However, the extended JCL keywords do not override any subsequent DJDE parameters in the data stream (that is, those not in the initial packet).

Preparing resources

For DJDE documents, there are tasks related to resource preparation that you need to complete before you submit jobs for printing. Before you begin printing documents, contact the system administrator responsible for maintaining your print resources to ensure that the applicable tasks have been completed.

NOTE: These tasks are summarized in table 33-1 and described in detail in *Section Three: Managing Resources with XPAF*.

Table 33-1. Resource preparation for DJDE documents

Resource type	User actions needed	Print time processing
Fonts	Load any centralized or decentralized fonts you have purchased from Xerox Font Services or a third-party vendor to the appropriate native font libraries.	XPAF will download fonts from the native font library if they have not been included inline or if they are not resident on the printer.
	Convert a centralized font to decentralized format if you do not have a decentralized version of the font, but want to use the same font in documents printed to both centralized and decentralized printers. ***NOTE:*** All fonts included with XPAF, except language-specific R03 fonts, are provided in both centralized and decentralized format, so preconversion is not necessary for these fonts. However, you must preconvert language-specific R03 centralized fonts to decentralized format.	XPAF does not dynamically convert centralized fonts to decentralized format. If you do not preconvert the font, document processing will be terminated.

Table 33-1. Resource preparation for DJDE documents (Continued)

Resource type	User actions needed	Print time processing
Fonts (continued)	Before you convert a centralized font that you have purchased from either Xerox Font Services or a third-party vendor to decentralized format, update the applicable font tables as needed: • Ensure that the Xerox Font Information (XPAFXFI) entry for the centralized font contains valid centralized and decentralized character mapping table names. • Verify that all expected character IDs exist in the centralized character mapping table, and that the character IDs in the decentralized character mapping table are mapped to the desired code point and plane number combination.	During centralized-to-decentralized font conversion, XOAF uses the centralized and decentralized character mapping tables to determine where to place the centralized characters in the decentralized font.
	(optional) Create a resident font list for each printer.	XPAF will check the printer's font list to determine whether a requested font is resident on the printer. If the font is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's font list when it downloads a font.
Forms	Load your centralized and decentralized forms to the appropriate native form libraries.	XPAF will download forms from the native form library if they have not been included inline or if they are not resident on the printer. For documents sent to decentralized printers, XPAF converts any centralized forms referenced in the document to decentralized format. For documents sent to PCL-capable printers, the decentralized (XES) form is then converted to PCL format. For documents converted to PDF, the decentralized images are then converted to PDF format.
	(optional) Create a resident form list for each printer.	XPAF will check the printer's form list to determine whether a requested form is resident on the printer. If the form is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's form list when it downloads a form.

Table 33-1. Resource preparation for DJDE documents (Continued)

Resource type	User actions needed	Print time processing
Images	Load your centralized and decentralized images to the appropriate native image libraries.	XPAF will download images from the native image library if they have not been included inline or if they are not resident on the printer. For documents sent to decentralized printers, XPAF converts any centralized images referenced in the document to decentralized format. For documents sent to PCL-capable printers, the decentralized images are then converted to PCL format. For documents sent to PDF devices, the decentralized images are then converted to PDF format.
	(optional) Create a resident image list for each printer.	XPAF will check the printer's image list to determine whether a requested image is resident on the printer. If the image is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's image list when it downloads an image.
Logos	Load centralized logos to the native logo library.	XPAF will download logos from the native logo library if they have not been included inline or if they are not resident on the printer.
	Convert centralized logos to decentralized fonts for printing on decentralized printers.	XPAF does not dynamically convert centralized logos to decentralized fonts. If you do not preconvert the logo, document processing will be terminated.
	(optional) Create a resident logo list for each centralized printer.	XPAF will check the printer's logo list to determine whether a requested logo is resident on the printer. If the logo is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's logo list when it downloads a logo.

Table 33-1. Resource preparation for DJDE documents (Continued)

Resource type	User actions needed	Print time processing
Color	(Optional) For highlight color processing, create a color cross-reference table to map the ink color specified in a DJDE document to the ink color loaded on the highlight color printer.	XPAF will look in the specified color cross-reference table to determine the color to use; however, XPAF cannot verify that the color specified in the table matches the ink loaded on the printer. Operator intervention will be required at the printer under these circumstances: • If the color you specify in the color cross-reference table is not loaded on the printer. • If you have not created a color cross-reference table, and the color specified in the document does not match the ink loaded on the printer.
	(Optional) For full color processing using custom colors not defined in the color conversion table, update the color conversion table to map centralized highlight color to decentralized full color, then load it in the appropriate native library.	XPAF will use the color conversion table to determine the RGB color values to be used on the decentralized printer. If your document uses a color not defined in this table, XPAF will substitute black for the undefined color.
Paper trays	Update any cluster mapping tables that differ from your site's setup to map centralized paper tray cluster names to paper trays on decentralized and PCL-capable printers.	When printing to a decentralized or PCL-capable printer, XPAF will attempt to match the cluster name specified in the document to an entry in the cluster mapping table. It there is a match, XPAF will use that entry to issue a tray select for the tray specified. NOTE: The paper size for a page is determined by the PAPERSIZE= value in the active JDE.
PDL	Load your PDL files to the native PDL libraries. You must ensure that the PDL members compiled on the printer are identical to those loaded to the native PDL libraries, or your results will be unpredictable.	XPAF will use the values in the specified PDL files to help determine the format and processing requirements for the document.

Using resources

For DJDE documents, the fonts, forms, images, and logos you specify in your document can be:

- Included inline as part of the document. Inline resources are specified using the FILE DJDE command in the data stream.
- Resident on the printer. Printer-resident resources can be specified using PDL, DJDEs, or extended JCL keywords.
- Downloaded from an XPAF resource library at print time.

The following sections contain information about extended JCL keywords you can use to specify and update resources at print time. For detailed information about a particular keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*. For information about using PDL and DJDEs to include resources in a document, refer to your centralized printer's reference manual.

Specifying

XPAF provides a number of extended JCL keywords which you can use to specify fonts, forms, and images in your DJDE documents.

Fonts

You can specify up to 16 fonts to be used within a document using the FONT*nn* extended JCL keyword. In conjunction with this keyword, you can use the FINDEX extended JCL keyword to establish font indexing. FINDEX enables you to specify the byte position, initial value, and number of low order bits to use in the index.

If you do not specify a font using DJDEs or JCL keywords, the printer will print the document using the font specified or defaulted to in the started JDL on the printer.

Forms

You can specify forms using several extended JCL keywords:

- Use the XFORM*n* extended JCL keyword to specify the names of up to three forms to be printed in a document. If the document is duplexed, the form(s) will be printed on both sides of the page.
- Use the BFORM*n* extended JCL keyword to specify the names of up to three forms to be printed on the back of a duplex page.
- Use the RFORM extended JCL keyword to specify the form to be included on all RTEXT pages.

Images

You can specify an image to be included in your DJDE document using the IMAGE extended JCL keyword. This keyword enables you to specify the name, position, and color attributes of an image.

Logos

There are no extended JCL keywords available for specifying logos. Logos can only be referenced through a form.

Revising

If your site has created or received a new version of a resource and loaded it to the appropriate XPAF native resource library, the version in the library may no longer match the version on the printer.

For data streams that reference Xerox native resources, you can specify AUTOREV=XEROX in your initialization parameters or the printer's profile to ensure that your document is printed using the most current version of the resource.

To ensure that your document is printed using the most current version of the resource, include the appropriate REVxxxxx extended JCL keyword(s) in the JCL used to submit the job:

- REVFONT
- REVFORM
- REVIMAGE
- REVLOGO

REV*xxxxx* downloads the specified resource to the printer. Then, for centralized and decentralized printers that are capable of permanently storing resources, the resource is stored on the printer so it will be available for subsequent jobs. For centralized printers only, if you also have specified the equivalent DEL*xxxxx* printer profile parameter or extended JCL keyword (DELFONT, DELFORM, DELIMAGE, or DELLOGO), the resource will not be stored on the printer.

Deleting

You may not want to keep all your resources resident on a printer. Some reasons why you might want to delete them from the printer include:

- Testing. If you are testing a new version of a font, form, image, or logo, you may not want to store it until you are certain it is the version you plan to use.
- Security. If you want to ensure that a particular resource (such as a licensed font or signature logo) cannot be copied from the printer, you should not store it on the printer.
- Limited printer disk space. If you have limited storage on your printer, you can delete resources to increase the amount of space available.

For centralized printers only, you can print a specific document without storing one or more of its resources on the printer. To do this, use the appropriate DEL*xxxxx* extended JCL keyword(s):

- DELFONT
- DELFORM
- DELIMAGE
- DELLOGO

Each of these keywords downloads the specified resource(s) to the centralized printer. Then after the document is printed, it deletes them from the printer so that they will no longer be available.

NOTE: You can include the DEL*xxxxx* parameter(s) in the centralized printer's profile to specify that for all documents, the resources that are downloaded will be deleted from the printer after use.

Modifying document processing

There are many document features you can change at print time using XPAF-supplied parameters and keywords. This section summarizes the extended JCL keywords available in XPAF to change DJDE document processing. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the keywords identified in this section and for IBM JCL keywords available for DJDE processing.

Table 33-2. Extended JCL keywords for DJDE processing

Extended JCL keyword	Function
BEGIN1– BEGIN4	Defines the origins for up to four logical pages per physical page.
BOF	Specifies the bottom-of-form line number.
CHAN01– CHAN12	Assigns a line number to a channel assignment.
CME	Identifies the copy modification entry to be used for printing the document.
FORMAT	Specifies the PDE to be used to format a document.
JDE	Identifies the JDE to be used for the document.
JDL	Identifies the JDL to be used for the document.
MARGIN	Specifies the left page margin for the document to be printed.
PMODE	Specifies the print orientation for the document.
SIDE	Species the positioning of the first logical page of the document to the first logical page of a physical sheet.
TOF	Specifies the top-of-form line number. This is the line with reference to the top of page on which the first line of text will print in an overflow condition.

Using advanced features

Through XPAF, you can print DJDE highlight color documents to both highlight and full color printers. If your printer is equipped with finishing equipment, you can use Document Finishing Architecture (DFA) interface support.

Highlight color

Highlight color DJDE documents can be printed on any centralized printer, PCL-capable printer that supports PCL5C color printing or when converted to PDF. By using extended JCL keywords, you can override the colors selected by DJDEs (for example, INKXREF) or add color not included in the original DJDEs (for example, COLORIMG).

If you use extended JCL keywords to add highlight color to a DJDE document, you also can print that document on a printer that does not support color. XPAF will ignore the color-related extended JCL keywords and the document will be printed in black.

Mapping color requests

If the text colors in your document do not match the colors on the highlight color printer, you can map the color requests to the colors on your printer through color cross-reference tables. When you print a document, XPAF changes the color request from the color coded in the data stream to the color specified in the color cross-reference table.

You can print a highlight color document to a PCL-capable printer that supports PCL5C color printing or convert the document to PDF without modifying the document. XPAF uses the color conversion table to convert highlight color requests to RGB format for the text only. You can update the color conversion table if you want to change its default color assignments or add custom colors. If you modify the color conversion table, you must reload it using either the XOAF Maintain the Color Conversion Table option on the Manage Tables menu or the LOAD INKS TSO/batch command.

Refer to *Section Three: Managing Resources with XPAF* for more information about creating, maintaining, and loading these tables.

Using color resources

You can include color forms, images, and logos in your DJDE documents.

Forms

The color forms you create using the XPAF Forms Generator can be printed through XPAF without modification.

Images and logos

Images that have not been converted to color format can be printed in color using the COLORIMG extended JCL keyword.

Using extended JCL keywords

Using extended JCL keywords, you can specify highlight color features for a document. Extended JCL keywords override any corresponding DJDE keywords included in the initial packet of a document.

Table 33-3. Highlight color-related extended JCL keywords for DJDE documents

Extended JCL keyword	Function
COLORIMG	Identifies colors to be applied to up to eight IMAGE DJDE records that are not already coded with an INKREF name.
ICATALOG	Identifies the ink catalog to use when ink references do not specify an ink catalog.
IDFAULT	Identifies the ink to be used when an ink is not specified in a resource.
IDR	Specifies the ink descriptor name.
ILIST	Specifies up to eight ink reference names to be used in an ink list and referenced by the ink index.
IMAGE	Defines image positioning and color parameters for the named image.
INKINDEX	Specifies the position within a user data record that contains the index to a specific ink reference name.
INKXLIB	Identifies the DD name of the library where the color cross-reference tables are stored.
INKXREF	Identifies the name of the color cross-reference table.
IRESULT	Identifies the ink to be used when different inks overlay on a pixel.
NUMBER	Specifies that page numbers will be printed for a document, and in which color they will be printed

Table 33-3. Highlight color-related extended JCL keywords for DJDE documents (Continued)

Extended JCL keyword	Function
PALETTE	Identifies the color palette to be used on the page.
XMP	Specifies whether to use Xerographic mode switching (XMS) to print the entire document using highlight color print mode.

Color-related keyword overrides

This table shows the overrides for printer commands, initial packet DJDEs, and extended JCL keywords.

Table 33-4. Color-related keyword overrides for DJDE documents

PDL command/parameter	Overridden by DJDE keyword in the initial packet	Overridden by extended JCL keyword
ABNORMAL/IMISMATCH		
ABNORMAL/ISUBSTITUTE		
CME/INK		
IDR/ICATALOG	ICATALOG	ICATALOG
IDR/ILIST	ILIST	ILIST
IDR/PALETTE	PALETTE	PALETTE
LINE/INKINDEX	INKINDEX	INKINDEX
OUTPUT/BFORM	BFORM	BFORM1– BFORM3
OUTPUT/CYCLEFORMS		
OUTPUT/FORMS	FORMS	XFORM1– XFORM3
OUTPUT/IDFAULT	IDFAULT	IDFAULT
OUTPUT/IDR	IDR	IDR
OUTPUT/IMAGE	IMAGE	IMAGE
OUTPUT/IRESULT	IRESULT	IRESULT
OUTPUT/NUMBER	NUMBER	NUMBER
OUTPUT/XMP	XMP	XMP

Document finishing

You can use XPAF features to control some aspects of document finishing, including:

- Collating
- Shifting data for binding purposes
- Stapling
- Setting the finishing boundary
- Paper tray selection

Collating

For centralized printers only, when you are printing multiple copies of a document, you can use the COLLATE extended JCL keyword to ensure that XPAF prints one complete copy of the document before starting the next copy.

Shifting output for binding

You can use the SHIFT extended JCL keyword to specify a shift of the page data for binding purposes. Shifting data toward the outer edge of the page helps prevent text from being obscured when pages are bound together or hole-punched.

Stapling

For centralized printers that support stapling, you can staple documents by specifying the JDE extended JCL. This keyword must name a JDE that is coded for stapling.

XPAF provides a sample JDE called STAPLE in the XPFSAMP member DFAULT. STAPLE has been commented out. To use it, you must uncomment it, then load it into your PDL library on the host, and compile it on the printer.

You can use your own JDE if you wish. The JDE must contain a statement similar to this:

```
OUTPUT STAPLE=YES,NT01=YES,FACEUP=YES;
```

The JDE must be loaded into your PDL library on the host, downloaded to the printer, and compiled.

Setting the finishing boundary

For centralized printers only, you can specify a finishing boundary for a document if your printer supports the Document Finishing Architecture (DFA) interface (version 4.1 or higher). The output is finished at the end of the document.

To specify a finishing boundary, perform these steps:

Step 1. Ensure that the printer's profile specifies FEATURE=DFA.

Step 2. Use the SF1 and/or SF2 extended JCL keywords in your JCL to instruct XPAF to send DJDEs to the printer to raise (that is, turn on) or lower (that is, turn off) signal function 1 and/or signal function 2 for document finishing purposes.

Refer to *Section Five: XPAF Parameter and Keyword Reference* for more information about the SF1 and SF2 extended JCL keywords. For more information about DJDEs, refer to the PDL/DJDE reference manual for your printer.

NOTE: XPAF does not determine the function of signal function 1 and signal function 2; the signal's function is defined by the third-party finishing equipment. Refer to the finishing equipment documentation supplied by your third-party vendor for more information about the equipment's use of signal functions.

Using extended JCL keywords

Using extended JCL keywords, you can specify several finishing features for a document

Table 33-5. Finishing-related extended JCL keywords for DJDE documents

Extended JCL keyword	Function
COLLATE	Specifies whether the output will be collated.
SF1	Specifies that XPAF will send a DJDE to the centralized printer to control signal function 1 at the start of a page.
SF2	Specifies that XPAF will send a DJDE to the centralized printer to control signal function 2 at the start of a page.
SHIFT	Specifies a shift of the page data for binding purposes.

Paper tray selection

XPAF uses cluster mapping tables to map a centralized paper tray cluster name to a paper tray on a decentralized or PCL-capable printer.

XPAF provides a default cluster mapping table for each printer model. You can also specify your own cluster mapping tables using the CLUSTRTB printer profile parameter or extended JCL keyword. Refer to *Section Three: Managing Resources with XPAF* for a discussion on how cluster mapping tables are used and for instructions on creating and updating the cluster mapping tables.

CAUTION: If you specify a value for PAPERSIZ in your extended JCL, that value overrides the PAPERSIZE= value in the active JDE. All other cluster mapping table processing occurs normally.

Using extended JCL keywords

Using extended JCL keywords, you can specify several paper-related table features for a document.

Table 33-6. Paper table-related extended JCL keywords for DJDE documents

Extended JCL keyword	Function
CLUSTRTB	Identifies the cluster mapping table used by XPAF to map a centralized paper tray cluster name to a paper tray on a decentralized or PCL-capable printer.
FEED	Specifies the printer cluster (paper tray group) from which paper will be selected. ***NOTE:*** When printing to a decentralized or PCL-capable printer, XPAF matches the value for this keyword to an entry in the cluster mapping table to determine the paper size and decentralized paper tray.
PAPERSIZ	Specifies the paper size to be used for the document. The paper loaded in the tray from which the job feeds must be the same size as you specify using this keyword. ***CAUTION:*** The value for this keyword overrides any PAPERSIZE= entries in the currently active JDE.
PAPNAMTB	Identifies the paper name table used by XPAF to determine the physical paper size dimensions that correlate to a specified paper name.

Printing documents

Submit your documents for printing using standard JCL. Make sure your job class references a supported centralized, decentralized, or PCL-capable printer or PDF device.

NOTE: The next section contains information about converting DJDE documents to XES documents for printing on decentralized printers. If you direct your document to a PCL-capable printer, the DJDE commands will be converted to XES commands, then the XES commands are converted to PCL commands. Refer to chapter 34, “Printing XES documents” for information about the XES-to-PCL conversion.

Converting DJDE documents to XES documents

If you direct a DJDE document to a decentralized printer, XPAF will convert the DJDE commands into XES commands. Print lines are then formatted with XES commands so that the printed results will match the results from a centralized printer.

Processing overview

When printing documents to a decentralized printer, the DJDE-to-XES conversion is invoked whenever:

- A DJDE command is found in the first record of the data stream
- PRMODE=DJDE is specified in the JCL used to submit the job

This includes jobs conditioned by extended JCL that reference features that are invoked by DJDEs. The DJDE environment is maintained between datasets and is reset only when a banner page/RSTACK condition is detected.

Default values

The PDL stored in your native PDL library is used to apply default JSL values and cataloged member values. A native PDL library is specified in the XOSF start-up proc DD statement named by the PDLLIB initialization or printer profile parameter. If this library does not exist or is not loaded with current information, the job formatting will be limited to values found in the DJDEs.

Multiple-step jobs

For multiple-step jobs sent to decentralized or PCL-capable printers, if line-mode data is in a separate step from the DJDEs that format the data, XPAF may print the data as a line-mode document using the decentralized or PCL-capable printer's default font, respectively. If this happens, you must force the line-mode data to go through the DJDE-to-XES conversion and use the formatting parameters from the previous DJDE step. You can do this in one of several ways:

- Include a DJDE command in the first record of the line-mode data stream.
- Specify PRMODE=DJDE in your JCL to identify the line-mode data stream as DJDE data stream.
- Specify DEFLINE=DJDE in your initialization parameters or printer's profile to force all line-mode data to be treated as DJDE data.

Supported DJDE/PDL statements

Table 33-7 lists the DJDE and PDL statements supported for DJDE-to-XES conversion. This table does not list any DJDE and PDL statements that are either not applicable or not supported.

Table 33-7. DJDE/PDL statements supported for DJDE-to-XES conversion

DJDE/PDL statement	Command	Limitations
BANNER	HCOUNT	
BANNER	TCOUNT	
BANNER	TEST	
CME	CONSTANT	
CME	FONT	
CME	INK	
CME	LINE	
CME	POSITION	
CODE	ASSIGN	
CODE	DEFAULT	
CRITERIA	CHANGE	
CRITERIA	CONSTANT	
CRITERIA	LINENUM	
DJDE	ALTER	
DJDE	ASSIGN	
DJDE	BATCH	
DJDE	BEGIN	
DJDE	BFORM	
DJDE	BOF	
DJDE	C (comment)	
DJDE	CANCEL	
DJDE	COLLATE	
DJDE	COPIES	
DJDE	DATA	

Table 33-7. DJDE/PDL statements supported for DJDE-to-XES conversion (Continued)

DJDE/PDL statement	Command	Limitations
DJDE	DUPLEX	
DJDE	END	
DJDE	FEED	
DJDE	FILE	Only .FRM and .IMG files are recognized and are treated as temporary resources
DJDE	FONTINDEX	
DJDE	FONTS	
DJDE	FORMAT	
DJDE	FORMS	
DJDE	GRAPHIC	
DJDE	IDFAULT	
DJDE	ILIST	
DJDE	IMAGE	
DJDE	INKINDEX	
DJDE	ITEXT	
DJDE	JDE	
DJDE	JDL	
DJDE	MARGIN	
DJDE	MODIFY	
DJDE	NUMBER	
DJDE	OTEXT	
DJDE	OVERPRINT	
DJDE	PMODE	
DJDE	RFORM	
DJDE	RTEXT	
DJDE	SHIFT	
DJDE	SIDE	
DJDE	STOCKS	

Table 33-7. DJDE/PDL statements supported for DJDE-to-XES conversion (Continued)

DJDE/PDL statement	Command	Limitations
DJDE	TOF	
IDEN	OFFSET	
IDEN	PREFIX	
IDEN	SKIP	
IDR	ILIST	
LINE	DATA	
LINE	FONTINDEX	
LINE	INKINDEX	
LINE	MARGIN	
LINE	OVERPRINT	
LINE	VFU	
OUTPUT	BFORM	Supported only on duplex printers.
OUTPUT	COLLATE	
OUTPUT	COPIES	
OUTPUT	COVER	
OUTPUT	CYCLEFORMS	
OUTPUT	DUPLEX	
OUTPUT	FEED	
OUTPUT	FORMAT	
OUTPUT	FORMS	
OUTPUT	GRAPHIC	
OUTPUT	IDFAULT	
OUTPUT	IMAGE	
OUTPUT	MODIFY	
OUTPUT	NUMBER	
OUTPUT	OFFSET	
OUTPUT	PAPERSIZE	

Table 33-7. DJDE/PDL statements supported for DJDE-to-XES conversion (Continued)

DJDE/PDL statement	Command	Limitations
OUTPUT	SHIFT	
PDE	BEGIN	
PDE	FONTS	
PDE	PMODE	
RAUX	TEST	
RFEED	TEST	
ROFFSET	TEST	
ROUTE	RFORM	
ROUTE	RTEXT	
RPAGE	SIDE	
RPAGE	TEST	
RPAGE	WHEN	
RSTACK	DELIMITER	
RSTACK	TEST	
TABLE	CONSTANT	
TABLE	MASK	Only these options are supported: IGNORE-CHAR, CHARSPEC1, and CHARSPEC2.
VFU	ASSIGN	
VFU	BOF	
VFU	TOF	
VOLUME	CODE	

Processing limitations

When directing a DJDE document to a decentralized or PCL-capable printer or converting to PDF, restrictions apply to certain elements, including:

- Decentralized printer functionality
- Image magnification
- Operator messages
- Paper trays
- Color start Metacodes

Color start Metacodes

When using the Fill color start (X'0A') and Highlight color start (X'0C') metacodes, an INKLIST must be used to determine the color to use.

Decentralized printer functionality

These limitations apply for decentralized printers:

- Output from a DJDE-to-XES conversion is limited to the functionality of the destination decentralized printer. XPAF ignores DJDE and PDL commands that do not apply to the destination decentralized printer.
- Because of differences in the printers' hardware and software, XPAF handles invalid DJDE packets differently for centralized and decentralized printers. Results vary depending on the invalid command and cannot be predicted.

Image magnification

Output from a DJDE-to-XES conversion limits centralized image magnification to two or four times the actual size. This is a limitation of decentralized image processing.

Table 33-8 shows the differences between centralized and decentralized image magnification (assuming that *x* is your centralized image magnification factor).

Table 33-8. Image magnification factors

Centralized	Decentralized
$0.125 \leq x < 2$	1
$2 \leq x < 4$	2
$4 \leq x \leq 8$	4

Operator messages

These limitations apply to the ITEXT and OTEXT extended JCL keywords:

- ITEXT or OTEXT messages cannot be specified for a particular copy of a job.
- OTEXT messages that specify the END parameter appear at the start of the output print job rather than at the end.
- The WAIT parameter is ignored, and operator intervention is required to continue printing the job.

Paper trays

These limitations apply to paper tray processing:

- Paper tray remapping on the printer is not supported. You should use a cluster mapping table instead to define paper tray mapping for decentralized and PCL-capable printers.
- Because it is a centralized printer operator command, XPAF cannot support the CLUSTER printer command during DJDE-to-XES conversion. Use a cluster mapping table instead to define paper tray mapping for decentralized and PCL-capable printers.
- XPAF will terminate processing of any document with a PDL-defined paper size that is not supported by the destination decentralized or PCL-capable printer.

Troubleshooting problems

Occasionally, your output may not print as you expected. If this happens, review the items in table 33-9 for information to help you resolve the problem.

Table 33-9. Common printing errors for DJDE documents

Symptom	Explanation	Steps to take
The printed output contains a blank page prior to the first page of data.	A blank page is printed prior to the first page of data for DJDE jobs whose first record contains a space 1 line and print ANSI carriage control (space character) and a DJDE.	To prevent a blank page from printing, replace the space 1 line and print carriage control character on the first DJDE record with a write without spacing carriage control character (+).
The printed output contains form positioning errors.	If no paper size is specified in the source version of a form, XPAF uses a default value of LETTER (8 1/2 inches by 11 inches). If the form you want to print was designed for a paper size other than LETTER, but no paper size was specified in the form, then the form will be mispositioned when printed through XPAF.	Ensure that the appropriate paper size value is specified in the source version of the form, then recompile it.
After you start the printer and submit a job, XPAF fails with an 0C1 abend.	If you recently applied z/OS/JES maintenance but did not rerun the XPAF usermod installation job, then XPAF no longer has access to the correct JES control block offsets for processing at your site.	Resubmit UMJOB101 to APPLY the JES offset table.

Table 33-9. Common printing errors for DJDE documents (Continued)

Symptom	Explanation	Steps to take
DJDEs are printed as data.	You have mismatched values in your initialization parameters, extended JCL keywords, and/or PDL. These mismatched values can cause two types of errors: • XPAF may process the DJDE document in another mode (such as AFP). • XPAF may be unable to recognize the DJDEs in the document.	Issue the SET INTENSIVE LOGGING ON operator command to enable intensive logging to the XPAF log dataset. Review the log for messages identifying the processing mode in effect. • If AFP processing is active, ensure that the SYSFCB initialization parameter value matches the JES default FCB value, and that the SYSFONT initialization parameter value matches the JES default UCS value. • If DJDE processing is active, ensure that your IDEN*nn*, DJDEOF*nn*, and DJDESK*nn* initialization parameter values match the corresponding values in the PDL.
When printing a multiple-step job to a decentralized or PCL-capable printer, data is not formatted correctly.	If the line-mode data is in a separate step from the DJDE packets that format the data, XPAF may print the data as a line-mode document using the decentralized or PCL-capable printer's default font.	You must force the line-mode data to go through the DJDE-to-XES conversion and use the formatting parameters from the previous DJDE step. Perform one of these actions: • Include a DJDE command in the first record of the line-mode data stream. • Specify PRMODE=DJDE in your JCL to identify the line-mode data stream as a DJDE data stream. • Specify DEFLINE=DJDE in your initialization parameters or printer's profile to force all line-mode data to be treated as DJDE data.

34. Printing XES documents

This chapter contains the information you need to print XES documents through XPAF. It addresses these topics:

Verifying that your resources have been set up correctly

- Including resources in your documents
- Modifying the processing of your documents
- Using advanced features, such as color
- Converting XES documents to PCL documents

In addition, it provides troubleshooting tips for resolving some of the common problems you may encounter as you print XES documents.

Data stream definition

In XES data streams, escape sequences dynamically change parameters for decentralized printers. You can define a user-defined key (UDK), which acts as a signal to the printer that an escape sequence follows.

Escape sequences can be used to define the format and processing for a document. For example, you can include escape sequences that position text on a page, draw rules, and change fonts. Refer to your decentralized printer XES reference manual for more information on XES commands.

Expected format of XES data stream

When printing native mode XES data streams via XPAF, the data stream must meet these criteria:

- Be in EBCDIC encoded format
- The first record must contain =UDK= starting in the first column
- For data streams being sent to PCL-capable printers or converted to PDF, include only supported XES commands

For a listing of XES commands supported for PCL-capable printers or converted to PDF, refer to “Supported XES commands” later in this chapter and your printer documentation.

XPAF support

You can print XES documents through XPAF to any decentralized or PCL-capable printer or convert them to PDF.

- When printing to a decentralized printer, XPAF accepts escape sequences and sends them to the printer without conversion.
- When printing to a PCL-capable printer, XPAF converts the escape sequences to PCL commands before sending them to the printer.
- When printing to a PDF-capable printer, XPAF converts the escape sequences to PDF commands before sending them to the printer.

NOTE: XES documents cannot be printed on centralized printers.

Preparing resources

For XES data streams, there are tasks related to resource preparation that you need to complete before you submit jobs for printing. Before you begin printing documents, contact the system administrator responsible for maintaining your print resources to ensure that the applicable tasks have been completed.

NOTE: These tasks are summarized in table 34-1 and described in detail in *Section Three: Managing Resources with XPAF*.

Table 34-1. Resource preparation for XES documents

Resource type	User actions needed	Print time processing
Fonts	Load any decentralized fonts you have purchased from either Xerox Font Services or a third-party vendor to the native decentralized font library.	XPAF will download decentralized fonts from the native font library if they have not been included inline or if they are not resident on the decentralized printer. ***NOTE:*** If you are using PCL or PDF -capable printers, you do not load fonts to the PCL or PDF font library; XPAF converts decentralized fonts to PCL or PDF bitmapped format during processing, then stores them in the PCL or PDF font library for subsequent use.
	If you have purchased centralized fonts from either Xerox Font Services or a third-party vendor, you can convert those fonts to decentralized format and specify them in XES documents sent to decentralized or PCL-capable printers or converted to PDF. Convert a centralized font to decentralized format if you do not have a decentralized version of the font, but want to use it in XES documents. ***NOTE:*** All fonts included with XPAF are provided in both centralized and decentralized format, so preconversion is not necessary for these fonts.	When printing an XES document to a decentralized or PCL-capable printer or converting to PDF, XPAF does not dynamically convert centralized fonts to decentralized format. If you attempt to specify a centralized font, document processing will be terminated.

Table 34-1. Resource preparation for XES documents (Continued)

Resource type	User actions needed	Print time processing
Fonts (Continued)	Create a resident font list for each decentralized printer.	XPAF will check the decentralized printer's font list to determine whether a requested font is resident on the printer. If the font is not resident, XPAF will download it. If the decentralized printer can store downloaded resources permanently, XPAF will update the printer's font list when it downloads a font.
Forms	Load your decentralized forms to the native decentralized form library.	XPAF will download decentralized forms from the native form library if they have not been included inline or if they are not resident on the decentralized printer. ***NOTE:*** If you are using PCL-capable printers or converting to PDF, you do not need to load forms to the PCL or PDF form library; XPAF converts a decentralized form to a PCL or PDF macro (which contains a set of PCL or PDF commands that define the form) during processing, then stores it in the PCL or PDF form library for subsequent use.
	Create a resident form list for each decentralized printer.	XPAF will check the decentralized printer's form list to determine whether a requested form is resident on the printer. If the form is not resident, XPAF will download it. If the decentralized printer can store downloaded resources permanently, XPAF will update the printer's form list when it downloads a form.

Table 34-1. Resource preparation for XES documents (Continued)

Resource type	User actions needed	Print time processing
Images	Load your decentralized images to the native decentralized image library.	XPAF will download images from the native image library if they have not been included inline or if they are not resident on the printer. ***NOTE:*** If you are using PCL-capable printers or converting to PDF, you do not need to load images to the PCL or PDF image library; XPAF converts images from sixelized format to bitmapped (HP raster graphic) format during processing, then stores them in the PCL or PDF image library for subsequent use.
	Create a resident image list for each decentralized printer.	XPAF will check the decentralized printer's image list to determine whether a requested image is resident on the printer. If the image is not resident, XPAF will download it. If the decentralized printer can store downloaded resources permanently, XPAF will update the printer's image list when it downloads an image.
Logos	Convert centralized logos to decentralized fonts if you want to use them in XES documents.	XPAF does not dynamically convert centralized logos to decentralized fonts for use in native XES documents. If you attempt to specify a logo, document processing will be terminated.
Color	For highlight color processing: None.	
	For full color processing: None.	XPAF passes color-specific XES commands to PCL or PDF
Paper trays	None.	XPAF passes the XES paper tray select command directly to a decentralized printer, and converts it to an equivalent PCL tray select command when printing to a PCL-capable printer. (If the XES document is the result of a DJDE-to-XES conversion, then the paper tray may have been specified originally in the DJDE document using the cluster mapping table.)
PDL	None.	Not applicable. PDL does not affect XPAF processing of XES documents.

Using resources

For XES documents, the fonts, forms, and images you specify in your document can be:

- Resident on the printer. Printer-resident resources can be specified using XES commands.
- Downloaded from an XPAF resource library at print time.

The following sections contain information about extended JCL keywords you can use to specify and update resources at print time. For detailed information about a particular keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Specifying

For XES documents, there are no extended JCL keywords which you can use to specify resources at print time.

Revising

If your site has created or received a new version of a resource and loaded it to the appropriate XPAF native resource library, the version in the library may no longer match the version on the printer.

For data streams that reference Xerox native resources, you can specify AUTOREV=XEROX in your initialization parameters or the printer's profile to ensure that your document is printed using the most current version of the resource.

To ensure that your document is printed using the most current version of the resource, include the appropriate REV*xxxxx* extended JCL keyword(s) in the JCL used to submit the job:

- REVFONT
- REVFORM
- REVIMAGE

REV*xxxxx* downloads the specified resource to the printer. Then, for centralized printers and decentralized printers that are capable of permanently storing resources, the resource is stored on the printer so it will be available for subsequent jobs. For centralized printers only, if you also have specified the equivalent DEL*xxxxx* printer profile parameter or extended JCL keyword (DELFONT, DELFORM, or DELIMAGE), the resource will not be stored on the printer.

Deleting

For XES documents, there are no extended JCL keywords which you can use to delete resources resident on a printer.

Modifying document processing

For XES documents, there are several extended JCL keywords available to modify document processing, as shown in table 34-2. Refer to *Section Five: XPAF Parameter and Keyword Reference* for additional information about these keywords.

Table 34-2. Extended JCL keywords for XES processing

Extended JCL keyword	Function
PCLDS	Identifies the data stream being printed.
PCLREQ	For printing to a PCL-capable printer, indicates whether the document is converted to PCL5 format, passed through without conversion, or converted as specified by the PCL printer profile parameter.

Using advanced features

Because XPAF does not enhance the processing of advanced features (such as using color or selecting paper trays), you are limited to the XES commands supported by the destination decentralized or PCL-capable printer.

Color

Although there are no extended JCL keywords available for specifying color, you can include color in your XES documents by specifying XES color-specific commands. These commands enable you to add color to text, graphic lines, background text highlighting, and graphic window bitmap separations.

NOTE: You cannot specify highlight color in an XES document.

When printing to a color PCL printer or converting to PDF, XPAF accepts XES printer commands which allow you to implement color, including the commands identified in table 34-3.

Table 34-3. Color commands for XES data streams

Command	Function
Assign Ink Color	Specifies the color or gray-shade parameter values to use as the substitute for a color or gray-shade palette entry.
Text Highlight	Specifies the background text color or gray-shade for characters that appear highlighted. This value may be applied on a text or paragraph basis.
Ink Change	Selects a color or gray-shade entry for the palette. This value can then be used for text, logos, non-graphic lines, and any other data that has been digitized into font characters.
Line Draw X	Draws a non-graphic line of specified length along the X-axis of the page. Use the S variable to select the color or gray-shade palette entry.
Line Draw Y	Draws a non-graphic line of specified length along the Y-axis of the page. Use the S variable to select the color or gray-shade palette entry.
Vector Draw	Draws a non-graphic line of specified length along the X-axis, the Y-axis, or diagonally across the page. Use the S variable to select the color or gray-shade palette entry.
Graphic Window	Defines an area on the page where graphics will be printed. Use the C variable to specify the color of the separation bitmap to use for the graphic window.

For more information on these commands, refer to the *Xerox 4700 II Color Laser Printing System Printer Language Reference*.

Paper tray selection

For XES documents printed to PCL-capable printers, the XES tray select command is converted to a PCL tray select command. Because XES and PCL use different identifiers to select the manual feed tray, the tray selected may not be equivalent to the original. You may need to change your XES document to specify the PCL manual feed tray correctly.

Verifying your print environment

This section identifies any additional steps you should take before you begin submitting jobs.

Printing to a PCL-capable printer

Before you print XES documents to a PCL-capable printer, check with your systems programmer to ensure that these actions have been completed:

- The PCL font, form, and image resource libraries have been allocated and initialized on the host system.
- The PFONTLIB, PFORMLIB, and PIMAGELIB initialization and/or printer profile parameters have been coded and point to the DD statements that define the PCL resource libraries for the specified printer.

For more information about setting the above options, refer to *Section Two: Installing and Customizing XPAF*. For more information about these parameters and keywords, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Printing documents

Submit your documents for printing using standard JCL. Make sure your job class references a supported decentralized or PCL-capable printer or conversion to PDF.

Converting XES documents to PCL or PDF documents

Using XPAF, you can convert DJDE, XES, page-formatted, and AFP documents to PCL or PDF format for printing on PCL capable printers or conversion to PDF. DJDE, page-formatted, and AFP documents are first converted to XES documents, which are then converted to PCL or PDF format.

Processing overview

When printing documents to a PCL capable printer or converted to PDF, XPAF searches the PCL or PDF resource libraries to determine if the resources already reside in the libraries. If they do, then XPAF uses the resources stored in the libraries. If they do not, or if you have requested a revision of them, then XPAF dynamically converts the resources.

- XPAF converts each font from Xerox 2700 format to PCL or PDF bitmapped format, then stores it in the library specified by the PFONTLIB or FFONTLIB initialization or printer profile parameter. This conversion ensures that the correct positioning is used when the page output is produced.
- XPAF converts each form from XES format to a PCL or PDF macro which contains a set of PCL or PDF commands that define the form. The PCL or PDF macro is executed at print time to reproduce the form as it appeared in XES format.
- XPAF converts each image from sixelized format to bitmapped (HP raster graphic) format, then stores it in the library specified by the PIMAGELIB initialization or printer profile parameter.

Resources which are included inline in the data stream are converted to PCL format but are not stored in the PCL or PDF resource libraries. There are two reasons for handling inline resources this way:

- To ensure that an inline test resource does not overlay a stored production version of the same name.
- For security reasons, so that signature fonts or other confidential resources are not accessible to other jobs.

XPAF downloads the necessary resources every time a PCL or PDF job is printed but does not store them on the printer.

Supported XES commands

Table 34-4 lists the XES commands that are supported by XPAF for PCL or PDF processing.

NOTE: If you include an unsupported XES command in a document, XPAF will issue an error message indicating that an unsupported command has been specified. It ignores the command and processing continues, but your output may be unpredictable.

Table 34-4. XES commands supported for XES-to-PCL or PDF conversion

XES command	Definition
=UDK=	Set a new UDK string
+X	Reset printer OSS
+F	Font load
+A	Font add
+M	Merge page load
a	Absolute text positioning
rd	Relative down text positioning
ru	Relative up text positioning
rl	Relative left text positioning
rr	Relative right text positioning
x	Draw X line
y	Draw Y line
n	Font switching (*n* = 0 through 9)
+*n*	Font form assignment (*n* = 0 through 9)
+N	Form load
+P	Print job
+Q	Print job mixed orientations
+U	Unload all files
+V	Merge page unload
c	Paper tray select
gr	Graphic repeat
gw	Graphic window
m	Page boundary margins. (Double page margins not supported.)
zd	Merge stop
ze	Merge start
zf	Units 300ths

Table 34-4. XES commands supported for XES-to-PCL or PDF conversion (Continued)

XES command	Definition
zyd	Duplex start
zye	Duplex stop
zyf	Duplex invert start
zyi	Duplex side select
f	Ink assign
zi	Ink change

Processing limitations

When directing an XES document to a PCL-capable printer or converted to PDF, restrictions apply to certain elements, including:

- Color
- Fonts stored on the printer
- Printers supported
- Document conversions

Color

When printing DJDE, page-formatted, and AFP documents containing color to PCL-capable printers or converted to PDF, documents can be printed on color PCL -capable printers or converted to full color PDF documents.

Fonts stored on the printer

XPAF downloads all necessary resources each time a PCL or PDF job is printed but does not store them on the printer. If you do not have your fonts stored in a native library because your site is set up to store fonts only on a printer (or use cartridge fonts), you must modify your procedure.

When printing an XES document to a PCL or PDF capable printer, if XPAF determines that a requested font is not available in the decentralized font library, then it will be unable to convert the decentralized font to a PCL or PDF bitmapped font. Processing will be terminated.

If this error occurs, you must either edit the document to specify a decentralized font that is available in the decentralized font library, or load the requested font to the decentralized font library on the host.

NOTE: When printing banner pages, XPAF uses the default font specified in the PORTFONT or LANDFONT printer profile parameters. The default fonts for PCL-capable printers are P0612A and L0112B, which are supplied in the decentralized font library. If you have changed the values for your default portrait and/or landscape fonts, you may need to update the PORTFONT and/or LANDFONT printer profile parameters to specify fonts that are available in the decentralized font library.

Printers supported

Support for the PCL or PDF conversion only applies for documents printed to Xerox printers that support the PCL or PDF printer command language.

Document conversions

When printing DJDE, page-formatted, and AFP documents to PCL -capable printers or converted to PDF, any limitations which exist for the conversion to XES remain in effect. That is, the XES-to-PCL or PDF conversion cannot overcome any limitations of the DJDE-to-XES, page format-to-XES, or AFP-to-XES document conversions.

35. Printing page-formatted documents

This chapter contains the information you need to print page-formatted documents through XPAF. It addresses these topics:

- Verifying that your resources have been set up correctly
- Including resources in your documents
- Modifying the processing of your documents
- Using advanced features, such as color
- Converting page-formatted documents to other formats

In addition, it provides troubleshooting tips for resolving some of the common problems you may encounter as you print page-formatted documents.

Data stream definition

Page-formatted documents are line-mode documents that have been formatted into discrete pages using a page format. Refer to *Section Eight: Xerox Page Format Editor User Guide* for information about creating and maintaining page formats.

NOTE: You cannot use a page format to format a document that contains DJDE, XES, AFP, or PCL commands. These commands are not supported by page-format processing and will produce unexpected results.

XPAF support

You can print page-formatted documents through XPAF to any supported centralized, decentralized, or PCL-capable printer or convert them to PDF.

- For documents sent to a centralized printer, XPAF converts the page-formatted document to a Metacode document.
- For documents sent to a decentralized printer, XPAF converts the page format settings to XES commands.
- For documents sent to a PCL-capable printer, XPAF converts the page format settings to XES commands, then converts the XES commands to PCL commands.
- For documents converted to a PDF capable printer, XPAF converts the page format settings to XES commands, then converts the XES commands to PDF commands.

Preparing resources

For page-formatted documents, there are tasks related to resource preparation that you need to complete before you submit jobs for printing. Before you begin printing documents, contact the system administrator responsible for maintaining your print resources to ensure that the applicable tasks have been completed.

NOTE: These tasks are summarized in table 35-1 and described in detail in *Section Three: Managing Resources with XPAF*, and *Section Eight: Xerox Page Format Editor User Guide*.

Table 35-1. Resource preparation for page-formatted documents

Resource type	User actions needed	Print time processing
Fonts	Load any centralized or decentralized fonts you have purchased from Xerox Font Services or a third-party vendor to the appropriate native font libraries.	XPAF will download fonts from the native font library if they have not been included inline or if they are not resident on the printer.
	Before you convert a centralized font that you have purchased from either Xerox Font Services or a third-party vendor to decentralized format, update the applicable font tables as needed: • Ensure that the XPAFXFI table entry for the centralized font contains valid centralized and decentralized mapping table names. • Verify that all expected character IDs exist in the centralized character mapping table, and that the character IDs in the decentralized character mapping table are mapped to the desired code point and plane number combination.	During centralized-to-decentralized conversion, XOAF uses the centralized and decentralized mapping tables to determine where to place the centralized characters in the decentralized font.

Table 35-1. Resource preparation for page-formatted documents (Continued)

Resource type	User actions needed	Print time processing
Fonts (continued)	Convert a centralized font to decentralized format if you do not have a decentralized version of the font, but want to use the same font in documents printed to both centralized and decentralized printers. ***NOTE:*** All fonts included with XPAF, except language-specific R03 fonts, are provided in both centralized and decentralized format, so preconversion is not necessary for these fonts. However, you must preconvert language-specific R03 centralized fonts to decentralized format.	XPAF does not dynamically convert centralized fonts to decentralized format. If you do not preconvert the font, document processing will be terminated.
	(optional) Create a resident font list for each printer.	XPAF will check the printer's font list to determine whether a requested font is resident on the printer. If the font is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's font list when it downloads a font.
	(optional) Convert Xerox font characteristics to ensure that the EBCDIC-to-ASCII (XPAFE2A) and EBCDIC font widths (XPAFEFW) tables are updated with the necessary entries.	When printing to either a centralized or decentralized printer, XPAF will use centralized font dimensions from the XPAFE2A and XPAFEFW tables to position characters on the page.
Forms	Load your centralized forms to the appropriate centralized native form libraries.	XPAF will download forms from the native form library if they are not resident on the printer.
	(optional) Create a resident form list for each printer.	XPAF will check the printer's form list to determine whether a requested form is resident on the printer. If the form is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's form list when it downloads a form.

Table 35-1. Resource preparation for page-formatted documents (Continued)

Resource type	User actions needed	Print time processing
Images	Load your centralized and decentralized images to the appropriate native image libraries.	XPAF will download images from the native image library if they are not resident on the printer.
	(optional) Create a resident image list for each channel-attached non-XNS centralized printer, remotely-attached centralized printer, and decentralized printer.	XPAF will check the printer's image list to determine whether a requested image is resident on the printer. If the image is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's image list when it downloads an image.
Logos	Load centralized logos to the native logo library.	XPAF will download logos from the native logo library if they are not resident on the printer.
	Convert centralized logos to decentralized fonts for printing on decentralized printers.	XPAF does not dynamically convert centralized logos to decentralized fonts. If you do not preconvert the logo, document processing will be terminated.
	(optional) Create a resident logo list for each printer.	XPAF will check the printer's logo list to determine whether a requested logo is resident on the printer. If the logo is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's logo list when it downloads a logo.
Color	Use the XOAF Edit Line Data Specifications option in the Xerox page format editor to specify colorized text for individual fields or lines of data. For highlight color only, create color cross-reference tables to map the ink color specified in a page-formatted document to the ink color loaded on the highlight color printer.	XPAF will print the text using the color specifications for the page format. When printing to a centralized highlight color printer, XPAF will look in the specified color cross-reference table to determine the color of ink to use.
Paper trays	Ensure that the cluster names are valid for the printer on which the document will be printed.	During page format-to-Metacode conversion, XPAF translates input trays 3 through 9 to TRAY3 through TRAY9.

Table 35-1. Resource preparation for page-formatted documents (Continued)

Resource type	User actions needed	Print time processing
PDL	Load your PDL files to the native PDL libraries. You must ensure that the PDL members compiled on the printer are identical to those loaded to the native PDL libraries, or your results will be unpredictable.	XPAF will use the values in the specified PDL files to help determine the format and processing requirements for the document.
Page formats	Create and generate a page format using the Xerox page format editor.	XPAF will use the parameters defined by the page format to determine how to format line-mode data streams.

Using resources

For page-formatted documents, the fonts, forms, images, and logos you specify in your document can be:

- Resident on a centralized printer
- Downloaded from an XPAF resource library at print time

The following sections contain information about page format options you can use to specify resources and extended JCL keywords you can use to update resources at print time.

For detailed information about a particular keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*. For information about creating page formats, refer to *Section Eight: Xerox Page Format Editor User Guide*. For information about using PDL to include resources in a document, refer to your centralized printer's reference manual.

Specifying

There are no extended JCL keywords available for specifying the fonts, forms, images, and logos in your page-formatted documents. Instead, these resources must already have been specified in the page format.

Fonts

When creating or editing a page format in XOAF, you can specify a Xerox font in the page layout using any of these options:

- Edit line data specifications — Specifies the font to be used for each line group.
- Edit a field format — Specifies the font to be used for each field format.
- Edit a font list — Specifies a list of up to 127 fonts to be used in the document. A font list must be used in conjunction with font indexing in the input data stream.

If you are using a font list in the page format and font indexing in the input data stream to select the fonts for a document, you must include the TRC=YES or the DCB option OPTCD=J in the standard IBM JCL used to submit the job. This instructs the system to recognize the font index byte in the input data stream.

Forms

When creating or editing a page format in XOAF, you can specify centralized forms in these fields of a copy modification:

- ‘Form Name for Front’ — Specifies the form to be included on the front of each page.
- ‘Form Name for Back’ — For duplex documents, specifies the form (with data) to be included on the back of each page.
- ‘BFORM Name’ — For duplex documents, specifies the form (without data) to be included on the back of each page.

NOTE: Forms must be in .FRM format. XPAF dynamically converts .FRM forms to internal XPAF format if you send a document to a decentralized printer. The converted form is stored in the library referenced by either the DFORMLIB initialization parameter or the FORMLIB printer profile parameter. XPAF does not generate an XES form, and you cannot reference XES forms in page-formatted documents.

Images

To specify an image, you must reference it in a form.

Logos

To specify a logo, you must reference it in a form.

Revising

If your site has created or received a new version of a resource and loaded it to the appropriate XPAF native resource library, the version in the library may no longer match the version on the printer.

For data streams that reference Xerox native resources, you can specify AUTOREV=XEROX in your initialization parameters or the printer's profile to ensure that your document is printed using the most current version of the resource.

To ensure that your document is printed using the most current version of the resource, include the appropriate REVxxxxx extended JCL keyword(s) in the JCL used to submit the job:

- REVFONT
- REVFORM
- REVIMAGE
- REVLOGO

REV*xxxxx* downloads the specified resource to the printer. Then, for centralized and decentralized printers that are capable of permanently storing resources, the resource is stored on the printer so it will be available for subsequent jobs. For centralized printers only, if you also have specified the equivalent DEL*xxxxx* printer profile parameter or extended JCL keyword (DELFONT, DELFORM, DELIMAGE, or DELLOGO), the resource will not be stored on the printer.

Deleting

You may not want to keep all your resources resident on a printer. Some reasons why you might want to delete them from the printer include:

- Testing. If you are testing a new version of a font, form, image, or logo, you may not want to store it until you are certain it is the version you plan to use.
- Security. If you want to ensure that a particular resource (such as a licensed font or signature logo) cannot be copied from the printer, you should not store it on the printer.
- Limited printer disk space. If you have limited storage on your printer, you can delete resources to increase the amount of space available.

For centralized printers only, you can print a specific document without storing one or more of its resources on the printer. To do this, use the appropriate DEL*xxxxx* extended JCL keyword(s):

- DELFONT
- DELFORM
- DELIMAGE
- DELLOGO

Each of these keywords downloads the specified resource(s) to the printers, then after the document is printed, it deletes them from the printer so that they will no longer be available.

NOTE: You can include the DEL*xxxxx* parameter(s) in the centralized printer's profile to specify that for all documents, the resources that are downloaded will be deleted from the printer after use.

Modifying document processing

There are several document features you can change using XPAF-supplied parameters and keywords. This section identifies some of the keywords available in XPAF to change document processing. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the keywords identified in this section and for other XPAF keywords available for page-formatted document processing.

Table 35-2. Extended JCL keywords for page-formatted processing

Extended JCL keyword	Function
DUPLEXSW	For centralized printers only, specifies whether the plexing mode on the printer will switch between simplex and duplex mode for a document.
JDE	Identifies the JDE to be used for the document.
JDL	Identifies the JDL to be used for the document.
PAGEFORM	Identifies the page format to be used for this document.
PAPERSIZ	Specifies the paper size to be used for this document. The paper loaded in the tray from which the job feeds must be the same size as you specify using this keyword.

Using advanced features

Through XPAF, you can print page-formatted highlight color documents to both highlight and full color printers. If your printer is equipped with finishing equipment, you can use Document Finishing Architecture (DFA) interface support.

Highlight color and full color

Color specifications for page-formatted documents can be set up only within a page format.

Specifying colors

When creating or editing a page format in XOAF, you can specify colors using these page layout options:

- Edit line data specifications — Specifies the color to be used for each line group.
- Edit a field format — Specifies the color to be used for each field format.

You can specify up to nine different colors, including DEF to indicate the default color set up for the printer.

Using extended JCL keywords

When printing to a highlight color printer, you can use extended JCL keywords to specify which color cross-reference table to use and the library where the table is stored. XPAF uses the color cross-reference table to map the color(s) specified in the document to the ink color loaded on the printer.

XPAF does not use color cross-reference tables when printing to a PCL-capable printer or converting to PDF; instead, it passes the color requests directly to the printer.

Table 35-3. Color-specific extended JCL keywords

Extended JCL keyword	Function
INKXLIB	Identifies the name of the library where the color cross-reference tables are stored.
INKXREF	Identifies the name of the color cross-reference table, and optionally, alters the color cross-references within the table for the current document only.

Document finishing

You can use XPAF features to control some aspects of document finishing, including:

- Stapling
- Setting the finishing boundary
- Selecting paper trays

Stapling

For centralized printers that support stapling, you can staple documents by specifying the JDE extended JCL keyword. The JDE/JDL pair must reference a JDE with stapling in effect.

XPAF provides a sample JDE called PGSTAP in XPFSAMP member DFAULT. You can use your own JDE if you wish. The JDE must contain statements similar to these:

```
VOLUME CODE=NONE;
OUTPUT STAPLE=YES,NT01=YES,FACEUP=YES;
```

The JDE must be loaded into your PDL library on the host, downloaded to the printer, and compiled.

Setting the finishing boundary

For centralized printers only, you can specify a finishing boundary for a document if your printer supports the DFA interface (version 4.1 or higher). The output is finished at the copy modification's boundary.

To specify a finishing boundary, perform these steps:

Step 1. Ensure that the printer's profile specifies FEATURE=DFA.

Step 2. If you want to split the output between copy modifications for document finishing purposes, use the Xerox page format editor to specify YES in the 'Split Report' field for the appropriate copy modification in the page format.

Step 3. If you want XPAF to send DJDEs to the printer to raise (that is, turn on) or lower (that is, turn off) signal function 1 and/or signal function 2 for finishing purposes, use the Xerox page format editor to specify YES or NO in the 'Signal Function 1' and/or 'Signal Function 2' fields in the appropriate copy modification in the page format.

NOTE: XPAF does not determine the function of signal function 1 and signal function 2; the signal's function is defined by the third-party finishing equipment. Refer to the finishing equipment documentation supplied by your third-party vendor for more information about the equipment's use of signal functions.

Step 4. Generate the page format. For more information about creating or updating copy modifications and generating page formats, refer to *Section Eight: Xerox Page Format Editor User Guide*.

Step 5. Specify the page format in the JCL used to submit the job.

NOTE: If you want to vary the DFA signal for different portions of a document, you can use conditional formatting parameters in the page format. Create a separate copy modification to activate each set of signals that you need, and add conditional processing to the page layout to control copy modification selection.

Selecting paper trays

When creating or editing a page format in XOAF, you can use these fields of a copy modification to select the paper source:

- 'Tray Number' — Specifies the number of the paper tray to be used as the paper source.
- 'Cluster Name' — For centralized printers only, identifies one or more paper trays that are loaded with the same type of paper.

Verifying your print environment

This section identifies any additional steps you should take before you begin submitting jobs.

Region size

To process page-formatted data streams with XPAF, make sure the region size defined in the XOSF start-up proc (XOSF00) is set to at least 6144K.

Printing documents

Submit your documents for printing using standard JCL. Ensure that:

- Your job class references a supported centralized, decentralized, or PCL-capable printer or conversion to PDF
- You specify the page format to be used for the document via the PAGEFORM extended JCL keyword

Converting page-formatted documents to other formats

If you direct your page-formatted documents to a decentralized printer, XPAF will convert the page format commands to XES commands.

If you direct your document to a PCL-capable printer or convert to PDF, the page format commands will be converted to XES commands, then the XES commands will be converted to PCL or PDF. Refer to chapter 34, "Printing XES documents" for information about the XES-to-PCL conversion.

Troubleshooting problems

Occasionally, your output may not print as you expected. If this happens, review the items in table 35-4 for information to help you resolve the problem.

Table 35-4. Common printing errors for page-formatted documents

Symptom	Explanation	Steps to take
Job attempts to print outside the valid printable area.	XPAF processing may produce slight rounding and processing differences.	Avoid printing any text, rules, and images within 1/8 inch of the edge of the valid printable area.
Document does not print in duplex as expected.	You may not have specified YES for the 'Duplex Mode' field of a copy modification in the page format, or you may have included the DUPLEXSW extended JCL keyword in the JCL used to submit the job.	Check the copy modification to verify that the 'Duplex Mode' field specifies YES. Review the JCL to determine whether DUPLEXSW was in effect, and add or remove it if necessary.
Your printed output contains extra spaces.	The data for your page-formatted document contains undefined code points. XPAF substitutes a space character for each undefined code point.	Edit the data to remove the undefined code points.
A back shift value was specified in the copy modification, but has not been applied to the document.	If a document includes both front and back shift values and is being sent to a decentralized simplex only printer, XPAF applies only the front shift value to every page of the document. This prevents text from being printed in the binding margin.	Print the document to a duplex-capable printer if you want the back shift value to take effect.

36. Printing AFP documents

This chapter contains the information you need to print AFP documents through XPAF. It addresses these topics:

- Verifying that your resources have been set up correctly
- Including resources in your documents
- Modifying the processing of your documents
- Using advanced features, such as color
- Converting AFP documents to Metacode, XES, PCL, or PDF documents

In addition, it provides troubleshooting tips for resolving some of the common problems you may encounter as you print AFP documents.

Data stream definition

AFP documents may consist of:

- Sequences of variable-length records called structured fields
- Fixed- or variable-length records that contain both line-mode data and structured fields
- Line-mode data formatted using AFP JCL keywords

AFP software makes use of all-points addressability to print data streams containing text, forms (known in AFP as overlays), and images. Different data types can be mixed and oriented in different directions on a page.

AFP documents can be created and printed using IBM software products such as:

- Document Composition Facility (DCF)
- Graphical Data Display Manager (GDDM)
- Overlay Generation Language (OGL)
- Page Printer Formatting Aid (PPFA)
- Print Services Access Facility (PSAF)

XPAF support

You can print AFP documents through XPAF to any supported centralized, decentralized, or PCL-capable printer or convert them to PDF documents:

- For documents sent to a centralized printer, XPAF converts the AFP document to a Metacode document.
- For documents sent to a decentralized printer, XPAF converts the AFP document to an XES document.
- For documents sent to a PCL-capable printer or converted to PDF, XPAF converts the AFP document to an XES document, then converts the XES document to a PCL or PDF document.

Preparing resources

For AFP documents, there are tasks related to resource preparation that you need to complete before you submit jobs for printing. Before you begin printing documents, contact the system administrator responsible for maintaining your print resources to ensure that the applicable tasks have been completed.

NOTE: These tasks are summarized in table 36-1 and described in detail in *Section Three: Managing Resources with XPAF*.

Table 36-1. Resource preparation for AFP documents

Resource type	User actions needed	Print time processing
Fonts	Install any custom replica fonts you have purchased from either Xerox Font Services or a third-party vendor to the appropriate native font libraries. ***NOTE:*** IBM custom character sets are not supported.	XPAF will download fonts from the native font library if they are not resident on the printer.
	Convert a centralized font to decentralized format if you do not have a decentralized version of the font, but want to use the same font in documents printed to both centralized and decentralized printers. ***CAUTION:*** Inverse portrait and inverse landscape centralized replica fonts cannot be converted to decentralized fonts. Decentralized inverse portrait and inverse landscape fonts are actually portrait and landscape fonts with the rasters inverted. When these fonts are converted for use with AFP documents they will be positioned incorrectly in your document. You must obtain the correct versions of these fonts from Xerox Font Services or a third-party vendor.	XPAF does not dynamically convert centralized fonts to decentralized format. If you have not preconverted the font, document processing will be terminated.
	(optional) Create a resident font list for each printer.	XPAF will check the printer's font list to determine whether the requested font is resident on the printer. If the font is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's font list when it downloads a font.

Table 36-1. Resource preparation for AFP documents (Continued)

Resource type	User actions needed	Print time processing
Fonts (continued)	Update your IBM font characteristics information if you have changed an IBM coded font or added new fonts to your IBM library. This ensures that your XPAF font tables are in synchronization with your IBM font library.	XPAF will use various font tables to determine which fonts to use for printing.
	Convert Xerox fonts to IBM format if you plan to use them in a DCF/SCRIPT document. This conversion creates an IBM look-alike version of the font that DCF recognizes. If you use an IBM code page with this font, the code page must reside in the same library in which the converted font is stored.	XPAF will use various font tables to determine which fonts to use for printing.
	For any Xerox fonts you plan to use in a DCF document, update the logical device table (LDT), the physical device table (PDT), and the Generalized Markup Language (GML) profile.	XPAF will use various font tables to determine which fonts to use for printing.
	Verify that you have the Xerox fonts XGT50L and XGT50P in your native font library or on the printer.	XPAF will use these fonts to specify the orientation for the AFP document.
Forms	(optional) Create a resident form list for each printer.	XPAF will check the printer's form list to determine whether a requested form is resident on the printer. If the form is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's form list when it downloads a form.

Table 36-1. Resource preparation for AFP documents (Continued)

Resource type	User actions needed	Print time processing
Images	Convert your IBM AFP page segments to centralized or decentralized format.	If you do not preconvert an IBM AFP page segment, XPAF will dynamically convert it to centralized or decentralized format at print time.
	Convert IM-type images colorized via the IID structured field to monochrome .IMG, monochrome RES .IMG, and/or two-color RES .IMG format.	If you do not preconvert an IM-type image, XPAF will dynamically convert it to monochrome .IMG, monochrome RES .IMG, and/or two-color RES .IMG format based on the color of the image, the destination printer selected, the value specified for the PRINTENV initialization parameter, and whether the image will be stored in the centralized image library.
	(optional) Create a resident image list for each printer.	XPAF will check the printer's image list to determine whether a requested image is resident on the printer. If the image is not resident, XPAF will download it. If the printer can store downloaded resources permanently, XPAF will update the printer's image list when it downloads an image.
Logos	None.	Not applicable. You cannot specify logos in AFP documents.
Color	(Optional) For highlight color processing, create color cross-reference tables to match the requests for color specified within composed text pages or PAGEDEFs to a color supported by the highlight color printer.	XPAF will look in the specified color cross-reference table to determine the color of ink to use for the text. This table cross-references IBM ink color names to Xerox ink color names.
	For full color processing: None.	Text colors that are coded in AFP documents will be passed through directly to PCL color printers and converted to PDF.

Table 36-1. Resource preparation for AFP documents (Continued)

Resource type	User actions needed	Print time processing
Paper trays	For AFP-to-Metacode conversion: Ensure that the cluster names are valid for the printer on which the document will be printed.	XPAF uses the bin number specified in the MMC structured field to generate a DJDE FEED command. If you have specified a varying paper size table, XPAF will use the values from that table. Otherwise, XPAF uses these values: Bin 1 MAIN Bin 2 AUX Bins 3–9 TRAY3–TRAY9 XPAF processing makes these assumptions: • The required paper is loaded in the correct tray(s) on the printer. • The selected printer supports the requested paper size (or output may be unpredictable).
	For AFP-to-XES and AFP-to-PCL conversion: None.	If you have specified a varying paper size table, XPAF will use the values from that table. Otherwise, XPAF uses these values: Bin 1 MAIN Bin 2 AUX Bins 3–9 TRAY3–TRAY9 XPAF processing makes these assumptions: • The required paper is loaded in the correct tray(s) on the printer. • The selected printer supports the requested paper size (or output may be unpredictable). Refer to Chapter 20, "XPAF tables" in *Section Three: Managing Resources with XPAF* for the tray select commands issued by XPAF to decentralized and PCL-capable printers. These commands are based on whether the primary or auxiliary feed is used and the paper name specified in PAPERSIZ initialization parameter, printer profile parameter, or extended JCL keyword.
PDL	For AFP-to-Metacode conversion: Load your PDL files to the native PDL libraries. You must ensure that the PDL members compiled on the printer are identical to those loaded to the native PDL libraries, or your results will be unpredictable.	XPAF will use the values in the specified PDL files to help determine the format and processing requirements for the document.

Using resources

For AFP documents, the fonts, overlays, page segments, and images you specify in your document can be:

- Resident on the printer. Printer-resident resources can be specified using AFP commands or standard IBM JCL keywords.
- Downloaded from an XPAF resource library at print time.

The following sections contain information about AFP commands and extended JCL keywords you can use to specify and update resources at print time. For detailed information about a particular keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Specifying

XPAF provides a number of extended JCL keywords which you can use to specify fonts, forms, and images in your AFP documents.

Fonts

The procedure for selecting fonts varies depending on whether you are printing composed text or line data:

- For an AFP composed text document, you specify either IBM or Xerox fonts using the DCF font definition commands.
- For an AFP line data document, you specify IBM fonts in a PAGEDEF or using standard IBM JCL.

If a document specifies IBM fonts, XPAF automatically uses replicas of the IBM fonts in the document. The replica fonts are initially stored on the host. The first time they are specified for a document, the replica fonts are downloaded to the printer.

Banner page default fonts

Standard XPAF banner and trailer pages for AFP jobs use the C1D0GT15 character set and the T1D0BASE code page by default. If your AFP font library does not contain these members, you must either add them to the AFP font library or modify the banner page user exit 05.

If you have modified these members, you also may need to modify the banner page user exit 05. Refer to *Section Two: Installing and Customizing XPAF* for more information on modifying user exit 05.

Support for IBM fonts

XPAF supports all of the IBM font directions and rotations, including column text where the characters are rotated 90 or 270 degrees from the baseline. However, due to Xerox font design constraints, characters that do not appear in the center of the character cell may appear misplaced when printed in column format. The misplacement is especially apparent with non-uppercase characters (lowercase and special characters). Variable-pitch fonts may also exhibit undesirable placement when printed in column format.

NOTE: For the best appearance, Xerox recommends using only uppercase, fixed-pitch fonts when printing column text.

AFP 300 dpi relative metrics type fonts

Text placement within XPAF occurs at AFP transform time, and not at font conversion time. In order to improve text placement for 300 dpi type fonts, XPAF font conversion processing saves the original IBM font metric information for use by the AFP transform XAM (centralized) and XAU (decentralized) components.

Overlays

You can include an IBM overlay in an AFP document by referencing it in one of these ways:

- In a FORMDEF.
- In an IPO structured field.
- Using the .OI command, if you are running SCRIPT/VS at level 1.4.0 or above. For more information about the .OI command, refer to the *Document Composition Facility: SCRIPT/VS Language Reference Guide*.

Dynamic conversion

XPAF automatically converts overlays to .FRM file format the first time they are referenced and stores them in the centralized form library with a 20-character member name. The last six characters of this member name are used as the form name on the printer.

Overlays are not converted again unless so requested through the REVOVLY extended JCL keyword. Converted overlays do not reside on decentralized or PCL-capable printers, but do remain resident on centralized printers.

If a native form in your centralized form library has the same name as an overlay in an AFP data stream, XPAF uses the native form rather than converting the overlay to Xerox format.

For example, you can add a Xerox form named TEST to your centralized form library. If one of your AFP data streams includes an overlay named O1TEST, XPAF does not convert O1TEST to Xerox format and store it in centralized form library. Instead, XPAF processes the data stream using the Xerox native form TEST. See the UNIQNAME initialization parameter in *Section Five: XPAF Parameter and Keyword Reference* for information on generating a unique form name.

Error reporting for preconverted overlays

Errors detected during overlay conversion are only reported at the time of conversion. If you have already converted an overlay, no error messages are displayed if you resubmit the document with DATACK=UNBLOCK unless you specify the REVOVLY extended JCL keyword.

Page segments

You can include an IBM page segment in an AFP document in one of these ways:

- As an inline resource
- By referencing it in an IPS structured field (either in an overlay or inline)

Dynamic conversion

XPAF automatically converts page segments to images the first time they are referenced and stores them in the appropriate native image library. Page segments are not converted again unless so requested through the REVPSEG extended JCL keyword. Converted page segments do not reside on decentralized or PCL-capable printers, but do reside on centralized printers.

Images

You can include an image in an AFP document in one of these ways:

- Inline
- By referencing it in an overlay
- By referencing it in a page segment

If a page, overlay, or page segment contains or references multiple images, XPAF performs image consolidation to enhance performance. Refer to “Image consolidation” later in this chapter for information about image consolidation.

Dynamic conversion

For printing on a Xerox printer, all AFP images can be converted to 300 dpi resolution. You should request conversion as follows:

- For IOCA-encoded images of any resolution, specify IMGTYPE=1 in the initialization parameters, printer's profile, or JCL to request conversion to 300 dpi.
- For all other AFP images (either inline, page segment, or referenced in an overlay), specify IMGTYPE=1 in the initialization parameters, printer's profile, or JCL to request conversion from 240 to 300 dpi. This preserves the original size of the image when printed.
- For all images already at 300 dpi, specify IMGTYPE=0 in the initialization parameters, printer's profile, or JCL to avoid conversion of the image dimension. The image position will still be scaled by 25% to ensure that the image prints in the correct relative location on the page. The size of the converted image will print smaller in XPAF (by a factor of 20%) than the original 240 dpi image printed in AFP.

  For some IM-type images, image dimension scaling does occur when you specify IMGTYPE=0. For example, non-page segment images that include shading are scaled. For these exceptions, image dimension scaling is increased by a factor of 25%.
- For images to be scaled based on the L-units value in the IDD or IID structured field of the image, specify IMGTYPE=3 in the initialization parameters, printer's profile, or JCL to request conversion of the image dimension and image position to 300 dpi. IOCA-encoded images are scaled from any L-units value to 300 dpi. For IM-type images, any L-units value that does not specify 300 dpi is assumed to be 240 dpi.

You must specify IMGTYPE=3 for documents that contain images at different resolutions. Otherwise, the images will not print at the correct size and position at 300 dpi.

Storing converted images

XPAF stores the converted image in the native centralized image library unless:

- The image is inline.
- The NOSTORE initialization or printer profile parameter is set to Y (yes).
- The image was retrieved from a user library via the USERLIB IBM JCL keyword.

IOCA image support

XPAF can process black-and-white (bilevel) images that are defined by IBM's Image Object Content Architecture (IOCA). XPAF supports these IOCA compression algorithms:

- IBM MMR
- No compression
- G3 one-dimensional
- G3 two-dimensional
- G4 two-dimensional

You can include IOCA-encoded images in your page segment library.

For more information about IOCA, refer to the IBM publication *Image Object Content Architecture Reference*.

Revising

If a new version of a resource is updated in the appropriate AFP resource library or loaded to the appropriate XPAF native resource library, the new version in the library may no longer match the version on the printer. Using automatic revision of resources or selective revision of resources ensures that your document is printed using the most current version of the resource.

When processing AFP applications, XPAF examines the ISPF statistics field for the IBM PDS members to identify changes to those members since the last XPAF conversion.

Automatic revision

For automatic revision of resources, specify one of the following in your initialization parameters or the printer's profile:

- For environments that reference AFP resources, you can specify AUTOREV=AFP.
- For environments that reference Xerox native resources, you can specify AUTOREV=XEROX.
- For environments that reference AFP and Xerox native resources, you can specify AUTOREV=BOTH.

NOTE: If you change the color in the IID structured field for an AFP resource image, you must use automatic revision of AFP resources to reconvert the image. Otherwise, the existing image will be printed instead of the updated image.

For more information on automatic revision of AFP and Xerox native resources, refer to *Section Three: Managing Resources with XPAF* and *Section Five: XPAF Parameter and Keyword Reference*.

Selective revision

For selective revision of resources, include the appropriate REV*xxxxx* extended JCL keyword(s) in the JCL used to submit the job:

- REVFONT
- REVFORM
- REVIMAGE
- REVOPSEG
- REVOVLY
- REVPSEG

REV*xxxxx* downloads the specified resource to the printer. Then, for centralized and decentralized printers that are capable of permanently storing resources, the resource is stored on the printer so it will be available for subsequent jobs. For centralized printers only, if you also have specified the equivalent DEL*xxxxx* printer profile parameter or extended JCL keyword (DELFONT, DELFORM, or DELIMAGE), the resource will not be stored on the printer.

NOTE: If you change the color in the IID structured field for an AFP resource image, you must specify the REVOVLY or REVPSEG extended JCL keyword to reconvert the image. Otherwise, the existing image will be printed instead of the updated image.

Deleting

You may not want to keep all your resources resident on a printer. Some reasons why you might want to delete them from the printer include:

- Testing. If you are testing a new version of a font, form, or image, you may not want to store it until you are certain it is the version you plan to use.
- Security. If you want to ensure that a particular resource (such as a licensed font) cannot be copied from the printer, you should not store it on the printer.
- Limited printer disk space. If you have limited storage on your printer, you can delete resources to increase the amount of space available.

For centralized printers only, you can print a specific document without storing one or more of its resources on the printer. To do this, use the appropriate DEL*xxxxx* extended JCL keyword(s):

- DELFONT
- DELFORM
- DELIMAGE

Each of these keywords downloads the specified resource(s) to the printer. Then after the document is printed, it deletes them from the printer so that they will no longer be available.

NOTE: For centralized printers only, you can include the DEL*xxxxx* parameter(s) in the printer's profile to specify that for all documents, the resources that are downloaded will be deleted after use.

Modifying document processing

There are many document features you can change using XPAF-supplied parameters and keywords. This section identifies some of the keywords available in XPAF to change document processing. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the keywords identified in this section and for other XPAF keywords available for AFP processing.

Table 36-2. Extended JCL keywords for AFP processing

Extended JCL keyword	Function
XDUPLEX	For documents that have simplex copy groups within a FORMDEF, overrides the duplexing option specified in the FORMDEF.
DUPLEXSW	For centralized printers only, specifies whether the plexing mode on the printer will switch between simplex and duplex for a document.
JDE	Identifies the JDE to be used for the document.
JDL	Identifies the JDL to be used for the document.
MERGEOVL	Indicates whether multiple overlays within a copy group will be consolidated.
PMODE	Specifies the hardware page origin (printing orientation). PMODE keyword settings are equivalent to the IBM PSF medium orientation.
XSHADE	Specifies whether to enhance cells within AFP images that are recognized as a shading pattern.

AFP structured fields

Table 36-3 identifies the structured fields that are honored by XPAF. This table does not list any structured fields that are either not applicable or not honored.

Table 36-3. AFP structured fields honored by XPAF

Structured field	Description	Limitations
BAG	Begin Active Environment Group	
BCF	Begin Coded Font	
BCP	Begin Code Page	
BDG	Begin Document Environment Group	
BDM	Begin Data Map	
BDT	Begin Document	Optional triplets are not processed.
BDX	Begin Data Transmission Subcase	
BFM	Begin Form Map	
BFN	Begin Font	
BIM	Begin Image Object (IOCA and IM images)	
BMM	Begin Medium Map	
BMO	Begin Medium Overlay	Optional triplets that define origin, date and time of creation, and security are ignored.
BOG	Begin Object Environment Group	
BPG	Begin Page	
BPM	Begin Page Map	
BPS	Begin Page Segment	Optional triplets that define origin, date and time of creation, and security are ignored.
BPT	Begin Presentation Text Block	
BR	Begin Resource	This structured field is processed only for inline FORMDEFs and PAGEDEFs. No other inline resources are supported.
BRG	Begin Resource Group	Optional triplets are not processed.
CCP	Conditional Processing Control	
CFC	Coded Font Control	

Table 36-3. AFP structured fields honored by XPAF (Continued)

Structured field	Description	Limitations
CFI	Coded Font Index	
CPC	Code Page Control	
CPD	Code Page Descriptor	
CPI	Code Page Index	
DXD	Data Map Transmission Subcase Descriptor	This structured field is ignored by XPAF because the only information it contains is constant.
EAG	End Active Environment Group	
ECF	End Coded Font	
ECP	End Code Page	
EDG	End Document Environment Group	
EDM	End Data Map	
EDT	End Document	
EDX	End Data Transmission Subcase	
EFM	End Form Map	
EFN	End Font	
EIM	End Image Object (IOCA and IM images)	
EMM	End Medium Map	
EMO	End Medium Overlay	
EOG	End Object Environment Group	
EPG	End Page	
EPM	End Page Map	
EPS	End Page Segment	
EPT	End Presentation Text Block	
ER	End Resource	This structured field is processed only for inline FORMDEFs and PAGEDEFs. No other inline resources are supported.
ERG	End Resource Group	
FDS	Fixed Data Size	

Table 36-3. AFP structured fields honored by XPAF (Continued)

Structured field	Description	Limitations
FDX	Fixed Data Text	
FGD	Form Environment Group Descriptor	This structured field is ignored by XPAF because the only information it contains is constant.
FNC	Font Control	
FND	Font Descriptor	
FNI	Font Index	
FNO	Font Orientation	
ICP	Image Cell Position	
IDD	Image Data Descriptor	
IDM	Invoke Data Map	
IID	Image Input Descriptor	
IMM	Invoke Medium Map	
IOC	Image Output Control	Because of image consolidation which is performed by XPAF during processing, single- and double-dot images cannot be mixed in the same resource. In addition, XPAF supports only the (0, 90) orientation for complex images.
IPD	Image Picture Data	
IPO	Include Page Overlay	
IPS	Include Page Segment	
IRD	Image Raster Data	
LNC	Line Descriptor Count	
LND	Line Descriptor	
MCC	Medium Copy Count	
MCF	Map Coded Font - Format 1 and Format 2	
MDD	Medium Descriptor	XPAF processes the triplets to identify the medium origin and print direction, but does not use the medium size.
MIO	Map Image Object	

Table 36-3. AFP structured fields honored by XPAF (Continued)

Structured field	Description	Limitations
MMC	Medium Modification Control	
MMO	Map Medium Overlay	
MPO	Map Page Overlay	XPAF ignores this structured field because XPAF does not precondition the printer with resources that may be used. XPAF will download the overlay when the IPO structured field is encountered in the data stream.
MPS	Map Page Segment	XPAF ignores this structured field because XPAF does not precondition the printer with resources that may be used. XPAF will download the page segment when the IPS structured field is encountered in the data stream.
MSU	Map Suppression	
NOP	No Operation	XPAF ignores this structured field unless position 24 in the first record of the data contains the character ‘X’. XPAF assumes this character indicates that the logical device specified when the document was created by DCF was a Xerox printer. All resolutions are assumed to be in 300ths of an inch and all resources are assumed to be Xerox resources.
OBD	Object Area Descriptor	XPAF assumes that the triplets in the descriptor are in sequence according to triplet identifier. The ID is not checked against the OBP ID to ensure consistency.
OBP	Object Area Position	XPAF supports only the (0, 90) orientation.
PGD	Page Descriptor	
PGP	Page Position - Format 1 and Format 2	
PMC	Page Modification Control	XPAF ignores this structured field.
PTD	Presentation Text Descriptor - Format 1 and Format 2	XPAF ignores this structured field.
PTX	Presentation Text Data	

Using advanced features

Through XPAF, you can perform many types of complex processing, such as:

- Print AFP color documents to both highlight and full color printers.
- Use the Document Finishing Architecture (DFA) interface if your printer is equipped with finishing equipment.
- Change the plexing mode within or between documents.
- Consolidate images and overlays to improve printer performance.
- Adjust the quality of your printed images.
- Select varying paper sizes.

Highlight color

XPAF supports AFP color requests. The highlight color printers use ink color cross-reference tables to match the requirements for color specified within composed text pages or PAGEDEFs to a color supported by the printer. Refer to *Section Three: Managing Resources with XPAF* for information about creating and maintaining these tables.

Adding color to DCF SCRIPT/VS documents

If you plan to print DCF SCRIPT/VS documents on a highlight color printer, follow these steps.

Update the PDT and LDT

Step 1. Update the physical device table macro, DSMPDT. Add the COLOR keyword to this macro to enable the use of color for the Define Font (.df) and Define Rule (.dr) control words.

Step 2. Add COLOR=YES to the DSMPDT statement in the IBM-supplied physical device table module, DSMLPPDT. This module is contained in the DCFASM dataset.

Step 3. Assemble and relink the DSMLPPDT module. For sample information on linking the module, refer to the DCSAMP member in the DMSTSDCT library.

Step 4. Update the logical device table module, DSMPLDT, so that it references the correct physical device table.

For more information on these steps, refer to the IBM publication *SCRIPT/VS Text Programmer's Guide*.

Use SCRIPT control words

When printing documents created in DCF SCRIPT/VS, you may use the Define Font (.df) or Define Rule (.dr) control words to implement colorized text, lines, and rules.

- The Define Font control word allows you to colorize a font, which can then be used on various other Script control words, such as Define Area, Define Head Level, etc. The syntax for this command is as follows:

  .df *font-name* TYPE(*type-face point-size*) COLOR *color*

  where

font-name	The name of the font.
type-face	The typeface name for this font.
point-size	The point size of the font.
color	A valid color.

- The Define Rule control word has a similar parameter to colorize lines. The rule definition may be used to add color to Horizontal Rules, Vertical Rules, Boxes, Underscore Definitions, and Tables. The syntax for this command is as follows:

  .dr *rule-name* WEIGHT *weight* COLOR *color*

  where

rule-name	The name of the rule.
weight	The weight or thickness of the rule.
color	A valid color.

For more information on these commands, refer to the IBM publication *Document Composition Facility: SCRIPT/VS Language Reference*.

Using PAGEDEF commands to specify color

When creating a PAGEDEF, you may specify color options on either the PRINTLINE or FIELD command. The color specification allows entire print lines or segments of a print line to be colorized. The syntax for these commands are:

PRINTLINE FONT *font-name* POSITION *x y* COLOR *color*

OR

FIELD TEXT '*text*' COLOR *color*

where

font-name	The name of the font.
x	The horizontal position of the text.
y	The vertical position of the text.
color	The color in which the text should be printed: RED, BLUE, GREEN, BLACK, or other color.
'*text*'	The text you wish to be printed in color.

For more information on specifying color in the PAGEDEF, refer to the IBM publication *Page Printer Formatting Aid Reference Manual*.

Adding color to text within overlays

You may add color to text in an overlay even if the application used to create the overlay does not support color. Two ways of doing this are:

- You can add color to an existing overlay by adding or setting the Set Text Color (STC) flags in the PTX structured field. For more information, refer to the *Advanced Function Printing: Data Stream Reference*.
- Using products such as Elixir, Lytrod, and Intran, you can create color overlays or add color to existing overlays. For more information on these products, contact your local Xerox representative.

Using color images

You can include IM-type images colorized via the IID structured field in your documents and print them in color on centralized highlight color printers. XPAF converts an image to monochrome .IMG, monochrome RES .IMG, and/or two-color RES .IMG format based on these factors:

- The value specified for the PRINTENV initialization parameter
- The target printer (whether monochrome or highlight color)
- The color of the image, whether black only, color only (image does not contain black), or both black and color
- Whether the image will be stored in the native centralized image library

These print factors only affect the resource when the image is first converted or if it is revised. If the resource has been previously converted, no change is made.

The relationship of how the print factors work together is shown in table 36-4. If you specify PRINTENV=MONO, XPAF only creates and prints a monochrome black .IMG file, regardless of the other print factors.

Table 36-4. Print factors for colorized images

	Target printer is ...			
	Mono	Highlight	Mono	Highlight
AFP resource is ...	**PRINTENV=COLR**		**PRINTENV=BOTH**	
Black only Not stored in native library	A[1]	A	A	A
Black only Stored in native library	A[1]	A	A	A
Color only (no black) Not stored in native library	A[1]	B	A	B
Color only (no black) Stored in native library	C[1]	B	C	D
Both black and color Not stored in native library	A[1]	E	A	E
Both black and color Stored in native library	F[1]	E	F	G

[1] XPAF forces the PRINTENV=COLR parameter to PRINTENV=BOTH, and creates the specified image type.

where

A XPAF only creates and prints a monochrome black .IMG file.

B XPAF only creates and prints a monochrome RES .IMG file.

C XPAF creates both a monochrome black .IMG file and a monochrome RES .IMG file, but only prints the monochrome black .IMG file.

D XPAF creates both a monochrome black .IMG file and a monochrome RES .IMG file, but only prints the monochrome RES .IMG file.

E XPAF only creates and prints a two-color RES .IMG file.

F XPAF creates both a monochrome black .IMG file and a two-color RES .IMG file, but only prints the monochrome black .IMG file.

G XPAF creates both a monochrome black .IMG file and a two-color RES .IMG file, but only prints the two-color RES .IMG file.

Using XPAF color cross-reference tables

Color cross-reference tables map colors for text in IBM AFP documents to printable colors defined in ink catalogs on highlight color printers. In XOAF, use the Maintain Color Cross-Reference Tables option on the Manage Tables menu to create the necessary color cross-reference tables.

Once the tables are created and stored, you must add the INKXLIB and INKXREF parameters to one of these files:

- The XINSXOSF member of XINPARM
- The printer profile of each highlight color printer

Otherwise, XPAF will not be able to locate and use the table entries. Also, you must ensure that COLOR has been specified for the FEATURE parameter in the printer profile of each highlight color printer (this is the default).

If the colors defined within the color cross-reference table use custom ink catalog and/or palette names, then code an Ink Descriptor within the PDL indicating which catalog and palette should be used.

Grey scale shading via the AFP Highlight Color space

XPAF supports AFP Highlight Color space black coverage requests for shaded boxes. The “black coverage” is represented as a percentage (0 - 100) where 0% is white and 100% is solid black.

When converting the shading to PDF, the specified percentage of black is used.

The black percentage is passed to PCL-capable printers. However, the percentage is interpreted as one of eight shading patterns. Refer to the PCL5 reference manual for the percentage-to-shading mapping.

The Metacode (LCDS) architecture does not support “percentage shading” and must use a shading “style” such as “None”, “Light”, “Medium”, “Heavy”, or “Black”. The following table shows the shading type that is used based on the percentage specified.

Table 36-5. Shading Type and Percentage

AFP Black Percentage	Metacode Shading
<10%	None
10% to 39%	Light
40% to 59%	Medium
60% to 79%	Heavy
>80%	Black

NOTE: Due to a limitation on the DocuSP and FreeFlow Print Server LCDS Decomposers, FORMS$.FNT must be used to correctly shade boxes using shading characters. XPAF will only use the FORMS$.FNT when required.

Using extended JCL keywords

You can use these extended JCL keywords to specify color in AFP documents sent to centralized highlight color printers:

Table 36-6. Color-related keywords for AFP documents

Extended JCL keyword	Function
COLORIMG	Identifies the color to be applied to images: • If the images are monochrome, this color overrides the existing color, including black. • If the images are two-color, this color overrides the highlight color. To colorize all .IMG files, use this format: //REPORT OUTPUT COLORIMG=RED ***NOTE:*** This keyword does not apply to images embedded within a .FRM.
INKXLIB	Identifies the name of the library where the color cross-reference tables are stored.
INKXREF	Identifies the name of the color cross-reference table, and optionally, alters the color cross-references within the table for text in the current document only.
IRESULT	Identifies the ink to be used when different inks overlay on a pixel.
XMP	Specifies whether to use Xerographic mode switching (XMS) to print the entire document using highlight color print mode.

Full color

You can specify color in AFP documents sent to PCL-capable color printers and converted to PDF.

Color commands in AFP documents will be honored by XPAF when sent to PCL-capable color printers or when the document is converted to PDF.

NOTE: XPAF AFP color support is currently limited to the OCA color space.

Document finishing

You can use XPAF features to control some aspects of document finishing, including:

- Setting the finishing boundary
- Stapling

Setting the finishing boundary

For centralized printers only, you can specify a finishing boundary for a document if your printer supports the Document Finishing Architecture (DFA) interface (version 4.1 or higher). The output is finished at the copy group's boundary.

To specify a finishing boundary, complete these steps:

Step 1. Ensure that the destination printer's profile specifies FEATURE=DFA.

Step 2. In the appropriate IBM form definition source code, include one or more of these values in the MEDIA_INFO keyword of the FORMDEF PROCESSING command:

Table 36-7. MEDIA_INFO keyword values

Value	Result
1	XPAF sends the SPLIT=NOW DJDE to the printer to split the output between copy groups for document finishing purposes.
2	XPAF sends the SF1=YES DJDE to the printer to raise (that is, turn on) signal function 1 for document finishing purposes.
3	XPAF sends the SF1=NO DJDE to the printer to lower (that is, turn off) signal function 1 for document finishing purposes.
4	XPAF sends the SF2=YES DJDE to the printer to raise (that is, turn on) signal function 2 for document finishing purposes.

Table 36-7. MEDIA_INFO keyword values (Continued)

Value	Result
5	XPAF sends the SF2=NO DJDE to the printer to lower (that is, turn off) signal function 2 for document finishing purposes.
6	XPAF sends the SEPARATORS=FIRST DJDE to the printer to indicate that a separator should be printed for every segment of the corresponding copy group for document finishing purposes.

NOTE: XPAF does not determine the function of signal function 1 and signal function 2; the signal's function is defined by the third-party finishing equipment. Refer to the finishing equipment documentation supplied by your third-party vendor for more information about the equipment's use of signal functions.

For more information about specifying values for the MEDIA_INFO keyword, refer to the IBM publication *Page Printer Formatting Aid User's Guide and Reference*. Refer to the PDL/DJDE Reference Manual for your centralized printer for more information about DJDEs.

Step 3. Compile the form definition source code to create a FORMDEF that contains your copy group.

Step 4. In your data stream, specify an Invoke Medium Map (IMM) structured field, using the name of the copy group that you created in step 2. Refer to the IBM publication *Advanced Function Printing: Data Stream Reference* for more information.

Stapling

For centralized and PCL-capable printers that support stapling, you can staple documents by specifying the STAPLE extended JCL keyword. Follow this procedure:

Step 1. Ensure that the destination printer's profile specifies FEATURE=STITCHER.

Step 2. Specify the JDE extended JCL keyword. This keyword must name a JDE that is coded for stapling.

XPAF provides a sample JDE called PGSTAP in XPFSAMP member DFAULT. You can use your own JDE if you wish. The JDE must contain statements similar to:

```
VOLUME CODE=NONE;
OUTPUT STAPLE=YES,NT01=YES,FACEUP=YES;
```

It must be loaded into your PDL library on the host, downloaded to the printer, and compiled.

Step 3. Specify the STAPLE extended JCL keyword in the JCL to submit the job.

Duplex mode printing

For AFP documents, the duplex mode is set by the FORMDEF. However, you can use extended JCL keywords to override the FORMDEF specification:

- For documents originally formatted for an IBM 3800-type printer, specify the XDUPLEX extended JCL keyword. This keyword applies for documents that have only simplex copy groups within a FORMDEF.

  For example, if you specify XDUPLEX=YES, simplex documents originally formatted for an IBM 3800-type printer will be printed on both sides of the paper.

- For all other AFP documents sent to centralized printers, specify the DUPLEXSW extended JCL keyword. This keyword determines whether the plexing mode on the printer switches between simplex and duplex.

  For example, if you specify DUPLEXSW=Y and the print job has copy groups that specify both simplex and duplex in the FORMDEF, the printer will clear the paper path each time the plexing mode changes between simplex and duplex.

  If you specify DUPLEXSW=N and the print job has copy groups that specify both simplex and duplex in the FORMDEF, the printer does not switch plexing modes between simplex and duplex. In other words, the entire job will print in duplex mode. For any copy group that specifies simplex, a blank page is sent for the back of the page.

Image enhancement

AFP images may occasionally appear faint when converted to Xerox format and printed on Xerox printers. You can control the appearance of AFP images that are printed on Xerox printers at two levels:

- At the job level by using the XSHADE extended JCL keyword. This keyword specifies whether to enhance cells within AFP images that are recognized as a shading pattern.
- At the printer level by using the IMAGETYPIMP, IMAGEINIMP, and IMAGEOUTIMP printer profile parameters. Table 36-8 describes the effect produced by each combination of these parameters.

Table 36-8. Effect of image-enhancement parameter values on image appearance

IMAGETYPIMP value	IMAGEINIMP value	IMAGEOUTIMP value	Enhancement result	
			Simple images[1]	Complex images[2]
NONE	any value	any value	None	None
SIMPLE	blank	blank	None	
SIMPLE	XRFTABTI	blank	Enhance during input (slight improvement)	
SIMPLE	blank	XRFTABTO	Enhance during output (better improvement)	None
SIMPLE	XRFTABTI	XRFTABTO	Enhance during both input and output (best improvement)	None
COMPLEX	blank	blank	None	Enhance during output (better improvement)
COMPLEX	XRFTABTI	blank	None	Enhance during output (better improvement)
COMPLEX	blank	XRFTABTO	Enhance during output (better improvement)	None
COMPLEX	XRFTABTI	XRFTABTO	Enhance during output (better improvement)	Enhance during input (slight improvement)
ALL	blank	blank	None	Enhance during output (better improvement)
ALL	XRFTABTI	blank	Enhance during input (slight improvement)	Enhance during both input and output (best improvement)
ALL	blank	XRFTABTO	Enhance during output (better improvement)	None
ALL	XRFTABTI	XRFTABTO	Enhance during both input and output (best improvement)	Enhance during input (slight improvement)

1 A simple image is composed of one or more contiguous IRD structured fields that contain the entire raster pattern for the image.

2 A complex image divides the image data into one or more image cells which are individually positioned relative to the image origin by using ICP structured fields.

Image consolidation

If you are printing a document on a centralized printer, XPAF performs image consolidation to enhance performance. Image consolidation processing is not performed for documents that are printed on decentralized or PCL-capable printers or converted to PDF.

XPAF consolidates images as follows:

- Inline images on a page that are not referenced by another resource (overlay or page segment) are consolidated and converted into a single .IMG, then downloaded to the printer. The .IMG is automatically deleted after the document is printed; each time inline images are referenced, they are reconverted.

  Review the IMAGEMAXP printer profile parameter value to ensure it accommodates the maximum number of images contained on any page in any document sent to this printer. If the number of images on a page exceeds the limit you have established for this parameter, XPAF issues a message.

- Images referenced within an overlay, excluding those that are included in a page segment referenced by the overlay, are consolidated and converted into a single .IMG, then downloaded to the printer. The converted image is stored in the native image library and referenced the next time it is printed in another document. The images are not converted again unless the overlay is revised using the REVOVLY extended JCL keyword.

  Review the IMAGEMAXO printer profile parameter value to ensure it accommodates the maximum number of images contained in any overlay, excluding images in page segments that are referenced by the overlay, in a document sent to this printer. If the number of images in an overlay exceeds the limit you have established for this parameter, XPAF issues a message.

- Images referenced within a page segment are consolidated and converted into a single .IMG, then downloaded to the printer. The converted image is stored in the image library and referenced the next time it is printed in another document. The images are not converted again unless the page segment is revised using the REVPSEG extended JCL keyword.

  Review the setting of the IMAGEMAXS printer profile parameter to ensure it accommodates the number of images contained in any page segment in any document for this printer. If the number of images in a page segment exceeds the limit you have established for this parameter, XPAF issues a message.

Image consolidation applies only to images within a single resource type; different resources on a page are not consolidated. For example, individual page segments referenced within overlays are not consolidated into a single page segment.

CAUTION: If you include both single- and double-dot images on a single page or within a single page segment or overlay, XPAF consolidates the images; however, the printed results are unpredictable.

Overlay consolidation

If your documents include multiple overlays in a copy group, you can consolidate those overlays to improve printer performance. Overlay consolidation can be specified at the job level by using the MERGEOVL extended JCL keyword.

Paper size/paper tray processing

If you have a document that uses more than one paper size, you may specify different paper trays in the MMC structured field of a copy subgroup within a medium map. This support is provided for AFP documents when printing to centralized, decentralized, and PCL-capable printers.

To activate this feature, you must specify a valid varying paper size table using the VARPAPTB initialization parameter, printer profile parameter, or extended JCL keyword. Refer to *Section Three: Managing Resources with XPAF* for instructions on creating and updating the varying paper size table.

Verifying your print environment

This section identifies any additional steps you should take before you begin submitting jobs.

Region size

To process AFP data streams with XPAF, make sure the region size defined in the XOSF start-up proc (XOSF00) is set to at least 6144K.

Printing documents

Submit your documents for printing using standard JCL. Ensure that your job class references a supported centralized, decentralized, or PCL-capable printer or PDF device.

Converting AFP documents to Metacode or XES documents

AFP documents must be converted to a Xerox format for printing on Xerox printers.

- For AFP documents sent to a centralized printer, XPAF converts the AFP commands to Metacode commands.
- Similarly, for AFP documents sent to a decentralized printer, XPAF converts the AFP commands to XES commands.
- For AFP documents sent to a PCL-capable printer, XPAF converts the AFP commands to XES commands, then converts the XES commands to PCL. Refer to Chapter 34, "Printing XES documents" for information about the XES-to-PCL conversion.
- For AFP documents sent to a PDF device, XPAF converts the AFP commands to XES commands, then converts the XES commands to PDF. Refer to Chapter 34, "Printing XES documents" for information about the XES-to-PDF conversion.

Printable area restriction

Due to rounding and processing differences, you should avoid printing any text, rules, and images within 1/8 inch of the valid printable area.

Processing limitations

When printing AFP documents through XPAF, restrictions apply to certain elements, including:

- Text orientation
- IOCA images
- Paper trays

Text orientation limitation

For AFP documents, XPAF does not support text orientations with these inline/baseline combinations:

Table 36-9. Unsupported text orientations

Inline/Baseline combinations	
Inline 0	Baseline 270
Inline 90	Baseline 0
Inline 180	Baseline 90
Inline 270	Baseline 180

These combinations will cause the text to be positioned incorrectly on the page.

IOCA support limitations

XPAF cannot process IOCA images that contain Band Image Data or Numbered Image Data. Band Image Data is an optional IOCA element used to specify images that are presented in a series of separate bands. Numbered Image Data is an optional IOCA element used to specify images presented in a group of adjacent tiles.

Be sure to remove all banded or tiled images from your data streams before processing them through XPAF. If the images are essential to the print job, regenerate them in a form other than banded or tiled and reinsert them into your data stream.

Paper tray processing limitations

When specifying varying paper sizes within a document, note these restrictions and limitations:

- Due to restrictions with some printers, the printer may not be able to combine certain paper sizes within a document. XPAF does not perform any cross-checking of which paper sizes have been specified, but instead leaves the printer to resolve any possible conflicts.
- The number of combinations of different paper sizes is unlimited. However, in practice, the number of different paper sizes you can specify is limited by the physical number of printer paper trays.
- XPAF cannot query the printer to determine the number of paper trays available, nor the actual sizes of paper physically loaded in those trays.
- XPAF has no method of controlling which output destination the paper will be delivered to on the printer.
- Because overlays are a fixed size, XPAF cannot adjust them to fit the specified paper size nor reposition them on the page. They may, however, appear to be placed differently based on the specified page origin and paper size.
- If you have a duplex form definition, you must specify the same bin number within the copy subgroup for each side of the sheet being printed. Otherwise, the value specified for the front side of the page will override the value specified for the back side of the page. XPAF does not issue an error message.

NOTE: Because of the extra processing that must be done every time the bin number changes within a copy subgroup, processing times may be adversely affected if you specify a mixture of bin numbers within the same copy group or job.

AFP-to-Metacode conversion limitations

When printing AFP documents to centralized printers, restrictions apply to certain elements, including:

- Inline coordinates for fonts
- Color IID structured field processing
- Including images in overlays
- Converting overlays
- Printer image-per-page considerations

Inline coordinates for fonts

When printing to a centralized printer, XPAF adjusts the inline coordinate for the output text by the left kern value of the font being used. The left kern value is based on the font typeface and the point size of the font. For some fonts, this value may be as large as 35 pels.

For example, the replica font XABH0 has a left kern value of 2. If your document requires that the character ‘A’ be positioned at inline position 300, the actual inline position sent to the printer would be 298 (the difference between 300 and the left kern value of 2).

When processing AFP documents that contain text positioned less than 1/8 inch from the edge of the page, the inline coordinate required to replicate the position may be negative, which is an invalid value. Any character that is detected as printing outside of the valid printable area is ignored.

If you specify DATACK=UNBLOCK in your JCL, an error indicator shows the area of the data check, and XPAF issues an error message. Therefore, you should avoid printing within 1/8 inch of the left margin.

Color IID structured field processing

When printing AFP documents that contain images colorized via the IID structured field, these limitations apply:

- XPAF support is limited to IM-type images.
- XPAF support does not include these features:
  - Reverse video processing
  - Image print impression processing
- If a colorized image is required for a merged overlay but is not available, the equivalent monochrome black image will be substituted, if available. If the monochrome black image is not available, a message is issued stating that the resource could not be found and processing is terminated.
- XPAF does not convert an image every time it is printed. If XPAF does not revise the image, the existing image will be printed instead of the updated image. Therefore, if you change the color in the IID structured field for an image, you must also specify either the REVOVLY or REVPSEG extended JCL keyword to reconvert the image.
- If you choose to store color images in the centralized image library and you specify PRINTENV=BOTH, XPAF maintains two separate copies of the image: one black and the other color. When the image is printed, XPAF downloads the appropriate file to the specified printer, using the last six characters of the file name as the resource name stored on the printer. Because the last six characters are the same for both files, they will both have the same name when downloaded to a printer. However, the two files will never be downloaded to or stored on the same printer, so no naming conflict will exist.

- All individual colors of a RES .IMG format image, other than black, will be represented in a consolidated image as a single color. This color will match the first colorized IID image color attribute value encountered within the AFP resource or data stream.
- If there are multiple RES .IMG images which contain different highlight colors within the same job, the printer will not be able to reconcile the conflict. As a result, either an error may occur at the printer or some of the color images may print as black.

Including images in overlays

For any overlay, XPAF rounds up the image dimensions to the next byte boundary. Any PSF image within 7 pels of the edge of the valid printable area may not be printable by XPAF.

Converting overlays

When XPAF converts overlays, they are converted as if they are medium overlays. No offset is applied to the positioning of text, rules, or images. The converted overlay is stored as a .FRM. When invoked as a page overlay, the IPO offsets are applied to the text and image coordinates held in the record prefix of the XPAF internal formatted resource. These records are then merged with the variable page data.

If a negative inline coordinate is generated (due to left kern adjustment) when the overlay is converted, the character is not saved as part of the converted resource, even if it would have printed once the IPO offsets were applied.

Printer image-per-page considerations

For documents printed on centralized printers for which image consolidation is performed:

- The page counts as one image if it contains any inline images.
- Each overlay on the page counts as one image if it contains any inline images; individual images within an overlay do not affect the image-per-page count because they are consolidated when the overlay is converted to a .FRM.
- Each page segment on the page or referenced by an overlay counts as one image; individual images within a page segment do not affect the image-per-page count because they are consolidated when the page segment is converted.

AFP-to-XES conversion limitations

When printing AFP documents to decentralized or PCL-capable printers or converting to PDF, restrictions apply to certain elements, including:

- Including images in overlays
- Converting overlays
- Printer image-per-page considerations

Including images in overlays

For any overlay, XPAF rounds up the image dimensions to the next byte boundary. Any PSF image within 7 pels of the edge of the valid printable area may not be printable by XPAF.

Converting overlays

When XPAF converts overlays, they are converted as if they are medium overlays. No offset is applied to the positioning of text, rules, or images. The converted overlay is stored in XPAF internal format. When invoked as a page overlay, the IPO offsets are applied to the text and image coordinates held in the record prefix of the XPAF internal formatted resource. These records are then merged with the variable page data.

If a negative inline coordinate is generated (due to left kern adjustment) when the overlay is converted, the character is not saved as part of the converted resource, even if it would have printed once the IPO offsets were applied.

Printer image-per-page considerations

For documents printed on decentralized or PCL-capable printers, for which image consolidation is not performed:

- Each image on the page counts as one image.
- Each image in an overlay counts as one image.
- Each image in a page segment counts as one image.

If the total image count supported by the destination printer is exceeded on any page in a document, XPAF processes the document; however, the document will fail at the printer.

Some decentralized and PCL-capable printers have a limit on the number of images per page that can be printed. This limitation is usually based on the amount of memory in the printer. For example, if you have one complex image on a page that requires more memory than is available on the printer, only part of the image will print. However, if you have 20 simple images on a page that do not require a lot of memory, all of the images will print.

If you specify IMGTYPE=0 in the initialization parameters, printer's profile, or JCL, the size of the converted image will print smaller in XPAF (by a factor of 20%) than the original 240 dpi image printed in AFP.

Troubleshooting problems

Occasionally, your output may not print as you expected. If this happens, review the items in table 36-10 for information to help you resolve the problem.

Table 36-10. Common printing errors for AFP documents

Symptom	Explanation	Steps to take
Job attempts to print outside the valid printable area.	XPAF processing may produce slight rounding and processing differences.	Avoid printing any text, rules, and images within 1/8 inch of the edge of the valid printable area.
AFP images appear faint when printed on Xerox printers.	Printing on Xerox printers may result in slight differences.	Use the XSHADE extended JCL keyword or the IMAGETYPIMP, IMAGEINIMP, and IMAGEOUTIMP printer profile parameters to adjust for differences at the printer.
AFP line-mode data prints differently on IBM and Xerox printers.	Possible causes are: • The XOSF start-up proc and PSF printer proc use different values for the default PAGEDEF, FORMDEF, and CHARS, or different AFP resource library concatenations. • XPAF is not processing the document as AFP (when no FORMDEF, PAGEDEF, or CHARS keywords are specified in the JCL).	Try these actions: • Set the XOSF start-up proc values to match those in the equivalent PSF printer proc. • Set the XOSF start-up proc library concatenation to match the concatenation in the equivalent PSF printer proc. • Set the DEFLINE initialization or printer profile parameter to PAGE to instruct XPAF to use the default PAGEDEF and FORMDEF when processing documents using PMODE=LINE.
Pages are rotated 90 degrees from the expected result.	Possible causes are: • The FORMDEF contains a landscape presentation setting in the medium descriptor. • The PMODE initialization parameter, printer profile parameter, or extended JCL keyword is set to LAND.	The IBMPMODE initialization and printer profile parameters instruct XPAF to honor (Y) or ignore (N) the page presentation as coded in AFP. If you specified IBMPMODE=N, change the value of PMODE from PORT to LAND, or vice versa if necessary, to rotate the page.

Table 36-10. Common printing errors for AFP documents (Continued)

Symptom	Explanation	Steps to take
Converted overlay text, rules, and/or images appear in the wrong position on a page.	Possible causes are: • The overlay was converted for one paper size but was printed on a different paper size. For example, the overlay was created for 8.5 by 11 inch paper but was printed on 8.5 by 14 inch paper. • The overlay was converted for one orientation (for example, PMODE=PORT), but was used in a document with a different orientation (PMODE=LAND).	You can use converted overlays only in the presentation and for the paper size in effect when the overlay was converted. To use an overlay in a different presentation or paper size, either specify REVOVLY in your extended JCL, or reference the user library where the original overlay is stored via the USERLIB IBM JCL keyword.
Font and character set mapping is different on Xerox printers than on IBM printers.	Possible causes are: • RJOB105 (create font tables) was not run for all IBM font libraries, or was not run the opposite order of the IBMFONT concatenation. • The XOAF Update IBM Font Characteristics Information option was not run for all IBM font libraries or was not run in the opposite order of the IBMFONT concatenation. • A required IBM font library was contained in a USERLIB statement. XPAF does not support USERLIB processing for font libraries.	Try these actions: • Run RJOB105 on all IBM font libraries in the reverse order of the IBMFONT concatenation. • Run the XOAF option to create IBM font characteristics in the reverse order of the IBMFONT concatenation. • Add the required IBM font library to the beginning of the IBMFONT DD statement in your XPAF printer proc. Then run RJOB105 against the IBM font library.
Two-color RES images do not print correctly.	A problem may exist within the image as it was originally created.	Run the XRCBATCH diagnostic utility to separate the image into two different formats to determine which part of the image is causing the problem. Refer to chapter 39, “Using XRCBATCH” for instructions on running XRCBATCH.
The image boundary cannot be determined for a colorized image.	Possible causes are: • The image boundary may be larger than the area in which it is printed. • The image boundary may overlap another image.	Run the XRCBATCH diagnostic utility to convert the image to a single black image, then reverse the color. Refer to Chapter 39, “Using XRCBATCH” for instructions on running XRCBATCH.

Table 36-10. Common printing errors for AFP documents (Continued)

Symptom	Explanation	Steps to take
When printing on centralized printers, an undefined tray error occurs.	The FORMDEF contains one or more requests for numbered trays (2–9). XPAF translates these requests into FEED=TRAY*n* commands, where *n* is the requested tray number.	Try these actions: • Ensure TRAY1 through TRAY9 are defined on the centralized printers used to print AFP documents. You may map these values to the available trays on each printer. • Define a varying paper sizes table to map the bin numbers in the FORMDEF to the trays on the printer.
When printing on decentralized printers, document data is misaligned, and the printer issues DATA OFF PAGE errors.	The paper size specified in the data stream does not match the size of the paper in the printer tray.	Make sure that the printer contains the correct paper size in the tray(s) selected by XPAF when printing AFP documents.
When printing AFP data streams that contain inline images which use DCF shading, printer performance does not match expectations.	If the DCF shading was built without repeat and fill, XPAF must scale inline images that contain DCF shading each time they are referenced.	To improve performance, rebuild the DCF shading in the images to use repeat and fill. This will allow XPAF to perform a direct 300 dpi substitution instead of having to scale the image. For more information on designing your AFP applications for better performance, refer to the IBM PSF documentation.

37. Printing VIPP documents

This chapter contains the information you need to print Variable Data Intelligent PostScript Printware (VIPP) documents through XPAF. It addresses these topics:

- Verifying that your resources have been set up correctly
- Including resources in your documents
- Modifying the processing of your documents
- Identifying a VIPP job to XPAF
- Changing a line-mode document to VIPP

NOTE: VIPP applications are sent to VIPP-enabled printers. The process described in this chapter may be modified to send any document to a printer capable of handling front end processing (FEP).

Data stream definition

VIPP documents are sent to VIPP-enabled printers in line-mode. XPAF inserts VIPP control commands at the beginning of the data stream, then sends the combined data stream to the VIPP-enabled printer. The data is formatted at the printer according to the VIPP commands contained in the document.

XPAF support

You can print VIPP documents through XPAF to any VIPP-enabled printer.

Preparing resources

VIPP document resources are managed through the VIPP software, which must reside on the printer.

Line-mode data sent by XPAF will include machine carriage control; for this reason all VIPP commands must start in column 2. In order for the VIPP-enabled printer to correctly handle this format, you must specify “/IBM1403 SETPCC” in each JDT. Sample JDTs XPAFLAND and XPAFPORT are provided as an example in XPFSAMP.

Using resources

When processing VIPP documents, the resources you specify in your JDT must reside on the printer. XPAF sends the VIPP document to printer-resident software, which defines or retrieves the resources used in the VIPP application.

Modifying document processing

There are several XPAF-supplied parameters and keywords used to print VIPP documents. This section identifies some of the keywords available in XPAF to change document processing. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the keywords identified in this section and for other XPAF keywords available for document processing.

Table 37-1. Keywords for VIPP processing

Keyword	Function
PRMODE=VIPP	Must be specified to indicate VIPP processing.
XVIPPMEM	Specifies a VIPP member to be retrieved from the dataset defined by LPRDSN and inserted at the front of the application.
XUSERAC1-3	Specifies user-defined variable information used by the members described in this table for variable substitution at the time of document creation.
FORMS	Specifies forms used in VIPP processing. To use this keyword, XVIPPMEM= must be specified in the PPT or JCL.

Using advanced features

Printer control commands and advanced features, such as using color or selecting paper trays, are defined in the VIPP JDTs. XPAF inserts user-defined VIPP commands that use printer-resident resources.

Printing documents

Submit your documents for printing using standard JCL. Make sure your output class specifies a supported VIPP device.

Verifying your print environment

This section identifies any additional steps you should take before you begin submitting jobs.

Preparing to print line-mode documents using VIPP

Step 1. Modify the JES printer definition to add VIPP as an accepted PRMODE

Step 2. Create the relevant members in the LPRDSN dataset to include the desired parameters.

Step 3. Review the PPT for all printers that will be printing VIPP documents.

a. If the printer is not supported by XPAF, but is VIPP-enabled, specify DEVICE=VIPP (otherwise use the correct DEVICE= for your printer)

b. (Optional) To include a set of VIPP commands that will be applied to documents with no specified user-defined commands, point the XVIPPMEM parameter in the printer's PPT to the member containing the desired commands. Sample source XVIPPMEM is supplied in XPFSAMP.

Step 4. Update their JCL to add the new keywords to the relevant OUTPUT statement

Step 5. Ensure that the JDTs used have"/IBM1403 SETPCC" coded, then transmit the XPAF-supplied JDTs to the target printer. A REXX sample, VIPPFTPP is shipped in XPFCLIST. The sample supplied with XPAF uses the fixed-pitch Courier font, which must be installed on the VIPP-enabled target printer.

Creating a VIPP command file member

XPAF copies all the lines in the PDS member specified by the XVIPPMEM parameter following the %INSERT line. This allows you to specify comments at the beginning of a member. The following example demonstrates a simple set of VIPP commands that invokes the XPAFLAND JDT:

```
* All lines prior to the %INSERT line are considered comments
* This VIPP command file:
* 1)  sets the LPR CLASS statement to "duplex"
* 2)  starts the VIPP job with the VIPP required header "%!"
* 3)  Invokes the "XPAFLAND" JDT stored on the printer in "line-mode"
*
%INSERT
%TCPIPCLASS(duplex)
%!
(XPAFLAND.JDT) STARTLM
```

NOTE: The %INSERT statement is required, even if no comments are specified. The %INSERT command must begin in column 1.

Using variable insert information

XPAF can insert document-specific information into a VIPP document using the PPT parameter or extended JCL keyword XVIPPMEM. Variable substitution occurs when using the following information in XVIPPMEM:

Variable	Description
%FORMNAME	The JES FORM name used to process the document. I.e. STD1
%STEPNAME	The job step name i.e. PRTSTEP
%ACCOUNT	The account number used to print the job i.e. D498
%JOBNAME	The JES job name i.e. HWMPRTAC
%PRINTER	The XPAF/JES printer name i.e. PRT123
%STEPDDN	The job step ddname i.e SYSUT1
%USERAC1	User variable extended JCL field
%USERAC2	User variable extended JCL field
%USERAC3	User variable extended JCL field

Variable	Description
%DEVICE	The printer device from the XPAF PPT i.e. N32
%IPADDR	The IP address the document i.e 192.64.0.1
%IPADDZ	The default IP address from the XPAF PPT i.e 192.64.0.4
%LPRDSN	The name of the XPAF created temporary LPR dataset
%JOBNO	The JES job number
%LINES	The number of records in the dataset
%PAGES	The number of pages in the dataset
%QNAME	The name of the LPR queue the document will be sent to
%QNAMZ	The name of the default LPR queue in the XPAF PPT
%PORT	The name of the IP port number the document will be sent to
%PORZ	The name of the default IP port number in the XPAF PPT
%USER	The user name of the account that submitted the job

Advanced users of this feature can use most of the fields defined in the following XPAF macros:

- Document Information Block, member @XDIB in SAMPMAC
- Printer Profile Table, member @XXQPPT in SAMPMAC
- Output Data Block, member @XODB in SAMPMAC
- XDIB DJDE extension, member @XDJD in SAMPMAC

Review the macros supplied in the sample macro library and use a '%' followed by the field name.

For example, the JES output class is held in the XDIB in field XDIBSOCL. To use the sysout class as a variable field in a PJL or job ticket command file, specify %XDIBSOCL.

The following example, enables the JDT to be selected in the JCL by using the XUSERAC1 extended JCL keyword:

```
* All lines prior to the %INSERT line are considered comments
* This VIPP command file:
* 1)  sets the LPR CLASS statement to "duplex"
* 2)  starts the VIPP job with the VIPP required header "%!"
* 3)  Invokes the JDT specified by the XUSERAC1 extended JCL keyword
*
%INSERT
%TCPIPCLASS(duplex)
%!
(%USERAC1.JDT) STARTLM
```

Specifying:

```
//VIPP    OUTPUT   PRMODE=VIPP,XVIPPMEM=VARJDT,XUSERAC1=XPAFPORT
.....
//SYSUT2  DD       SYSOUT=M,OUTPUT=(*.VIPP)
```

Will cause the SYSUT2 line-mode data to be formatted with the XPAFPORT JDT.

Default FORM and JOBNAME VIPP command processing

You can create default VIPP commands that will be used for a job based on the JES job name or FORMS name. Simply create a member containing VIPP commands with the same name as the JOB or FORM. XPAF first searches for a member that matches the JOBNAME or FORM name and will use these commands if present.

The hierarchy of the member name to use is as follows:

1. JOBNAME
2. JES FORM name
3. extended JCL keyword XVIPPMEM
4. The value specified by the XVIPPMEM PPT keyword

38. Using XPAF extended features

This chapter provides instructions for printing documents while using these extended features of XPAF:

- Xerox Job Control Facility (XJCF) in simulation mode
- Xerox Direct Print Services (XDS)
- Redirecting XOSF-converted datasets to other printers

Using XJCF simulation processing

This section explains how to use XJCF simulation mode to modify XPAF processing of DJDE documents.

Processing overview

XPAF uses a table known as the XJCFSIM table to emulate XJCF processing. The XJCFSIM table contains sets of simulation tables. Each set of simulation tables is tied to a specific JDL and can consist of one or all of these tables:

- FORMS
- CLASS
- DEST
- FLASH
- MODIFY
- FCB
- CHARS
- PDE

When processing an XJCF job, XPAF determines the JDL being used, then reads the XJCFSIM table to determine which set of simulation tables to use. Based on the JCL keywords used to submit the job, XPAF reads the appropriate simulation tables and generates DJDEs that affect document processing.

The XJCFSIM table is user-defined and must be assembled and link-edited into XPFLOAD. It can either be created manually or generated from your existing XJCF XIM table. Instructions for creating the XJCFSIM table are provided in *Section Two: Installing and Customizing XPAF*.

DJDE generation

During XJCF simulation processing, DJDE generation occurs in this order:

1. DJDEs are generated from extended JCL parameters coded in the job.

2. The XJCFSIM FLASH table is processed. This table is searched for an entry that has matching COPIES, FLASH, PMODE, and TWOUP values. FORMS and/or BFORM DJDEs are generated from the matching table entry unless that particular keyword has been overridden by extended JCL.

   If no FLASH value is specified in the JCL used to submit the job, XPAF uses the SYSFLSH initialization parameter value as a default FLASH value. During simulation processing, this SYSFLSH value is used to find a match in the XJCFSIM FLASH table.

3. The XJCFSIM MODIFY table is processed. This table is searched for an entry that has matching MODIFY, PMODE, and COPIES values. A MODIFY DJDE is generated for the matching table entry unless the MODIFY keyword has been overridden by extended JCL. If no match is found, a MODIFY DJDE is not generated.

4. The XJCFSIM FORMS table is processed. This table is searched for an entry that has a matching form name. Associated DJDEs are generated from the matching table entry unless a particular keyword has been overridden by extended JCL or the XJCFSIM FLASH table.

5. The XJCFSIM CLASS table is processed. This table is searched for an entry that has a matching output class. Associated DJDEs are generated from the matching table entry unless a particular keyword has been overridden by extended JCL, the XJCFSIM FLASH table, or the XJCFSIM FORMS table.

   If neither a form nor a class entry is found in its respective table, the first form in the XJCFSIM FORMS table is used as the default.

6. The XJCFSIM DEST table is processed. This table is searched for an entry that has a matching DEST name. Associated DJDEs are generated from the matching table entry unless a particular keyword has been overridden by extended JCL, XJCFSIM FLASH table, XJCFSIM FORMS table, or the XJCFSIM CLASS table.

7. The XJCFSIM FCB table is processed to determine the LPI used for best-fit PDE selection. This table is searched for a matching FCB name. If no matching entry is found, LPI=0 is assumed. No DJDEs are generated. Associated DJDEs are generated from the matching table entry unless a particular keyword has been overridden by extended JCL or the XJCFSIM FLASH table.

8. The XJCFSIM CHARS table is processed to determine the Xerox font to be used. This table is searched for an entry that has matching CHARS and PMODE values. If a matching entry is found, XPAF generates the FONTS DJDE associated with that table entry. If no matching entry is found, the original CHARS value is used, and no DJDEs are generated.

   If no CHARS value is specified in the JCL used to submit the job, XPAF uses the SYSFONT initialization parameter value as a default CHARS value. During simulation processing, this SYSFONT value is used to find a match in the XJCFSIM CHARS table.

9. The XJCFSIM PDE selection table is processed to determine the PDE that best fits the document's environment. This table is searched for matching PMODE, LPI, TWOUP, and CHARS values. Since this is a best-fit search, XPAF always selects a PDE from this table and generates a FORMAT DJDE unless FORMAT has been overridden by extended JCL, the XJCFSIM FORMS table, or the XJCFSIM CLASS table.

10. The data stream initial packet is processed. If the initial packet contains any DJDEs that have not already been specified, they are added to those generated by the extended JCL and XJCFSIM tables. If the initial packet contains DJDEs already generated from the extended JCL or other tables, they are ignored.

NOTE: If you do not want the SYSFLSH or SYSFONT value to be used to match an entry in an XJCFSIM table, you must either:

- Specify SYSFLSH=, or SYSFONT=, in the XINSXOSF member of XINPARM. This sets a null value for each parameter.
- Include the FLASH or CHARS IBM JCL keyword in the JCL used to submit the XJCF simulation job.

Enabling XJCF simulation processing on a job-by-job basis

Through the extended JCL keywords shown in table 38-1, you can use XJCF simulation processing for selected DJDE documents. For detailed information about these keywords, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Table 38-1. Extended JCL keywords for XJCF simulation processing

Extended JCL keyword	Function
DJDE	Specifies whether XPAF translates extended JCL keywords to DJDEs at print time or generates any XJCF simulation DJDEs. Use this keyword if you have coded your own DJDEs in a data stream and do not want XJCF or XPAF to add any DJDEs to it.
TWOUP	Specifies whether this document prints multiple logical pages on one physical page.
XJCFSIM	Allows XOSF to control XJCF simulation processing for the current print job. Use this keyword if the printer's profile specifies XJCFMODE=N.

Printing documents through XDS

This section identifies the types of data streams that can be printed through XDS, and provides an overview of the processing performed. In addition, it describes how to submit an XDS print job and recover from an abend.

Data streams supported

You can use XDS to print line-mode, DJDE, XES, page-formatted, AFP, and pass-through documents.

Processing overview

XDS prints synchronously with a print application from a started task or batch initiator through the SUBSYS parameter on the DD JCL statement, instead of through the SYSOUT parameter. As the print application writes each print record, XDS moves it to the printer. Each record within the dataset is limited to a record length of 32K, which is the limit imposed by both z/OS and XOSF.

XDS honors these parameters and keywords used with XOSF:

- All JCL OUTPUT statement parameters, except COPIES and OUTDISP
- All XPAF extended JCL keywords
- All XJCF-specific extended JCL keywords
- All XPAF initialization parameters
- All XPAF printer profile parameters

Printing documents

Follow these steps to print documents through XDS:

Step 1. Verify initialization parameters.

Be sure the values below are specified for the ALOGDSN, COMSSID, COMSSTYP, SUBSYS, and XLOGDSN initialization parameters. These parameters are found in the XINSXOSF member of the XINPARM library you created for XDS.

ALOGDSN=*dataset-name* (optional)
COMSSID=*subsys-name*
COMSSTYP=DIRECT
SUBSYS=*subsys-name*
XLOGDSN=*dataset-name*

The values for COMSSID and SUBSYS must be identical and must be the same as the XOSF start-up proc name.

Be sure this initialization parameter is specified in the XINSXOAF member of the XINPARM library you created for XDS:

COMSSTYP=DIRECT

Step 2. Initialize XDS.

If you installed XDS with one of the automatic initialization options, no other actions are required to initialize XDS.

If you installed XDS with the manual initialization option, you must enter this z/OS operator command to start XDS:

START XDSSTART

Enter the command only after JES has started. Once the command is acknowledged, these actions occur:

- z/OS initializes XDS.
- XDS initializes XOSF.
- XOSF waits for FSA orders from the print application running as an XDS batch job or started task.

Step 3. Submit a print job.

The printer to be used for an XDS batch print job must be defined to JES. You specify which printer to use in the JCL for the job.

To submit a print job through XDS, include this statement in your JCL for the batch print job:

//*ddname* DD SUBSYS=(*xds-name*,*printer-name*,'SEP=*x*')

where

ddname	The user-defined DD name for this statement.
xds-name	The 4-character XOSF subsystem name as defined in the SUBSYS initialization parameter in the XINSXOSF member in the XINPARM library you created for XDS.
printer-name	The name of the printer to be used. The printer name must be defined in the printer profile library.

x One of these values:

J Produces job header and trailer pages.

D Produces dataset separator pages.

JD Produces both job header and trailer pages and dataset separator pages.

N Produces no separator pages.

Default: N

Example:

```
//PRINTJOB DD SUBSYS=(XOSF,PRT1652,'SEP=J')
```

Limitations

Note these limitations when printing documents using XDS:

- XDS does not support multiple-step jobs.
- To help prevent errors, you must manually schedule all print jobs.
- The printer must not be active in the XPAF address space when you start a batch XDS print step.

NOTE: Within a job, you can specify a SUBSYS parameter with each DD statement specifying a different printer. Each SUBSYS parameter must specify the same XOSF subsystem.

Receiving error messages from XPAF

You can receive or suppress the low-level error message text that caused an error while XOSF was processing an XDS-supplied document. To receive or suppress the low-level error messages, use one of the options described in the following sections.

Review these considerations before determining which option to use:

- When the application program has been given control via SYNAD or EXLST code X'09', make sure that Register 14 is preserved and restored before exiting back to the caller.
- If SYNAD and EXLST are both coded on the DCB and EXLST code X'09' is enabled and pointing to the same routine as the SYNAD= routine, a loop may occur. To solve this problem, be sure that the logic in the application program does not allow recursive calls to CLOSE.

Process messages during WRITE/CHECK BSAM processing

To receive control to process the message text during WRITE/CHECK BSAM processing, code the SYNAD parameter on the DCB statement in the application program. This SYNAD routine is called whenever CHECK discovers that XDS presented a non-zero return code.

The SYNAD routine finds the address of the message buffer in tagname DCBEODA. This 24-bit address points to the message buffer, which contains the length followed by the message text.

For more information on the SYNAD parameter, refer to the *z/OS/DATA Administration: Macro Instruction Reference*.

Example:

```
--SYNAD ROUTINE--
SYNAD00DSOHUSER SYNAD ROUTINE
*SAVE REGISTERS AS DESIRED.
XRR15,R15CLEAR REGISTER
ICMR15,7,DCBEODAGET ADDRESS OF MSG BUFF
BZSYNAD90NO MESSAGE BUFFER, EXIT
USING MSGBUF,R15MSGBUF
*PROCESS MESSAGE TEXT HERE
*PROCESS MESSAGE TEXT HERE
*PROCESS MESSAGE TEXT HERE
SYNAD90DSOH
*RESTORE REGISTER DESIRED.
BSM0,R14RETURN TO CALLER VIA R14
--DATA CONTROL BLOCK DEFINITION--
SYSUT2DCBDSORG=PS,MACRF=W,LRECL=*),RECFM=F,  C
SYNAD=SYNAD00SYNAD ROUTINE ADDRESS
--DATA CONTROL BLOCK DSECT--
DCBD DSORG=(PS)DATA CONTROL BLOCK DSECT
--MESSAGE BUFFER DSECT--
MSGBUFDSECTMESSAGE BUFFER
MSGLENDSHMESSAGE TEXT LENGTH
MSGTEXTDSCL248MESSAGE TEXT
```

Process message text during CLOSE processing

To receive control to process the message text during CLOSE processing, you must specify EXLST code X'09'. On the DCB statement in the application program, code the EXLST parameter. The EXLST routine is called whenever XDS discovers an XOSF document processing error during the CLOSE process, as opposed to the WRITE/CHECK process.

The EXLST routine can be the same routine that was specified for SYNAD as long as the application program returns back via Register 14 and is prepared to handle errors at CLOSE time. Failure to return back via Register 14 may cause unpredictable results.

The EXLST routine will find the address of the message buffer in tagname DCBEODA. This 24-bit address points to the message buffer that contains the length followed by the message text.

For more information on the EXLST parameter, refer to the *z/OS/Data Administration: Macro Instruction Reference*.

Example:

```
--DATA CONTROL BLOCK DEFINITION--
SYSUT2DCBDSORG=PS,MACRF=W,LRECL=80,RECFM=F,C
EXLST=$EXLST,EXIT LIST ADDRESSC
SYNAD=SYNAD00SYNAD ROUTINE ADDRESS
--EXLST PARAMETERS--
$EXLSTDSOFFULLWORD ALIGNED
DCXL1'09',AL3(SYNAD00)EXLST FOR MSG ERROR
DCXL1'80',AL3(0)END OF EXLST PARAMETER
```

Return error information to Register 14

Error information can be returned to the application program in Register 14 during the CLOSE process. This process does not take place if EXLST code X'09' (MSG RTN EXIT) is active. On the DCB statement in the application program, code the EXLST parameter. EXLST entry X'08' signals XDS to suppress XOSF-related error messages and return the information back to the application program in Register 14 whenever XDS discovers an XOSF document processing error during the CLOSE process, as opposed to the WRITE/CHECK process.

The return code is X'FF' in the high order byte of Register 14. The remaining three bytes contain the 24-bit address that points to the message buffer that contains the length followed by the message text. The return code byte should be compared using the CLM assembler instruction (see example).

For more information on the EXLST parameter, refer to the *z/OS/Data Administration: Macro Instruction Reference*.

Example:

```
--RETURNED INFORMATION IN R14 VIA EXLST CODE X'08'--
CLOSE(SYSUT2)CLOSE XDS OUTPUT DCB
LTRR15,R15DID CLOSE HAVE AN ERROR
BZCLOSE10NO, CHECK IF XOSF DID
*HANDLE CLOSE ERROR HERE.
CLOSE10DSOH
CLMR14,8,=X'FF'DID XDS FIND AN XOSF ERR
BNZCLOSE90NO XDS ERROR, CONTINUE
SLLR14,8CLEAR OUT RETURN CODE
SRLR14,8RESET MESSAGE TEXT ADDR
USING MSGBUF,R14MSGBUF
*PROCESS MESSAGE TEXT HERE.
*PROCESS MESSAGE TEXT HERE.
*PROCESS MESSAGE TEXT HERE.
CLOSE90DSOH
--DATA CONTROL BLOCK DEFINITION--
SYSUT2DCBDSORG=PS,MACRF=W,LRECL=80,RECFM=F,C
EXLST=$EXLST,EXIT LIST ADDRESSC
SYNAD=SYNAD00SYNAD ROUTINE ADDRESS
--EXLST PARAMETERS--
$EXLSTDSOFFULLWORD ALIGNED
DCXL1'08',AL3(0)SUPPRESS XOSF WTO MESSAGE
DCXL1'80',AL3(0)END OF EXLST PARAMETERS
```

Process error messages without the EXLST parameter

If EXLST is omitted from the DCB or if either X'08' or X'09' are not active, then XDS issues message XDS1080E and the XOSF low-level error message. The XOSF message may be truncated if the message text is longer than 126 characters.

Recovering from an abend

The abend recovery functions are enabled at XDS setup when you add to and modify the XDSSTART and XDSSTOP procs in the JES-controlled PROCLIB. Follow the recovery steps shown in the following sections for XOSF and XDS abends.

After an XOSF abend

Step 1. Enter **START XDSSTOP** to stop XDS.

Step 2. XOSF performs its own recovery if the XOSF ESTAE initialization parameter specifies Y.

After recovery has completed, enter **START XDSSTART** to restart XDS.

After an XDS abend

Step 1. Perform normal XOSF termination. Instructions for terminating XOSF are provided in the *XPAF Operator Guide*.

XOSF will perform its own recovery if the XOSF ESTAE initialization parameter specifies Y.

Step 2. Enter **START XDSSTOP** to stop XDS.

Step 3. After recovery has completed, enter **START XDSSTART** to restart XDS.

Printing documents using CMA-SPOOL or CA-SPOOL

This section identifies the types of data streams that can be printed through CMA-SPOOL or CA-SPOOL and provides an overview of the processing performed. In addition, it describes how to set up and then submit a CMA-SPOOL or CA-SPOOL job to XPAF.

Data streams supported

You can use CMA-SPOOL or CA-SPOOL to print line-mode, DJDE, XES, page-formatted, AFP and pass-through documents.

Processing overview

XPAF can process spool files provided by the CMA-SPOOL or CA-SPOOL subsystems in much the same manner as it processes spool files provided by the JES2 or JES3 subsystems. XPAF prints asynchronously with a print application from a started task or batch initiator through the SUBSYS parameter on the DD JCL statement. In addition, CMA-SPOOL and CA-SPOOL provide additional subsystem interfaces that may be used with XPAF.

CMA-SPOOL or CA-SPOOL honors all of the following parameters and keywords used with XOSF:

- JCL DD statement parameters, except FLASH, MODIFY and UCS
- JCL OUTPUT statement parameters, except FLASH, MODIFY and UCS
- XPAF extended JCL keywords
- XJCF-specific extended JCL keywords
- XPAF initialization parameters
- XPAF printer profile parameters

For more information on parameters, refer to the appropriate CA- or CMA-SPOOL publication.

NOTE: The job name (CA-SPOOL file name) and programmer name are limited to the operating system defined lengths.

Setting up

Follow these steps to set up to print through CMA-SPOOL or CA-SPOOL.

Step 1. Verify XPAF initialization parameters.

Be sure the values below are specified for the COMSSID, COMSSTYP, CONCHAR and SUBSYS initialization parameters. These parameters are found in the XINSXOSF member of the XINPARM library you created for CMA-SPOOL or CA-SPOOL.

COMSSID= subsys-name for CA-SPOOL

COMSSTYP=CMASPOOL

CONCHAR=special-character

SUBSYS= subsys-name for XPAF

Refer to CONCHAR and SUBID in the CA-SPOOL (tm) Installation and Customization Guide.

SUBSYS must be different from the XOSF start-up proc name.

Be sure the following initialization parameter is specified in the XINSXOAF member of the XINPARM library you created for CMA-SPOOL or CA-SPOOL:

COMSSTYP=CMASPOOL

Step 2. Define XPAF user exits.

If you are using XPAF user exit 02, Dataset open, in addition to the user exit implementation steps documented in chapter 7, “Coding the XPAF user exits” in Section Two: Installing and Customizing XPAF, you must also perform the following:

- Review the sample user exit XUXIT02C for CMA-SPOOL or CA-SPOOL specific code

- Specify the optional SUBSYS parameter on the @UXPM macro:

  @UXPM EXIT=02,SUBSYS=CMA

NOTE: Since the exit parameter list contains the variable length control block $FQE, the corresponding CMA-SPOOL or CA-SPOOL sample offset table, XUXOF02C, must be assembled and linked into the user exit load library using the same JCL you use for the XPAF user exits. In addition, when you upgrade your installed version of CA-SPOOL, you must also reassemble this table.

Step 3. Initialize the XPAF connection to CMA-SPOOL or CA-SPOOL by performing the following procedure:

a) Create the XPAF proc as documented in chapter 5, “Customizing your system” in *Section Two: Installing and Customizing XPAF* with the following considerations:

- The proc name must be different from the CMA-SPOOL or CA-SPOOL subsystem name.
- The proc must contain a step library for the CMA-SPOOL or CA-SPOOL load library. Refer to the “FSI Support Module” section in the *CA-SPOOL (tm) Installation and Customization Guide* for additional information.

b) Define the CMA-SPOOL or CA-SPOOL initialization parameters for XPAF. Refer to the *CA-SPOOL (tm) Installation and Customization Guide* for details on the following required parameters:

- FSSDEF (Define the XPAF functional subsystem)
- NODE (Define the XPAF printers)

c) Start the XPAF functional subsystem by starting a CMA-SPOOL or CA-SPOOL printer. Use the start printer command, S, as documented in the “Printer Control Commands” section in the *CA-SPOOL (tm) Operation, Commands and Messages Guide*.

d) Stop your CMA-SPOOL or CA-SPOOL printer. Use the stop printer command, P, as documented in the “Printer Control Commands” section in the *CA-SPOOL (tm) Operation, Commands and Messages Guide*.

e) Stop the XPAF functional subsystem. Use the XPAF stop command or the XPAF system shutdown command. Refer to *Section Seven: XPAF Operator Guide*.

f) Stop CMA-SPOOL or CA-SPOOL functional subsystem processing. After all XPAF functional subsystems have been ended, perform CA-SPOOL functional subsystem cleanup with the stop PSF command, PFSS, as documented in the “PSF Interface” section in the *CA-SPOOL (tm) Operation, Commands and Messages Guide*.

Printing documents

There are four methods of submitting a print job to XPAF through CMA-SPOOL or CA-SPOOL.

METHOD 1: To submit a print job through CMA-SPOOL or CA-SPOOL, include this statement in your JCL for the batch print job:

```
//ddname DD SUBSYS=(subsystem-name,sysout-class),
// DEST=printer-name
```

where

ddname The user-defined DD name for this statement.

subsystem name The 1- to 4-character XOSF subsystem name as defined in the COMSSID initialization parameter in the XINSXOSF member in the XINPARM library you created for CMA-SPOOL or CA-SPOOL.

sysout-class The SYSOUT class defined for the printer name specified in the DEST IBM JCL keyword.

printer-name *printer-name* The name of the printer to be used. The printer name must be defined in the XPAF printer profile parameter library.

Example: //PRINTJOB DD SUBSYS=(ESF,5),DEST=PRT1017

NOTE: Additional positional parameters may be specified in the SUBSYS parameter list as well as additional DD statement keyword parameters. For more information, refer to the “DD Statement SUBSYS Parameter” section in the CA-SPOOL (tm) System Guide.

METHOD 2: If the CMA-SPOOL or CA-SPOOL SYSOUT allocation intercept feature has been activated, you can submit your normal XPAF print jobs without any changes to the JCL. Normal DD statement OUTPUT statement parameters supported by JES2, JES3, XPAF and operating systems may be used.

For information on implementing this feature and using it to print documents, refer to the “SYSOUT Allocation Intercept” section in the CA-SPOOL (tm) Installation and Customization Guide.

For example, to print to the XPAF printer specified in the SYSOUT parameter, use this statement in your JCL:

```
//JSOUTPUT OUTPUT NOTIFY=(XE01.USER5),PRMODE=LINE,FCB=FCB1,CLASS=6,
// COPIES=5,DEST=LOCAL,PAPERSIZE=A4,BFORM1=(USR5,1,1),
// BFORM2=(USR3,2,4)
//*
//SYSUT2 DD SYSOUT=(M,XP17),OUTPUT=(*.JSOUTPUT)
```

METHOD 3: You may copy existing datasets to CMA-SPOOL or CA-SPOOL using the ESFPRINT batch utility; you may also call ESFPRINT from a TSO session. The spool file may be directed to XPAF but only the CMA-SPOOL or CA-SPOOL parameters may be specified. JES2, JES3, XPAF and operating system parameters are not supported. For more information, refer to the “ESFPRINT Utility” section in the CA-SPOOL (tm) System Guide.

For example, to copy a PDS member to CA-SPOOL to be printed on the XPAF printer specified by the DEST ESFPRINT keyword, use this statement in your JCL:

```
//ESFPRINT EXEC PGM=ESFPRINT,PARM='SYSIN'
//STEPLIB DD DISP=SHR,DSN=ESF,SESFLNK
//CAINPUT DD DISP=SHR,DSN=USER5.DATA(USER DATA) /* INPUT DATA*/
//SYSIN DD *
DDNAME(CAINPUT) DEST(PRT1017) CLASS(5) UCS(TN)
COPIES(5) FORM(USR5)
NAME('DATA LISTING') OWNER(USER5)
PAGELEN(66)
```

METHOD 4: You may modify your applications to use the CMA-SPOOL or CA-SPOOL call interfaces program to dynamically allocate a CMA-SPOOL or CA-SPOOL spool file and to specify spool file parameters. The spool file may be directed to XPAF by specifying an XPAF printer for the DESTINATION ESFALLOC input parameter; however, only the CMA-SPOOL or CA-SPOOL parameters may be specified. JES2, JES3, XPAF and operating system parameters are not supported. Since these spool files are dynamically allocated, no JCL is required. For more information, refer to the “Application Program Facilities, “Call Routines,” and “Calling ESFALLOC” sections in the CA-SPOOL (tm) System Guide.

Redirecting XOSF-converted datasets to other printers

The COPYDOCU utility within the batch LPR facility is used to reformat XOSF-converted LCDS data streams for processing by a third party product. This utility reformats print datasets generated by XOSF for the DOCUSPL, TCP/IP LCDS printer into a dataset formatted for a channel-attached LCDS printer.

When a job is printed on an XOSF printer defined as DEVICE=DOCUSPL it is formatted into an LCDS dataset formatted for transmission via LPR using TCP/IP to the DOCUSP printer. COPYDOCU reformats this dataset into a dataset with machine carriage controls for use on a channel-attached LCDS printer.

Invoking COPYDOCU

The COPYDOCU utility is invoked by XOSF via the batch LPR facility defined in the XOSF printer profile. The printer profile should include the following parameters:

DEVICE=DOCUSPL,

TCPMODE=LPR,

LPRDSN=your.hlq.jcllib,

LPRJCL=COPYDOCU,

When a job is printed with this printer profile, XOSF formats the output into an LCDS dataset in the format for transmission via LPR to the DOCUSP printer (i.e., a DP180 EPS printer). Specifying TCPMODE=LPR instructs XOSF to use the batch facility and submit a batch job to process the LPR dataset when XOSF has finished creating the dataset. This job is specified by LPRJCL=COPYDOCU and is submitted from the PDS specified by LPRDSN=your.hlq.jcllib. This library could be your XINPARM file.

A sample COPYDOCU JCL member is supplied in XPFSAMP. The sample member should be copied to your JCL PDS and modified as required by your system.

A partial listing of the supplied sample JCL is shown here:

```
//%JOBNAME JOB (%XODBACCT),
// '%XDIBPGMN',CLASS=A,MSGCLASS=X
//*
//* THIS IS THE SKELETON JCL TO BE SUBMITTED BY XOSF FOR EACH JOB
//* PROCESSED FOR A PRINTER WITH THE FOLLOWING PRINTER PROFILE
//* ATTRIBUTES:
//*
//* DEVICE=DOCUSPL,
//* TCPMODE=LPR,
//* LPRDSN=your.hlq.jcllib,
//* LPRJCL=COPYDOCU,
//*
//* NOTE THAT ALL VALID %-FIELDS WILL BE REPLACED WITH THE
//* CORRESPONDING VARIABLE DATA FROM THE ORIGINAL JOB.
//*
//* REPLACE THE FOLLOWING WITH THE APPROPRIATE VALUES
//* TO ENSURE THAT THE FINAL OUTPUT IS ROUTED TO THE
//* CORRECT PRINTER BASED ON YOUR JES SELECTION CRITERIA.
```

```
//OUT1 OUTPUT LINECT=0,
// CLASS=?, <== Replace with appropriate value
// DEST=LOCAL, <== Replace with appropriate value
// FORMS=%XDIBFORM <== Replace with appropriate value
//*
//*-----------------------------------------------------*//
//*---------- COPY PRINT FILE TO JES QUEUE ----------*//
//*-----------------------------------------------------*//
//*
//COPYDOCU EXEC PGM=COPYDOCU,REGION=2048K
//STEPLIB DD DISP=SHR,DSN=your.hlq.XPFLOAD <== Replace
//INFILE DD DISP=(OLD,DELETE,DELETE),
// DSN=%LPRDSN
//OUTFILE DD SYSOUT=(,),OUTPUT=*.OUT1
//*
//
```

Operation of COPYDOCU

The COPYDOCU JCL copies the LPR dataset and reformats it into a data stream suitable for a channel-attached LCDS printer. This data stream is returned to the JES queue via the SYSOUT= parameter of the OUTFILE DD statement. This statement also refers to an OUTPUT statement that includes routing parameters from the original print job. The LPR dataset created by XOSF includes all resources necessary to print the dataset. This is known as XOSF conditioning. This feature may be turned off in XOSF by specifying FEATURE=NODOWNLOAD in the printer profile if resource downloading is not wanted.

It is possible to get two sets of banner pages using this procedure; the first set generated by XOSF when the LPR dataset is produced and the second generated when the printer designated by COPYDOCU prints the

job. To avoid these duplicated pages turn off banner page processing for one or the other printer within JES.

When to reformat XOSF-converted datasets

This type of processing is typically used in a service bureau environment where different clients have uniquely defined resources but the printers used are neither unique nor dedicated to each client. The COPYDOCU utility allows many different clients to share common LCDS printers without the problems of resource conflicts.

In the service bureau environment a DOCUSPL printer can be defined for each client with printer profile parameters pointing to unique resource libraries for that client. The COPYDOCU job copies the output jobs, which have been conditioned with the clients resources, back to the JES queue with an output disposition that causes the jobs to be selected for a real channel-attached LCDS printer. The real printer can be another XOSF printer, or a JES printer.

To ensure independent resource conditioning, each DOCUSPL printer should be defined with the following printer profile parameters:

FEATURE=(NOFILEKEEP) — Causes all required resources to be downloaded with each job.

PDLOBJ=YES — Causes PDL objects (such as JDLs and PDEs) to be downloaded when referenced. To use this option all PDL objects must be loaded into the PDLLIB for each client.

Refer to chapter 18, “XPAF resources,” and chapter 20, “Loading resources to a native library,” in *Section Three: Managing Resources with XPAF* for more information about PDL object management and using the PDL Loader.

Splitting LCDS documents converted to PDF

XPAF supports the splitting of LCDS documents into multiple output files when converting LCDS datastreams to either PDF or PCL. This primary purpose of this feature is to enable a large report containing information on multiple accounts to be broken up into individual output files.

Fore example, a job currently prints account statements at the end of the month. The single job is a 10,000+ page report that contains account statements for 1,000 individual account. Each account statement has a variable number of pages. Normally, when the job is converted by XPAF to PDF, a single, 10,000+ page PDF file is created containing all 1,000 account statements, With the LCDS splitting feature,1,000 individual PDF files are generated. Each PDF file contains only those pages associated with the account in question.

When splitting an LCDS document, you need to specify how the document is to be split and the name for each individual PDF file that is created.

Splitting an LCDS document

Document splitting is enabled by specifying FEATURE=SPLITDOC in the printer profile table.

There are two methods of splitting an LCDS document:

- Using a trigger file or
- Using Enhanced DJDEs

The following sections describe how to use both methods

Using the Trigger File

The trigger file describes how an input record is tested to determine if and when the document should be split and how the name of the segment is derived.

The trigger file is a member of a LRECL=80, RECFM=FB Partitioned dataset (PDS) that is referenced by the TRIGGER DD statement in the XOSF started task procedure.

The member name used is the same as the job name being processes or is specified by the XTRIGGER XPAF extended JCL keyword.

Specifying the parameters in the trigger file

Create a member, with the same name as the job you want to split, in the TRIGGER PDS. Specify the trigger parameters that define your processing options.

Option	Description
*** (in column 1)**	A comment. An asterisk, '*' in column one denotes that the record is treated as a comment.. Example: * Weekly new accounts per state report (Split by State)
TRIGGER="trigger value"	Species the text that is to be matched with the input data records, to determine whether or not ain input record is a trigger record. A question mark, "?", can be used as a mask character and will match any character at that position in teh input record Example: TRIGGER="00001 ????? EFT" The input record, at the offset specified by the TCOL value, is compared to the trigger string. If the first six characters of the input are "00001 ", the next five characters are masked and so can be any value, and the next four characters are " EFT", then the input record is determined to be a trigger record
TRIGGER=X"hex-string"	Specifies the trigger as a hexadecimal string. This notation is used to define a trigger value for Metacode input. Example: TRIGGER=X"062100046800004D" The input record, at the offset specified by the TCOL value is compared to the trigger string X'062100046800004D'
STARTLINE=n	Specifies the starting line number for comparing the trigger value to the input record. Where n is an integer 0 to 32767 Example: STARTLINE=5 The lowest line number to search for a trigger record is line 5 Default: STARTLINE=0

Option	Description
ENDLINE=n	Specifies the ending line number of the input record for comparing to the trigger string. Where n is an integer 0 to 32767 Example: ENDLINE=10 The highest line number to search for a trigger string is line 10 Default: The default value of ENDLINE is the value specified for start line
TCOL=n	Specifies the starting column, or offset, in the input record to start comparing to the value. The carriage control byte is not included in the TCOL calculation. The first byte of the input record is considered to be column 0 Where n is an integer 0 to 32767 Example: TCOL=153 Compare the input record, starting in column 153 to the trigger value.
NAMESTART=n	Specifies the starting column, or offset, in the input record to the start of the string to be used in creating the segment name The carriage control byte is not included in the NAMESTART calculation. The first byte of the input record is considered to be column 0 Where n is an integer 0 to 32767 Example: NAMESTART=138 The segment name starts in column 138 of the input record.
NAMELENGTH=n	Specifies the length of the string, starting in column NAMESTART to be used for the segment name Where n is an integer 1 to 32767 Example: NAMELENGTH=24 24 bytes of the input record, starting at the column specified by NAMESTART, will be used in creating the segment name.

Option	Description
NAMEPREFIX="string"	Specifies a string that is prefixed to the segment name extracted from the input record. Where string is a 1 to 20 character string Example: NAMEPREFIX="PAYROLL." The string "PAYROLL." Is added to the start of the segment name.
NAMESUFFIX="string"	Specifies a string that is suffixed to the segment name extracted from the input record. Where string is a 1 to 20 character string Example: NAMEPREFIX=".PDF" The string ".PDF" is added to the end of the segment name.
CHANGESTART=n	Specifies the start column of the portion of the input record that is tested to see if a change has occurred. The contents of the "change" portion of the input trigger record are compared to the value found on the previous input trigger record. If the two values are different, a new segment will be created. Where n is an integer from 0 to 32767 Example: CHANGESTART=150 The string starting in column 150, for a length specified by CHANGELENGTH, is used to detect if the segment has changed. Default: If neither CHANGESTART nor CHANGELENGTH have been specified, NAMESTART and NAMELENGTH will be used.
CHANGELENGTH=n	Specifies the length of the portion of the input record that is tested to see if a change has occurred. The contents of the "change" portion of the input trigger record are compared to the value found on the previous input trigger record. If the two values are different, a new segment will be created. Where n is an integer from 1 to 32767 Example: CHANGELENGTH=7 The string, starting in the column specified by CHANGESTART, for a length of 7 bytes is used to detect if the segment has changed

Option	Description
ENCODING=ASCII | EBCDIC	Specifies the character encoding of the name segment in the input record. EBCDIC is used for line mode or DJDE data. ASCII is used of Metacode data If ENCODING=ASCII is specified the string obtained from the input record will be translated from ASCII to EBCDIC
BLANKNAME=NO | YES	Specifies whether the name segment of the input trigger record should be replaced by blanks, so the name does not appear in the output. Default: BLANKNAME=NO
TRACE=ALL | FILE | LINES | MATCHED | YES | NO	Specifies whether or not trace messages will be generated when the job is processed. Where: TRACE=FILE, Echo trigger file records to the log. Only records after the TRACE=FILE will be echoed. IF used, it is recommended that TRACE=FILE is the first record in the trigger file. TRACE=LINES, Issue a message indicating the logical line number and input record number of the record being traced. Note: Due to DJDE and carriage control consolidation, the input record number may be less than the actual record number in the input data. TRACE=MATCHED, only log information on records that match the trigger record. If TRACE=YES is specified, additional messages will be issued for each record that resides in the range of lines specified by STARTLINE/ENDLINE and is long enough to contain the trigger and name strings. TRACE=ALL, is equivalent to specifying all TRACE options.
VIEWROTATION=L | P	Specifies the viewing rotation for each segment. This parameter can be used to correctly set the viewing rotation of Metacode data streams converted to PDF. Default: None. The rotation is determined by the orientation set in the LCDS data stream. For Metacode documents, where the orientation is always Landscape, the orientation is determined by the fonts used on the page.

Option	Description
INCLUDEBLANKPAGES=NO | YES	Specifies whether or not XPAF should generate blank pages when required to maintain the correct side for duplexing, for example, when a DJDE SIDE=NUFRONT is encountered for a page that would otherwise be printed on the back of a sheet. This parameter can be used blank pages from LCDS documents converted to PDF. Default: The value specified by the Printer Profile parameter FEATURE=SUPBLNKPG Example: INCLUDEBLANKPAGES=NO
SPLIT_ON_SAME_NAME=Y | N	Indicates whether or not a new segment should be created if the name found in the trigger string is the same as the previously matched trigger Example: SPLIT_ON_SAME_NAME=Y To uniquely name segments, that use the same name in the trigger file, use the SEQUENCE_NUMBER_DIGITS trigger file parameter
SEQUENCE_NUMBER_DIGITS=n	Specifies the number of digits to be used for the segment sequence number which will be used as the variable part of the segment name. Segment numbers will be left padded with zeroes to generate the required number of digits. Where n is an integer 1 to 8 Example: SEQUENCE_NUMBER_DIGITS=5 Specifies that five digits will be used as the variable part of the segment name. The digits used will be 00001, 00002, 00003, etc. Default: None.

Trigger file example for a DJDE datastream

In this example, the Linemode/DJDE mode data is a set of account statements with the following properties:

- The first page of each statement has the account number on line 8 (Channel 1 has been assigned to line 2)
- The account number is a 10 digit unique identifier starting in column 19
- The account number is preceded by the text “Account No.” which starts in column 7.

Note: The ISPF column display starts with the first character of a record as column one. The trigger column number starts with the first character at offset zero. In addition, the dataset is formatted with carriage control, so the first character of data starts in ISPF column

two. To convert the ISPF column number to a trigger column value, subtract two from the ISPF column number.

```
=COLS> ----+----1----+----2----+----3----+----4---
       191*0987654321*
       +@@@DJDE IMAGE=(GISIMG,0.2 IN,0.2 IN),END;
        81
        81 PADDY O'FURNITURE
        81 27 BBQ LANE
        81 GHOST TOWN   AK 99999-5432
        11
        11     Account No. 0987654321
```

The following trigger file is used to split the data:

```
*
* PDF SPLITTING TRIGGER DEFINTION FILE
*
TRACE=NO
TRIGGER="Account No."
STARTLINE=8
TCOL=7
NAMESTART=20
NAMELENGTH=10
NAMEPREFIX="TCX.G"
NAMESUFFIX=".PDF"
ENCODING=EBCDIC
SPLIT=TOP
```

Using the trigger file with the data defined above through the PDF transform will result in a PDF file called TCX.G0987654321.PDF.

Points to Note

- The line number is based on the carriage control and the VFU or FCB in use when the job is processed, rather than the record number in the dataset. For example, if channel 1 has been assigned to line 5, then the record with a “Skip to Channel 1 and Print” will be on Line 5.
- An input record must be greater than or equal to the minimum length required to contain both the trigger string and the name string before it is tested for a match.
- The name of the segment is saved when a trigger record is found. The name on the next matching trigger record is compared to the previous name. Only if the names differ is a new segment created.

Using Enhanced DJDEs

Enhanced DJDEs are special DJDE comments that are recognized by XPAF and affect processing. Since the enhanced DJDEs are specified as comments, they will not cause errors if sent to an LCDS device that does not support them.

Enhanced DJDE format

All enhanced DJDEs use a similar format. They use the DJDE identifier and start with a “C ” in the first position of the command.

For example, if the DJDE identifier is “@@@DJDE” with a SKIP value of 8, and enhanced DJDE would look like:

@@@DJDE C XFILENAME=PAYROLL.MONTHLY.REPORT

Enhanced DJDE commands

The following enhanced DJDE commands are available:

- XFILENAME
- XLPRCLASS
- XQNAME
- XSPLIT

XFILENAME

Description Specifies a one to 60 character name to be used as the name of the converted document.

Scope Affects processing of DJDE data streams sent to PCL-capable or PDF printers.

Syntax XFILENAME=filename

where

filename The 1 to 60 character file name

Example @@@DJDE C XFILENAME=PAYROLL-MONTHLY-REPORT

XLPRCLASS

Description Specifies a one to 152 character string to be used as “Class” data in the LPR Control File when sending the document to a printer via direct LPR, TCPMODE=TCPLPR, with TCPCONNECT=CLOSE.

Scope Affects processing of DJDE data streams sent to PCL-capable or PDF printers.

Syntax XLPRCLASS=classdata

where

classdata The 1 to 152 character class data

Example @@@DJDE C XLPRCLASS=(Media=:drilled)

XQNAME

Description Specifies a one to 50 character name to be used as the LPR Queue name when sending the document to a printer via direct LPR, TCPMODE=TCPLPR, with TCPCONNECT=CLOSE.

Scope Affects processing of DJDE data streams sent to PCL-capable or PDF printers.

Syntax XQNAME=queue

where

queue The 1 to 152 character class data

Example @@@DJDE C XQNAME=HoldQueue

XSPLIT

Description Specifies a one to 50 character name to be used as the LPR Queue name when sending the document to a printer via direct LPR, TCPMODE=TCPLPR, with TCPCONNECT=CLOSE.

Scope Affects processing of DJDE data streams sent to PCL-capable or PDF printers.

Syntax XSPLIT={NEWFRONT | RPAGE | TOP | OFFSET | OFF}

where

NEWFRONT	specifies that the document should be split when a DJDE SIDE=NUFRONT condition is met. The page that is formatted for the new front, will be the first page of a new document segment
RPAGE	specifies that the document will be split when an RPAGE condition occurs
TOP	specifies that the document should be split at the top of the current page. The current page becomes the first page of a new segment
OFFSET	specifies that the document should be split when an OFFSET occurs
OFF	turns off document splitting

Example @@@DJDE C XSPLIT=TOP

39. Using XRCBATCH

The XRCBATCH utility, distributed in XPFSAMP, is a diagnostic utility used to separate a two-color RES .IMG file into one or two files. You may need to run the XRCBATCH utility if any of these situations apply to your site:

- If you have problems printing a two-color RES .IMG file, you may want to separate it into two different formats (monochrome black and monochrome color) to determine which part of the image is causing the problem.
- If you have all color printers and start using a monochrome printer, you can use this utility to create the monochrome black .IMG files from the two-color RES .IMG files before printing the jobs. This eliminates waiting for the images to be created at run time.
- If you have a colorized image for which you cannot determine the image boundary, you can use this utility to convert it to a single black image and reverse the color for the image. The background will print in black, and the image will be white, thus allowing you to see the image boundaries.

Processing performed

When you run XRCBATCH, XPAF separates the two-color RES .IMG file into one of these file types:

- A single monochrome black .IMG file.
- A single monochrome color RES .IMG file. The color is determined by the first color of the input two-color RES .IMG file. If you specify REVVIDEO=Y, the image will print as black.
- Two separate monochrome black .IMG files, one for each color separation.
- Two separate monochrome RES .IMG files, one for each color separation. Each file will have the corresponding color of the input two-color RES .IMG file. In other words, one file will be highlight color and the other will be black.

The files can then be printed on the appropriate printer.

Specifying file attributes

The file or files created depends on the values you specify in the COLORPRT and NUMIMAGE parameters:

- The COLORPRT parameter determines whether black or color files are created.
- The NUMIMAGE parameter determines whether one file or two files are created.

For example, if you specify COLORPRT=Y and NUMIMAGE=1, a single monochrome RES .IMG file will be created. If you specify COLORPRT=N and NUMIMAGE=2, two monochrome black .IMG files will be created.

If two separations are required, the separations will be either both monochrome black .IMG format or both monochrome RES .IMG format. The file cannot be converted to one of each format type.

Setting up XRCBATCH

You can specify these parameters in the JCL:

NOTE: You cannot specify all of the parameters at one time because the IBM JCL PARM= statement limits the number of characters within the parentheses to no more than 100. Therefore, you should specify a parameter only if you require a value other than the default.

Parameter	Action
COLORPRT	Indicates whether the printer on which the image will be printed supports color printing. This value determines whether XPAF creates a monochrome black .IMG file or a monochrome RES .IMG file. Valid values: Y The printer supports color printing. XPAF creates one or two monochrome RES .IMG files depending on the value specified in NUMIMAGE. N The printer does not support color printing. XPAF creates one or two monochrome black .IMG files, depending on the value specified in NUMIMAGE. Default: N
COMPMODE	Specifies the image compression mode used for converting the image file. Use this parameter only if COMPTYPE=TIME. Valid values: ENC Run-length encoded compression mode. LIN Line-predicted compression mode. Default: LIN

Parameter	Action
COMPTYPE	Specifies the image optimization compression type when converting raster data. Valid values: SIZE Compresses images to the smallest possible size, regardless of the length of processing time involved. TIME Compresses images in the quickest way, as specified in the COMPMODE parameter. Default: TIME
INPUTDDN	Names the native centralized image library containing the two-color RES .IMG files to be converted. This name must match the name in the input library DD statement in the JCL used to submit this job. Valid value: A 1- to 8-character DD name. Default: IMAGEIN
INPUTMEM	Specifies the member name of the two-color RES .IMG file(s) to be converted. Valid values: *member-name* Selects a single member (20 characters). * Selects all members in a dataset. Default: *
LOGDSN	Names the dataset to be used for logging messages. This sequential dataset must have the same specifications as your XLOG dataset, but the XLOG dataset itself should not be used with this parameter. ***NOTE:*** If you do not specify the LOGDSN parameter, the dataset specified in the XPAFXLOG DD statement is used. If neither of these is specified, messages are displayed on the system console. If you do not wish to use logging, change the JCL to specify **DD DUMMY** in the XPAFXLOG DD statement. Valid value: A 1- to 44-character dataset name. Default: None
NUMIMAGE	Specifies the number of image separations to be created. Valid values: 1 Creates a single monochrome file. 2 Creates two separate monochrome files. Default: 1

Parameter	Action
OUTPUTDD	Names the native centralized image library where the separated .IMG files will be stored. This name must match the name in the output library DD statement in the JCL used to submit this job. Valid value: A 1- to 8-character DD name. Default: IMAGEOUT ***NOTE:*** The name you specify for this library must be different from the name specified for INPUTDDN.
POSITION	Specifies the horizontal and vertical position for the image(s) to be converted. Valid values: * Position remains unchanged. 0 Sets position to 0. Default: *
REVVIDEO	Specifies whether to translate the image into reverse video on output. This translation consists of reversing the printing of all pixels in the image. For black images or when COLORPRT=N, all white pixels are printed as black, and all black pixels are printed as white. For color images and when COLORPRT=Y, all white pixels are printed as color, and all color pixels are printed as white. Valid values: Y Reverses all pixels. N Does not reverse pixels. Default: N

Executing XRCBATCH

After entering the necessary parameter values, submit the job. XPAF separates the original image into one or two files, based on the parameters you specified.

If you enter an incorrect value for any parameter or omit any parameter, XRCBATCH uses the default value. If you have specified message logging, XPAF logs the parameter values actually used as part of the output.

Printing the image(s)

After you have run XRCBATCH, perform one of these options to print the image(s):

- If you ran this utility to locate a problem within an image, make the appropriate changes. Then, resubmit the original print job, making sure you specify either the REVOVLY or REVPSEG extended JCL keyword to revise the overlay or page segment.
- If you ran this utility to create monochrome black images from colorized images, make sure any converted images are in the centralized image library used by your XPAF proc. Then resubmit the original print job, making sure you specify either the REVOVLY or REVPSEG extended JCL keyword to revise the overlay or page segment.
- If you ran this utility to verify the image boundaries, create and submit a job to print the image, making sure that you specify the library pointed to by the OUTPUTDD statement in the XRCBATCH JCL. Then resubmit the original print job, making sure you specify either the REVOVLY or REVPSEG extended JCL keyword to revise the overlay or page segment.

Restrictions and limitations

Any conversions or separations are limited one-way from interleaved raw raster data to non-interleaved raw raster data. Once an image has been separated into two images, the two images cannot be combined again to recreate the initial image.

Also, this utility only can be used for two-color RES .IMG files; it cannot be used for monochrome RES .IMG files.

Sample JCL

This figure shows the sample JCL used to execute the XRCBATCH utility.

```
//job-name JOB job-information
//*
//*
//*        ************************************************************
//*        *   THIS SAMPLE JCL IS PROVIDED TO EXECUTE THE BATCH        *
//*        *   UTILITY FOR CONVERTING XEROX TWO-COLOR RES FILES        *
//*        *   INTO EITHER ONE OR TWO .IMG FILES FOR DIAGNOSTIC        *
//*        *   PRINT PURPOSES.  CHANGE THIS JOB AS NECESSARY TO        *
//*        *   NAME THE LIBRARIES AND PARAMETERS OF YOUR CHOICE.       *
//*        ************************************************************
//*
//*
//XRCBATCH EXEC PGM=XRCBATCH,COND=(0,NE),        <---  RES CONVERT PGM
//             PARM=('COLORPRT=N',   N  OR  Y    <---  DESTINATION PRTR
//             'NUMIMAGE=1',         1  OR  2    <---  # OUTPUT IMAGES
//             'POSITION=*',         *  OR  0    <---  IMAGE POSITIONS
//             'REVVIDEO=N',         N  OR  Y    <---  IMG REVERS VIDEO
//             'INPUTDDN=IMAGEIN',   IMAGEIN     <---  RES INPUT DDNAME
//             'OUTPUTDD=IMAGEOUT',  IMAGEOUT    <---  IMG OUTPUT DDNAM
//             'INPUTMEM=*')         *           <---  RES INPUT MEMBER
//STEPLIB DD DSN=prefix.XPFLOAD,DISP=SHR         <---  XPAF LOAD LIB
//IMAGEIN DD DSN=prefix.CRESLIB,DISP=SHR         <---  INPUT RES LIB
//IMAGEOUT DD DSN=prefix.CIMGLIB,DISP=SHR        <---  OUTPUT IMAGE LIB
//XPAFXLOG DD DSN=prefix.XPAFXLOG,DISP=OLD       <---  XPAF MESSAGE LOG
//
```

Sample images

Figure 39-1 shows a sample two-color RES .IMG input file. Figures 39-2 and 39-3 show the resulting black RES .IMG and color RES .IMG images that are output from the XRCBATCH utility.

Figure 39-1. Sample input file — two-color RES .IMG

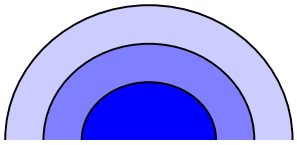


Figure 39-2. Sample output file — monochrome black RES .IMG

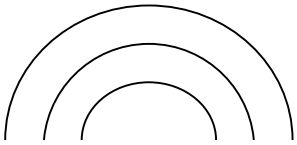
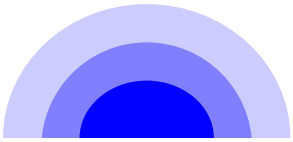


Figure 39-3. Sample output file — monochrome color RES .IMG



Section Five: XPAF Parameter and Keyword Reference

This section provides the following information about every initialization parameter, printer profile parameter, IBM JCL keyword, and extended JCL keyword that XPAF supports:

- A functional description
- The applicable scope, defined by data stream and printer type
- The valid syntax
- The default value, if applicable
- An example
- The override information — any value(s) that replaces or will be replaced by the value you specify in the parameter/keyword
- Any related information, if applicable, including references to other parameters and keywords that have related functionality

40. Initialization parameters

Initialization parameters provide XPAF with system-wide default values. These parameters are read by XPAF at start-up time: for XOSF, when the FSS is started, and for XOAF, when you enter XOAF. Initialization parameters allow you to customize your XPAF environment by:

- Providing z/OS and JES information to XPAF
- Naming DD statements in the XOSF start-up proc and the XOAF logon procedures
- Describing DJDE formats and defaults

Specifying initialization parameters

XPAF is supplied with initialization parameters in the XINSXOAF and XINSXOSF members of XINPARM. Before you begin using XPAF, check all the parameter values provided in the sample members to determine if they meet your site's requirements. You can either accept the distributed parameter values or edit the sample members to meet your site's needs.

Coding initialization parameters

As you create and edit initialization parameter members or datasets, you must adhere to these conventions:

- Parameters can be listed in any order.
- Each statement consists of a parameter, an equals sign (=), and the parameter's value(s).
- Each statement, except the last, is terminated by a comma. The last statement must be terminated by a space.
- Comments can follow on the same line as a statement provided that they are separated from the parameter value by one or more spaces.
- A statement can start in column one, but does not need to, allowing you to indent parameters.
- Multiple parameters are permitted on the same line provided that a comma separates each subsequent parameter and its value from the preceding parameter and its value. Do not insert a space between the comma and the beginning of the next parameter.
- If the same parameter is coded twice, the last occurrence takes precedence.
- If a parameter's value contains one or more spaces, you must enclose the value in single quotes.
- Separate comment lines can be included by entering an asterisk (*) in column one.
- Blank lines are ignored.

Refer to this example for an illustration of these conventions:

```
* XOAF INITIALIZATION PARAMETERS FOR MJONES

XLOG=Y,XLOGDSN=MJONES.XOAFLOG,
       DEFILIND=N,                    INTENSIVE LOGGING TURNED OFF
       ESTAE=N,
       ETV=8,
       FNTTBLDD=TABLELIB,
       SLOG=N,
       SMF=Y,
       SUBTASKS=37
```

Overriding specifications

Use one of these methods to override initialization parameters:

- Specify the parameter and its overriding value in the PARM parameter of the EXEC PGM=XINMAIN statement of the XOSF start-up proc.
- Include the PFILE initialization parameter in one of these places:
  - The PARM parameter in the EXEC PGM=XINMAIN statement
  - The XINPARM(XINSXOAF) or XINPARM(XINSXOSF) member

PFILE specifies a DD statement that defines a sequential dataset or partitioned dataset (PDS) member containing additional initialization parameter statements. During XOAF or XOSF start-up, the parameters in the dataset or member named by PFILE are processed immediately after the parameter list that contains the PFILE parameter. Thus, if PFILE is included in XINSXOSF, its dataset or member is processed after XINSXOSF and before PARM.

PFILE in the PARM parameter causes the PFILE to be processed after other XINXOSF parameters and other PARM parameters.

Parameter/keyword processing hierarchy

XPAF allows you to specify, at three different levels, certain controls used in processing documents. The levels are:

- Initialization parameters which establish system-wide defaults
- Printer profile parameters which establish printer specific defaults
- Extended JCL keywords which establish job specific values

In general, XPAF processes parameters and keywords according to this hierarchy:

- Printer profile parameters override initialization parameters.
- Extended JCL keywords override initialization and/or printer profile parameters.

Exceptions to this rule are noted in this chapter.

Parameter definitions

The initialization parameters shown later in this chapter are used to define your system-wide environment. The default values are shown when applicable. There are no abbreviations or alternate spellings of any of the parameters unless otherwise specified.

Parameters that apply to XOAF can be modified in the XINSXOAF member of XINPARM, and parameters that apply to XOSF can be modified in the XINSXOSF member of XINPARM.

Initialization parameters that apply to both XOAF and XOSF are listed below.

ALOGDSN	COMSSTYP	CONROUTE
CFONTDSN		CLOGODSN
DEFILIND	ESTAE	ETV
FNTTBLDD	MSFSUPPMEM	OPHLQ
OPDALLOC	OPDALLOS	PDLOBJ
PFILE		
REFRSHMAX	RLIC	RLID
SAFLOGAI	SAFLOGNF	SAFLOGNO
SAFLOGNS	SLOG	SMF
SUBTASKS	XLOG	SUBTASKS
XLOGDSN		

All other parameters apply to XOSF only.

ACB

Description For XOSF processing, names the VTAM application definition statement that XPAF uses for remote communications.

Multiple XPAF FSSs

If your site has multiple XPAF FSSs, each FSS requires its own unique Access Control Block (ACB). For this reason, if you have several FSSs that access a single XINPARM dataset, you must specify the ACB parameter in the procedure for each FSS.

Scope Affects processing of all types of data streams sent to printers that are remotely attached to the host.

Syntax ACB=*appldef*

where

appldef The 1- to 8-character name of the VTAM application definition statement. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None.

Example ACB=XP42

Overrides You can specify an ACB value in the XOSF start-up proc to override the value specified in the initialization parameters.

AFPDSHDR

Description For XOSF processing, identifies the AFP resources to be used in the dataset separator page. The FDEF, PDEF, and CHARS values you specify for this parameter are applied only to the dataset separator page. They are not applied to the document.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax AFPDSHDR=(FDEF=*formdef-name*,PDEF=*pagedef-name*, CHARS=*font-name*)

where

formdef-name Specifies the form definition to be used for the separator page.

pagedef-name Specifies the page definition to be used for the separator page.

font-name Specifies the font to be used for the separator page.

Default

Variable	Default
FDEF	A form definition with these specifications: tray 1, simplex, and offset 0,0
PDEF with the value for CHARS omitted	A page definition with these specifications: centered based on paper size
PDEF with the value for CHARS specified	A page definition with these specifications: 64 lines, 8.3 LPI, 1.1 inch left margin, and orientation 90,180
CHARS	GT15

Example AFPDSHDR=(FDEF=AX0001,PDEF=A06460,CHARS=GT20)

In this example, the AX0001 form definition, A06460 page definition, and GT20 character set are used to print the dataset separator page.

Overrides You can override this parameter by using the AFPDSHDR printer profile parameter.

AFPJOBHDR

Description For XOSF processing, identifies the AFP resources to be used in the job header separator page. The FDEF, PDEF, and CHARS values you specify for this parameter are applied only to the job header separator page. They are not applied to the document.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax AFPJOBHDR=(FDEF=*formdef-name*,PDEF=*pagedef-name*, CHARS=*font-name*)

where

formdef-name Specifies the form definition to be used for the separator page.

pagedef-name Specifies the page definition to be used for the separator page.

font-name Specifies the font to be used for the separator page.

Default

Variable	Default
FDEF	A form definition with these specifications: tray 1, simplex, and offset 0,0
PDEF with the value for CHARS omitted	A page definition with these specifications: centered based on paper size

Variable	Default
PDEF with the value for CHARS specified	A page definition with these specifications: 64 lines, 8.3 LPI, 1.1 inch left margin, and orientation 90,180
CHARS	GT15

Example AFPJOBHDR=(FDEF=AX0001,PDEF=A06460,CHARS=GT20)

In this example, the AX0001 form definition, A06460 page definition, and GT20 character set are used to print the job header separator page.

Overrides You can override this parameter by using the AFPJOBHDR printer profile parameter.

AFPJOBTLR

Description For XOSF processing, identifies the AFP resources to be used in the job trailer separator page. The FDEF, PDEF, and CHARS values you specify for this parameter are applied only to the job trailer separator page. They are not applied to the document.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax AFPJOBTLR=(FDEF=*formdef-name*,PDEF=*pagedef-name*, CHARS=*font-name*)

where

formdef-name Specifies the form definition to be used for the separator page.

pagedef-name Specifies the page definition to be used for the separator page.

font-name Specifies the font to be used for the separator page.

Default

Variable	Default
FDEF	A form definition with these specifications: tray 1, simplex, and offset 0,0
PDEF with the value for CHARS omitted	A page definition with these specifications: centered based on paper size
PDEF with the value for CHARS specified	A page definition with these specifications: 64 lines, 8.3 LPI, 1.1 inch left margin, and orientation 90,180
CHARS	GT15

Example AFPJOBTLR=(FDEF=AX0001,PDEF=A06460,CHARS=GT20)

In this example, the AX0001 form definition, A06460 page definition, and GT20 character set are used to print the job trailer separator page.

Overrides You can override this parameter by using the AFPJOBTLR printer profile parameter.

AFPMSGDS

Description For XOSF processing, identifies the AFP resources to be used in the message dataset separator page. The FDEF, PDEF, and CHARS values you specify for this parameter are applied only to the message dataset separator page. They are not applied to the document.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax AFPMSGDS=(FDEF=*formdef-name*,PDEF=*pagedef-name*, CHARS=*font-name*)

where

formdef-name Specifies the form definition to be used for the separator page.

pagedef-name Specifies the page definition to be used for the separator page.

font-name Specifies the font to be used for the separator page.

Default

Variable	Default
FDEF	A form definition with these specifications: tray 1, simplex, and offset 0,0
PDEF with the value for CHARS omitted	A page definition with these specifications: centered based on paper size
PDEF with the value for CHARS specified	A page definition with these specifications: 64 lines, 8.3 LPI, 1.1 inch left margin, and orientation 90,180
CHARS	GT15

Example AFPMSGDS=(FDEF=AX0001,PDEF=A06460,CHARS=GT20)

In this example, the AX0001 form definition, A06460 page definition, and GT20 character set are used to print the message dataset separator page.

Overrides You can override this parameter by using the AFPMSGDS printer profile parameter.

Related information This parameter applies to messages generated by XPAF only. Other types of messages, such as the JES interrupt message, appear to XPAF as data, and as such will not be formatted with AFPMSGDS resources.

ALOGDSN

Description For XOAF and XOSF processing, identifies the alternate dataset to which XPAF messages are logged.

XPAF alternates message logging between this dataset and the dataset identified by the XLOGDSN initialization parameter. When specified, automatic switching between datasets occurs when one fills up. When the switch occurs, XPAF issues a message. After XPAF switches logging to the alternate dataset, you must delete the contents of the original dataset before XPAF can write to it again.

Generation data group (GDG)

XPAF can write to a log dataset for a (+0) or a (-*n*) preallocated GDG. XPAF cannot write to a (+*n*) GDG that is not preallocated, nor increment the GDG itself.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax ALOGDSN=*dataset-name*

where

dataset-name Name of the dataset to which messages will be logged; 44-character maximum, including periods. Do not include quotes around the dataset name.

Default None.

Example ALOGDSN=MJONES.XPAFLOG2

Overrides None.

Related information See also the SLOG, XLOG, and XLOGDSN initialization parameters.

AUTOREV

Description For XOSF processing, indicates one of the following:

- For non-AFP resources, indicates whether to force a resource download if the most current resource is in the XPAF native resource library and not on the printer. This download occurs when the resource is referenced in a print job.
- For AFP resources, indicates whether to force a resource conversion and download if the most current resource is in the AFP resource library and not in the XPAF resource library. Conversion and download occur when the resource is referenced in a print job.

  When processing AFP applications, XPAF examines the ISPF statistics field for the IBM PDS members to identify changes to those members since the last XPAF conversion.

Scope Affects processing of all types of data streams that reference Xerox native resources sent to centralized and decentralized printers, and processing of DJDE and XES data streams sent to PCL-capable printers.

Affects processing of AFP data streams that reference resources, with the exception of AFP fonts, sent to all types of printers.

Syntax AUTOREV= { XEROX | AFP | BOTH | NONE }

where

XEROX	Enables automatic revision of Xerox native resources.
AFP	Enables automatic revision of AFP resources.
BOTH	Enables automatic revision of AFP resources and Xerox native resources.
NONE	Disables automatic revision of all resources.

Default N

Example AUTOREV=A

Overrides You can override this parameter by using the AUTOREV printer profile parameter.

Related information See also the LIBRARY printer profile parameter, the REVOPSEG initialization and printer profile parameters, and the REVOPSEG extended JCL keyword.

BANNERCPY

Description Specifies whether or not to print multiple banner pages for DJDE documents sent to remote printers when the DJDE COPIES parameter is used.

Scope Affects processing of DJDE data streams sent to decentralized, PCL-capable or PDF printers.

Syntax BANNERCPY=Y | N

where

Y Indicates that banner pages should be printed for each copy produced.

N Indicates that there will be one header banner page at the beginning of the job, a dataset separator at the beginning of each dataset and one trailer banner printed after the last copy of the last dataset in the job.

Default Y

Example BANNERCPY=N

Overrides You can override this parameter by using the BANNERCPY printer profile parameter.

Related information See also the BANNERCPY printer profile parameter.

BANNERJDL

Description For XOSF processing, specifies the type of DJDE packet to be generated for the banner page.

Scope Affects processing of DJDE data streams sent to centralized printers.

Syntax BANNERJDL={ Y | N }

where

Y Generates an initial banner page DJDE packet containing only a DJDE that uses the JDE or JDL printer profile parameter values. If there are no JDE or JDL printer profile values, the DJDE uses the values from the DEFJDE and DEFJDL initialization parameters.

N Generates the default banner page DJDE packet that contains these DJDEs:

ASSIGN=(1,1)	FORMS=NONE
BEGIN=(0,18,0.660)	MARGIN=1
BFORM=NONE	NUMBER=NO
BOF=66	PMODE=LAN
DATA=(1,250)	SIDE=(NUFRONT,NOFFSET)
FONTS=L0112B	TOF=1

Default N

Example BANNERJDL=Y

Overrides None.

Related information See also the DEFJDE and DEFJDL initialization parameters and the JDE and JDL printer profile parameters.

BANRESET

Description For XOSF processing, indicates whether any DJDE or XES control packets will be generated by the banner page routine. Specifying N ensures that the banner page and the job following it are printed using the printer's native environment.

Scope Affects processing of DJDE data streams sent to all types of printers, and XES data streams sent to decentralized and PCL-capable printers.

Syntax BANRESET={ Y | N }

where

Y Sends DJDE or XES control packets to the printer.
N Does not send DJDE or XES control packets to the printer.

Default Y

Example BANRESET=N

Overrides None.

BANSTYLE

Description For XOSF processing, identifies the banner page style to be produced when header, dataset, or trailer pages are requested. This value also is available in user exits 02 and 05 for constructing customized banner pages.

Scope Affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to decentralized and PCL-capable printers if you have changed the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'.

Syntax BANSTYLE=*style-name*

where

style-name The 1- to 4-character user-defined banner page style name used in user exits 02 and 05. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

The two system-defined banner page style names are JES and XPAF. JES specifies the JES banner page style, and XPAF specifies the XPAF banner page style. For BANSTYLE=JES, only applies to JES2 and JES3 systems at version 4.2 or higher. If BANSTYLE=NONE is specified, no banner pages will be produced.

Default XPAF

Example BANSTYLE=PAY1

In this example, PAY1 is passed to the XDIBBANS field in @XDIB in user exits 02 and 05. You can code user exit 05 to give you additional banner page styles. User exit 05 could generate a special payroll banner page if it detected PAY1 in the XDIBBANS field.

Overrides You can override this parameter by using the BANSTYLE printer profile parameter or extended JCL keyword. You also can override this parameter by specifying a value in the XDIBBANS field in @XDIB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

CFONTDSN

Description For XOAF processing, defines the dataset name of the XPAF Centralized Font library.

Default None

Scope Affects processing of forms compiled with the XFG option.

Example CFONTDSN=MY.XPAF50.CFONTLIB

CLOGODSN

Description For XOAF processing, defines the dataset name of the XPAF Centralized Logo library.

Default None

Scope Affects processing of forms compiled with the XFG option.

Example CLOGODSN=MY.XPAF50.CLOGOLIB

CFONTLIB

Description For XOSF processing, names the DD statement that specifies the centralized font library.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax CFONTLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default CFONTLIB

Example CFONTLIB=CTESTFNT

Overrides You can override this parameter by using the FONTLIB printer profile parameter.

Related information See also the DFONTLIB initialization parameter.

CFORMLIB

Description For XOSF processing, names the DD statement that specifies the centralized form library.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax CFORMLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default CFORMLIB

Example CFORMLIB=CTESTFRM

Overrides You can override this parameter by using the FORMLIB printer profile parameter.

Related information See also the DFORMLIB initialization parameter.

CIMAGELIB

Description For XOSF processing, names the DD statement that specifies the centralized image library.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax CIMAGELIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default CIMGLIB

Example CIMAGELIB=CTESTIMG

Overrides You can override this parameter by using the IMAGELIB printer profile parameter.

Related information See also the DIMAGELIB initialization parameter.

CLOGOLIB

Description For XOSF processing, names the DD statement that specifies the logo library.

Scope Affects processing of DJDE and page-formatted data streams sent to centralized printers.

Syntax CLOGOLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default CLOGOLIB

Example CLOGOLIB=TESTLOGO

Overrides You can override this parameter by using the LOGOLIB printer profile parameter.

COMSSID

Description For XOSF processing, identifies the spooling subsystem name to XPAF.

CMA-SPOOL

If you use CMA-SPOOL, refer to the *CMA-SPOOL Installation Guide* to determine where in addition to this parameter the subsystem name must be defined.

CA-SPOOL

If you use CA-SPOOL, refer to the *CA-SPOOL (tm) Installation and Customization Guide* to determine where in addition to this parameter the subsystem name must be defined.

Scope For secondary JES2 or non-JES spooling subsystems, affects processing of all types of data streams sent to all types of printers.

Syntax COMSSID=*subsys-name*

where

subsys-name The 1- to 4-character name of the non-JES spooling subsystem. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

To specify a secondary JES2 subsystem on the same z/OS system that is running XPAF, the name you specify must begin with the letters JES; for example, JESA, JESM, or JES9.

To specify any other non-JES spooling subsystem, refer to the documentation for that subsystem.

Default JES

Example COMSSID=JESB

Overrides None.

Related information See also the COMSSTYP and SUBSYS initialization parameters.

COMSSTYP

Description For XOAF and XOSF processing, identifies the type of spooling subsystem with which XPAF will communicate. The subsystem type is used for two purposes:

- To determine the format of spool control commands
- To generate the appropriate IVP jobs

If this parameter is omitted, XPAF assumes the subsystem type is JES.

Scope For non-JES spooling subsystems, affects processing of all types of data streams sent to all types of printers.

Syntax COMSSTYP= { DIRECT | CMASPOOL }

where

DIRECT	Indicates that XDS is the subsystem.
CMASPOOL	Indicates that CMA-SPOOL or CA-SPOOL is the subsystem.

NOTE: If the COMSSID initialization parameter is not specified, any value specified for this parameter is ignored.

Default None.

Example COMSSTYP=CMASPOOL

Overrides None.

Related information See also the COMSSID and SUBSYS initialization parameters. Refer to *Section Two: Installing and Customizing XPAF* for information about setting up XDS, and *Section Four: Printing Documents with XPAF* for information about using XDS.

CONCHAR

Description For XOSF processing, specifies the console command character through XPAF to be used in constructing the JES2 commands built and sent by XPAF.

Scope For systems running JES2 version 4.2.0 or higher, affects processing of all types of data streams sent to all types of printers.

Syntax CONCHAR=*character*

where

character	A single character.

Default $

Example CONCHAR=$

Overrides None.

Related information If your system is running at a version below JES2 3.1.3, the $ character will be used for this parameter regardless of what you enter.

CONROUTE

Description For XOAF and XOSF processing, specifies a unique routing code and associates it with a particular console. Instead of a single line message being written to the default console, all XPAF messages are routed to the console specified by this routing code.

The routing code definitions are equivalent to those specified by IBM. For a complete description of the routing codes, refer to the WTO macro section in IBM's *z/OS System Programming Authorized Assembler Services Reference*.

If you specify an invalid routing code, XPAF uses the default routing codes:

2 Master console information.

11 Programmer information.

Scope Affects processing of all messages issued to the system log.

Syntax CONROUTE=*nnn*

where

nnn 1 through 128.

Default The default value as specified in the DEFAULT statement in the CONSOL*nn* member of SYS1.PARMLIB.

Example CONROUTE=5

Overrides None.

DEFILIND

Description For XOAF and XOSF processing, identifies whether intensive logging is activated when XPAF is started.

Scope Affects all XPAF processing.

Syntax DEFILIND={Y|N}

where

Y Activates intensive logging. Debugging and/or additional information messages are written to the XOAF and XOSF log datasets.

N Does not activate intensive logging.

Default N

Example DEFILIND=Y

Overrides You can override this parameter by using the SET INTENSIVE LOGGING command.

Related information For more information about the SET INTENSIVE LOGGING command, refer to *Section Seven: XPAF Operator Guide*.

DEFJDE

Description For XOSF processing, identifies the default JDE member in the default JDL that is used for processing DJDE documents. If a JDE is requested in the initial DJDE packet of a document, the packet JDE is used instead of the default.

Scope Affects processing of all types of data streams sent to centralized printers, and processing of DJDE data streams sent to decentralized and PCL-capable printers.

Syntax DEFJDE=*jde-name*

where

jde-name The 1- to 6-character JDE name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default DFLT

Example DEFJDE=ONEUP

Overrides You can override this parameter by using the JDE printer profile parameter or extended JCL keyword.

Related information See also the BANNERJDL initialization parameter for banner page processing information. See also the RSTACK initialization and printer profile parameters for RSTACK record processing information.

DEFJDL

Description For XOSF processing, identifies the default JDL that is used for processing DJDE documents. If a JDL is requested in the initial DJDE packet of a document, the packet JDL is used instead of the default.

Scope Affects processing of all types of data streams sent to centralized printers, and processing of DJDE data streams sent to decentralized and PCL-capable printers and PDF devices.

Syntax DEFJDL=*jdl-name*

where

jdl-name The 1- to 6-character JDL name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default DFAULT

Example DEFJDL=XPAFC1

Overrides You can override this parameter by using the JDL printer profile parameter or extended JCL keyword.

Related information See also the BANNERJDL initialization parameter for banner page processing information. See also the RSTACK initialization and printer profile parameters for RSTACK record processing information.

DEFLINE

Description For XOSF processing, substitutes a different print mode for a data stream with PRMODE=LINE specified. Any document with a PAGEFORM name will always be processed as a page-formatted document.

Scope Affects processing of line-mode data streams sent to all types of printers.

Syntax DEFLINE= { LINE | DJDE | PAGE }

where

LINE Indicates that no special processing is required.

DJDE Enables DJDE processing. This is particularly useful in emulating a PDL environment for documents that are being printed on decentralized or PCL-capable printers or PDF devices. However, if a document is recognized as an AFP document (for example, PAGEDEF or FORMDEF), AFP processing will override DJDE processing.

PAGE Forces AFP processing.

Default LINE

Example DEFLINE=PAGE

Overrides You can override this parameter by using the DEFLINE printer profile parameter.

Related information Refer to *Section Four: Printing Documents with XPAF* for more information about how XPAF determines the processing mode.

DFONTLIB

Description For XOSF processing, names the DD statement that specifies the decentralized font library.

Scope Affects processing of all types of data streams sent to decentralized and PCL-capable printers and PDF devices.

Syntax DFONTLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default DFONTLIB

Example DFONTLIB=DTESTFNT

Overrides You can override this parameter by using the FONTLIB printer profile parameter.

Related information See also the CFONTLIB initialization parameter.

DFORMLIB

Description For XOSF processing, names the DD statement that specifies the decentralized form library.

Scope Affects processing of all types of data streams sent to decentralized and PCL-capable printers and PDF devices.

Syntax DFORMLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default DFORMLIB

Example DFORMLIB=DTESTFRM

Overrides You can override this parameter by using the FORMLIB printer profile parameter.

Related information See also the CFORMLIB initialization parameter.

DIMAGELIB

Description For XOSF processing, names the DD statement that specifies the decentralized image library.

Scope Affects processing of all types of data streams sent to decentralized and PCL-capable printers and PDF devices.

Syntax DIMAGELIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default DIMGLIB

Example DIMAGELIB=DTESTIMG

Overrides You can override this parameter by using the IMAGELIB printer profile parameter.

Related information See also the CIMAGELIB initialization parameter.

DJDEOF01–DJDEOF09

Description For XOSF processing, defines the offset (number of bytes) into the record where the first character of the DJDE record identifier IDEN*nn* is located. If not provided, the search begins at offset zero.

NOTE: If you have not defined any IDENnn initialization parameters, this parameter is not necessary.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax DJDEOF*nn*=*value*

where

nn 01 through 09.

value Offset (number of bytes) into the record where the first character of the DJDE record identifier IDEN*nn* is located.

Default DJDEOF01–DJDEOF09=0

Example DJDEOF03=1

Overrides None.

Related information See also the DJDESK*nn* and IDEN*nn* initialization parameters and the IDENIDX printer profile parameter.

DJDESK01–DJDESK09

Description For XOSF processing, defines the offset into the record where the search will start for DJDE commands after a DJDE record has been recognized. Typically, this value is greater than the sum of DJDEOF*nn* plus the length of the corresponding IDEN*nn* string plus the number of bytes before the data portion of the DJDE record.

NOTE: If you have not defined any IDENnn initialization parameters, this parameter is not necessary.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax DJDESK*nn*=*value*

where

nn 01 through 09.

value Offset into the record where the search will start for DJDE commands after a DJDE record has been recognized.

Default DJDESK01–DJDESK09=0

Example DJDESK03=12

Overrides None.

Related information See also the DJDEOF*nn* and IDEN*nn* initialization parameters and the IDENIDX printer profile parameter.

DSGROUP

Description For XOSF processing, specifies how a multiple dataset job is handled after a DRAIN or STOP command is issued.

Scope For systems running JES2 version 4.2.0 or higher and JES3 version 4.2.1 or higher, affects processing of all types of data streams sent to all types of printers.

Syntax DSGROUP={ Y | N }

where

Y XPAF finishes printing the entire job or output group, then drains the printer. The datasets for the job or output group are then purged from the JES queue.

N XPAF finishes printing the current dataset, then drains the printer. All datasets belonging to the job are requeued and printed when the job is selected again by JES.

Default N

Example DSGROUP=Y

Overrides None.

DUPLEXSW

Description For XOSF processing, indicates whether the printer's plexing mode will switch between simplex and duplex.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax DUPLEXSW={ Y | N }

where

Y Switches the plexing mode on the printer between simplex and duplex. For example, if a document is simplex for the first few pages and duplex for the remaining pages, specify DUPLEXSW=Y to have the printer switch from simplex mode printing to duplex mode printing.

N Does not switch the plexing mode on the printer between simplex and duplex. XPAF searches the data stream to determine if DUPLEX is specified in any of the copy groups (for AFP documents) or copy modifications (for page-formatted documents). If it is, the entire document will be printed in duplex mode. Any simplex copy groups or copy modifications will be printed with blank back pages. If DUPLEX is not specified, the entire document is printed in simplex mode.

Default N

Example DUPLEXSW=Y

Overrides You can override this parameter by using the DUPLEXSW printer profile parameter or extended JCL keyword.

Related information For more information about printing duplex documents, refer to *Section Four: Printing Documents with XPAF*.

ESTAE

Description For XOAF and XOSF processing, specifies the option for ESTAE processing.

Scope Affects all XPAF processing.

Syntax ESTAE={ Y | N }

where

Y ESTAE routines are activated. This is the normal mode of operation.

N ESTAE routines are deactivated.

Default Y

Example ESTAE=Y

Overrides None.

ETV

Description For XOAF and XOSF processing, specifies the error tolerance value (number) used to set a threshold which, if exceeded, will terminate XPAF. The return code from the load of each program at initialization is compared to this value.

Scope Affects XPAF start-up processing.

Syntax ETV=*nn*

where

nn 0 through 50.

Default 8

Example ETV=16

Overrides None.

FCB

Description For XOSF processing, indicates whether Forms Control Buffers (FCBs) are transmitted to centralized printers.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax FCB={ Y | N }

where

Y Downloads the FCB specified in the JCL, which indicates line-mode or DJDE processing. If no FCB is specified in the JCL for the first native mode job after printer start-up, the SYSFCB initialization parameter determines which value to use. If you specify FCB=Y, review the FCBPREF initialization parameter.

N Does not download the FCB specified in the JCL. The FCB is used as a PAGEDEF, which indicates AFP processing.

NOTE: If you specify FCB=N and the FCB name in the JCL matches the value you specify for the SYSFCB initialization parameter, the FCB value is not used as a PAGEDEF.

Default N

Example FCB=Y

Overrides You can override this parameter by using the FCB printer profile parameter or IBM JCL keyword.

Related information See also the FCBPREF, PAGEDEF, and SYSFCB initialization parameters and the PAGEDEF IBM JCL keyword.

FCBPREF

Description For XOSF processing, identifies the FCB prefix to be used with the FCB name when retrieving FCBs from SYS1.IMAGELIB. Specify this parameter only if your FCB prefix is different from the default and you are downloading FCBs to the centralized printer. This parameter only takes effect if you specify FCB=Y.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax FCBPREF=*fcb-prefix*

where

fcb-prefix The 1- to 4-character FCB prefix. The prefix can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default FCB2

Example FCBPREF=FCB9

Overrides None.

Related information See also the FCB initialization and printer profile parameters.

FNTTBLDD

Description For XOAF and XOSF processing, names the DD statement that specifies the native library which contains the XPAF font tables. These tables support the use of Xerox and replica fonts for XPAF processing. In XOAF, use the Manage Tables option to maintain your font tables.

Scope Affects all types of processing except DJDE data streams sent to centralized printers.

Syntax FNTTBLDD=*ddname*

where

auto The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default TABLELIB

Example FNTTBLDD=TABLES

Overrides None.

Related information Refer to *Section Three: Managing Resources with XPAF* for information on XOAF options.

FNTLGOCONV

Description For XOSF processing, specifies whether LCDS fonts and logos should automatically be converted to PCL or PDF format when required.

Scope Affects processing of LCDS data streams sent to PCL-capable printers or PDF devices.

Syntax FNTLGOCONV={**AUTO** | MANUAL}

where

AUTO Automatically convert LCDS fonts and logos referenced in a DJDE document to PCL or PDF.

MANUAL LCDS fonts and logos referenced in a DJDE document are not converted to PCL or PDF when required. Fonts and logos must be preconverted manually via XOAF

Default AUTO

Example FNTLGOCONV=MANUAL

Overrides None.

Related information Refer to *Section Three: Managing Resources with XPAF* for information on XOAF options to manually convert fonts and logos.

FORMDEF

Description For XOSF processing, specifies the AFP resource that defines the appearance of the page on the form. XPAF automatically retrieves the form definition during printing.

PSF

If you use PSF, make sure the XPAF value for FORMDEF matches your PSF value. If you are printing the same jobs on both IBM and Xerox printers, you must specify this parameter.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax FORMDEF=*resource-name*

where

resource-name The 1- to 6-character resource name. The name can include alphanumeric characters.

Default A10110

Example FORMDEF=AX0001

Overrides You can override this parameter by using the FORMDEF IBM JCL keyword, or the printer profile keyword.

FORMDEFDD

Description For XOSF processing, names the DD statement that specifies the partitioned dataset which contains FORMDEFs. This library is referenced when processing AFP documents.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax FORMDEFDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default FDEFLIB

Example FORMDEFDD=AFPLIB

Overrides None.

IBMFONTDD

Description For XOSF processing, names the DD statement that specifies the partitioned dataset which contains IBM fonts used by AFP. XPAF obtains font width information from this library.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IBMFONTDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default IBMFONT

Example IBMFONTDD=AFPLIB

Overrides None.

IBMFONT300

Description For XOSF processing, names the DD statement that specifies the partitioned dataset which contains IBM 300 dpi fonts used by AFP. XPAF obtains font width information from this library.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IBMFONT300=*library*

where

library Identifies the DD name of the AFP 300 dpi font library

Default IBMFONT3

Example IBMFONT300=IBMFONT1

Overrides None.

Related information See also the IBMFONTDD initialization parameter and the IFONTRES initialization parameter, printer profile parameter, and extended JCL keyword.

IBMPMODE

Description For XOSF processing, specifies whether the parameter set in the MDD structured field affects the presentation mode of the job. This structured field contains values for page presentation (PRESENT field) and printing direction (DIRECTION field) defined in the PPFA FORMDEF command.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IBMPMODE= { Y | N | A }

where

Y The parameter set in the MDD structured field overrides the PMODE initialization parameter specification.

N The parameter set in the MDD structured field is ignored. The value specified in the PMODE initialization parameter is used.

A The parameter set in the MDD structured field is always used.

Default Y

Example IBMPMODE=Y

Overrides The PMODE extended JCL keyword overrides the IBMPMODE and PMODE values specified in your initialization parameters.

For A, none.

Related information See also the PMODE initialization parameter and extended JCL keyword.

IDEN01–IDEN09

Description For XOSF processing, defines the character strings used to identify a DJDE document. You can define up to 9 IDENs with a maximum of 64 characters per IDEN. Each of these parameters must have corresponding DJDEOF*nn* and DJDESK*nn* initialization parameters, where the value of *nn* is the same throughout the set. If your site uses only one DJDE identifier for all data streams, this parameter is not necessary.

XPAF-started identifier

Use this parameter to allow XPAF to recognize DJDE identifiers that are different from the XPAF-started identifier for the printer. The XPAF-started identifier is the identifier in the JDE/JDL that is named by any of these parameters:

- JDE printer profile parameter
- JDL printer profile parameter
- DEFJDE initialization parameter
- DEFJDL initialization parameter

Note that the JDE and JDL extended JCL keywords do not affect identifier processing.

Identifier processing

When XPAF finds a match between the identifier in the first record of a document and either the identifier defined in the XPAF-started JDE/JDL or any of the nine identifiers at their specific offsets, the document is considered a DJDE document.

An identifier found in any record of a document will be dynamically changed to the identifier defined in the XPAF-started JDE/JDL for the printer (unless the IDENIDX printer profile parameter is specified). This allows data streams to be correctly processed that use identifiers that are

different from the one that the printer expects. If the IDENIDX printer profile parameter is specified, the identifier in the corresponding IDEN*nn* initialization parameter will override the XPAF-started identifier.

Coding requirements

If an IDEN*nn* text string contains spaces, the string must be enclosed in single quotes; for example, IDEN01='FIRST DJDE RECORD'. If the text string requires hex or non-EBCDIC characters, you should:

- Use the HEX option of the ISPF editor to enter the text string.
- Enter the hex characters without a preceding X.
- Enclose the text string in single quotes.

For example, IDEN02='ABC.DEF.GHI', where the period (.) represents a non-EBCDIC character. If the string is not enclosed in quotes, unpredictable results may occur.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax IDEN*nn*='*string*'

where

nn	01 through 09.
'*string*'	The 1- to 64-character string used to identify a DJDE document.

Default IDEN01–IDEN09=None.

Example IDEN03=$DJDE$

Overrides If you specify the IDENIDX printer profile parameter, the corresponding IDEN*nn* initialization parameter's identifier will override the XPAF-started identifier.

Related information See also the DJDEOF*nn* and DJDESK*nn* initialization parameters and the IDENIDX printer profile parameter.

IFONTRES

Description Specifies which of the user's AFP font libraries is to be referenced at print time. A value of 240 indicates use of the font library defined by the IBMFONTDD initialization parameter. A value of 300 indicates use of the font library defined by the IBMFONT300 initialization parameter.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IFONTRES={240 | 300}

where

240 Indicates that the 240 dpi font library is used
300 Indicates that the 300 dpi font library is used

Default 240

Example IFONTRES=300

Overrides You can override this parameter by using the IFONTRES printer profile parameter or extended JCL keyword.

Related information See also the IBMFONTDD and IBMFONT300 initialization parameters.

IMGTYPE

Description For XOSF processing, specifies whether to convert AFP images from their original resolution to 300 dpi.

NOTE: If you have previously scaled an image using a product other than XPAF, the quality of that image rescaled through XPAF may not match the original.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IMGTYPE= { 0 | 1 | 3 }

where

0 Does not scale the image dimension but does scale the position of the image. Image position scaling allows the image to print in the correct relative location on the page when printed on a Xerox printer as opposed to printing on an IBM printer. Image position scaling is increased by a factor of 25%.

For some IM-type images, image dimension scaling does occur when specifying 0. For example, non-page segment images that include shading are scaled. For these exceptions, image dimension scaling is increased by a factor of 25%.

NOTE: If you specify 0, the size of the converted image will print smaller in XPAF (by a factor of 20%) than the original 240 dpi image printed in AFP.

1 Scales the image dimension and image position of an AFP image to 300 dpi before sending it to the printer. IOCA-encoded images are scaled from any resolution to 300 dpi. All other AFP images are scaled from 240-to-300 dpi, an increase of 25%.

3 Scales the image dimension and image position of an AFP image to 300 dpi based on the current L-units value specified in the IDD or IID structured field of the image. IOCA-encoded images are scaled from any resolution to 300 dpi. For IM-type images, any L-units value that does not specify 300 dpi is assumed to be 240 dpi.

Default 0

Example IMGTYPE=1

Overrides You can override this parameter by using the IMGTYPE printer profile parameter or extended JCL keyword.

Related information See also the IMAGEPROC and IMAGETONE printer profile parameters.

INKXLIB

Description For XOSF processing, names the DD statement that specifies the native library which contains the color cross-reference tables and the color conversion table.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to centralized highlight color printers, and processing of DJDE data streams sent to decentralized full color printers.

Syntax INKXLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default TABLELIB

Example INKXLIB=TABLES

Overrides For color cross-reference tables, you can override this parameter by using the INKXLIB printer profile parameter or extended JCL keyword. For the color conversion table, you can override this parameter by using the INKXLIB printer profile parameter. The INKXLIB extended JCL keyword does not apply to the color conversion table.

INKXREF

Description For XOSF processing, identifies the default color cross-reference table. In XOAF, use the Maintain Color Cross-Reference Tables option on the Manage Tables menu to create and update color cross-reference tables.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to centralized highlight color printers.

Syntax INKXREF=*table-name*

where

table-name The 1- to 20-character color cross-reference table name. The name can include alphanumeric characters.

Default None.

Example INKXREF=IBM24890

Overrides You can override this parameter by using the INKXREF printer profile parameter or extended JCL keyword.

Related information Refer to *Section Three: Managing Resources with XPAF* for information on XOAF options.

IPVERSION

Description For XOSF processing, Indicates the version of the Internet Protocol to use.

Scope Affects processing of all documents sent via TCP/IP LPR, Sockets or E-Mail.

Syntax IPVERSION={ 4 or 6 }

where

4 Indicates IP version 4.

6 Indicates IP version 6.

Default 4

Example IPVERSION=6

Overrides You can override this parameter by using the IPVERSION printer profile parameter or the EMAIL Address Table IPVERSION option.

JESNEWS

Description For XOSF processing, specifies where and how JESNEWS will be printed. XPAF supports JESNEWS text containing ANSI carriage control, machine carriage control, or no carriage control.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax JESNEWS= { PRINT | EXIT | NONE }

where

PRINT JESNEWS text is processed as any other JES print dataset and is concatenated with the rest of the data stream. The JESNEWS text is formatted using the characteristics of the OUTPUT statement and extended JCL keywords from the first dataset in the job. Therefore, unexpected results may occur, particularly when the first dataset relies on a combination of extended JCL and inline DJDE keywords for its formatting.

EXIT JESNEWS text is gathered into a control block and passed to the XPAF banner page user exit (user exit 05) for custom formatting. If you have not installed the banner page user exit, XPAF will format JESNEWS text as part of the default banner pages. The default processing for JESNEWS is:

- For a job processed through JES2, XPAF prints JESNEWS immediately following the header banner page.
- For a job processed through JES3, XPAF prints JESNEWS immediately before the trailer banner page.

For AFP data streams, the default AFP banner page processing does not allow a banner page to run over one page. Therefore, if

you are using a full page banner, such as the default centralized banner page, and a JESNEWS dataset of more than a few lines, the combination of the two may run over one page. If this happens, you will lose some data. To avoid losing any data:

- Reduce the number of lines in the banner.
- Insert a skip-to-channel-1 in the JESNEWS text to force a new page on the banner.
- Use the AFPJOBHDR and AFPJOBTLR initialization or printer profile parameters to specify a PAGEDEF for the banner page that will allow it to flow to multiple pages.

Additional samples and instructions are provided in XUXIT05 and XUXIT05B that specify how to print JESNEWS using the banner page user exit.

JESNEWS, as available to user exit 05, is mapped by the XPAF sample macro @XNEWS.

NONE If a JESNEWS dataset exists, it is suppressed.

Default EXIT

Example JESNEWS=PRINT

Overrides None.

Related information For information on how to create and delete the JESNEWS dataset using z/OS or JES3 utilities, refer to the *z/OS JES2 Initialization and Tuning Guide* or z/OS *JES3 Commands*.

Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

LDMEXPND This is sample JCL showing the procedure for expanding the size of an XPAF VSAM Library. This procedure should be used when an XPAF VSAM Library becomes full and more space must be allocated to it.

MERGEOVL

Description For XOSF processing, indicates whether overlays will be consolidated.

Include MERGEOVL=Y in your XINSXOSF member if you want to merge all the overlays in a copy group the first time that the copy group is used in a document. Each overlay in the copy group is converted, then the individual converted overlays are consolidated into a single .FRM. The .FRM is not saved in the native form library, but will be reused each time the copy group is called. At completion of the document, the .FRM is deleted from the printer. Depending on the complexity of the document, enabling this feature may improve your printer's performance.

All of the inline images included in the overlays are consolidated into a single image. The consolidated image can be reused each time the copy group is called. At completion of the document, the consolidated image is deleted from the printer.

If you omit this parameter or specify MERGEOVL=N in your XINSXOSF member, the converted overlays are not consolidated. Instead, only the first converted overlay is processed as a .FRM; subsequent converted overlays are merged with variable data on the page.

Scope Affects processing of AFP data streams that include multiple overlays in a copy group sent to centralized printers.

Syntax MERGEOVL={ Y | N }

where

Y Overlays are consolidated.
N Overlays are not consolidated.

Default None.

Example MERGEOVL=Y

Overrides You can override this parameter by using the MERGEOVL printer profile parameter or extended JCL keyword.

Related information If you specify MERGEOVL=Y, the COLORIMG extended JCL keyword has no affect on images within forms. However, other image resources will be affected. For more information, see the COLORIMG extended JCL keyword.

METAJDE

Description For XOSF processing, defines the JDE member name of the JDL used when converting documents to Metacode. The JDE must reference a VOLUME CODE=NONE statement to be effective.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax METAJDE=*jde-name*

where

jde-name The 1- to 6-character JDE name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default PGMODE

Example METAJDE=PGLETR

Overrides You can override this parameter by using the METAJDE printer profile parameter or JDE extended JCL keyword.

METAJDL

Description For XOSF processing, identifies the JDL to be used for AFP-to-Metacode jobs directed to centralized printers.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax METAJDL=*jdl-name*

where

jdl-name The 1- to 6-character JDL name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default DFAULT

Example METAJDL=ONLINE

Overrides You can override this parameter by using the METAJDL printer profile parameter or JDL extended JCL keyword.

MSFSUPPMEM

Description For XOAF and XOSF processing, identifies a member name in the dataset pointed to by the XINPARM DD statement that contains text (message numbers/message types) used to suppress messages directed to the z/OS console.

All messages will continue to be written to the log dataset. The MSGSUPP member in XPFSAMP is a sample showing you how to code suppression text. Refer to *Section Seven: XPAF Operator Guide* for details.

Some messages, including those identifying fatal errors, are non-suppressible. If you attempt to specify a non-suppressible message, XPAF issues an error message.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax MSFSUPPMEM=*member-name*

where

member-name The 1- to 8-character member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None.

Example MSFSUPPMEM=SUPXOAF

Overrides None.

MSGFEED

Description For XOSF processing, identifies the tray from which paper is fed when printing messages issued by XPAF during document processing. This parameter is required only if the PRINTMSG initialization or printer profile parameter is a value other than N.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax MSGFEED=$\left\{\begin{array}{c}\text{MAIN}\\ \text{AUX}\\ stock-ref\end{array}\right\}$

where

MAIN Uses the main paper tray.

AUX Uses the auxiliary paper tray.

stock-ref The 1- to 6-character alphanumeric stock reference name. Uses the tray that contains a specified paper type.

Default MAIN

Example MSGFEED=AUX

Overrides You can override this parameter by using the MSGFEED printer profile parameter.

Related information See also the PRINTMSG initialization and printer profile parameters. For AFP data streams, refer to the AFPMSGDS initialization and printer profile parameters.

MSGTHMAX

Description For XOSF processing, identifies the maximum number of messages to be displayed on the host console and written to the SYSLOG while printing a dataset.

Any messages issued after this value is exceeded are written only to the XOSF log, and XPAF issues an error message.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax MSGTHMAX=*nnnnn*

where

nnnnn 0 through 32767.

Default 25

Example MSGTHMAX=75

Overrides None.

NOSTORE

Description For XOSF processing, specifies whether AFP resources (converted overlays and images) are stored in native libraries.

Scope Affects processing of AFP data streams sent to centralized printers.

Syntax NOSTORE={ Y | N }

where

Y Does not store AFP resources in the native libraries. Instead, they are converted and downloaded for every job. This revises the resources without having to use the REV*xxxxx* extended JCL keywords.

Downloaded resources are deleted from the printer at the end of the job.

N Stores AFP resources in the native libraries.

Default N

Example NOSTORE=Y

Overrides You can override this parameter by using the NOSTORE printer profile parameter.

NOXJCLMSG

NOTE: In order for XOSF to recognize the Extended JCL keywords, they must be installed before the Functional Subsystem is encountered or the keywords will be ignored resulting in incorrect output. If you are using the XPAF extended JCL keywords and want to avoid XOSF starting without the extended JCL keywords installed, specify NOXJCLMSG=FATAL in the initialization parameter member, XINSXOSF.

Description Specifies the severity of the message issued by XOSF when the XPAF Extended JCL JDT module, XESJDT00, is not found (indicating that the XPAF keywords have not been installed). This can be used to prevent an issue where the XPAF extended JCL keywords are ignored if the XPAFJCL job, to install the XPAF keywords, is run after the FSS is started.

Scope Affects processing of all types of data streams.

Syntax

```
NOXJCLMSG={ NONE    }
          { WARNING }
          { FATAL   }
```

where

NONE	No error message is issued and XOSF continues processing. Specify this value if you never intend to use the XPAF extended JCL keywords.
WARNING	A warning message is issued if the XESJDT00 module is not found during FSS initialization. XOSF processing continues.
FATAL	A fatal error message is issued if the XESJDT00 module is not found during FSS initialization. XOSF processing is terminated.

Default FATAL

Example NOXJCLMSG=W

Overrides None.

OFFSTACK

Description For XOSF processing, indicates whether offset stacking is enabled or disabled at the printer. For job types other than page-formatted or AFP, offsets occur when job separator or dataset separator pages are inserted.

Scope Affects processing of page-formatted and AFP data streams sent to decentralized printers that support offset stacking.

Syntax

```
OFFSTACK={ Y }
         { N }
```

where

Y Offset stacking by job is enabled at the printer. Offset stacking will occur between datasets only if separator pages are contained within the job.

N Offset stacking has been manually disabled at the printer (only for the 4700, 4235, 4213, and 3700 printers).

For page-formatted and AFP jobs, if you want to use the COPYMARK=JOB JES printer parameter, you must specify OFFSTACK=N.

Default Y

Example OFFSTACK=N

Overrides You can override this parameter by using the OFFSTACK printer profile parameter.

OPDALLOC

Description For XOSF processing, defines the number of tracks for primary allocation of storage for output destined for disk datasets. Secondary allocation is 10 percent of primary allocation (1 track minimum).

Scope Affects processing of all types of data streams sent to all types of printers for output to disk.

Syntax OPDALLOC=*value*

where

value Defines the number of tracks for primary allocation of storage for output destined for disk datasets.

Default 1

Example OPDALLOC=100

Overrides None.

Related information See also the OPDUNIT, OPDALLOS, OPDLRECL, OPHLQ, OPTEXPTD, OPTUNIT, OPTVOLCT, and OPVOLSER initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OPDALLOS

Description For XOSF processing, defines the number of tracks for secondary allocation of storage for output destined for disk datasets.

Scope Affects processing of all types of data streams sent to all types of printers with output to disk.

Syntax OPDALLOS=*value*

where

value Defines the number of tracks for secondary allocation of storage for output destined for disk datasets.

Default 10% of primary allocation size defined by OPDALLOC (minimum of one track)

Example OPDALLOS=1000

Overrides None.

Related information See also the OPDALLOC, OPDLRECL, OPDUNIT, OPHLQ, initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OPDLRECL

Description For XOSF processing, defines the maximum logical record length for output destined for disk datasets. Block size will be set to zero, allowing the operating system to allocate the most efficient block size for the device being used. Minimum value allowed is 214. Maximum value allowed is 31900. Note that the block size will always be at least the LRECL size plus 4, so make sure you use a value that will allow the most efficient use of your DASD. The default value of 27994 allows for half-track blocking on a 3390 at 27998. Half-track blocking for the 3380 would require a value of 23472 giving a block size of 23476.

Scope Affects processing of all types of data streams sent to all types of printers with output to disk.

Syntax OPDLRECL=*value*

where

value Defines the maximum logical record length for output destined for disk datasets.

Default 27994

Example OPDLRECL=23472

Overrides None.

Related information See also the OPDALLOC, OPDALLOS, OPDUNIT, OPHLQ, initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OPDUNIT

Description For XOSF processing, defines the DASD device to be used for dynamically allocating output-to-disk datasets.

Scope Affects processing of all types of data streams sent to all types of printers for output to disk.

Syntax OPDUNIT={*device-type* | *nnn* | */nnnn*}

where

device-type	Any valid device type.
nnn	000 through FFF. Any valid three-digit hexadecimal device number.
/nnnn	0000 through FFFF. Any valid four-digit hexadecimal device number which must be preceded by /.

Default SYSDA

Examples OPDUNIT=3380

In this example, 3380 is a valid device type.

OPDUNIT=280

In this example, 280 is a valid device number.

OPDUNIT=/4800

In this example, 4800 is a valid device number.

Overrides None.

Related information See also the OPDALLOC, OPDLRECL, OPHLQ, OPTEXPTD, OPTUNIT, OPTVOLCT, and OPVOLSER initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OPHLQ

Description For XOSF processing, names the high-level qualifier to be used for dynamically allocating the dataset used for output to disk or file.

Scope Affects processing of all types of data streams sent to all types of printers for output to disk or file.

Syntax OPHLQ=*prefix*

where

prefix	The 1- to 8-character alphanumeric high-level qualifier name.

Default XPAF

Example OPHLQ=MJ99999

Overrides None.

Related information See also the OPDALLOC, OPDUNIT, OPTEXPTD, OPTUNIT, OPTVOLCT, and OPVOLSER initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OPTEXPDT

Description For XOSF processing, specifies either an expiration date or a retention period for output-to-file datasets.

Scope Affects processing of all types of data streams sent to all types of printers for output to file.

Syntax OPTEXPDT={ *yyddd* | *nnnn* }

where

yyddd The expiration date of the dataset in the format YYDDD (Julian date).

nnnn The number of days for which to retain the dataset.

A value of 10000 or greater is considered an expiration date. A value less than 10000 is considered a retention period.

Default 00000 (No expiration date or retention period is generated.)

Examples OPTEXPDT=97010

In this example, January 10, 1997 is the expiration date.

OPTEXPDT=0365

In this example, the dataset will be retained for 365 days.

Overrides None.

Related information See also the OPDALLOC, OPDUNIT, OPHLQ, OPTUNIT, OPTVOLCT, and OPVOLSER initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OPTUNIT

Description For XOSF processing, defines the file device for dynamically allocating output-to-file datasets.

Scope Affects processing of all types of data streams sent to all types of printers for output to file.

Syntax OPTUNIT={ *device-type* | *nnn* | */nnnn* }

where

device-type Any valid device type.

nnn 000 through FFF. Any valid three-digit hexadecimal device number.

/nnnn 0000 through FFFF. Any valid four-digit hexadecimal device number which must be preceded by /.

Default file

Examples OPTUNIT=3480

In this example, 3480 is a valid device type.

OPTUNIT=280

In this example, 280 is a valid device number.

OPTUNIT=/4800

In this example, 4800 is a valid device number.

Overrides None.

Related information See also the OPDALLOC, OPDUNIT, OPHLQ, OPTEXPTD, OPTVOLCT, and OPVOLSER initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OPTVOLCT

Description For XOSF processing, defines the maximum number of file volumes that can be written for output-to-file datasets.

Scope Affects processing of all types of data streams sent to all types of printers for output to file.

Syntax OPTVOLCT=*nnn*

where

nnn 1 through 255.

Default 5

Example OPTVOLCT=10

Overrides None.

Related information See also the OPDALLOC, OPDUNIT, OPHLQ, OPTEXPTD, OPTUNIT, and OPVOLSER initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OPVOLSER

Description For XOSF processing, names the DASD VOLSER to be used for dynamically allocating output-to-disk datasets.

Scope Affects processing of all types of data streams sent to all types of printers for output to disk.

Syntax OPVOLSER=*volser*

where

volser The 1- to 6-character alphanumeric DASD VOLSER.

Default None. (No VOLSER is specified for dynamic allocation.)

Example OPVOLSER=USR005

Overrides None.

Related information See also the OPDALLOC, OPDUNIT, OPHLQ, OPTEXPTD, OPTUNIT, and OPTVOLCT initialization parameters, the WRITER printer profile parameter, and the OPWRITER extended JCL keyword.

OVERLAYDD

Description For XOSF processing, names the DD statement that specifies the partitioned dataset which contains AFP overlays.

Scope Affects processing of AFP data streams sent to all printer types.

Syntax OVERLAYDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default OVERLIB

Example OVERLAYDD=AFPLIB

Overrides None.

PAGEDEF

Description For XOSF processing, names the default PAGEDEF member used for AFP-to-Metacode conversion if a PAGEDEF is not specified in the extended JCL. If you use AFP, make sure the XPAF value for PAGEDEF matches your AFP value.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax PAGEDEF=*member-name*

where

member-name The 1- to 6-character PAGEDEF member name. The name can include alphanumeric or national ($, #, @) characters.

Default A06460

Example PAGEDEF=X06483

Overrides You can override this parameter by using the PAGEDEF IBM JCL keyword, or by the printer profile keyword.

Related information See also the FCB and SYSFCB initialization parameters, the FCB printer profile parameter, and the FCB IBM JCL keyword.

PAGEDEFDD

Description For XOSF processing, names the DD statement that specifies the partitioned dataset which contains AFP PAGEDEFs.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax PAGEDEFDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default PDEFLIB

Example PAGEDEFDD=AFPLIB

Overrides None.

PAGESEGDD

Description For XOSF processing, names the DD statement that specifies the partitioned dataset which contains AFP page segments.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax PAGESEGDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default PSEGLIB

Example PAGESEGDD=AFPLIB

Overrides None.

PAPERHIT

Description For XOSF processing, specifies the height (y axis) dimension of the default paper size. Use this parameter in conjunction with the PAPERWID

and PAPERUM initialization parameters to specify complete dimensions for the paper size.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPERHIT=*height*

where

height Any number up to the maximum supported paper height for your printer(s). If you specify a decimal value, use the letter P to identify the decimal point. Enter a valid value using one of these formats:

000P01 to 999P99 (for a decimal number)
000001 to 999999 (for a whole number)

Default None.

Example PAPERHIT=11P69

Overrides You can override this parameter by using the PAPERSIZ printer profile parameter or extended JCL keyword.

Related information See also the PAPERSIZ, PAPERUM, and PAPERWID initialization parameters.

PAPERSIZ

Description For XOAF and XOSF processing, specifies the system-wide default paper size value.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPERSIZ=*paper-size*

where *paper-size* is

A3	16.54 by 11.69 inches.
A4	8.27 by 11.69 inches.
A5	5.83 by 8.27 inches.
B4	9.84 by 13.9 inches.
LEGAL	8.5 by 14 inches.
LEGL13	8.5 by 13 inches.
LETTER	8.5 by 11 inches.
LONG	11 by 17 inches.
STATMT	5.5 by 8.5 inches.
paper-name	Any 1- to 6-character alphanumeric, user-defined name from a paper name table.

Default LETTER

Example PAPERSIZ=LEGAL

Overrides If you have modified the dimensions for a paper name in a paper name table, those dimensions will override the default dimensions shown in this Syntax section. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

For XOSF processing, you can override this parameter by using the PAPERSIZ printer profile parameter or extended JCL keyword.

Related information

If you specify a paper name that is defined in a paper name table, make sure that paper name table has been specified in the PAPNAMTB initialization parameter, printer profile parameter, or extended JCL keyword. If you specify a paper name that is not defined in a paper name table, XPAF uses the values shown in this Syntax section to determine the paper size. If the paper name is not listed in the Syntax section, the paper size defaults to 8.5 by 11 inches.

For AFP data streams, XPAF uses the entries in the currently active varying paper size table to determine which tray select command to issue to decentralized and PCL-capable printers. If a valid varying paper size table is not specified, XPAF issues a tray select command based on three criteria: the AFP bin number within the copy group, the paper name specified in PAPERSIZ, and the printer type.

For XOAF processing, the value you specify for PAPERSIZ only affects varying paper size and cluster mapping tables, and only after you delete their DEFAULT table through XOAF. Then, when you create a new table, the value you specified for PAPERSIZ is used in either of these ways:

- The paper name value in the default entry of varying paper size tables
- The paper name value in every entry of the cluster mapping tables

Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

PAPERUM

Description

For XOSF processing, specifies the units of measure for the PAPERHIT and PAPERWID parameters.

Scope

Affects processing of all types of data streams sent to all types of printers.

Syntax

$$\text{PAPERUM}=\left\{\begin{array}{c}\text{C}\\ \text{D}\\ \text{I}\\ \text{M}\\ \text{X}\end{array}\right\}$$

where

C Centimeters
D 300 dpi
I Inches
M Millimeters
X 600 dpi

Default

None.

Example

PAPERUM=I

Overrides

You can override this parameter by using the PAPERSIZ printer profile parameter or extended JCL keyword.

Related information

See also the PAPERHIT, PAPERSIZ, and PAPERWID initialization parameters.

PAPERWID

Description For XOSF processing, specifies the width (x axis) dimension of the default paper size. Use this parameter in conjunction with the PAPERHIT and PAPERUM initialization parameters to specify complete dimensions for the paper size.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPERWID=*width*

where

width Any number up to the maximum supported paper width for your printer(s). If you specify a decimal value, use the letter P to identify the decimal point. Enter a valid value using one of these formats:

000P01 to 999P99 (for a decimal number)
000001 to 999999 (for a whole number)

Default None.

Example PAPERWID=8P27

Overrides You can override this parameter by using the PAPERSIZ printer profile parameter or extended JCL keyword.

Related information See also the PAPERHIT, PAPERSIZ, and PAPERUM initialization parameters.

PAPNAMTB

Description For XOSF processing, identifies the paper name table used to determine the physical paper size dimensions that correlate to a specified paper name. The paper name can be specified in the varying paper size tables, in the cluster mapping tables, or by the PAPERSIZ initialization parameter, printer profile parameter, and extended JCL keyword.

This table resides in the library specified in the XOSF start-up proc DD statement named by the PAPTBLDD initialization or printer profile parameter.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPNAMTB=*table-name*

where

table-name The 1- to 16-character table name. The name can include alphanumeric or national ($, #, @) characters.

Default DEFAULT

Example PAPNAMTB=PNAME01

Overrides You can override this parameter by using the PAPNAMTB printer profile parameter or extended JCL keyword.

Related information See also the PAPERSIZ initialization parameter, printer profile parameter, and extended JCL keyword. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

NOTE: XPAF cannot verify that the paper size specified matches the paper actually loaded on the printer.

PAPTBLDD

Description For XOSF processing, names the DD statement that specifies the native library which contains paper-related tables.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPTBLDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default TABLELIB

Example PAPTBLDD=PAPRTBLS

Overrides You can override this parameter using the PAPTBLDD printer profile parameter.

Related information Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

PDLLIB

Description For XOSF processing, names the DD statement that specifies the native library that contains both JSL files and cataloged member files.

Scope Affects processing of all types of data streams except XES sent to centralized printers, and processing of DJDE data streams sent to decentralized and PCL-capable printers and PDF devices.

Syntax PDLLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default PDLLIB

Example PDLLIB=PDL

Overrides You can override this parameter by using the PDLLIB printer profile parameter.

Related information When you update PDL, you must update it on both the host and the printer. Then, recompile the PDL on the printer, and load the updated host member to the native library specified in the DD statement named by this parameter. Refer to *Section Three: Managing Resources with XPAF* and *Section Four: Printing Documents with XPAF* for more information on updating PDL.

PFILE

Description For XOAF and XOSF processing, names the DD statement that specifies a sequential dataset or PDS member which contains additional initialization parameter statements. These statements must follow the rules for writing parameters in the JCL PARM statement except for continuation. Continue by ending a card image with a full parameter and a space (no comma) and beginning a new parameter on the next card image.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PFILE=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None.

Example PFILE=TESTPARM

Overrides None.

PFONTLIB

Description For XOSF processing, names the DD statement that specifies the PCL font library used to store fonts that have been dynamically converted to PCL format.

Scope Affects processing of DJDE, XES, page-formatted, and AFP data streams sent to PCL-capable printers.

Syntax PFONTLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default PFONTLIB

Example PFONTLIB=PCLFONTS

Overrides You can override this parameter by using the PFONTLIB printer profile parameter.

PFORMLIB

Description For XOSF processing, names the DD statement that specifies the PCL form library used to store forms that have been dynamically converted to PCL format.

Scope Affects processing of DJDE, XES, page-formatted, and AFP data streams sent to PCL-capable printers.

Syntax PFORMLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default PFORMLIB

Example PFORMLIB=PCLFORMS

Overrides You can override this parameter by using the PFORMLIB printer profile parameter.

PGFRMDD

Description For XOSF processing, names the DD statement that specifies the partitioned dataset which contains page formats. This library is referenced when processing page-formatted documents.

Scope Affects processing of page-formatted data streams sent to all types of printers.

Syntax PGFRMDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default PAGEFORM

Example PGFRMDD=XFORMLIB

Overrides You can override this parameter by using the PAGEFORMLIB printer profile parameter.

PIMAGELIB

Description For XOSF processing, names the DD statement that specifies the PCL image library used to store images that have been dynamically converted to PCL format.

Scope Affects processing of DJDE, XES, page-formatted, and AFP data streams sent to PCL-capable printers.

Syntax PIMAGELIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default PIMGLIB

Example PIMAGELIB=PCLIMGS

Overrides You can override this parameter by using the PIMAGELIB printer profile parameter.

PMODE

Description For XOSF processing, specifies the hardware page origin (printing orientation) for documents that are converted into Metacode, and affects the entire document except for job/dataset separators.

Scope Affects processing of page-formatted and AFP data streams sent to all types of printers.

Syntax PMODE= { L | P }

where

L Landscape
P Portrait

Default P

Example PMODE=L

Overrides If you allow the IBMPMODE initialization parameter to default to Y(es), the values for page presentation (PRESENT field) and printing direction (DIRECTION field) defined in the job's PPFA FORMDEF command override your PMODE initialization parameter specification.

You can override this parameter by using the PMODE extended JCL keyword.

Related information See also the IBMPMODE initialization parameter and PMODE extended JCL keyword.

PRINTENV

Description For XOSF processing, identifies the type of centralized printer used to print AFP data streams through XPAF. XPAF uses this parameter to determine how to dynamically convert images colorized via the IID structured field.

CAUTION: Specifying an incorrect value for this parameter could produce unpredictable results, such as the system not being able to find an image library member.

Scope Affects processing of AFP data streams that contain images colorized via the IID structured field sent to centralized printers.

Syntax PRINTENV= { MONO | COLR | BOTH }

where

MONO Specifies that XPAF jobs are printed only on monochrome printers. XPAF converts any colorized images to monochrome black .IMG files.

COLR Specifies that XPAF jobs are printed only on highlight color printers. XPAF converts any colorized images to color RES .IMG files.

BOTH Specifies that XPAF jobs are printed on both monochrome and highlight color printers. XPAF converts any colorized images to the appropriate file type.

Default MONO

Example PRINTENV=BOTH

Overrides None.

Related information Refer to *Section Four: Printing Documents with XPAF* for more information about how XPAF processes images colorized via the IID structured field. Refer to *Section Three: Managing Resources with XPAF* for information about converting AFP resources.

PRINTMSG

Description For XOSF processing, indicates whether messages issued by XPAF while processing a document are printed. If you elect to print the messages, they are printed following the last page of the document and before the trailer page.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PRINTMSG=*msgcode*

where *msgcode* is

Y Prints all messages.

N Does not print any error messages.
I Prints messages with message types I, W, A, E, F.
W Prints messages with message types W, A, E, F.
A Prints messages with message types A, E, F.
E Prints messages with message types E, F.
F Prints messages with message type F.

Default E

Example PRINTMSG=W

Overrides You can override this parameter by using the PRINTMSG printer profile parameter.

Related information See also the MSGFEED initialization and printer profile parameters.

PROFDD

Description For XOSF processing, names the DD statement that specifies the native library which contains printer profiles.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PROFDD= *dname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default XINPARM

Example PROFDD=TSTPARM

Overrides None.

REVOPSEG

Description For XOSF processing, specifies whether page segments will be revised when an overlay referring to them is revised.

To use this keyword with an AFP data stream, you must:

- Issue the REFRESH operator command for the appropriate resource libraries.
- Resubmit the job using the appropriate REVxxxxx keywords in the extended JCL.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax REVOPSEG={Y|N}

where

Y Any page segments referred to by an overlay will be revised during document processing if the REVOVLY extended JCL keyword is included in the JCL used to submit the job.

N The page segments referred to by an overlay will not be revised as a part of REVOVLY processing. However, one or more page segments can still be revised using the REVPSEG extended JCL keyword.

NOTE: Specifying REVOPSEG=N is not applicable when the AUTOREV initialization or printer profile parameter is set to either AFP or BOTH. REVOPSEG will default to Y.

Default Y

Example REVOPSEG=N

Overrides You can override this parameter by using the REVOPSEG printer profile parameter or extended JCL keyword.

Related information See also the REVOVLY and REVPSEG extended JCL keywords and the AUTOREV initialization and printer profile parameters.

RLIC

Description For XOAF and XOSF processing, defines the centralized resource file level for your site.

Scope Affects processing of AFP data streams sent to centralized printers.

Syntax RLIC=*volser*

where

volser The 6-character VOLSER of the first file in the series of resource files. If you do not enter a value, or if the file level you enter is invalid, XPAF assumes the level to be UC3SA1.

Default UC3SA1

Example RLIC=UC2CA1

Overrides None.

RLID

Description For XOAF and XOSF processing, defines the decentralized resource file level for your site.

Scope Affects processing of AFP data streams sent to decentralized and PCL-capable printers.

Syntax RLID=*volser*

where

volser The 6-character VOLSER of the first file in the series of resource files. If you do not enter a value, or if the file level you enter is invalid, XPAF assumes the level to be UD3SA1.

Default UD3SA1

Example RLID=UD2CA1

Overrides None.

RMTTBL

Description For XOSF processing, identifies the XINPARM member that contains the RJE System Definition for extended BARR/SNA RJE support.

Scope Affects processing of all types of data streams sent to printers attached through a BARR/SNA RJE platform.

Syntax RMTTBL=*member-name*

where

member-name The 1- to 8-character XINPARM member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None.

Example RMTTBL=RMTTEST

Overrides None.

Related information Refer to *Section Two: Installing and Customizing XPAF* for a description of the RJE System Definition.

RSTACK

Description For XOSF processing, identifies whether RSTACK processing is activated and if JDE/JDL will be generated.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax RSTACK={START | END | BOTH | GROUP | NONE | OMIT}

where

START Writes an RSTACK record only at the beginning of a dataset. JDE/JDL will be generated at the end of a dataset with the JDE and JDL values specified in either the DEFJDE and DEFJDL initialization parameters or the JDE and JDL printer profile parameters. This will force a switch back to the XPAF-started JDE/JDL and ensure that the printer is not left in Metacode mode.

END Writes an RSTACK record only at the end of a dataset.

BOTH Writes an RSTACK record both at the beginning and end of a dataset.

GROUP Writes an RSTACK record at the beginning of the first dataset of an output group and at the end of the last dataset of an output group. JDE/JDL will be generated at the end of each dataset in an output group except for the last one with the JDE and JDL values specified in either the DEFJDE and DEFJDL initialization parameters or the JDE and JDL printer profile parameters. This will force a switch back to the XPAF-started JDE/JDL and ensure that the printer is not left in Metacode mode.

NONE Does not write RSTACK records at the beginning or end of a dataset. JDE/JDL will be generated at the end of a dataset with the JDE and JDL values specified in either the DEFJDE and DEFJDL initialization parameters or the JDE and JDL printer profile parameters. This will force a switch back to the XPAF-started JDE/JDL and ensure that the printer is not left in Metacode mode.

OMIT Does not write RSTACK records at the beginning or end of a dataset, and JDE/JDL will not be generated at the end of a dataset.

Default BOTH

Example RSTACK=N

Overrides You can override this parameter by using the RSTACK printer profile parameter.

Related information See also the DEFJDE and DEFJDL initialization parameters and the JDE and JDL printer profile parameters.

SAFLOGAI

Description For XOAF and XOSF processing, indicates how resource security checking errors are logged.

Enter SAFLOGAI=Y to record a security check success or failure in the manner specified in the profile that protects the resource. This profile is defined in the security package used to protect your resources. If you do not want to use this method for logging resource security checks, do not specify this parameter.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SAFLOGAI=Y

where

Y Records a security check success or failure in the manner specified in the profile that protects the resource.

Default If none of the SAFLOG*xx* initialization parameters are specified in the XINSXOSF member of XINPARM, SAFLOGAI=Y is used as the default.

Example SAFLOGAI=Y

Overrides None.

Related information If you specify SAFLOGAI=Y, you should omit the SAFLOGNF, SAFLOGNO, and SAFLOGNS parameters. However, if you do specify more than one of these parameters, resource security logging is based on the order in which the parameters are listed in the XINSXOAF and/or XINSXOSF member of XINPARM.

SAFLOGNF

Description For XOAF and XOSF processing, indicates how resource security checking errors are logged.

Enter SAFLOGNF=Y to record a security check success in the manner specified in the profile that protects the resource. This profile is defined in the security package used to protect your resources. If the security check fails, the attempt is not recorded. If you do not want to use this method for logging resource security checks, do not specify this parameter.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SAFLOGNF=Y

where

Y Records a security check success in the manner specified in the profile that protects the resource.

Default If none of the SAFLOG*xx* initialization parameters are specified in the XINSXOSF member of XINPARM, SAFLOGAI=Y is used as the default.

Example SAFLOGNF=Y

Overrides None.

Related information If you specify SAFLOGNF=Y, you should omit the SAFLOGAI, SAFLOGNO, and SAFLOGNS parameters. However, if you do specify more than one of these parameters, resource security logging is based on the order in which the parameters are listed in the XINSXOAF and/or XINSXOSF member of XINPARM.

SAFLOGNO

Description For XOAF and XOSF processing, indicates how resource security checking errors are logged.

Enter SAFLOGNO=Y to indicate that success or failure of a security check will not be recorded. If you do not want to use this method for logging resource security checks, do not specify this parameter.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SAFLOGNO=Y

where

Y Indicates that success or failure of a security check will not be recorded.

Default If none of the SAFLOG*xx* initialization parameters are specified in the XINSXOSF member of XINPARM, SAFLOGAI=Y is used as the default.

Example SAFLOGNO=Y

Overrides None.

Related information If you specify SAFLOGNO=Y, you should omit the SAFLOGAI, SAFLOGNF, or SAFLOGNS parameters. However, if you do specify more than one of these parameters, resource security logging is based on the order in which the parameters are listed in the XINSXOAF and/or XINSXOSF member of XINPARM.

SAFLOGNS

Description For XOAF and XOSF processing, indicates how resource security checking errors are logged.

Enter SAFLOGNS=Y to indicate that the success or failure of a security check will not be recorded, and that logging and resource statistics (SMF records) will not be updated. If you do not want to use this method for logging resource security checks, do not specify this parameter.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SAFLOGNS=Y

where

Y Indicates that the success or failure of a security check will not be recorded, and that logging and resource statistics (SMF records) will not be updated.

Default If none of the SAFLOG*xx* initialization parameters are specified in the XINSXOSF member of XINPARM, SAFLOGAI=Y is used as the default.

Example SAFLOGNS=Y

Overrides None.

Related information If you specify SAFLOGNS=Y, you should omit the SAFLOGAI, SAFLOGNF, or SAFLOGNO parameters. However, if you do specify more than one of these parameters, resource security logging is based on the order in which the parameters are listed in the XINSXOAF and/or XINSXOSF member of XINPARM.

SETUP

Description For XOSF processing, indicates whether JES issues the SETUP message each time the FORMS name changes.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SETUP={ Y | N }

where

Y JES issues the SETUP message each time the FORMS name changes.

N JES does not issue the SETUP message each time the FORMS name changes.

Default N

Example SETUP=Y

Overrides You can override this parameter by using the SETUP printer profile parameter.

SHRACQTIME

Description For XOSF processing, specifies the maximum length of time, in minutes, which XPAF will attempt to acquire a shared device. This parameter is valid only if the SHARE printer profile parameter is Y.

Scope Affects processing of all types of data streams sent to decentralized or PCL-capable printers that are remotely attached to the host.

Syntax SHRACQTIME=*nnnnn*

where

nnnnn 1 through 32767.

Default 3

Example SHRACQTIME=20

Overrides You can override this parameter by using the SHRACQTIME printer profile parameter.

Related information See also the SHRMSGINT initialization and printer profile parameters.

SHRMSGINT

Description For XOSF processing, specifies the interval, in minutes, for displaying an informational message during shared device acquisition processing. This parameter is valid only if the SHARE printer profile parameter is Y.

Scope Affects processing of all types of data streams sent to decentralized or PCL-capable printers that are remotely attached to the host.

Syntax SHRMSGINT=*nnnnn*

where

nnnnn 1 through 32767.

Default 1

Example SHRMSGINT=20

Overrides You can override this parameter by using the SHRMSGINT printer profile parameter.

Related information See also the SHRACQTIME initialization and printer profile parameters.

SLOG

Description For XOAF and XOSF processing, indicates whether XPAF error messages are written to the z/OS system log.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SLOG={ Y | N }

where

Y XPAF error messages are written to the z/OS system log.
N XPAF error messages are not written to the z/OS system log.

Default XOAF: N

XOSF: Y

Example SLOG=N

Overrides None.

Related information See also the ALOGDSN, XLOG, and XLOGDSN initialization parameters.

SMF

Description For XOAF and XOSF processing, selects the option for System Management Facilities (SMF) type 6 recording. SMF recording also can be selected or changed using the SET SMF RECORDING command from the operator's console.

Scope Affects processing of all types of data streams, except pass-through, sent to all types of printers.

Syntax SMF={Y|N}

where

Y SMF type 6 recording is used.
N SMF type 6 recording is not used.

Default Y

Example SMF=N

Overrides None.

Related information See also the XPSMBRS and XPSMSRS initialization parameters for information about using SMF recording with XPSM. Refer to *Section Seven: XPAF Operator Guide* for more information about the SET SMF RECORDING command.

SNAPCLAS

Description For XOSF processing, specifies the SYSOUT class for XPAF SNAP dumps.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SNAPCLAS=*class*

where

class A single character or digit, A through Z or 0 through 9.

Default X

Example SNAPCLAS=G

Overrides None.

SUBSYS

Description For XOSF processing, specifies the subsystem name to use. This subsystem name must be defined in the z/OS subsystem names list, which is typically found in SYS1.PARMLIB(IEFSSN*nn*). Each active XOSF must have a unique name.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SUBSYS=*subsys-name*

where

subsys-name The 4-character alphanumeric subsystem name.

Default XOSF

Example SUBSYS=XP38

Overrides None.

Related information See also the COMSSID and COMSSTYP initialization parameters.

SUBTASKS

Description For XOAF and XOSF processing, defines the maximum number of subtasks that can be active concurrently.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SUBTASKS=*value*

where

value Maximum number of subtasks that can be active concurrently. This value must provide for the number of auto-started subtasks (currently six) plus the number of printers that will be started. The numeric value range is 8-72.

NOTE: The number of printers cannot exceed 64 regardless of subsystem type.

Default For XOAF the default is 10, for XOSF the default is 40.

Example SUBTASKS=50

Overrides None.

Related information See also the COMSSID and COMSSTYP initialization parameters.

SYSFCB

Description For XOSF processing, identifies the FCB name specified by the FCB IBM JCL keyword in your JES parameters. Enter **** if you are sending data to the printer in line-mode, without using AFP. If you print AFP documents, do not enter ****.

If SYSFCB specifies the same name as the PAGEDEF IBM JCL keyword, the PAGEDEF name is ignored. To use the PAGEDEF name for AFP processing, the SYSFCB initialization parameter and the PAGEDEF IBM JCL keyword must specify different names.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SYSFCB=*fcb-name*

where

fcb-name The 1- to 4-character alphanumeric default FCB for your printers.

- If you use JES2, specify the value for SYSFCB by using these JES2 initialization parameters:

  PRT*nnnn* FCB
  R*nnnn*.PR*nnnn* FCB
  PRINTDEF NIFCB
  PRINTDEF FCB

  PRT*nnnn* FCB overrides any other parameter specified.

- If you use JES3, specify the value for SYSFCB by using these JES3 initialization parameters:

  SYSOUT CARR
  DEVICE CARRIAGE
  OUTSERV CARRIAGE

  SYSOUT CARR overrides any other parameter specified.

Default None.

Example SYSFCB=STD1

Overrides None.

Related information To invoke DJDE processing for sites that print DJDE, AFP, and native mode jobs, this SYSFCB value must match the JES default FCB value.

See also the FCB and PAGEDEF initialization parameters, the FCB printer profile parameter, and the FCB and PAGEDEF IBM JCL keywords.

SYSFLSH

Description For XOSF processing, identifies the form specified by the FLASH IBM JCL keyword in your JES parameters. Enter **** if you are sending data to the printer in line-mode, without using AFP. If you are printing AFP documents, do not enter ****.

If SYSFLSH specifies the same name as the FLASH IBM JCL keyword, the FLASH name is ignored. To use the FLASH name for AFP processing, the SYSFLSH initialization parameter and the FLASH IBM JCL keyword must specify different names.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SYSFLSH=*form-name*

where

form-name The 1- to 4-character alphanumeric default form for your printers.

- If you use JES2, specify the value for SYSFLSH by using these JES2 initialization parameters:

  PRT*nnnn* FLASH
  PRINTDEF NIFLASH

  PRT*nnnn* FLASH overrides any other parameter specified.

- If you use JES3, specify the value for SYSFLSH by using these JES3 initialization parameters:

  SYSOUT FLASH
  DEVICE FLASH
  OUTSERV FLASH

  SYSOUT FLSH overrides any other parameter specified.

Default None.

Example SYSFLSH=NONE

Overrides None.

SYSFONT

Description For XOSF processing, identifies the font specified by the CHARS IBM JCL keyword in your JES parameters. Enter **** if you are sending data to the printer in line-mode, without using AFP. If you are printing AFP documents, do not enter ****.

If SYSFONT specifies the same name as the CHARS IBM JCL keyword, the CHARS name is ignored. To use the CHARS name for AFP processing, the SYSFONT initialization parameter and the CHARS IBM JCL keyword must specify different names.

NOTE: If you specify the SYSFONT parameter for an AFP document, the font in the data stream is changed to the font specified, but the banner page font does not change.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SYSFONT=*font-name*

where

font-name The 1- to 4-character alphanumeric default font for your printers.

- If you use JES2, specify the value for SYSFONT by using these JES2 initialization parameters:

  PRT*nnnn* UCS
  R*nnnn*.PR*nnnn* UCS
  PRINTDEF NIUCS
  PRINTDEF UCS

  PRT*nnnn* UCS overrides any other parameter specified.

- If you use JES3, specify the value for SYSFONT by using these JES3 initialization parameters:

  SYSOUT CHARS
  DEVICE CHARS
  OUTSERV CHARS

SYSOUT CHARS overrides any other parameter specified.

Default GT15

Example SYSFONT=GS10

Overrides None.

Related information For AFP documents, if a font has not been defined in a page definition with the CHARS IBM JCL keyword or with the UCS IBM JCL keyword, XPAF uses the SYSFONT initialization parameter value as a CHARS value.

See also the UCS initialization and printer profile parameters, and the CHARS and UCS IBM JCL keywords.

SYSUCS

Description For XOSF processing, identifies the default UCS used when UCSs are transmitted to centralized printers.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax SYSUCS=*ucs-name*

where

ucs-name The 1- to 4-character alphanumeric default UCS for your printers.

Default None.

Example SYSUCS=AN

Overrides None.

TCPABORT

Description This parameter provides the option of permitting or stopping the submission of the Batch JCL, or whether or not the document should be attached in an e-mail of a print job that is aborted by XPAF.

Scope Affects processing of all types of data streams sent via the TCP/IP Batch JCL feature (TCPMODE= BATCH or LPR) or as an e-mail attachment.

Syntax TCPABORT= { TRANSMIT | NOTRANSMIT }

where

TRANSMIT	Permits the submission of the batch job to process the resulting document that includes errors, or allows the document to be attached to the e-mail.
NOTRANSMIT	Stops the submission of the batch job to process the resulting document that includes errors or does not attach the document to the e-mail.

Default TRANSMIT

Example TCPABORT= TRANSMIT

TCPBUFSIZE

Description Specifies the size of the buffer area allocated for passing data to the TCP/IP address space.

Scope Affects processing of all types of data streams sent to either decentralized or PCL-capable printers using the TCP/LPR or TCP/IP protocols.

Syntax TCPBUFSIZE = nnnnn

where

nnnnn Number of bytes

NOTE: The upper limit to the number of bytes defined by the TCPBUFSIZE initialization parameter is 16777215. The lower limit is 1536 bytes.

Default 32767

Example TCPBUFSIZE=9000

Overrides You can override this parameter by using the TCPBUFSIZE printer profile parameter.

Related information See also the TCPBUFSIZE printer profile parameter.

TCPCONNECT

Description Specifies how XPAF will acquire the IP address for processing documents from a JES queue.

Scope Affects processing of all types of data streams sent to any device using the direct LPR protocol.

Syntax TCPCONNECT = { OPEN | CLOSE }

where

OPEN The IP address is acquired when the document is opened in the JES queue.

CLOSE The IP address is acquired when the document is closed from the JES queue.

Default OPEN

Example TCPCONNECT= OPEN

Overrides None.

TCPIPJOB

Description Defines the IBM TCP/IP address space job name. Used by the XPAF functional subsystem to forward conditioned data for transmission across the network. Refer to IBM's *z/OS Communication Server: IP Configuration Reference*, for additional information.

Scope Affects processing of all types of data streams sent to either decentralized or PCL-capable printers using the TCP/IP or TCP/LPR protocols. This parameter does not apply to batch LPR printing.

Syntax TCPIPJOB=*nnnnnnnn*

where

nnnnnnnn TCP/IP address space job name.

Default TCPIP

Example TCPIPJOB=TCPIP

Overrides None.

TCPLPRDSN

Description Specifies whether or not the temporary dataset should be deleted when printing using the batch TCP/LPR protocol.

Scope Affects processing of all types of data streams sent to either decentralized or PCL-capable printers using the TCP/LPR protocol.

Syntax TCPLPRDSN= { DELETE | KEEP }

where

DELETE Deletes the intermediate LPR dataset as soon as it is transmitted to the specified IP address.

KEEP Stores the intermediate LPR dataset after it is transmitted to the specified IP address.

Default DELETE

Example TCPLPRDSN= KEEP

Overrides None.

Related information See also the IPADDR, LPRQNAME, TCPMODE, and TCPPORT printer profile parameters for information on setting up your system for TCP/IP printing.

For LPR protocol requests, see also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP/IP printing.

TCPRETRY

Description Defines the number of retry attempts to try to acquire the network device and the action to be taken once the count is reached.

Scope Affects processing of all types of data streams sent using the TCP/IP or TCP/LPR protocols.

Syntax TCPRETRY = { (*n*,HOLD) | (*n*,REQUEUE) | (*n*,STOP) }

where

n, HOLD After the specified number of retry attempts, the document will be held in the JES queue.

n, REQUEUE After the specified number of retry attempts, the document is requeued to the printer device.

n, STOP After the specified number of retry attempts, the printer is stopped.

Default 3, HOLD

Example TCPRETRY= (5,STOP)

Overrides None.

Related information TCPRETRY cannot be interrupted. XOSF will not allow any JES operator commands until the number of retry attempts have been completed. The time between retries is determined by the RESOLVERTIMEOUT

parameter specified in the TCPIP parameter file. For additional information, refer to IBM's *z/OS Communication Server: IP Configuration Reference*.

TDF

Description For XOSF processing, indicates whether the tracking DJDE function is activated. If you specify TDF=Y, all DJDEs encountered in the data stream are sent to the SYSLOG and XLOG.

Scope Affects processing of DJDE data streams sent to all printers.

Syntax TDF=Y | N

where

Y Activates the tracking DJDE function.

N Does not activate the tracking DJDE function.

Default N

Example TDF=Y

Overrides You can override this parameter by using the TDF printer profile parameter.

Related information See also the TDF printer profile parameter. Refer to Section Seven: XPAF Services Operator Guide for more information about suppressing messages.

UCS

Description For XOSF processing, indicates whether Universal Character Sets (UCSs) are transmitted to centralized printers.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax UCS=$\left\{ \begin{array}{c} Y \\ N \end{array} \right\}$

where

Y UCSs are transmitted to the printer.
N UCSs are not transmitted to the printer.

Default N

Example UCS=Y

Overrides You can override this parameter by using the UCS printer profile parameter or IBM JCL keyword.

Related information See also the SYSFONT and UCSPREF initialization parameters and the CHARS IBM JCL keyword.

UCSPREF

Description For XOSF processing, identifies a UCS prefix to be used when retrieving UCSs from SYS1.IMAGELIB. This parameter is necessary only if UCS=Y, which means that your UCS prefix is different from the default and you are downloading UCSs to the centralized printer.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax UCSPREF=*ucs-prefix*

where

ucs-prefix The 1- to 4-character alphanumeric UCS prefix.

Default UCS2

Example UCSPREF=UCS3

Overrides None.

Related information See also the UCS initialization and printer profile parameters.

UNIQNAME

Description For XOSF processing, specifies whether a unique 6-character suffix is generated for a converted overlay.

Scope Affects processing of AFP data streams sent to centralized printers.

Syntax UNIQNAME=$\left\{ \begin{matrix} Y \\ N \end{matrix} \right\}$

where

Y For a converted overlay, generates a form name with a unique 6-character suffix. For example, if the overlay name is O1XEROX1, the converted overlay is stored in the centralized form library with a name such as “XEROX1 -P-11-XG112A”. After it converts the overlay to a form and stores it in the centralized form library, XPAF uses that form without reconverting the overlay.

If a native form of the same name already exists in the centralized form library, XPAF ignores the existing form, converts the overlay, and generates a unique 6-character suffix.

If a preconverted overlay was converted without using the UNIQNAME parameter or if you specified UNIQNAME=N, XPAF uses the existing name found in the centralized form library without reconverting the overlay.

If a preconverted overlay already exists in the centralized form library and you specify the REVOVLY extended JCL keyword in the AFP

data stream, XPAF reconverts the overlay and stores it using the original name.

N For a converted overlay, uses the original overlay name (without the O1 prefix) as the 6-character suffix in the form name. For example, if the overlay name is O1XEROX1, the converted overlay name stored in the centralized form library will be “XEROX1 -P-11-XEROX1”.

If a native form of the same name already exists in the centralized form library, XPAF uses the existing form and does not convert the overlay.

If you specify the REVOVLY extended JCL keyword in the AFP data stream, XPAF reconverts the overlay and stores it using the original name.

Default N

Example UNIQNAME=Y

Overrides You can override this parameter by using the UNIQNAME printer profile parameter.

Related information See also the REVOVLY extended JCL keyword.

USRXIT01–USRXIT32

Description For XOSF processing, specifies the load module name of a user exit. You can specify names for up to 32 different user exits.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax USRXIT*nn*=*module-name*

where

nn 01 through 32. The value of *nn* must correspond to the user exit number for which the load module named applies.

module-name The 1- to 8-character load module name of a user exit. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character. The value of module-name must be different from all XPAF load module names.

Default None.

Example USRXIT01=LOAD01

Overrides None.

Related information XPAF supplies samples for user exits 01 through 12 and 30 through 32. Refer to *Section Two: Installing and Customizing XPAF* for more information on creating your own user exits.

USRXITWA

Description For XOSF processing, specifies the size of the work area for the user exits.

Scope Affects processing system-wide.

Syntax USRXITWA=*value*

where

value The maximum work area size required by all the user exits specified in bytes, kilobytes, or megabytes.

Default 4K

Example USRXITWA=4096

Overrides None.

VARPAPTB

Description For XOSF processing, identifies the varying paper size table used to determine the physical paper size which corresponds to the AFP bin number for the current printer. XPAF evaluates the currently active paper name table to determine the dimensions of the paper name specified in this table.

This table resides in the library specified in the XOSF start-up proc DD statement named by the PAPTBLDD initialization or printer profile parameter.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax VARPAPTB=*table-name*

where

table-name The 1- to 16-character table name. The name can include alphanumeric or national ($, #, @) characters.

Default None.

Example VARPAPTB=PRTR01A

Overrides You can override this parameter by using the VARPAPTB printer profile parameter or extended JCL keyword.

Related information Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

NOTE: XPAF cannot verify that the paper size specified matches the paper actually loaded on the printer.

VPA

Description For XOSF processing, specifies the type of value XPAF will use to determine the valid printable area when checking for data-off-page conditions.

Scope Affects the processing of page-formatted and AFP data streams sent to all types of printers.

Syntax VPA= { L | P }

where

L Logical. XPAF compares the logical and physical page values and uses the lesser value to determine the valid printable area when checking for data-off-page conditions.

P Physical. XPAF uses only the physical page to determine the valid printable area when checking for data-off-page conditions.

Default L

Example VPA=P

Overrides You can override this parameter by using the VPA printer profile parameter.

Related information See also the VPA printer profile parameter and the DATACK IBM JCL keyword.

XOAFSAMP This is sample JCL showing the procedure for running a Batch XOAF JOB and showing sample skeleton commands for the most commonly used functions.

XCORE

Description For XOSF processing, defines the amount of virtual storage to be reserved for LSQA expansion. If you receive an z/OS GETMAIN failure for high private storage on an LSQA subpool, increase the value of this parameter in increments of 4K until the value is high enough to satisfy your installation's needs.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax XCORE=*nnnn*K

where

*nnnn*K 512K through 2048K.

Default 512K

Example XCORE=756K

Overrides None.

XLOG

Description For XOAF and XOSF processing, sets the XPAF logging function on or off at session start-up.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax XLOG={ Y | N }

where

Y Activates the logging function at session start-up. Messages are written to the dataset identified by the XLOGDSN initialization parameter.

N Does not activate the logging function at session start-up.

Default XOAF: N

XOSF: Y

Example XLOG=Y

Overrides You can reset this option at any time from the system console using the SET XOSF LOGGING operator command. For more information about this operator command, refer to *Section Seven: XPAF Operator Guide*.

Related information See also the ALOGDSN, SLOG, and XLOGDSN initialization parameters.

XLOGDSN

Description For XOAF and XOSF processing, identifies the dataset to which XLOG messages are written. There is no default dataset; XPAF cannot set logging on unless you specify a dataset name for this parameter.

Installation-generated datasets

During installation, these XLOG datasets are allocated:

prefix.XOAFLOG for XOAF
prefix.XOSFLOG for XOSF

where *prefix* is the value you specified for HLQ in the #GENPROD installation service macro. You can log messages to these installation-generated datasets or to new datasets which have been allocated with the same attributes.

Generation data group (GDG)

XPAF can write to a log dataset for a (+0) or a (-*n*) preallocated GDG. XPAF cannot write to a (+n) GDG that is not preallocated nor increment the GDG itself.

Scope Affects processing system-wide.

Syntax XLOGDSN=*dataset-name*

where

dataset-name The name of the dataset to which messages will be logged; 44-character maximum, including periods. Do not include quotes around the dataset name.

Default None.

Example XLOGDSN=MJONES.XPAFLOG1

Overrides None.

Related information See also the ALOGDSN, SLOG, and XLOG and initialization parameters.

XPDFFSUB

Description Specifies the name of the member that contains PDF font substitution table. This member must reside in the XINPARM PDS dataset.

Scope Affects processing of all PDF documents.

Syntax XPDFFSUB=member-name

where

member-name The 1- to 8-character member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None

Example XPDFONTS=PDFFONTS

Overrides You can override this parameter by specifying the XPDFFSUB printer profile parameter or extended JCL keyword.

XPDL

Description Specifies if the PDL Compiler function is desired when using the LOAD PDL XOAF function.

Scope Affects processing of all types of JSL being loaded into the XPAF PDLLIB by XOAF.

Syntax XPDL=xx

where

xx is YES or NO

Default NO

Example XPDL=YES

Related information See also the OPDUNIT= and OPHLQ= initialization parameters. These parameters must be specified in your XINSXOAF XINPARM member and

will be applied to temporary work files needed by the PDL Compiler. Also see the PDLOBJ=, PDLOLIST= and AUTOREV= Printer Profile parameters for information on managing these resources at the printer.

XSHADE

Description For XOSF processing, specifies whether to enhance cells within AFP images that are recognized as a shading pattern.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax XSHADE={YES | NO}

where

YES Shading cells will be enhanced.

NO Shading cells will not be enhanced. Standard image processing will be used.

Default Y

Example XSHADE=N

Overrides You can override this parameter by using the XSHADE printer profile parameter or extended JCL keyword.

XWRLIB

Description For XOSF processing, names the DD statement that specifies the native library which contains checkpoint files. During processing, XPAF generates entries with names in the format XREF*cuu*, where *cuu* is the printer's device address.

Scope Affects processing of all types of data streams, except pass-through, sent to all types of printers.

Syntax XWRLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default XWRLIB

Example XWRLIB=CHKPTLST

Overrides None.

41. Printer profile parameters

Printer profile parameters provide XPAF with printer specific default values. These printer profile parameters are specified in a printer profile, one for each printer controlled by XPAF. Printer profile parameters can name DD statements in the XOSF start-up proc and name members in XPAF libraries like initialization parameters do, as well as setting printer specific information such as:

- The language character set and the type of character code that the printer expects to receive
- Interface devices or communication interfaces
- Whether to store or delete resources
- Whether features such as color and duplexing are available on the printer
- How much memory is available on the printer's Operating System Software (OSS)

XDS printer profiles are the printer profiles used for jobs submitted by XDS, and are those defined for the XOSF, which processes the job.

Specifying printer profile parameters

Printer profiles are stored in the library referenced by the PROFDD initialization parameter. This library is read each time an XPAF-controlled printer is started.

Sample printer profiles for each XPAF-supported printer are provided in the PROFILES member in XPFSAMP. The samples include prototype statements which show the profile parameter defaults that are being used.

Coding printer profile parameters

As you create or edit your printer profiles, you must adhere to these conventions:

- Each profile in the library must have a unique name that is identical to the printer's corresponding JES definition:
  - For JES2, profile names must be in the form PRT*nnnn*, where *nnnn* is the printer number. For example, you could name the profile of your first printer PRT1.
  - For JES3, you can specify alphanumeric profile names that do not begin with PRT.
- The first statement in the profile must be the DEVICE parameter. Other parameters can be included in any order.
- Each statement in the profile consists of a parameter, an equals sign (=), and the parameter's value(s).
- A statement can start in column one, but does not need to, allowing you to indent parameters.
- If a parameter supports multiple values, for example FEATURE, the values must be enclosed in parentheses with each value separated by a comma; however, no spaces are allowed before or after a comma. For single values, parentheses can be used, but are not required.
- Each statement ends with a comma or a space. Comments can follow on the same line.
- Separate comment lines can be included by entering an asterisk (*) in column one.
- Only one parameter is permitted per line; you cannot use continuation lines.
- A single parameter and its values must be contained on one line.
- Blank lines are ignored.
- Only text up to column 72 is parsed.

Refer to this example for an illustration of these conventions. The comment line at the beginning of the profile is used to further identify each printer.

```
*PRT2283                The Nuvera 120 by window
DEVICE=LCDS,
   UNIT=921,
   DELIMAGE=YES,        Force download and delete for all images
   MSGFEED=AUX,         Feed error message pages from AUX tray
   PAPERSIZE=LETTER,
   WRITER=LOCAL
```

Refer to *Section Two: Installing and Customizing XPAF* for more information on creating and editing printer profiles.

Parameter/keyword processing hierarchy

XPAF allows you to specify, at three different levels, certain controls used in processing documents. The levels are:

- Initialization parameters which establish system-wide defaults
- Printer profile parameters which establish printer specific defaults
- Extended JCL keywords which establish job specific values

In general, XPAF processes parameters and keywords according to this hierarchy:

- Printer profile parameters override initialization parameters.
- Extended JCL keywords override initialization and/or printer profile parameters.

Exceptions to this rule are noted in this chapter.

Parameter definitions

The following printer profile parameters are used to define your printer environment. The default values are shown when applicable.

AFPDSHDR

Description Identifies the AFP resources to be used in the dataset separator page. The FDEF, PDEF, and CHARS values you specify for this parameter are applied only to the dataset separator page. They are not applied to the document.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax AFPDSHDR=(FDEF=*formdef-name*,PDEF=*pagedef-name*, CHARS=*font-name*)

where

formdef-name Specifies the form definition to be used for the separator page.

pagedef-name Specifies the page definition to be used for the separator page.

font-name Specifies the font to be used for the separator page.

Default

Variable	Default
FDEF	A form definition with these specifications: tray 1, simplex, and offset 0,0
PDEF with the value for CHARS omitted	A page definition with these specifications: centered based on paper size
PDEF with the value for CHARS specified	A page definition with these specifications: 64 lines, 8.3 LPI, 1.1 inch left margin, and orientation 90,180
CHARS	GT15

Example AFPDSHDR=(FDEF=AX0001,PDEF=A06460,CHARS=GT20)

In this example, the AX0001 form definition, A06460 page definition, and GT20 character set are used.

Overrides This parameter overrides the AFPDSHDR initialization parameter.

AFPJOBHDR

Description Identifies the AFP resources to be used in the job header separator page. The FDEF, PDEF, and CHARS values you specify for this parameter are applied only to the job header separator page. They are not applied to the document.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax AFPJOBHDR=(FDEF=*formdef-name*,PDEF=*pagedef-name*, CHARS=*font-name*)

where

formdef-name Specifies the form definition to be used for the separator page.

pagedef-name Specifies the page definition to be used for the separator page.

font-name Specifies the font to be used for the separator page.

Default

Variable	Default
FDEF	A form definition with these specifications: tray 1, simplex, and offset 0,0
PDEF with the value for CHARS omitted	A page definition with these specifications: centered based on paper size
PDEF with the value for CHARS specified	A page definition with these specifications: 64 lines, 8.3 LPI, 1.1 inch left margin, and orientation 90,180
CHARS	GT15

Example AFPJOBHDR=(FDEF=AX0001,PDEF=A06460,CHARS=GT20)

In this example, the AX0001 form definition, A06460 page definition, and GT20 character set are used.

Overrides This parameter overrides the AFPJOBHDR initialization parameter.

AFPJOBTLR

Description Identifies the AFP resources to be used in the job trailer separator page. The FDEF, PDEF, and CHARS values you specify for this parameter are applied only to the job trailer separator page. They are not applied to the document.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax AFPJOBTLR=(FDEF=*formdef-name*,PDEF=*pagedef-name*, CHARS=*font-name*)

where

formdef-name Specifies the form definition to be used for the separator page.

pagedef-name Specifies the page definition to be used for the separator page.

font-name Specifies the font to be used for the separator page.

Default

Variable	Default
FDEF	A form definition with these specifications: tray 1, simplex, and offset 0,0
PDEF with the value for CHARS omitted	A page definition with these specifications: centered based on paper size
PDEF with the value for CHARS specified	A page definition with these specifications: 64 lines, 8.3 LPI, 1.1 inch left margin, and orientation 90,180
CHARS	GT15

Example AFPJOBTLR=(FDEF=AX0001,PDEF=A06460,CHARS=GT20)

In this example, the AX0001 form definition, A06460 page definition, and GT20 character set are used.

Overrides This parameter overrides the AFPJOBTLR initialization parameter.

AFPMSGDS

Description Identifies the AFP resources to be used in the message dataset separator page. The FDEF, PDEF, and CHARS values you specify for this parameter are applied only to the message dataset separator page. They are not applied to the document.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax AFPMSGDS=(FDEF=*formdef-name*,PDEF=*pagedef-name*, CHARS=*font-name*)

where

formdef-name Specifies the form definition to be used for the separator page.

pagedef-name Specifies the page definition to be used for the separator page.

font-name Specifies the font to be used for the separator page.

Default

Variable	Default
FDEF	A form definition with these specifications: tray 1, simplex, and offset 0,0
PDEF with the value for CHARS omitted	A page definition with these specifications: centered based on paper size
PDEF with the value for CHARS specified	A page definition with these specifications: 64 lines, 8.3 LPI, 1.1 inch left margin, and orientation 90,180
CHARS	GT15

Example AFPMSGDS=(FDEF=AX0001,PDEF=A06460,CHARS=GT20)

In this example, the AX0001 form definition, A06460 page definition, and GT20 character set are used.

Overrides This parameter overrides the AFPMSGDS initialization parameter.

Related information This parameter applies to messages generated by XPAF only. Other types of messages, such as the JES interrupt message, appear to XPAF as data, and as such will not be formatted with AFPMSGDS resources.

AUTOREV

Description Indicates one of the following:

- For non-AFP resources, indicates whether to force a resource download if the most current resource is in the XPAF native resource library and not on the printer. Download occurs when the resource is referenced in a print job.
- For AFP resources, indicates whether to force a resource conversion and download if the most current resource is in the AFP resource library and not in the XPAF resource library. Conversion and download occur when the resource is referenced in a print job.

  When processing AFP applications, XPAF examines the ISPF statistics field for the IBM PDS members to identify changes to those members since the last XPAF conversion.

Scope Affects processing of all types of data streams that reference Xerox native resources sent to centralized and decentralized printers, and processing of DJDE and XES data streams sent to PCL-capable printers and conversion to PDF.

Affects processing of AFP data streams that reference resources, with the exception of AFP fonts, sent to all types of printers.

Syntax

AUTOREV= { XEROX | AFP | BOTH | NONE }

where

XEROX	Enables automatic revision of Xerox native resources.
AFP	Enables automatic revision of AFP resources.
BOTH	Enables automatic revision of AFP resources and Xerox native resources.
NONE	Disables automatic revision of all resources.

Default The AUTOREV initialization parameter value.

Example AUTOREV=A

Overrides This parameter overrides the AUTOREV initialization parameter.

Related information See also the LIBRARY printer profile parameter, the REVOPSEG initialization and printer profile parameters, and the REVOPSEG extended JCL keyword.

BANNERCPY

Description Specifies whether or not to print multiple banner pages for DJDE documents sent to remote printers when the DJDE COPIES parameter is used.

Scope Affects processing of DJDE data streams sent to decentralized, PCL-capable or PDF printers.

Syntax BANNERCPY=Y | N

where

Y Indicates that each copy produced should have banner pages printed for it.

N Indicates that there will be one header banner page at the beginning of the job, a dataset separator at the beginning of each dataset and one trailer banner printed after the last copy of the last dataset in the job.

Default The BANNERCPY initialization parameter value.

Example BANNERCPY=N

Overrides None

Related information See also the BANNERCPY initialization parameter.

BANRESET

Description For XOSF processing, indicates whether any DJDE or XES control packets will be generated by the banner page routine. Specifying N ensures that the banner page and the job following it are printed using the printer's native environment.

Scope Affects processing of DJDE data streams sent to all types of printers, and XES data streams sent to decentralized and PCL-capable printers.

Syntax BANRESET=$\left\{ \begin{array}{c} Y \\ N \end{array} \right\}$

where

Y Sends DJDE or XES control packets to the printer.
N Does not send DJDE or XES control packets to the printer.

Default Y

Example BANRESET=N

Overrides None.

BANSTYLE

Description Identifies the banner page style to be produced by XPAF when header, dataset, or trailer pages are requested. This value also is available in user exits 02 and 05 for constructing customized banner pages.

Scope Affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to decentralized and PCL-capable printers if you have changed the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'.

Syntax BANSTYLE=*style-name*

where

style-name The 1- to 4-character user-defined banner page style name used in user exits 02 and 05. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

The two system-defined banner page style names are JES and XPAF. JES specifies the JES banner page style, and XPAF specifies the XPAF banner page style. For BANSTYLE=JES, only applies to JES2 and JES3 systems at version 4.2 or higher. If BANSTYLE=NONE is specified, no banner pages will be produced.

Default The BANSTYLE initialization parameter value.

Example BANSTYLE=PAY1

In this example, PAY1 is passed to the XDIBBANS field in @XDIB in user exits 02 and 05. You can code user exit 05 to give you additional banner page styles. User exit 05 could generate a special payroll banner page if it detected PAY1 in the XDIBBANS field.

Overrides You can override this parameter by using the BANSTYLE extended JCL keyword. You also can override this parameter by specifying a value in the XDIBBANS field in @XDIB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

BUFSIZE

Description Specifies the buffer size to use when sending data to a centralized printer attached via a BARR/SNA RJE platform. BUFSIZE is the maximum number of bytes sent in one transmission to a device.

The buffer size is determined according to this processing hierarchy:

- The system default BUFSIZE is set to 512.
- The DLOGMODE (default logmode table entry) BUFSIZE value overrides the default setting.
- The BUFSIZE printer profile parameter value overrides all previous settings.

NOTE: Extended BARR/SNA RJE configurations cannot use the BUFSIZE printer profile parameter value because printer profile values are not available when this type of session is established.

Scope Affects processing of all types of data streams sent to centralized printers that are remotely-attached using a standard BARR/SNA RJE platform.

Syntax BUFSIZE=*nnnn*

where

nnnn 256 through 3840.

Default 512

Example BUFSIZE=1024

Overrides None.

CHARSET

Description Identifies the default multinational language character set or user-defined derivative language for this decentralized printer. Only the first five characters of the value are used.

Scope Affects processing of line-mode data streams sent to decentralized printers.

Syntax CHARSET=*string*

where

string One of these language character sets: BELGIAN, CANFR (Canadian French), DANISH, DUTCH, FINNISH, FRENCH, GERMAN, ITALIAN, LATAM (Latin America), NORWEGIAN, PORTUGUESE, SPANISH, SWEDISH, UKENGLISH, and USENGLISH.

Default USENGLISH

Example CHARSET=SPANISH

Overrides None.

CHECKPNT

Description Specifies whether or not to checkpoint the print dataset.

Scope Affects processing of all data streams sent to all types of printers.

Syntax CHECKPNT=Y | N

where

Y Indicates that the page count should be interrogated and a checkpoint taken if the threshold has been reached.

N Indicates that no checkpoint processing is to be done.

Default Y

Example CHECKPNT=N

Overrides None

Related information See also the checkpoint restart sections referenced in the index.

CLUSTRTB

Description Identifies the cluster mapping table used by XPAF to map a centralized paper tray cluster name to a paper tray on a decentralized or PCL-capable printer.

This table resides in the library specified in the XOSF start-up proc DD statement named by the PAPTBLDD initialization or printer profile parameter.

Scope Affects processing of DJDE data streams sent to decentralized and PCL-capable printers.

Syntax CLUSTRTB=*table-name*

where

table-name The 1- to 16-character table name. The name can include alphanumeric or national ($, #, @) characters.

Default DEFAULT*xxxx*, where *xxxx* is the printer model. For NPS printers, the default value is DEFAULTDPNP.

Examples CLUSTRTB=DEFAULT4700

This example specifies the default cluster mapping table for the 4700 printer.

CLUSTRTB=DEFAULTDPNP

This example specifies the default cluster mapping table for the 4890 NPS printer, the 4850 NPS printer, the 4635 NPS printer, the 4090 NPS printer, and the 4050 NPS printer.

Overrides You can override this parameter by using the CLUSTRTB extended JCL keyword.

Related information If a document being printed includes a PDL-defined paper size that is not supported by the target printer as defined in the cluster mapping table, document processing is terminated. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

CONVERTER

Description Specifies the type of interface device used with this printer. Metacode data streams cannot be sent to any 3270-type protocol converters.

Scope Affects processing of all types of data streams sent to centralized printers that are remotely-attached using a standard BARR/SNA RJE platform, decentralized printers, and PCL-capable printers.

Syntax CONVERTER=*converter-type*

where *converter-type* is

BARRGATE For decentralized and PCL-capable printers, connected to a Local Area Network using BARR PRINT/GATE.

BARRSNA For centralized and PCL-capable printers, remotely-attached to the host through a modem and BARR/SNA RJE communication.

BARRTCP For centralized and PCL-capable printers, remotely attached to the host using BARR/PRINT for TCP/IP.

NONE For printers without a protocol converter attached. For example, decentralized printers connected to OS/2-based workstations, decentralized or PCL-capable printers attached to an LPD print server using the TCP/LPR protocol, or PCL-capable printers with a DocuPrint NIC version 4.12 or higher using the TCP/LPR or TCP/IP protocols.

XPAF sets the LUTYPE to LU1 and the MODE to ISO6937; if you specify any other values for LUTYPE and MODE in the printer profile, XPAF overrides those values.

Default 274

Example CONVERTER=4X

Overrides None.

Related information For more information on the relationship between this parameter and the LUTYPE printer profile parameter, refer to *Section Two: Installing and Customizing XPAF*.

DEFLINE

Description Substitutes a different print mode for a data stream with PRMODE=LINE specified. Any document with a PAGEFORM name will always be processed as a page-formatted document.

Scope Affects processing of line-mode data streams sent to all types of printers.

Syntax DEFLINE={ LINE | DJDE | PAGE }

where

LINE Indicates that no special processing is required.

DJDE Enables DJDE processing. This processing is particularly useful in emulating a PDL environment for documents that are being printed on decentralized or PCL-capable printers. However, if a document is recognized as an AFP document (for example, PAGEDEF or FORMDEF), AFP processing will override DJDE processing.

PAGE Forces AFP processing.

Default The DEFLINE initialization parameter value.

Example DEFLINE=LINE

Overrides This parameter overrides the DEFLINE initialization parameter and the PRMODE IBM JCL keyword.

Related information Refer to *Section Four: Printing Documents with XPAF* for more information about how XPAF determines the processing mode.

DELFONT

Description Indicates whether fonts that are downloaded with a document will be deleted from the printer after use.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax DELFONT={YES | NO}

where

YES Deletes the font after the document has been printed.

NO Stores the font permanently.

Default NO

Example DELFONT=YES

Overrides You can override this parameter by using the DELFONT extended JCL keyword.

DELFORM

Description Indicates whether forms that are downloaded with a document will be deleted from the printer after use.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax DELFORM={YES | NO}

where

YES Deletes the form after the document has been printed.

NO Stores the form permanently.

Default NO

Example DELFORM=YES

Overrides You can override this parameter by using the DELFORM extended JCL keyword.

DELIMAGE

Description Indicates whether images that are downloaded with a document will be deleted from the printer after use.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax DELIMAGE={YES | NO}

where

YES Deletes the image after the document has been printed.

NO Stores the image permanently.

Default NO

Example DELIMAGE=YES

Overrides You can override this parameter by using the DELIMAGE extended JCL keyword.

DELLOGO

Description Indicates whether logos that are downloaded with a document will be deleted from the printer after use.

Scope Affects processing of DJDE and page-formatted data streams sent to centralized printers.

Syntax DELLOGO={YES | NO}

where

YES Deletes the logo after the document has been printed.

NO Stores the logo permanently.

Default NO

Example DELLOGO=YES

Overrides You can override this parameter by using the DELLOGO extended JCL keyword.

DEVICE

Description Identifies the printer's model number. DEVICE must be the first parameter specified in your printer's profile.

DocuSP, FreeFlow Print Server, and Nuvera printers in PCL mode

Specify the value, DOCUSP, for all DocuSP printer models: 6180, 6155, 6135, 6115, 6100, and DP65, DP75 and DP90 and all FreeFlow Print Server devices to print PostScript or PCL to TCP/IP attached printers

DocuSP, FreeFlow Print Server, 4xxx, and Nuvera printers in LCDS mode

Specify the value, LCDS, for all members of the DocuSP, FreeFlow Print Server, 4xxx and Nuvera printer families using the LCDS decomposer attached via TCP/IP.

Specify the same value, DOCUSPC, to print LCDS to all channel-attached printers in any of the listed product groups.

LPS color printers

Specify the value, DPLPSC, for all LPS color printer models: DP92C LPS.

NPS printers

Specify the same value, DPNPS, for all NPS printer models: 4890 NPS, 4850 NPS, 4635 NPS, 4090 NPS, 4050 NPS, 180 NPS, 155 NPS, AA5 NPS, 100 NPS, and 92C NPS.

PCL printers

For any Xerox PCL-capable printer not covered by an explicit group, specify the value, PCL.

Phaser printers

Specify the value, PHASER, for all Phaser printer

PDF Conversion

Specify the value, PDF, to specify conversion to PDF.

VIPP-enabled Printers

Specify VIPP when sending line-mode VIPP applications to VIPP-enabled printers not supported by XPAF.

Default None.

Example DEVICE = PDF

This example specifies that documents will be converted to PDF.

Overrides None.

Related information Refer to *Section Two: Installing and Customizing XPAF* for information on setting up your printer profiles.

DJDESCAN

Description Indicates whether the performance option of not processing duplicate DJDEs found in large print datasets is to be used. If used, duplicate DJDEs found in a dataset will not be parsed and processed for resource requirements repeatedly by XOSF. These DJDEs will still be sent to the printer, so the print job will not be compromised in any way. This can cause a big performance enhancement on very large print jobs that repeatedly use the same DJDEs. Note that the XOSF page and/or impression counts may be slightly off because DUPLEX=YES or NO will not be recognized by XOSF in this case.

Scope Affects processing of EBDIC DJDE streams sent to centralized printers.

Syntax DJDESCAN={ **Y** or N }

where

Y Activates the DJDE scanning feature so that duplicate DJDEs will not be parsed.

N All DJDEs are parsed.

Default N

Example DJDESCAN=Y

Overrides You can override this parameter by using the DJDESCAN extended JCL keyword.

DUPLEXSW

Description Indicates whether the printer's plexing mode will switch between simplex and duplex.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax DUPLEXSW={YES | NO}

where

YES Switches the plexing mode on the printer between simplex and duplex. For example, if a document is simplex for the first few pages and duplex for the remaining pages, specify DUPLEXSW=Y to have the printer switch from simplex mode printing to duplex mode printing.

NO Does not switch the plexing mode on the printer between simplex and duplex. XPAF searches the data stream to determine if DUPLEX is specified in any of the copy groups (for AFP documents) or copy modifications (for page-formatted documents). If it is, the entire document will be printed in duplex mode. Any simplex copy groups or copy modifications will be printed with blank back pages. If DUPLEX is not specified, the entire document is printed in simplex mode.

Default The DUPLEXSW initialization parameter value.

Example DUPLEXSW=Y

Overrides This parameter overrides the DUPLEXSW initialization parameter; it can be overridden by the DUPLEXSW extended JCL keyword.

Related information For more information about printing duplex documents, refer to *Section Four: Printing Documents with XPAF*.

EMAIL_Body_Text_Member

Description Specifies the text source member to be used when creating the body of an e-mail when sending the document as an e-mail attachment. This member must reside in the dataset pointed to by the LPRDSN printer profile parameter.

Scope Affects processing of all documents sent as e-mail attachments.

Syntax EMAIL_Body_Text_Member=*member-name*

where

member-name The one to eight character member name

Default None.

Example EMAIL_Body_Text_Member=EMAILTXT

Overrides None

Related Infromation The text source member can use the variable substitution method as documented in the “Using the insertion feature to add PJL and job ticket commands” section of the XPAF User Documentation. A new variable, %EOL has been added that will insert an End-of-line sequence in the generated text. An example of the e-mail text member:

```
Dear %USER,%EOL
%EOL
Job %JOBNAME(%JOBNO) has been processed by XPAF printer
 %PRINTER.%EOL
%EOL%EOL
See the attached document.
```

EMAIL_Body_HTML_Member

Description Specifies the HTML source member to be used when creating the body of an e-mail when sending the document as an e-mail attachment. This member must reside in the dataset pointed to by the LPRDSN printer profile parameter.

Scope Affects processing of all documents sent as e-mail attachments.

Syntax EMAIL_Body_HTML_Member=*member-name*

where

member-name The one to eight character member name

Default None.

Example EMAIL_Body_HTML_Member=EMAILHTM

Overrides None

Related Infromation The html source member can use the variable substitution method as documented in the “Using the insertion feature to add PJL and job ticket commands” section of the XPAF User Documentation.

A sample HTML source member, XSMTPCTL, is provided in XPFSAMP.

This parameter is synonyms with the existing XSMTPCTL printer profile parameter.

EMAILMAX

Description Specifies the maximum number of bytes allowed in documents sent as e-mail attachments. If a document's size is greater than this value, then document processing is terminated and the job is requeued.

Scope Affects processing of all documents sent as e-mail attachments.

Syntax EMAILMAX=bytes

where

bytes Identifies the maximum allowable number of bytes.

Default No limit

Example EMAILMAX=003009

Overrides None

EMAILXN

Description Specifies the file name extension, (often referred to as the file type), that is used when the converted file is sent as an e-mail attachment.

Scope Affects processing of all documents sent as e-mail attachments.

Syntax EMAILXN=*type*

where

type Identifies file type to use on the generated e-mail attachment.

Default None

Example EMAILXN=PDF

Overrides None

FCB

Description Indicates whether Forms Control Buffers (FCBs) are transmitted to centralized printers.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax FCB={ Y | N }

where

Y Downloads the FCB specified in the JCL, which indicates line-mode or DJDE processing. If no FCB is specified in the JCL for the first native mode job after printer startup, the SYSFCB initialization parameter determines which value to use. If you specify FCB=Y, review the FCBPREF initialization parameter.

N Does not download the FCB specified in the JCL. The FCB is used as a PAGEDEF, which indicates AFP processing.

NOTE: If you specify FCB=N and the FCB name in the JCL matches the value you specify for the SYSFCB initialization parameter, the FCB value is not used as a PAGEDEF.

Default The FCB initialization parameter value.

Example FCB=N

Overrides This parameter overrides the FCB initialization parameter; it can be overridden by the FCB IBM JCL keyword.

Related information See also the FCBPREF, PAGEDEF, and SYSFCB initialization parameters and the PAGEDEF IBM JCL keyword.

FEATURE

Description Describes the capabilities of the printer to XPAF. Each printer model has its own set of defaults.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax FEATURE=(*feature-name1*[,...,*feature-namen*])

where

n	The maximum number of features available.
feature-name	The name of the supported or unsupported feature. Enter one or more of these values:
COLOR	Printer supports color processing; XPAF honors color-related extended JCL keywords.
NOCOLOR	Printer does not support color processing; XPAF does not honor color-related extended JCL keywords.
DFA	For centralized printers with finishing equipment attached only. Supports Xerox' DFA interface, version 4.1 or higher. DJDE, page-formatted, and AFP documents can be finished using DFA functionality.
NODFA	Centralized printer does not have finishing equipment attached.
DOWNLOAD	Printer accepts downloaded resources; XPAF downloads resources when required.
NODOWNLOAD	For centralized printers only. Printer does not accept downloaded resources; XPAF does not download fonts, forms, images or logos. Downloading of PDL object resources is controlled via the PDLOBJ printer profile parameter.
DUPLEX	Printer supports duplex printing. Duplexing commands are sent to the printer as required.
NODUPLEX	Printer does not support duplex printing.
EDGE2EDGE	For PCL-capable printers with a firmware version that supports edge-to-edge only. Printer prints to the edge of the page. There is no non-printable area bordering the page.
NOEDGE2EDGE	PCL-capable printer does not have a firmware version that supports edge-to-edge. Printer does not print to the edge of the page. There is a non-printable area bordering the page.
FILEKEEP	For centralized printers and decentralized printers that can permanently store resources only. Printer permanently stores downloaded resources. XPAF maintains the list of resources that are stored on the printer.

NOFILEKEEP	Printer cannot permanently store downloaded resources. XPAF downloads all resources needed for each job but does not update resource tables.
OFFSTACK	For decentralized printers that support offset stacking only. Printer supports offset stacking.
NOOFFSTACK	Decentralized printer does not support offset stacking.
JES2CCEMU	Specifies XOSF will emulate JES2 handling of machine carriage control and convert a “Write and Skip to Channel 1”, x‘89’ followed by one or more spaces to a “Skip to Channel 1” immediate.
OPRMSG	For decentralized printers only. Printer supports display of operator messages.
NOOPRMSG	Decentralized printer does not support display of operator messages.
PDFDUPLEX	Indicates that blank pages should be inserted, where needed, in a document converted to PDF, so that the document can be printed in duplex with correctly placed front and back pages. See also the XPDFDPLX extended JCL keyword. This feature is only applicable to DEVICE=PDF printers. This parameter can be overridden by the XPDFDPLX extended JCL keyword.
PJLOFFSET	Specifies that the PCL printer does not support the PCL offset command. The printer uses the “Green” controller, such as the Xerox 4595 and 4112. Direct socket printing, TCPMODE=TCPIP, must be used for this feature to work correctly.
STITCHER	Printer is configured with a finisher such as a stitcher/stacker. Page-formatted and AFP documents can be finished.
NOSTITCHER	Centralized printer is not configured with a finisher such as a stitcher/stacker. Page-formatted and AFP documents cannot be finished.
SPLITDOC	Indicates that LCDS documents should be split into multiple segments as specified by the TRIGGER definition file. Refer to the “Splitting LCDS documents” section.
SUPAFPLEN	Indicates that data sent to the V-Services (DEVICE=VSERV) print server is fully composed AFPDS (all records are AFP structured fields) and that record lengths should not be sent to the server. This feature is only applicable to DEVICE=VSERV printers.
SUPBLNKPG	Specifies that when converting LCDS documents to PCL or PDF, blank pages should not be inserted to maintain duplexing page order
UELOFFSET	Specifies that PCL printer does not support the PCL offset command. The printer does offset between jobs

and also has a hard drive to allow storing of PCL permanent resources.

Default The default features for each printer model are:

4890	COLOR, DOWNLOAD, DUPLEX, FILEKEEP, GHO, NODFA, NOEDGE2EDGE, NOMXDORIENT, NOSTITCHER, and NOXGRAPH.
4850	COLOR, DOWNLOAD, DUPLEX, FILEKEEP, GHO, NODFA, NOEDGE2EDGE, NOMXDORIENT, NOSTITCHER, and NOXGRAPH.
4650	DOWNLOAD, DUPLEX, FILEKEEP, GHO, NOCOLOR, NODFA, NOEDGE2EDGE, NOMXDORIENT, NOSTITCHER, and NOXGRAPH.
4635	DOWNLOAD, DUPLEX, FILEKEEP, GHO, NOCOLOR, NODFA, NOEDGE2EDGE, NOMXDORIENT, NOSTITCHER, and NOXGRAPH.
4135	DOWNLOAD, DUPLEX, FILEKEEP, GHO, NOCOLOR, NODFA, NOEDGE2EDGE, NOMXDORIENT, NOSTITCHER, and NOXGRAPH.
4090	DOWNLOAD, DUPLEX, FILEKEEP, GHO, NOCOLOR, NODFA, NOEDGE2EDGE, NOMXDORIENT, NOSTITCHER, and NOXGRAPH.
4050	DOWNLOAD, DUPLEX, FILEKEEP, GHO, NOCOLOR, NODFA, NOEDGE2EDGE, NOMXDORIENT, NOSTITCHER, and NOXGRAPH.
DP96 LPS	DOWNLOAD, FILEKEEP, DUPLEX, and GHO.
DP180 LPS	DOWNLOAD, FILEKEEP, DUPLEX, and GHO.
DOCUSP	DOWNLOAD, EDGE2EDGE, OFFSTACK, NOFILEKEEP, and STITCHER.
DOCUSPC	DOWNLOAD, FILEKEEP, DUPLEX, GHO, OFFSTACK.
DOCUSPL	DOWNLOAD, FILEKEEP, DUPLEX, GHO, OFFSTACK.
DPLPSC	DOWNLOAD, FILEKEEP, COLOR, DUPLEX, GHO, OFFSTACK.
DPNPS	DOWNLOAD, DUPLEX, EDGE2EDGE, GHO, NOCOLOR, NODFA, NOFILEKEEP, NOHCF, NOMXDORIENT, NOSTITCHER, NOXGRAPH, and OFFSTACK.
LCDS	DOWNLOAD, FILEKEEP, DUPLEX, GHO, OFFSTACK.
PCL	DOWNLOAD.
PDF	COLOR.
PHASER	DOWNLOAD, COLOR, MXDORIENT, GHO, OFFSTACK, NOEDGE2EDGE.

Examples

FEATURE=STITCHER

FEATURE=(COLOR,DOWNLOAD,FILEKEEP,GHO,NODFA)

Overrides None.

Related information See also the FONTLIST, FORMLIST, IMAGELIST, and LOGOLIST printer profile parameters. If more features are required than can fit on a single 72 character line, then multiple FEATURE= parameters can be used.

FFONTLIB

Description Names the DD statement that specifies the PDF font library.

Scope Affects processing of all documents converted to PDF

Syntax FFONTLIB=ddname

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default FFONTLIB

Example FFONTLIB=PDFFONT

Overrides None

FIMAGELIB

Description Names the DD statement that specifies the PDF image library.

Scope Affects processing of all documents converted to PDF.

Syntax FIMAGELIB=ddname

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default FIMGLIB

Example FIMAGELIB=PDFIMG

Overrides None

FNTTBLDD

Description For XOSF processing, names the DD statement that specifies the native library which contains the XPAF font tables. These tables support the use of Xerox and replica fonts for XPAF processing. In XOAF, use the Manage Tables option to maintain your font tables.

Scope Affects all types of processing except DJDE data streams sent to centralized printers.

Syntax FNTTBLDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default TABLELIB

Example FNTTBLDD=TABLES

Overrides None.

Related information Refer to *Section Three: Managing Resources with XPAF* for information on XOAF options.

FONTLIB

Description Names the DD statement that specifies the primary font library for the printer.

CAUTION: For decentralized and PCL-capable printers and PDF conversion, you must specify a decentralized font library here, and a centralized form library in the SFORMLIB printer profile parameter. Centralized and decentralized font must be stored in separate libraries.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax FONTLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

To specify that no DD name should be used, enter FONTLIB= with no value after the equal sign. This causes the default values to be ignored.

Default Centralized printers: The CFONTLIB initialization parameter value.

Decentralized printers: The DFONTLIB initialization parameter value.

PCL-capable printers and PDF conversion: The DFONTLIB initialization parameter value.

Example FONTLIB=DTESTFNT

Overrides For centralized printers, this parameter overrides the CFONTLIB initialization parameter. For decentralized and PCL-capable printers and PDF conversion, this parameter overrides the DFONTLIB initialization parameter.

Related information See also the SFONTLIB printer profile parameter.

FONTLIST

Description Names the list in the LIBRARY dataset for the fonts that are resident on the printer. If you specify a value for the LIBRARY printer profile parameter but not the FONTLIST parameter, a name will be generated.

- For centralized printers, the name will be in the format FONT*cuu*, where *cuu* is the unit address of the printer specified in the UNIT printer profile parameter.
- For decentralized printers, the name will be in the format FONT*slu*, where *slu* is the SLU name specified in the SLU printer profile parameter.

For this list to be maintained by XPAF, the DOWNLOAD and FILEKEEP features must be specified in the FEATURE printer profile parameter. Printers that do not support the FILEKEEP feature may share lists if they have the same resident fonts (for example, if they use the same cartridge fonts). Printers that support FILEKEEP must have unique list names.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax FONTLIST=*list-name*

where

list-name The 1- to 20-character alphanumeric list name.

Default None.

Example FONTLIST=FONT1839

Overrides None.

Related information See also the FEATURE, LIBRARY, SLU, and UNIT printer profile parameters.

NOTE: The PCL implementation of FONTLIST only utilizes the FONTLIST keyword, and is not affected by any of the above related information.

For PCL printers, the FONTLIST parameter will be a PDS member name in the XINPARM dataset which contains a list of named fonts and permanent soft fonts. Refer to *Section Three: Managing Resources with XPAF* for more information on managing a PCL font list.

FORMDEF

Description For XOSF processing, specifies the AFP resource that defines the appearance of the page on the form. XPAF automatically retrieves the form definition during printing for this printer.

PSF

If you use PSF, make sure the XPAF value for FORMDEF matches your PSF value. If you are printing the same jobs on both IBM and Xerox printers, you must specify this parameter.

Scope Affects processing of AFP data streams sent to this printer.

Syntax FORMDEF=*resource-name*

where

resource-name The 1- to 6-character resource name. The name can include alphanumeric characters.

Default The FORMDEF initialization value.

Example FORMDEF=AX0001

Overrides You can override this parameter by using the FORMDEF IBM JCL keyword.

FORMLIB

Description Names the DD statement that specifies the primary form library for the printer.

CAUTION: For decentralized and PCL-capable printers and PDF conversion, you must specify a decentralized form library here, and a centralized form library in the SFORMLIB printer profile parameter. Centralized and decentralized forms must be stored in separate libraries.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax FORMLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

To specify that no DD name should be used, enter FORMLIB= with no value after the equal sign. This causes the default values to be ignored.

Default Centralized printers: The CFORMLIB initialization parameter value.

Decentralized printers: The DFORMLIB initialization parameter value.

PCL-capable printers and PDF conversion: The DFORMLIB initialization parameter value.

Example FORMLIB=DTESTFRM

Overrides For centralized printers, this parameter overrides the CFORMLIB initialization parameter. For decentralized and PCL-capable printers and PDF conversion, this parameter overrides the DFORMLIB initialization parameter.

Related information See also the SFORMLIB printer profile parameter.

FORMLIST

Description Names the list in the LIBRARY dataset for the forms that are resident on the printer. If you specify a value for the LIBRARY printer profile parameter but not the FORMLIST parameter, a name will be generated.

- For centralized printers, the name will be in the format FORM*cuu*, where *cuu* is the unit address of the printer as specified in the UNIT printer profile parameter.
- For decentralized printers, the name will be in the format FORM*slu*, where *slu* is the SLU name as specified in the SLU printer profile parameter.

For this list to be maintained by XPAF, the DOWNLOAD and FILEKEEP features must be specified in the FEATURE printer profile parameter. Printers that support FILEKEEP must have unique list names.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax FORMLIST=*list-name*

where

list-name The 1- to 20-character alphanumeric list name.

Default None.

Example FORMLIST=FORM1839

Overrides None.

Related information See also the FEATURE, LIBRARY, SLU, and UNIT printer profile parameters.

IDENIDX

Description

Specifies the number of the DJDE identifier for all DJDEs XPAF sends to this printer. If the number specified does not have corresponding DJDEOF*nn*, DJDESK*nn*, and IDEN*nn* initialization parameters (01–09), the number will default to 0 and normal identifier processing will continue.

When you specify this parameter, the corresponding IDEN*nn* initialization parameter's identifier will override the XPAF-started identifier, which is the identifier in the JDE/JDL named by any of these parameters:

- JDE printer profile parameter
- JDL printer profile parameter
- DEFJDE initialization parameter
- DEFJDL initialization parameter

This functionality may be useful if a common JDE/JDL is to be shared in PDLLIB, but the printers actually use different identifiers. Note that the JDE and JDL extended JCL keywords do not affect identifier processing.

Scope

Affects processing of DJDE data streams sent to all types of printers.

Syntax

IDENIDX=*n*

where

n 0 through 9. 1 through 9 correspond to the DJDEOF*nn*, DJDESK*nn*, and IDEN*nn* initialization parameters. 0 specifies that the identifier in the XPAF-started JDE/JDL will be used (normal processing).

Default

0

Examples

IDENIDX=1

In this example, you must specify corresponding DJDEOF01, DJDESK01, and IDEN01 initialization parameters.

IDENIDX=2

In this example, you must specify corresponding DJDEOF02, DJDESK02, and IDEN02 initialization parameters.

Overrides

If you specify the IDENIDX printer profile parameter, the corresponding IDEN*nn* initialization parameter's identifier will override the XPAF-started identifier.

Related information

See also the DJDEOF*nn*, DJDESK*nn*, and IDEN*nn* initialization parameters.

IFONTRES

Description Specifies which of the user's AFP font libraries is to be referenced at print time. A value of 240 indicates use of the font library defined by the IBMFONTDD initialization parameter. A value of 300 indicates use of the font library defined by the IBMFONT300 initialization parameter.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IFONTRES= { 240 | 300 }

where

240 Indicates that the 240 dpi font library is used
300 Indicates that the 300 dpi font library is used

Default 240

Example IFONTRES=300

Overrides This parameter overrides the IFONTRES initialization parameter. It can be overridden by the IFONTRES extended JCL keyword.

Related information See also the IBMFONTDD and IBMFONT300 initialization parameters.

IMAGEINIMP

Description Specifies whether XPAF should enhance the print quality of converted AFP images during input processing. This parameter enhances either SIMPLE, COMPLEX, or ALL images based on the value specified in the IMAGETYPIMP parameter.

Refer to *Section Four: Printing Documents with XPAF* for a description of the types of image enhancement that result from the various combinations of parameter values.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IMAGEINIMP= { XRFTABTI | blank }

where

XRFTABTI Enhances images during input processing.
blank Does not enhance images during input processing.

Default blank

Example IMAGEINIMP=XRFTABTI

Overrides None.

Related information See also the IMAGEOUTIMP and IMAGETYPIMP printer profile parameters.

IMAGELIB

Description Names the DD statement that specifies the primary image library for the printer.

CAUTION: For decentralized and PCL-capable printers and PDF conversion, you must specify a decentralized image library here, and a centralized image library in the SIMAGELIB printer profile parameter. Centralized and decentralized images must be stored in separate libraries.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax IMAGELIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

To specify that no DD name should be used, enter IMAGELIB= with no value after the equal sign. This causes the default values to be ignored.

Default Centralized printers: The CIMAGELIB initialization parameter value.

Decentralized printers: The DIMAGELIB initialization parameter value.

PCL-capable printers and PDF conversion: The DIMAGELIB initialization parameter value.

Example IMAGELIB=DTESTIMG

Overrides For centralized printers, this parameter overrides the CIMAGELIB initialization parameter. For decentralized and PCL-capable printers and PDF conversion, this parameter overrides the DIMAGELIB initialization parameter.

Related information See also the SIMAGELIB printer profile parameter.

IMAGELIST

Description Names the list in the LIBRARY dataset for the images that are resident on the printer. If you specify a value for the LIBRARY printer profile parameter but not the IMAGELIST parameter, a name will be generated.

- For centralized printers, the name will be in the format IMAG*cuu*, where *cuu* is the unit address of the printer as specified in the UNIT printer profile parameter.
- For decentralized printers, the name will be in the format IMAG*slu*, where *slu* is the SLU name as specified in the SLU printer profile parameter.

For this list to be maintained by XPAF, the DOWNLOAD and FILEKEEP features must be specified in the FEATURE printer profile parameter. Printers that support FILEKEEP must have unique list names.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax IMAGELIST=*list-name*

where

list-name The 1- to 20-character alphanumeric list name.

Default None.

Example IMAGELIST=IMAG1839

Overrides None.

Related information See also the FEATURE, LIBRARY, SLU, and UNIT printer profile parameters.

IMAGEMAXO

Description Specifies the maximum number of images XPAF expects to encounter in an overlay, excluding images that are part of a page segment which is referenced by the overlay. XPAF uses this value to consolidate individual images referenced by an overlay into a single .IMG. The larger the value, the larger the amount of storage reserved for image consolidation. Refer to *Section Four: Printing Documents with XPAF* for information about image consolidation.

Scope Affects processing of AFP data streams sent to centralized printers.

Syntax IMAGEMAXO=*nnnnn*

where

nnnnn 1 through 32767.

Default 16

Example IMAGEMAXO=32

Overrides None.

IMAGEMAXP

Description Specifies the maximum number of inline images XPAF expects to encounter on a page. These are images that are not included in another resource type (overlay or page segment). XPAF uses this value to consolidate individual images on a page into a single .IMG. The larger the value, the larger the amount of storage reserved for image consolidation. Refer to *Section Four: Printing Documents with XPAF* for information about image consolidation.

Scope Affects processing of AFP data streams sent to centralized printers.

Syntax IMAGEMAXP=*nnnnn*

where

nnnnn 1 through 32767.

Default 16

Example IMAGEMAXP=32

Overrides None.

IMAGEMAXS

Description Specifies the maximum number of images XPAF expects to find referenced by a single page segment. XPAF uses this value to consolidate individual images referenced by a page segment into a single .IMG. The larger the value, the larger the amount of storage reserved for image consolidation.

Scope Affects processing of AFP data streams sent to centralized printers.

Syntax IMAGEMAXS=*nnnnn*

where

nnnnn 1 through 32767.

Default 16

Example IMAGEMAXS=32

Overrides None.

Related information Refer to *Section Four: Printing Documents with XPAF* for information about image consolidation.

IMAGEMODE

Description Specifies the image compression mode. This parameter can be specified for each printer. This parameter is valid only if the IMAGEOPTM printer profile parameter is TIME.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IMAGEMODE={ENC | LIN}

where

ENC Run-length encoded compression mode.

LIN Line-predicted compression mode.

LIN typically produces a slightly better compression ratio (that is, a more compressed image) than ENC. ENC typically allows for faster processing than LIN.

Default LIN

Example IMAGEMODE=ENC

Overrides None.

Related information See also the IMAGEOPTM printer profile parameter.

IMAGEOPTM

Description Specifies the image optimization compression type when converting AFP images into Xerox format.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IMAGEOPTM={SIZE | TIME}

where

SIZE Compresses images to the smallest possible size, regardless of the length of processing time involved.

TIME Compresses images in the quickest way, as specified in the IMAGEMODE parameter.

Default TIME

Example IMAGEOPTM=SIZE

Overrides None.

Related information See also the IMAGEMODE printer profile parameter.

IMAGEOUTIMP

Description Specifies whether XPAF should enhance the print quality of converted AFP images during output processing.

If you specify ALL, SIMPLE, COMPLEX or in the IMAGETYPIMP parameter, all images are enhanced during output processing.

Refer to *Section Four: Printing Documents with XPAF* for a description of the types of image enhancement that result from the various combinations of parameter values.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IMAGEOUTIMP= { XRFTABTO | blank }

where

XRFTABTO	Enhances images during output processing.
blank	Does not enhance images during output processing.

Default blank

Example IMAGEOUTIMP=XRFTABTO

Overrides None.

Related information See also the IMAGEINIMP and IMAGETYPIMP printer profile parameters.

IMAGERVID

Description Specifies whether XPAF should reverse the printing of all pixels in all images that are sent to this printer. All white pixels are printed as black, and all black pixels are printed as white. By showing the image's boundaries, this feature can assist you in positioning an image more accurately on a page.

Reversed images are stored in reversed form in the appropriate image libraries. To print correctly, images can either be reconverted, or they can be revised by setting this parameter value to N.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IMAGERVID={Y | N}

where

Y Reverses all pixels from black to white and white to black for all images that are sent to this printer.

N Does not reverse pixels.

Default N

Example IMAGERVID=N

Overrides None.

IMAGETONE

Description Specifies whether the image resolution conversion algorithm will use dark or light dots at certain decision points. This will cause images that are very dark or very light to be printed slightly darker or lighter and may be required if an image has characteristics which do not convert satisfactorily using the default.

Scope Affects processing of AFP data streams sent to all types of printers only when you specify 1 or 3 for the IMGTYPE initialization parameter, printer profile parameter, or extended JCL keyword.

Syntax IMAGETONE=*nnn*

where

nnn 1 (darkest) through 240 (lightest).

Default 120

Example IMAGETONE=105

Overrides None.

Related information See also the IMGTYPE initialization parameter, printer profile parameter, and extended JCL keyword.

IMAGETYPIMP

Description

Specifies the type of images to enhance. Use this parameter to enhance the print quality of AFP images that appear faint when converted to Xerox format and printed on a Xerox printer. Faint images typically contain raster patterns that are only one pel wide.

This parameter activates the enhancement of image raster patterns, based on the values you specify in the IMAGEINIMP and IMAGEOUTIMP parameters. This parameter may not produce the desired result when printing colorized AFP images to a centralized highlight color printer.

Refer to *Section Four: Printing Documents with XPAF* for a description of the types of image enhancement that result from the various combinations of parameter values.

NOTE: A simple image is composed of one or more contiguous IRD structured fields that contain the entire raster pattern for the image. A complex image divides the image data into one or more image cells which are individually positioned relative to the image origin by using ICP structured fields. Refer to the appropriate AFP data stream reference manual for more information.

Scope

Affects processing of AFP data streams sent to all types of printers.

Syntax

IMAGETYPIMP={NONE | ALL | SIMPLE | COMPLEX}

where

NONE	Does not select any images for enhancement.
ALL	Selects all AFP images for enhancement according to the values specified in the IMAGEINIMP and IMAGEOUTIMP printer profile parameters.
SIMPLE	Selects simple AFP images for enhancement during input processing (with the IMAGEINIMP parameter) and all images for enhancement during output processing (with the IMAGEOUTIMP parameter).
COMPLEX	Selects complex AFP images for enhancement during input processing (with the IMAGEINIMP parameter) and all images for enhancement during output processing (with the IMAGEOUTIMP parameter).

Default

NONE

Example

IMAGETYPIMP=SIMPLE

Overrides

None.

Related information

See also the IMAGEINIMP and IMAGEOUTIMP printer profile parameters.

IMGTYPE

Description Specifies whether to convert AFP images from their original resolution to 300 dpi.

NOTE: If you have previously scaled an image using a product other than XPAF, the quality of that image rescaled through XPAF may not match the original.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IMGTYPE= { 0 | 1 | 3 }

where

0 Does not scale the image dimension but does scale the position of the image. Image position scaling allows the image to print in the correct relative location on the page when printed on a Xerox printer as opposed to printing on an IBM printer. Image position scaling is increased by a factor of 25%.

For some IM-type images, image dimension scaling does occur when specifying 0. For example, non-page segment images that include shading are scaled. For these exceptions, image dimension scaling is increased by a factor of 25%.

NOTE: If you specify 0, the size of the converted image will print smaller in XPAF (by a factor of 20%) than the original 240 dpi image printed in AFP.

1 Scales the image dimension and image position of an AFP image to 300 dpi before sending it to the printer. IOCA-encoded images are scaled from any resolution to 300 dpi. All other AFP images are scaled from 240-to-300 dpi, an increase of 25%.

3 Scales the image dimension and image position of an AFP image to 300 dpi based on the current L-units value specified in the IDD or IID structured field of the image. IOCA-encoded images are scaled from any resolution to 300 dpi. For IM-type images, any L-units value that does not specify 300 dpi is assumed to be 240 dpi.

Default 0

Example IMGTYPE=1

Overrides This parameter overrides the IMGTYPE initialization parameter and can be overridden by the IMGTYPE extended JCL keyword.

Related information See also the IMAGEPROC and IMAGETONE printer profile parameters.

INKXLIB

Description Names the DD statement that specifies the native library which contains the color cross-reference tables and the color conversion table.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to centralized highlight color printers, and processing of DJDE data streams sent to decentralized full color printers.

Syntax INKXLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The INKXLIB initialization parameter value.

Example INKXLIB=TESTINK

Overrides For color cross-reference tables, this parameter overrides that INKXLIB initialization parameter; it can be overridden by the INKXLIB extended JCL keyword. For the color conversion table, this parameter overrides the INKXLIB initialization parameter. The INKXLIB extended JCL keyword does not apply to the color conversion table.

INKXREF

Description Identifies the name of the color cross-reference table used by this color printer. In XOAF, use the Maintain Color Cross-Reference Tables option on the Manage Tables menu to create and update color cross-reference tables.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to centralized highlight color printers.

Syntax INKXREF=*table-name*

where

table-name The 1- to 20-character color cross-reference table name used by this color printer. The name can include alphanumeric characters.

Default The INKXREF initialization parameter value.

Example INKXREF=IBM24850

Overrides This parameter overrides the INKXREF initialization parameter; it can be overridden by the INKXREF extended JCL keyword.

Related information Refer to *Section Three: Managing Resources with XPAF* for information on XOAF options.

IPADDR

Description Specifies the IP address or host name of this printer. Refer to your vendor's TCP documentation for information on defining a host names table.

Scope Affects processing of all types of data streams sent using the TCP/LPR or TCP/IP protocols.

Syntax IPADDR={ *ip-address* | *host-name* }

where

ip-address The 7- to 39-digit IP address of this printer.

host-name The 1- to 50-character host name of this printer as defined in your host names table. The host name can include alphanumeric, national ($, #, @), or special characters.

Default None.

Example IPADDR=13.245.113.77

Overrides None.

Related information See also the IPVERSION, LPRBNDRY, LPRDSN, LPRJCL, LPRQNAME, TCPMODE, and TCPPORT printer profile parameters for information on setting up your system for TCP batch printing.

For LPR protocol requests, see also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP batch printing.

IPVERSION

Description Indicates the version of the Internet Protocol to use.

Scope Affects processing of all documents sent via TCP/IP LPR, Sockets or E-Mail.

Syntax IPVERSION={ 4 or 6 }

where

4 Indicates IP version 4.

6 Indicates IP version 6.

Default 4.

Example IPVERSION=6

Overrides None

JDE

Description Specifies the job descriptor entry (JDE) to be used for processing documents for which no JDE has been specified.

Scope Affects processing of all types of data streams sent to centralized printers, and processing of DJDE data streams sent to decentralized and PCL-capable printers and PDF devices.

Syntax JDE=*jde-name*

where

jde-name The 1- to 6-character JDE name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The DEFJDE initialization parameter value.

Example JDE=TWOUP

Overrides This parameter overrides the DEFJDE initialization parameter; it can be overridden by the JDE extended JCL keyword.

Related information See also the BANNERJDL initialization parameter for banner page processing information. See also the RSTACK initialization and printer profile parameters for RSTACK record processing information

JDL

Description Specifies the job descriptor library (JDL) to be used for processing documents for which no JDL has been specified.

Scope Affects processing of all types of data streams sent to centralized printers, and processing of DJDE data streams sent to decentralized and PCL-capable printers and PDF devices.

Syntax JDL=*jdl-name*

where

jdl-name The 1- to 6-character JDL name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The DEFJDL initialization parameter value.

Example JDL=XPAFC1

Overrides This parameter overrides the DEFJDL initialization parameter; it can be overridden by the JDL extended JCL keyword.

Related information See also the BANNERJDL initialization parameter for banner page processing information. See also the RSTACK initialization and printer profile parameters for RSTACK record processing information

JESCOPIES

Description Specifies whether XOSF should honor the JES COPIES value by retransmitting each dataset for the specified number of copies or whether XOSF will ignore the JES COPIES value and process the dataset once. This parameter is provided to enable customers, who use a JES exit to convert the JES COPIES value to a DJDE COPIES= statement, to migrate their JES exit(s) to XPAF user exits without the need to modify JES control blocks.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax JESCOPIES={ **PROCESS** | IGNORE }

where

PROCESS indicates that XOSF should honor the JES COPIES= value and transmit the dataset the specified number of times.

IGNORE indicates that XOSF should ignore the JES COPIES= value and only transmit each dataset once. The JES COPIES= value is set in the XDIB in the XDIBCOPY field and can be used by user exits to convert the value into a DJDE COPIES= command.

Default PROCESS

Example JESCOPIES=IGNORE

Overrides None.

LANDFONT

Description Specifies the default landscape font defined on the printer. For decentralized printers in XES mode, the font must be resident on the printer.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax LANDFONT=*font-name*

where

font-name For centralized printers, the 1- to 6-character font name. The name can include alphanumeric or national ($, #, @) characters.

For decentralized and PCL-capable printers, the 1- to 20-character font name. The name can include alphanumeric characters.

Default L0112B

Example LANDFONT=XCP14iso-L

Overrides None.

LCDS_Heavy_Shading_Percent

Description Specifies the percentage of black coloring to be used when converting LCDS heavy shading to PDF. A lower value will produce lighter shading. A value of 0 will produce white or no shading. A value of 100 will produce a black box.

Scope Affects processing of all LCDS documents transformed to PDF.

Syntax LCDS_Heavy_Shading_Percent=*nnn*

where

nnn A value in the range 0 to 100 indicating the amount of back to be used in the PDF shading.

Default 41

Example LCDS_Heavy_Shading_Percent=50

Overrides This parameter can be overridden by the XLCDSHSP extended JCL keyword.

LCDS_Light_Shading_Percent

Description Specifies the percentage of black coloring to be used when converting LCDS light shading to PDF. A lower value will produce lighter shading. A value of 0 will produce white or no shading. A value of 100 will produce a black box.

Scope Affects processing of all LCDS documents transformed to PDF.

Syntax LCDS_Light_Shading_Percent=*nnn*

where

nnn A value in the range 0 to 100 indicating the amount of back to be used in the PDF shading.

Default 10

Example LCDS_Light_Shading_Percent=8

Overrides This parameter can be overridden by the XLCDSLSP extended JCL keyword.

LCDS_Medium_Shading_Percent

Description Specifies the percentage of black coloring to be used when converting LCDS medium shading to PDF. A lower value will produce lighter shading. A value of 0 will produce white or no shading. A value of 100 will produce a black box.

Scope Affects processing of all LCDS documents transformed to PDF.

Syntax LCDS_Medium_Shading_Percent=*nnn*

where

nnn A value in the range 0 to 100 indicating the amount of back to be used in the PDF shading.

Default The value specified by the LCDS_Medium_Shading_Percent printer profile parameter.

Example LCDS_Medium_Shading_Percent=20

Overrides This parameter can be overridden by the XLCDSMSP extended JCL keyword.

LIBRARY

Description Names the DD statement that specifies the native library where lists for resident fonts, forms, images, and logos are maintained for each printer. If no LIBRARY is specified, the lists will be built and maintained in memory each time a printer is started and will not be saved when the printer is stopped. This means that each resource will be downloaded to the printer as needed when the printer is restarted, even if the resource is already resident on the printer.

You should specify a library name for all printers to maintain the date and time stamps for the XOSF automatic revision feature.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax LIBRARY=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None.

Example LIBRARY=TABLELIB

Overrides None.

Related information See also the AUTOREV, FONTLIST, FORMLIST, IMAGELIST, LOGOLIST, and XNS printer profile parameters.

LOGOLIB

Description Names the DD statement that specifies the logo library for the printer.

Scope Affects processing of DJDE and page-formatted data streams sent to centralized printers.

Syntax LOGOLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

To specify that no DD name should be used, enter LOGOLIB= with no value after the equal sign. This causes the default value to be ignored.

Default The CLOGOLIB initialization parameter value.

Example LOGOLIB=TESTLOGO

Overrides This parameter overrides the CLOGOLIB initialization parameter.

LOGOLIST

Description Names the list in the LIBRARY dataset for the logos that are resident on the printer. If you specify a value for the LIBRARY printer profile parameter but not the LOGOLIST parameter, a name is generated. The name is in the form LOGO*cuu*, where *cuu* is the unit address of the printer as specified in the UNIT printer profile parameter.

For this list to be maintained by XPAF, the DOWNLOAD and FILEKEEP options must be specified on the FEATURE printer profile parameter. Printers that support FILEKEEP must have unique list names.

Scope Affects processing of DJDE and page-formatted data streams sent to centralized printers.

Syntax LOGOLIST=*list-name*

where

list-name The 1- to 20-character alphanumeric list name.

Default None.

Example LOGOLIST=LOGO1839

Overrides None.

Related information See also the FEATURE, LIBRARY, and UNIT printer profile parameters.

LPRBNDRY

Description For print jobs that contain multiple datasets being sent via batch using the TCP/LPR or TCP/IP protocols, this parameter specifies if each dataset in an output group is saved to a separate disk dataset or if all datasets in an output group are saved to one disk dataset. If each dataset is saved separately, the datasets are printed as soon as they are created instead of waiting until the end of the output group to print.

Scope Affects processing of all types of data streams sent to any printer using the TCP/LPR or TCP/IP protocols.

Syntax LPRBNDRY={GROUP | DS}

where

GROUP Writes all datasets in an output group to one disk dataset and sends that dataset to the printer when the end of the output group is reached.

DS Writes each dataset in an output group to a separate disk dataset and sends the dataset to the printer as soon as it is created.

Default GROUP

Example LPRBNDRY=DS

Overrides None.

Related information See also the IPADDR, LPRDSN, LPRJCL, LPRQNAME, TCPMODE, and TCPPORT printer profile parameters for information on setting up your system for TCP batch printing.

See also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP batch printing.

LPRDSN

Description Specifies the dataset name that contains the JCL used when printing using the TCP/LPR or TCP/IP protocols, or the commands used when printing jobs using job tickets, PJL, or VIPP.

Scope Affects processing of all types of data streams sent using the TCP/LPR or TCP/IP protocols. Affects job ticketing, and PJL sent to PCL-capable printers, or VIPP jobs sent to VIPP-enabled printers.

Syntax LPRDSN=*dataset-name*

where

dataset-name Name of the dataset that contains the TCP JCL; 44-character maximum, including periods. Do not include quotes around the dataset name.

Default None.

Example LPRDSN=MJONES.LPRJCL

Overrides None.

Related information See also the IPADDR, LPRBNDRY, LPRJCL, LPRQNAME, TCPMODE, and TCPPORT printer profile parameters for information on setting up your system for TCP batch printing.

See also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP batch printing.

See also the XJOBTMEM, XPJLMEM, XUSERAC1-3, and XVIPPMEM printer profile and extended JCL keywords for more information on VIPP, PJL, and job ticket parameters.

See also chapter 13, “Setting up PCL-capable printers,” in *Section Two: Installing and Customizing XPAF*, or chapter 37, “Printing VIPP documents” in *Section Four: Printing Documents with XPAF*.

LPRJCL

Description Specifies the member name containing the skeleton JCL that will be submitted to print a document using the batch TCP/LPR or TCP/IP protocols.

Scope Affects processing of all types of data streams sent to any printer using the batch TCP/LPR or TCP/IP protocols.

Syntax LPRJCL=*member-name*

where

member-name The 1- to 8-character member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None.

Examples LPRJCL=XTCPLPRJ

In this example, XTCPLPRJ is set up to send documents using the TCP/LPR protocol.

LPRJCL=XTCPIPJ

In this example, XTCPIPJ is set up to send documents using the TCP/IP protocol.

Overrides None.

Related information See also the IPADDR, LPRBNDRY, LPRDSN, LPRQNAME, TCPMODE, and TCPPORT printer profile parameters for information on setting up your system for TCP batch printing.

See also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP batch printing.

LPRQNAME

Description Specifies the queue name on this printer that will receive print jobs. For the default queue name of other printers and interface devices, refer to the applicable vendor documentation.

Scope Affects processing of all types of data streams sent to any printer using the TCP/LPR or TCP/IP protocols.

Syntax LPRQNAME=*queue-name*

where

queue-name The 1- to 50-character queue name on this printer. The queue name can include alphanumeric, national ($, #, @), or special characters.

NOTE: Spaces are not valid characters within a queue name.

Default None.

Example LPRQNAME=PASSTHRU

Overrides None.

Related information See also the IPADDR, LPRBNDRY, LPRDSN, LPRJCL, TCPMODE, and TCPPORT printer profile parameters for information on setting up your system for TCP batch printing.

See also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP batch printing.

LPSRELEASE

Description Defines the printer's OSS software/firmware level.

Scope Affects processing of jobs sent to centralized printers when PDLOBJ=YES has been specified. Currently has no effect for XES or PCL-capable printers or PDF devices.

Syntax LPSRELEASE=lpsrelease

where

lpsrelease An eight character value indicating the release level of the OSS software/firmware.

Default

Device	Value
DOCUSPC	V3A
DOCUSPL	V3A
DP180LPS	V3A
DPLPSC	V3A
DP96LPS	V3A
4050	V35
4090	V35
4135	V3A
420CFT	V99
4635	V3A
4635MX	V3A
4890	V37

CAUTION: If an exact match to LPSRELEASE is not found, the first object with the correct name and type will be downloaded. If incorrect default values are entered, unpredictable results may occur.

Example LPSRELEASE=V35

Overrides None.

Related information See PDLOBJ printer profile parameter.

See also the section about PDL object management in chapter 19, “XPAF resources.”

LUTYPE

Description Specifies the session type. Obtain this information from your VTAM system administrator.

Scope Affects processing of all types of data streams sent to decentralized and PCL-capable printers.

Syntax LUTYPE={LU0 | LU1 | LU3}

where

LU0 Xerox printer attached in non-SNA mode.

LU1 Xerox printer attached in SNA mode.

LU3 Xerox printer attached in SNA mode using DSC compatibility.

Default None.

Example LUTYPE=LU3

Overrides None.

Related information For XCTO, the value specified for the LUTYPE printer profile parameter determines the value that must be specified for STM from the 4213 control panel and the value for the CONVERTER printer profile parameter:

- If LUTYPE=LU1, specify DISABLED for the STM setting and specify either CONVERTER=XCTO-US or CONVERTER=XCTO-RX.
- If LUTYPE=LU3, you can use either of these combinations:
  - Specify STM XEROX for the STM setting and specify CONVERTER=XCTO-US.
  - Specify STM RANK XEROX for the STM setting and specify CONVERTER=XCTO-RX.

For more information on the relationship between this parameter and the CONVERTER printer profile parameter, refer to *Section Two: Installing and Customizing XPAF*.

MERGEOVL

Description Indicates whether overlays will be consolidated.

Include MERGEOVL=Y in your printer profile if you want to merge all the overlays in a copy group the first time that the copy group is used in a document. Each overlay in the copy group is converted, then the individual converted overlays are consolidated into a single .FRM. The .FRM is not saved in the native form library, but will be reused each time the copy group is called. At completion of the document, the .FRM is deleted from the printer. Depending on the complexity of the document, enabling this feature may improve your printer's performance.

All of the inline images included in the overlays are consolidated into a single image. The consolidated image can be reused each time the copy group is called. At completion of the document, the consolidated image is deleted from the printer.

If you include MERGEOVL=N in your printer profile, the converted overlays are not consolidated. Instead, only the first converted overlay is processed as a .FRM; subsequent converted overlays are merged with variable data on the page.

If you omit this parameter, the value specified in your XINSXOSF member is used.

Scope Affects processing of AFP documents, that include multiple overlays in a copy group, sent to centralized printers.

Syntax MERGEOVL={ Y | N }

where

Y Overlays are consolidated.
N Overlays are not consolidated.

Default The MERGEOVL initialization parameter value.

Example MERGEOVL=Y

Overrides This parameter overrides the MERGEOVL initialization parameter; it can be overridden by the MERGEOVL extended JCL keyword.

Related information If you specify MERGEOVL=Y, the COLORIMG extended JCL keyword has no affect on images within forms. However, other image resources will be affected. For more information, see the COLORIMG extended JCL keyword.

METAJDE

Description Defines the JDE member in the JDL dataset used when converting documents to Metacode. Note that the JDE must reference a VOLUME CODE=NONE to be effective.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax METAJDE=*jde-name*

where

jde-name The 1- to 6-character JDE name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The METAJDE initialization parameter value.

Example METAJDE=PGMODE

Overrides This parameter overrides the METAJDE initialization parameter; it can be overridden by the JDE extended JCL keyword.

METAJDL

Description Identifies the JDL to be used for AFP-to-Metacode jobs directed to centralized printers.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax METAJDL=*jdl-name*

where

jdl-name The 1- to 6-character JDL name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The METAJDL initialization parameter value.

Example METAJDL=HIP871

Overrides This parameter overrides the METAJDL initialization parameter; it can be overridden by the JDL extended JCL keyword.

MSGFEED

Description Identifies the tray from which paper is fed when printing messages that are issued by XPAF during document processing. This parameter is required only if the PRINTMSG initialization or printer profile parameter is a value other than N.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax MSGFEED={ MAIN | AUX | *stock-ref* }

where

MAIN	Uses the main paper tray.
AUX	Uses the auxiliary paper tray.
stock-ref	The 1- to 6-character stock reference name. Uses the tray that contains a specified paper type.

Default The MSGFEED initialization parameter value.

Example MSGFEED=MAIN

Overrides This parameter overrides the MSGFEED initialization parameter.

Related information See also the PRINTMSG initialization and printer profile parameters. For AFP data streams, refer to the AFPMSGDS initialization and printer profile parameters.

NOSTORE

Description Specifies whether AFP resources (converted overlays and images) are stored in native libraries.

Scope Affects processing of AFP data streams sent to centralized printers.

Syntax NOSTORE={ Y | N }

where

Y Does not store AFP resources in the native libraries. Instead, they are converted and downloaded for every job. This revises the resources without having to use the REV*xxxxx* extended JCL keywords.

Downloaded resources are deleted from the printer at the end of the job.

N Stores AFP resources in the native libraries.

Default The NOSTORE initialization parameter value.

Example NOSTORE=Y

Overrides This parameter overrides the NOSTORE initialization parameter.

OFFSTACK

Description Indicates whether offset stacking is enabled or disabled at the printer. For job types other than page-formatted or AFP, offsets occur when job separator or dataset separator pages are inserted.

Scope Affects processing of all types of data streams sent to decentralized printers that support offset stacking.

Syntax OFFSTACK={YES | NO}

where

YES Offset stacking by job is enabled at the printer. Offset stacking will occur between datasets only if separator pages are contained within the job.

NO Offset stacking has been manually disabled at the printer.

NOTE: For page-formatted and AFP jobs, you must specify OFFSTACK=NO if you want to use the COPYMARK=JOB JES printer parameter.

Default The OFFSTACK initialization parameter value.

Example OFFSTACK=NO

Overrides This parameter overrides the OFFSTACK initialization parameter.

PAGEDEF

Description For XOSF processing, names the default PAGEDEF member used for AFP-to-Metacode conversion if a PAGEDEF for this printer is not specified in the extended JCL. If you use AFP, make sure the XPAF value for PAGEDEF matches your AFP value.

Scope Affects processing of AFP data streams sent to this printer.

Syntax PAGEDEF=*member-name*

where

member-name The 1- to 6-character PAGEDEF member name. The name can include alphanumeric or national ($, #, @) characters.

Default The PAGEDEF initialization value.

Example PAGEDEF=X06483

Overrides You can override this parameter by using the PAGEDEF IBM JCL keyword.

Related information See also the FCB and SYSFCB initialization parameters, the FCB printer profile parameter, and the FCB IBM JCL keyword.

PAGEFORMLIB

Description Names the DD statement that specifies the partitioned dataset which contains the page formats for this printer.

Scope Affects processing of page-formatted data streams sent to all types of printers.

Syntax PAGEFORMLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The PGFRMDD initialization parameter value.

Example PAGEFORMLIB=TSTPFORM

Overrides This parameter overrides the PGFRMDD initialization parameter.

PAPERSIZ

Description Specifies the paper size for each printer.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPERSIZ=*paper-size*

where *paper-size* is

A3	16.54 by 11.69 inches.
A4	8.27 by 11.69 inches.
A5	5.83 by 8.27 inches.
B4	9.84 by 13.9 inches.
LEGAL	8.5 by 14 inches.
LEGL13	8.5 by 13 inches.
LETTER	8.5 by 11 inches.
LONG	11 by 17 inches.
STATMT	5.5 by 8.5 inches.
paper-name	Any 1- to 6-character alphanumeric, user-defined name from a paper name table.

You also can specify PAPERSIZ to match the exact dimensions of any corresponding paper size loaded in your printer. To do so, enter the values for PAPERSIZ as:

PAPERSIZ=(*width,height,unit-measure*)

where

width The paper width (x axis).

height The paper height (y axis).

unit-measure The unit of measure, specified by one of these:

CM	Centimeters
DOTS	300 dpi
IN	Inches
MM	Millimeters
XDOTS	600 dpi

If you specify a decimal value, use the letter P to identify the decimal point. Enter a valid value using one of these formats:

000P01 to 999P99 (for a decimal number)
000001 to 999999 (for a whole number)

Default The PAPERSIZ initialization parameter value.

Examples PAPERSIZ=LEGAL

PAPERSIZ=(9P84,13P9,IN)

Overrides This value overrides the value specified in the PAPERSIZ or PAPERHIT/PAPERWID/PAPERUM initialization parameters. For a selected document, you can override this parameter by using the PAPERSIZ extended JCL keyword.

If you have modified the dimensions for a paper name in a paper name table, those dimensions will override the default dimensions shown in this Syntax section. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

Related information

If you specify a paper name that is defined in a paper name table, make sure that paper name table has been specified in the PAPNAMTB initialization parameter, printer profile parameter, or extended JCL keyword. If you specify a paper name that is not defined in a paper name table, XPAF uses the values shown in this Syntax section to determine the paper size. If the paper name is not listed in the Syntax section, the paper size defaults to 8.5 by 11 inches.

For AFP data streams, XPAF uses the entries in the currently active varying paper size table to determine which tray select command to issue to decentralized and PCL-capable printers. If a valid varying paper size table is not specified, XPAF issues a tray select command based on three criteria: the AFP bin number within the copy group, the paper name specified in PAPERSIZ, and the printer type. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

PAPNAMTB

Description

Identifies the paper name table used by XPAF to determine the physical paper size dimensions that correlate to a specified paper name. The paper name can be specified in the varying paper size tables, in the cluster mapping tables, or by the PAPERSIZ initialization parameter, printer profile parameter, and extended JCL keyword.

This table resides in the library specified in the XOSF start-up proc DD statement named by the PAPTBLDD initialization or printer profile parameter.

Scope

Affects processing of all types of data streams sent to all types of printers.

Syntax

PAPNAMTB=*table-name*

where

table-name The 1- to 16-character table name. The name can include alphanumeric or national ($, #, @) characters.

Default

The PAPNAMTB initialization parameter value.

Example

PAPNAMTB=PNAME01

Overrides

This parameter overrides the PAPNAMTB initialization parameter; it can be overridden by the PAPNAMTB extended JCL keyword.

Related information

See also the PAPERSIZ initialization parameter, printer profile parameter, and extended JCL keyword. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

NOTE: XPAF cannot verify that the paper size specified matches the paper actually loaded on the printer.

PAPTBLDD

Description Names the DD statement that specifies the native library which contains paper-related tables.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPTBLDD=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The PAPTBLDD initialization parameter value.

Example PAPTBLDD=PAPRTBLS

Overrides This parameter overrides the PAPTBLDD initialization parameter.

Related information Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

PCL

Description Identifies the default Printer Command Language (PCL) for this printer.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PCL={ META | PCL5 | XES }

where

META Printer supports data streams containing Metacode.

PCL5 Printer supports data streams containing PCL5 commands.

XES Printer supports data streams containing XES commands.

Default Centralized printers: META

Decentralized printers: XES

PCL-capable printers: PCL5

Example PCL=META

Overrides None.

Related information If you specify PCL=PCL5 and you have not specified a value for PCLREQ in either your printer's profile or extended JCL, XPAF will set PCLREQ to a value of GEN.

PCLREQ

Description Indicates whether XES-to-PCL conversion is requested, or if the document is converted to the default printer command language or is passed through without conversion.

Scope Affects processing of all types of data streams sent to PCL-capable printers.

Syntax PCLREQ={DEFAULT | GEN | PASS}

where

DEFAULT	Converts the document to the default printer command language specified by the PCL printer profile parameter.
GEN	Converts the document to PCL5 format.
PASS	Indicates that the document is a pass-through job; no conversion is performed.

Default DEFAULT

Example PCLREQ=GEN

Overrides You can override this parameter by using the PCLREQ extended JCL keyword.

Related information If you specify PCL=PCL5 in your printer's profile and you have not specified a value for PCLREQ in either your printer's profile or extended JCL, XPAF will set PCLREQ to a value of GEN.

PDLLIB

Description Names the DD statement that specifies the native library that contains JSL files, and cataloged member files.

Scope Affects processing of all types of data streams sent to centralized printers, and processing of DJDE data streams sent to decentralized and PCL-capable printers.

Syntax PDLLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The PDLLIB initialization parameter value.

Example PDLLIB=TESTPDL

Overrides This parameter overrides the PDLLIB initialization parameter.

Related information When you update PDL, you must update it on both the host and the printer. Then, recompile the PDL on the printer and load the updated host member to the native library specified in the DD statement named by this parameter. Refer to *Section Three: Managing Resources with XPAF* and *Section Four: Printing Documents with XPAF* for more information on updating PDL.

PDLOBJ

Description Enables downloading of PDL object files (JDL, PDE, CME, STK, TST, LIB, and IDR) to centralized printers when referenced within a print job. These resources must first be loaded into the PDLLIB with XOAF.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax PDLOBJ={ YES | NO }

where

YES Enables PDL resource management.

NO Disables PDL resource management.

Default NO

Related information See also the AUTOREV initialization and printer profile parameters.

This parameter is independent of the FEATURE=NODOWNLOAD parameter. PDL objects will be downloaded based on the setting of the PDLOBJ parameter, not the FEATURE=DOWNLOAD/NODOWNOAD parameter.

Refer to *Section Three: Managing Resources with XPAF* and *Section Four: Printing Documents with XPAF* for more information on updating PDL.

PDLOLIST

Description Names the list in the LIBRARY dataset for the PDL objects that are resident on the printer. This list will be maintained if you have specified PDLOBJ=Y in your printer profile.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax PDLOLIST=list-name

where

list-name Is the 1- to 20-character alphanumeric list name.

Default PDLOunit

Example PDLOLIST=MYPDLOBJLIST

Related information See also the FEATURE, LIBRARY, PDLOBJ and UNIT printer profile parameters.

PFONTLIB

Description Names the DD statement that specifies the PCL font library used to store fonts that have been dynamically converted to PCL format.

Scope Affects processing of DJDE, XES, page-formatted, and AFP data streams sent to PCL-capable printers.

Syntax PFONTLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The PFONTLIB initialization parameter value.

Example PFONTLIB=PCLFONTS

Overrides This parameter overrides the PFONTLIB initialization parameter.

PFORMLIB

Description Names the DD statement that specifies the PCL form library used to store forms that have been dynamically converted to PCL format.

Scope Affects processing of DJDE, XES, page-formatted, and AFP data streams sent to PCL-capable printers.

Syntax PFORMLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The PFORMLIB initialization parameter value.

Example PFORMLIB=PCLFORMS

Overrides This parameter overrides the PFORMLIB initialization parameter.

PIMAGELIB

Description Names the DD statement that specifies the PCL image library used to store images that have been dynamically converted to PCL format.

Scope Affects processing of DJDE, XES, page-formatted, and AFP data streams sent to PCL-capable printers.

Syntax PIMAGELIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The PIMAGELIB initialization parameter value.

Example PIMAGELIB=PCLIMGS

Overrides This parameter overrides the PIMAGELIB initialization parameter.

PORTFONT

Description Specifies the default portrait font defined on the printer. This value is used for AFP-to-XES conversions in a dummy font selection to invoke the correct page orientation at the beginning of a document. For decentralized printers in XES mode, the font must be resident on the printer.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PORTFONT=*font-name*

where

font-name For centralized printers, the 1- to 6-character font name. The name can include alphanumeric or national ($, #, @) characters.

For decentralized and PCL-capable printers and PDF devices, the 1- to 20-character font name. The name can include alphanumeric characters.

Default P0612A

Example PORTFONT=Titan10iso-P

Overrides None.

PRINTMSG

Description Indicates whether messages issued by XPAF while processing a document are printed. If you print the messages, they are printed following the last page of the document and before the trailer page.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PRINTMSG=*msgcode*

where *msgcod*e is

Y Prints all messages.
N Does not print any error messages.
I Prints messages with message types I, W, A, E, F.
W Prints messages with message types W, A, E, F.
A Prints messages with message types A, E, F.
E Prints messages with message types E, F.
F Prints messages with message type F.

Default The PRINTMSG initialization parameter value.

Example PRINTMSG=E

Overrides This parameter overrides the PRINTMSG initialization parameter.

Related information See also the MSGFEED initialization and printer profile parameters.

REVOPSEG

Description Specifies whether page segments will be revised when an overlay referring to them is revised.

To use this keyword with an AFP data stream, you must:

Resubmit the job using the appropriate REVxxxxx keywords in the extended JCL.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax REVOPSEG={ Y | N }

where

Y Any page segments referred to by an overlay will be revised during document processing if the REVOVLY extended JCL keyword is included in the JCL used to submit the job.

N The page segments referred to by an overlay will not be revised as a part of REVOVLY processing. However, one or more page segments can still be revised separately using the REVPSEG extended JCL keyword.

NOTE: Specifying REVOPSEG=N is not applicable when the AUTOREV initialization or printer profile parameter is set to either AFP or BOTH. REVOPSEG will default to Y.

Default The REVOPSEG initialization parameter value.

Example REVOPSEG=N

Overrides This parameter overrides the REVOPSEG initialization parameter; it can be overridden by the REVOPSEG extended JCL keyword.

Related information See also the REVOVLY and REVPSEG extended JCL keywords and the AUTOREV initialization and printer profile parameters.

RSTACK

Description Identifies whether RSTACK processing is activated and if JDE/JDL will be generated.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax

```
RSTACK={ START
         END
         BOTH
         GROUP
         NONE
         OMIT }
```

where

START Writes an RSTACK record only at the beginning of a dataset. JDE/JDL will be generated at the end of a dataset with the JDE and JDL values specified in either the DEFJDE and DEFJDL initialization parameters or the JDE and JDL printer profile parameters. This will force a switch back to the XPAF-started JDE/JDL and ensure that the printer is not left in Metacode mode.

END Writes an RSTACK record only at the end of a dataset.

BOTH Writes an RSTACK record both at the beginning and end of a dataset.

GROUP Writes an RSTACK record at the beginning of the first dataset of an output group and at the end of the last dataset of an output group. JDE/JDL will be generated at the end of each dataset in an output group except for the last one with the JDE and JDL values specified in either the DEFJDE and DEFJDL initialization parameters or the JDE and JDL printer profile parameters. This will force a switch back to the XPAF-started JDE/JDL and ensure that the printer is not left in Metacode mode.

NONE Does not write RSTACK records at the beginning or end of a dataset. JDE/JDL will be generated at the end of a dataset with the JDE and JDL values specified in either the DEFJDE and DEFJDL initialization parameters or the JDE and JDL printer profile parameters. This will force a switch back to the XPAF-started JDE/JDL and ensure that the printer is not left in Metacode mode.

OMIT Does not write RSTACK records at the beginning or end of a dataset, and JDE/JDL will not be generated at the end of a dataset.

Default The RSTACK initialization parameter value.

Example RSTACK=N

Overrides This parameter overrides the RSTACK initialization parameter.

Related information See also the DEFJDE and DEFJDL initialization parameters and the JDE and JDL printer profile parameters.

SDLCRLC

Description Indicates whether to compress data streams on a printer-by-printer basis for centralized printers attached via a standard BARR/SNA RJE platform or an SNA interface. XPAF uses an SDLC run-length compression algorithm to compress the data.

Scope Affects processing of all types of data streams sent to centralized printers attached via a standard BARR/SNA RJE platform or an SNA interface.

Syntax SDLCRLC={ Y | N }

where

Y Compresses data streams.
N Does not compress data streams.

Default Y

Example SDLCRLC=N

Overrides None.

SELECT

Description Identifies the BARR/SNA RJE printer that is associated with this printer profile.

Scope Affects processing of all types of data streams sent to BARR/SNA RJE connected printers.

Syntax SELECT=*printer-name*

where

printer-name PRINT1 through PRINT6.

Default PRINT1

Examples SELECT=PRINT1

This example specifies PRINT1 for logical RJE printer PR1.

SELECT=PRINT2

This example specifies PRINT2 for logical RJE printer PR2.

Overrides None.

SERIAL

Description Identifies the printer serial number. XPAF does not use this value, but it is available to user exits in @XXQPPT.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax SERIAL= { *string* | blank }

where

string Any valid 1- to 16-character alphanumeric serial number. This serial number cannot contain spaces or commas.

blank No serial number is specified.

Default blank

Example SERIAL=3Y6003932

Overrides None.

SETUP

Description Indicates whether JES issues the SETUP message each time the FORMS name changes. For centralized printers that are remotely-attached using standard BARR/SNA RJE, it enables generation of the PDIR. For centralized printers that are remotely-attached using BARR/PRINT for TCP/IP, it enables the BARR OUTPUT statement.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax

```
SETUP= { Y      }
       { N      }
       { PDIR   }
       { OUTPUT }
```

where

Y	Yes. When you start the printer, you must issue a start printer command before the first job will print.
N	No. When you start the printer, available jobs automatically start printing.
PDIR	Indicates that XPAF will build the PDIR and send it to the BARR/SNA RJE workstation. The PDIR contains this information: date, time, forms, FCB name, copies, volume, I/O (number of print lines), and DSN (job name). You can use the information in these fields to manage your output and control job routing. The copies field passed in the PDIR contains the value specified for the COPIES IBM JCL keyword. BARR/SNA RJE uses this value to determine the number of copies needed. For example, if a value of three is passed in the PDIR, XPAF will transmit the job to the BARR/SNA RJE workstation once, then the BARR/SNA RJE workstation will send the job to the printer three times. If you specify SETUP=(PDIR,NOCOPY), then the copies value is not included in the PDIR. Multiple copies are transmitted from XPAF to the BARR/SNA RJE workstation, and the BARR/SNA RJE workstation sends each copy to the printer one time. For example, if a value of five is specified for the COPIES IBM JCL keyword but the printer profile specifies SETUP=(PDIR,NOCOPY), XPAF will transmit the job to the BARR/SNA RJE workstation five times, and the BARR/SNA RJE workstation will send each copy to the printer once.
OUTPUT	Indicates that XPAF will generate a BARR OUTPUT statement for TCP/IP workstation.

Default The SETUP initialization parameter value.

Example SETUP=Y

Overrides This parameter overrides the SETUP initialization parameter.

SFONTLIB

Description Names the DD statement that specifies the secondary font library for the printer. Use this library to store centralized fonts only.

Although XPAF does not perform dynamic font conversion for DJDE data streams, it looks at the corresponding centralized font to obtain the font metric information it needs to determine line spacing.

CAUTION: Do not specify the same DD name here that you specify for the FONTLIB printer profile parameter. You must use separate centralized and decentralized font libraries.

Scope Affects processing of DJDE data streams sent to decentralized and PCL-capable printers and PDF conversion.

Syntax SFONTLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The CFONTLIB initialization parameter value.

Example SFONTLIB=CTESTFNT

Overrides None.

Related information See also the FONTLIB printer profile parameter.

SFORMLIB

Description Names the DD statement that specifies the secondary form library for the printer. Use this library to store centralized forms only.

Dynamic conversion

During processing, if a decentralized form is not found in the primary form library specified by the FORMLIB printer profile parameter, XPAF looks for a corresponding centralized form in the secondary form library. If it finds one, XPAF dynamically converts the form to decentralized format, stores it in the primary form library, and sends it to the decentralized printer. The converted form will also be stored on the printer if it has storage capability.

CAUTION: Do not specify the same DD name here that you specify for the FORMLIB printer profile parameter. You must use separate centralized and decentralized form libraries.

Scope Affects processing of DJDE data streams sent to decentralized and PCL-capable printers and PDF conversion.

Syntax SFORMLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The CFORMLIB initialization parameter value.

Example SFORMLIB=CTESTFRM

Overrides None.

Related information See also the FORMLIB printer profile parameter.

SHARE

Description Specifies whether this printer is available for participation in device sharing via VTAM.

Scope Affects processing of all types of data streams sent to decentralized and PCL-capable printers that are remotely attached to the host.

Syntax SHARE={ Y | N }

where

Y The printer is available for participation in device sharing via VTAM.

N The printer is not available for participation in device sharing via VTAM.

Default N

Example SHARE=Y

Overrides None.

SHRACQTIME

Description Specifies the maximum length of time, in minutes, which XPAF will attempt to acquire a shared device. This parameter is valid only if the SHARE printer profile parameter is Y.

Scope Affects processing of all types of data streams sent to decentralized or PCL-capable printers that are remotely attached to the host.

Syntax SHRACQTIME=*nnnnn*

where

nnnnn 1 through 32767.

Default The SHRACQTIME initialization parameter value.

Example SHRACQTIME=20

Overrides This parameter overrides the SHRACQTIME initialization parameter.

Related information See also the SHRMSGINT initialization and printer profile parameters.

SHRMSGINT

Description Specifies the interval, in minutes, for displaying an informational message during shared device acquisition processing. This parameter is valid only if the SHARE printer profile parameter is Y.

Scope Affects processing of all types of data streams sent to decentralized or PCL-capable printers that are remotely attached to the host via VTAM.

Syntax SHRMSGINT=*nnnnn*

where

nnnnn 1 through 32767.

Default The SHRMSGINT initialization parameter value.

Example SHRMSGINT=20

Overrides This parameter overrides the SHRMSGINT initialization parameter.

Related information See also the SHRACQTIME initialization and printer profile parameters.

SIMAGELIB

Description Names the DD statement that specifies the secondary image library for the printer. Use this library to store centralized images only.

Dynamic conversion

During processing, if a sixelized image is not found in the primary image library specified by the IMAGELIB printer profile parameter, XPAF looks for a corresponding .IMG in the secondary image library. If it finds one, XPAF dynamically converts the image to a sixelized image, stores it in the primary image library, and sends it to the decentralized printer. The converted image will also be stored on the printer if it has storage capability.

CAUTION: Do not specify the same DD name here that you specify for the IMAGELIB printer profile parameter. You must use separate centralized and decentralized image libraries.

Scope Affects processing of DJDE data streams sent to decentralized and PCL-capable printers and PDF conversion.

Syntax SIMAGELIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The CIMAGELIB initialization parameter value.

Example SIMAGELIB=CTESTIMG

Overrides None.

Related information See also the IMAGELIB printer profile parameter.

SLU

Description Identifies the VTAM name of the printer. You should obtain the printer name from the VTAM system administrator.

Scope Affects processing of all types of data streams sent to centralized and decentralized printers that are remotely-attached using a standard BARR/SNA RJE platform.

Syntax SLU=*vtam-name*

where

vtam-name The 1- to 8-character VTAM name of the printer, the VTAM name of an RJE session defined by Barr/RJE host definitions (not a 3270 LU name). The name can include alphanumeric characters.

Default None.

Example SLU=SLU2222

Overrides None.

STARTJDEL

Description Specifies whether XOSF should use the default JDE and JDL values defined in the printer profile or the JDE and JDL values specified via extended JCL or the XJCFSIM table as the starting JDE and JDL for the document.

Scope Affects processing of LCDS data streams sent to any type of printer.

Syntax STARTJDEL={**PPT** | XJCL}

where

PPT or P LCDS documents will start with the default JDE and JDL values specified in the printer profile table.

XJCL or X LCDS documents will start with the default JDE and JDL values specified in extended JCL or via the XJCLSIM table, if present.

Default STARTJDEL=PPT

Example STARTJDEL=XJCL

Overrides None.

TCPABORT

Description This parameter provides the option of permitting or stopping the submission of the Batch JCL, or whether or not the document should be attached in an e-mail of a print job that is aborted by XPAF.

Scope Affects processing of all types of data streams sent via the TCP/IP Batch JCL feature (TCPMODE= BATCH or LPR) or as an e-mail attachment.

Syntax TCPABORT= { TRANSMIT | NOTRANSMIT }

where

TRANSMIT	Permits the submission of the batch job to process the resulting document that includes errors, or allows the document to be attached to the e-mail.
NOTRANSMIT	Stops the submission of the batch job to process the resulting document that includes errors or does not attach the document to the e-mail.

Default TRANSMIT

Example TCPABORT= TRANSMIT

Overrides This parameter overrides the TCPABORT initialization parameter.

TCPBIND

Description Specifies the local TCP/IP port numbers on which to bind when transmitting print jobs.

Scope Used to specify the local port numbers for print servers that require a specific port number range.

Syntax TCPBIND=*xxxx,yyyy*

where

xxxx	Indicates the local port number used as a starting point from which to bind print jobs.
yyyy	Indicates the number of ports to use.

Default None.

Example TCPBIND=(721,11)

Overrides None.

TCPBUFSIZE

Description Specifies the size of the buffer area allocated for passing data to the TCP/IP address space.

Scope Affects processing of all types of data streams sent to any printer using the TCP/LPR or TCP/IP protocols.

Syntax TCPBUFSIZE = nnnnn

where

nnnnn Number of bytes

Default 32767

Example TCPBUFSIZE=9000

Overrides None.

Related information See also the TCPBUFSIZE initialization parameter.

TCPCONNECT

Description Specifies how XPAF will acquire the IP address for processing documents from a JES queue.

Scope Affects processing of all types of data streams sent to any device using the direct LPR protocols.

Syntax TCPCONNECT = { OPEN | CLOSE }

where

OPEN The IP address is acquired when the document is opened in the JES queue.

CLOSE The IP address is acquired when the document is closed from the JES queue.

Default The setting specified by the TCPCONNECT initialization parameter.

Example TCPCONNECT= OPEN

Overrides None.

TCPMAIL

Description Specifies whether a document will be sent to the PDF printer in addition to e-mail.

Scope Affects processing of all documents sent as e-mail attachments.

Syntax TCPMAIL=BOTH | MAILONLY | YES

where

BOTH	The document be sent to both the user (as an e-mail attachment) and to the PDF printer.
MAILONLY	The document will only be sent to the user as an e-mail attachment.
YES	The document will only be sent to the user as an e-mail attachment

Default none. The document will not be sent as an e-mail attachment.

Example TCPMAIL=BOTH

Overrides None

TCPMODE

Description Specifies the TCP protocol used to send data to this printer XPAF.

Scope Affects processing of all types of data streams sent to all types of printers using the TCP/LPR or TCP/IP protocols.

Syntax TCPMODE= { BATCH | DATASET | RENAME | TCPIP | TCPLPR }

where

BATCH	Indicates that the TCP/LPR protocol is used to send data to this printer. It also indicates that the resulting print file is processed via a batch job that is built from the skeleton JCL specified by the LPRJCL parameter and submitted via the internal reader. A sample JCL (XTCPIPJ) is provided to illustrate a method of sending a print file via batch LPR.
DATASET	Indicates that the data created by XPAF is saved in a dataset. No further processing of the dataset is performed.
RENAME	Specifies that the data created by XPAF is saved in a dataset that is then renamed to a name specified in the XODB Mail File Name field, XODBMFNM.
TCPLPR	Indicates that the direct TCP/LPR protocol is used to send data directly from XPAF to the LPD Server.
TCPIP	Indicates that the TCP/IP direct socket protocol is used to send data to this printer. This requires the TCPPORT value to be set to the server's port number.

Default None

Example TCPMODE=TCPLPR

Overrides None.

Related information See also the IPADDR, LPRBNDRY, LPRDSN, LPRJCL, LPRQNAME, and TCPPORT printer profile parameters for information on setting up your system for TCP batch printing. For LPR protocol requests, see also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP batch printing.

If you specify TCPMODE=RENAME, you can set the XODBMFNM field via the MAILFILE= IBM JCL Keyword, the XFILENAME enhanced DJDE, via a trigger file when splitting an LCDS document, or via XOSF User Exit 02. The name can be a valid sequential file name, partitioned dataset or library (PDSE) name, which must include the member name, eg. MAILFILE=TC.DAILY.REPORT(D141031), or a UNIX file name, eg. MAILFILE=/u/xpaf/dailyreport/D141031.PDF

TCPPORT

Description Specifies the TCP/IP port number of this printer. Refer to your printer documentation to determine the correct port number to use.

Scope Used for Direct IP or Direct LPR printing only. Affects processing of all types of data streams sent to any printer attached via TCP/IP.

Syntax TCPPORT=*nnnnn*

where

nnnnn 0 through 65535.

Default 515

Example TCPPORT=9100

Overrides None.

Related information See also the IPADDR, LPRBNDRY, LPRDSN, LPRJCL, LPRQNAME, and TCPMODE printer profile parameters for information on setting up your system for TCP batch printing.

TCPWAIT

Description Specifies the time, in one hundredths of a second, that XOSF will wait after sending a buffer of data to the TCPIP destination. This parameter is provided to avoid XOSF flooding the network or tieing up the CPU on very fast systems.

Scope Used for Direct IP or Direct LPR printing only. Affects processing of all types of data streams sent to any printer attached via TCP/IP.

Syntax TCPWAIT=*nnn*

where

nnnnn 0 through 200.

Default 0

Example TCPWAIT=50 * Wait 50/100 = 1/2 a second

Overrides None.

TDF

Description Indicates whether the tracking DJDE function is activated. If you specify TDF=Y, all DJDEs encountered in the data stream are sent to the SYSLOG and XLOG.

Scope Affects processing of DJDE data streams sent to all printers.

Syntax TDF=Y | N
where
Y Activates the tracking DJDE function.
N Does not activate the tracking DJDE function.

Default The TDF initialization parameter value.

Example TDF=N

Overrides This parameter overrides the TDF initialization parameter.

Related information See also the TDF initialization parameter.

UCS

Description Indicates whether Universal Character Sets (UCSs) are transmitted to centralized printers.

Scope Affects processing of line-mode and DJDE data streams sent to centralized printers.

Syntax UCS={ Y | N }

where

Y UCSs are transmitted to the printer.
N UCSs are not transmitted to the printer.

Default The UCS initialization parameter value.

Example UCS=N

Overrides This parameter overrides the UCS initialization parameter; it can be overridden by the UCS IBM JCL keyword.

Related information See also the UCSPREF and SYSFONT initialization parameters and the CHARS IBM JCL keyword.

UNIQNAME

Description Specifies whether a unique 6-character suffix is generated for a converted overlay.

Scope Affects processing of AFP data streams sent to centralized printers.

Syntax UNIQNAME={ Y | N }

where

Y For a converted overlay, generates a form name with a unique 6-character suffix. For example, if the overlay name is O1XEROX1, the converted overlay is stored in the centralized form library with a name such as “XEROX1 -P-11-XG112A”. After it converts the overlay to a form and stores it in the centralized form library, XPAF uses that form without reconverting the overlay.

If a native form of the same name already exists in the centralized form library, XPAF ignores the existing form, converts the overlay, and generates a unique 6-character suffix.

If a preconverted overlay was converted without using the UNIQNAME parameter or if you specified UNIQNAME=N, XPAF uses the existing name found in the centralized form library without reconverting the overlay.

If a preconverted overlay already exists in the centralized form library and you specify the REVOVLY extended JCL keyword in the AFP data stream, XPAF reconverts the overlay and stores it using the original name.

N For a converted overlay, uses the original overlay name without the O1 prefix as the 6-character suffix. For example, if the overlay name is O1XEROX1, the converted overlay name stored in the centralized form library will be “XEROX1 -P-11-XEROX1”.

If a native form of the same name already exists in the centralized form library, XPAF uses the existing form and does not convert the overlay.

If you specify the REVOVLY extended JCL keyword in the AFP data stream, XPAF reconverts the overlay and stores it using the original name.

Default The UNIQNAME initialization parameter value.

Example UNIQNAME=Y

Overrides This parameter overrides the UNIQNAME initialization parameter.

Related information See also the REVOVLY extended JCL keyword.

UNIT

Description Provides the cuu device address of a locally-attached printer. A unique address must be given for each local printer including WRITER=TAPE or WRITER=DISK printers. This address is used to create unique table names for printer resource management. For FILE or DISK only printers, the cuu does not actually have to exist.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax UNIT=*nnnn*

where

nnnn 0000 through FFFF. Any valid four-digit hexadecimal device address. A slash (/) is not required preceding the four-digit device address. Also, you may omit a leading zero from the address. XPAF will add a zero in front of a three-digit entry.

Default None.

Examples UNIT=E23

In this example, XPAF adds a leading zero so that 0E23 is used as the device address.

UNIT=5384

In this example, 5384 is a valid four-digit device address.

Overrides None.

Related information See also the FONTLIST, FORMLIST, IMAGELIST, and LOGOLIST printer profile parameters.

VARPAPTB

Description Identifies the varying paper size table used by XPAF to determine the physical paper size which corresponds to the AFP bin number for the current printer. XPAF evaluates the currently active paper name table to determine the dimensions of the paper name specified in this table.

This table resides in the library specified in the XOSF start-up proc DD statement named by the PAPTBLDD initialization or printer profile parameter.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax VARPAPTB=*table-name*

where

table-name The 1- to 16-character table name. The name can include alphanumeric or national ($, #, @) characters.

Default None.

Example VARPAPTB=PRTR01A

Overrides This parameter overrides the VARPAPTB initialization parameter; it can be overridden by the VARPAPTB extended JCL keyword.

Related information Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

NOTE: XPAF cannot verify that the paper size specified matches the paper actually loaded on the printer.

VPA

Description Specifies the type of value XPAF will use to determine the valid printable area when checking for data-off-page conditions.

Scope Affects processing of page-formatted and AFP data streams sent to all types of printers.

Syntax VPA={ L | P }

where

L Logical. XPAF compares the logical and physical page values and uses the lesser value to determine the valid printable area when checking for data-off-page conditions.

P Physical. XPAF uses only the physical page to determine the valid printable area when checking for data-off-page conditions.

Default The VPA initialization parameter value.

Example VPA=L

Overrides This parameter overrides the VPA initialization parameter.

Related information See also the VPA initialization parameter and the DATACK IBM JCL keyword.

WRITER

Description Specifies the type of writer that is used to communicate with a printer or print server.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax

```
WRITER={ LOCAL[,TAPEN,DISK,ONLINE] }
       { REMOTE[,TAPEN,DISK,ONLY]  }
```

where

LOCAL Sends to a channel-attached centralized (local) printer.

REMOTE Sends to remotely-attached Xerox printers via TCP/IP or VTAM.

Only one of these values LOCAL or REMOTE can be specified for a device.

The following values can be specified alone or with LOCAL:

TAPE*n* Directs output to file in addition to or in place of a local printer, where n specifies the file density according to z/OS JCL density parameters of 2, 3, or 4. If you do not enter a density parameter, the file is written at the z/OS default density. For more information, refer to the DEN subparameter in the appropriate z/OS JCL reference manual. XPAF generates an output dataset name in the format *prefix.printerid*.

DISK Directs output to disk (in file format) in addition to or in place of a local printer. XPAF generates an output dataset name in the format *prefix.printerid.date.time*.

ONLINE XPAF processes the local print job and sends the output to file and/or disk as specified in the WRITER printer profile parameter and/or the OPWRITER extended JCL keyword.

ONLINE specifies online format, which is the format used to send data over the channel to a local printer. If you omit this parameter, XPAF writes the output in offline format.

You can print a file or disk dataset that was written in online format using IEBGENER and specifying either an XPAF- or JES-controlled printer. Documents written in offline format can be printed from file only and with the printer offline. For further information about printing documents from file and/or disk, refer to *Section Four: Printing Documents with XPAF*.

The following values can be specified with REMOTE:

TAPE*n* Directs output to file in addition to or in place of a local printer, where n specifies the file density according to z/OS density parameters of 2, 3, or 4. If you do not enter a density parameter, the file is written at the z/OS default density. For more information, refer to the DEN subparameter in the appropriate z/OS JCL reference manual. XPAF generates an output dataset name in the format *prefix.printerid*.

DISK Directs output to disk (in file format) in addition to or in place of a local printer. XPAF generates an output dataset name in the format *prefix.printerid.date.time*.

ONLY Writes the dataset to the TAPE and/or DISK dataset, but not to the printer defined by the printer profile.

If you select output to file and/or disk, first review these initialization parameters described in chapter 40, "Initialization parameters."

- OPDALLOC and OPDALLOS
- OPDUNIT
- OPHLQ
- OPTEXPTD
- OPTUNIT
- OPVOLSER

Default Centralized printers: LOCAL (no printer device is opened)

PCL-capable printers and PDF conversion: REMOTE

Examples WRITER=LOCAL

Sends print data to the local printer defined by the UNIT printer profile parameter.

WRITER=REMOTE

Sends print data to the remote printer defined by the SLU or TCP/IP configuration printer profile parameters.

WRITER=

Assumes LOCAL printer type. If OPWRITER is specified in the JCL, sends all print data to the destination as specified for OPWRITER. If OPWRITER is not specified in the JCL, no data is processed, and an error message is generated.

WRITER=ONLINE

Same as WRITER=, except the data is in online format.

WRITER=TAPE

Sends local job print data to file in offline format, to be read directly by a local printer's file drive and printed.

WRITER=DISK

Sends local job print data to disk in offline format. This data must be transferred to file for it to be read directly by a local printer's file drive and printed.

WRITER=(DISK,ONLINE)

Sends print data to disk in online format. This data can be printed directly from disk using IEBGENER.

WRITER=(LOCAL,ONLINE)

Sends print data to the local printer defined by the UNIT printer profile parameter. If the job's JCL specifies file and/or disk for OPWRITER, the output also is created in online format and sent to file and/or disk as specified.

WRITER=(REMOTE,DISK)

Sends print data to the remote printer defined by the SLU printer profile parameter and to disk.

WRITER=(REMOTE,TAPE,ONLY)

Sends local job print data only to file, not to the printer.

WRITER=(DISK,TAPE,ONLINE)

Sends print data to disk and file in online format. No actual printer is used.

Overrides None.

Related information All values specified for the OPWRITER extended JCL keyword are used in addition to the WRITER values. See also the OPDALLOC, OPDUNIT, OPHLQ, OPTEXPTD, OPTUNIT, OPTVOLCT, and OPVOLSER initialization parameters and the UNIT printer profile parameter.

XEMAILXN

Description For e-mail notification, specifies the file extension to be appended to the file name of the document attached to the e-mail.

Scope Affects processing of all documents sent as e-mail attachments.

Syntax XEMAILXN=value

where

value Identifies the file extension for the document.

Default *value* is based on the Printer Command Language for the printer specified in the DEVICE printer profile parameter.

Printer Type	File Extension
Centralized	META
Decentralized	XES
PCL-capable	PCL5
PDF Transform	PDF

For example, if you submit a job called “SAMPLE” to a printer whose profile specifies DEVICE=PCL and TCPMAIL=MAILONLY, then XPAF will generate the document as an e-mail attachment called “SAMPLE.PCL5”.

Example XEMAILXN=PDF

Overrides None

XJCFMODE

Description Indicates the type of XJCF processing support used for this printer.

Scope Affects processing of line-mode and DJDE data streams sent to all types of printers.

Syntax XJCFMODE=[C | F | S | **N**]

where

N XJCF support is not required.

S XPAF simulates XJCF processing via the XJCFSIM simulation table. XJCF is not installed.

F XPAF simulates XJCF processing only for the first dataset in the output group.

C XPAF coexists with XJCF through the XIM table. XJCF is installed.

Default N

Example XJCFMODE=S

Overrides You can override this parameter using the XJCFSIM extended JCL keyword.

Related information The procedures for installing and using XPAF with XJCF are described in both *Section Two: Installing and Customizing XPAF* and *Section Four: Printing Documents with XPAF*. These sections address both coexistence and simulation modes.

XJCFTABL

Description Specifies which XJCFSIM table should be used for this printer.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax XJCFTABL=xxxxxxxx

where

xxxxxxxx is the 1- to 8-character name of the XJCFSIM table load module to be used. The name can include alphanumeric or national ($, #, @) characters and cannot begin with a number. It is the users responsibility to assemble and link-edit all XJCFSIM tables into their XPFLOAD library.

Default XJCFSIM

Example XJCFTABL=MYXJCF

Overrides None.

Related information See also the XJCFMODE printer profile parameter and the XJCFSIM Extended JCL keyword.

Note It is the user's responsibility to assemble and link-edit XJCFSIM tables under different names into their XPFLOAD library before they can be referenced with this keyword.

XJOBTMEM

Description Specifies Xerox job ticket information to be retrieved from the dataset defined by LPRDSN.

Scope Affects processing of all types of data streams sent to NPS and DocuSP printers.

Syntax XJOBTMEM=*nnnnnnnn*

where

nnnnnnnn The 1- to 8-character name for the desired job ticket member name. The name can include alphanumeric or national ($, #, @) characters.

Example XJOBTMEM=XJOBTICK

Related Information LPRDSN specifies the name of the PDS in which the member resides.

For more information on job tickets see the XJOBTMEM extended JCL keyword, and refer to chapter 13, “Setting up PCL-capable printers” in *Section Two: Installing and Customizing XPAF*.

XMAILADR

Description Specifies the name of the member that contains the users who will be e-mailed via this printer. This member must reside in the PDS dataset pointed to by the LPRDSN printer profile parameter.

Scope Affects processing of all documents sent as e-mail attachments.

Syntax XMAILADR=member-name

where

member-name The 1- to 8-character member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None

Example XMAILADR=EMAILADR

Overrides None

XPDFFSUB

Description Specifies the name of the member that contains PDF font substitution table. This member must reside in the XINPARM PDS dataset.

Scope Affects processing of all PDF documents.

Syntax XPDFFSUB=member-name

where

member-name The 1- to 8-character member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The value specified by the XPDFFSUB initialization parameter.

Example XPDFFSUB=FONTSUB2

Overrides You can override this parameter by specifying the XPDFFSUB extended JCL keyword.

XPJLMEM

Description Specifies a PJL member to be retrieved from the dataset defined by LPRDSN.

Scope Affects processing of all types of data streams sent to PCL-capable printers.

Syntax XPJLMEM=*nnnnnnnn*

where

nnnnnnnn The 1- to 8-character name for the desired PJL member name. The name can include alphanumeric or national ($, #, @) characters.

Example XPJLMEM=XPJL3COP

Related Information LPRDSN specifies the name of the PDS in which the member resides.

For more information on PJL see the XPJLMEM extended JCL keyword, and refer to chapter 13, "Setting up PCL-capable printers" in *Section Two: Installing and Customizing XPAF*.

XSHADE

Description Specifies whether to enhance cells within AFP images that are recognized as a shading pattern.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax XSHADE={YES | NO}

where

YES Shading cells will be enhanced.

NO Shading cells will not be enhanced; standard image processing is used.

Default The XSHADE initialization parameter value.

Example XSHADE=NO

Overrides This parameter overrides the XSHADE initialization parameter; it can be overridden by the XSHADE extended JCL keyword.

XSMTPCTL

Description Specifies the default HTML source member name to be used when creating e-mail attachments. This member must reside in the PDS dataset pointed to by the LPRDSN printer profile parameter.A sample HTML source member, XSMTPCTL, is provided in XPFSAMP.

Scope Affects processing of all documents sent as HTML-format e-mail attachments.

Syntax XSMTPCTL=member-name

where

member-name The 1- to 8-character member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default None

Example XSMTPCTL=HTMLDECK

Overrides None

XTCPJNAM

Description Specifies the format of the job name used in the LPR Job name (LPR control file 'J' parameter), the LPR Document name (LPR control file 'N' parameter), the EPS Socket header document name, and/or the e-mail subject text.

Scope Affects processing of all types of data streams sent to any printer via LPR or to a DocuSP EPS printer via the socket gateway.

Syntax XTCPJNAM= [xxxxxxxx | JESINFO]

where

xxxxxxxx is the name of the member to be found in the library specified by the LPRDSN= parameter or JESINFO indicates that the standard format as described below is to be used

Default None

Example XTCPJNAM=JOBI76

Overrides None.

Related Information If neither XTCPJNAM, nor EPSSHMEM has been specified, the format used will be: ophlq.jobname.jobnumber.D<juliandate>.T<24 hour time> i.e. “XPAF.DJDSIM01.JOB12345.D06203.T125401”

If XTCPJNAM=JESINFO has been specified, the format used will be:

<jobname> - <jobnumber> - <JES form> - <JES class> <userid>

i.e. “DJDSIM01 - JOB12345 - STD - M EK98764”

If XTCPJNAM=EPSHDR (the sample member supplied in SAMPLIB) has been specified the format used will be: <jobname>(<jobnumber>) FORM=<JES form> CLASS=<JES class>

i.e. “DJDSIM01(JOB12345) FORM=STD CLASS=M”

XUSERAC1–XUSERAC3

Description Specifies user-defined variable information used as a substitute parameter in XJOBTMEM, XPJLMEM, XTCPJNAM or XVIPPMEM.

Scope Affects processing of all types of data streams sent to any printer.

Syntax XUSERACn=*nnnnnnnnnnnn*

where

nnnnnnnnnnnn The 1- to 12-character user-defined variable. The name can include alphanumeric or national ($, #, @) characters.

Example XUSERAC1=JCLDATASET

Related information See also "Using the insertion feature to add PJL and job ticket commands," in *Section Two: Installing and Customizing XPAF*.

See also "Using variable insert information," in *Section Four: Printing Documents with XPAF*.

XVIPPMEM

Description Specifies the VIPP member to be retrieved from the dataset defined by LPRDSN.

Scope Affects processing of line-mode data streams sent to VIPP-enabled printers.

Syntax XVIPPMEM=*nnnnnnnn*

where

nnnnnnnn The 1- to 8-character name for the desired VIPP member name. The name can include alphanumeric or national ($, #, @) characters.

Example XVIPPMEM=XPAFJDT

Related Information LPRDSN specifies the name of the PDS in which the member resides.

For more information on VIPP see the PRMODE JCL keyword, and refer to chapter 13, "Setting up PCL-capable printers" in *Section Two: Installing and Customizing XPAF*, and chapter 37, "Printing VIPP documents," in *Section Four: Printing Documents with XPAF*.

42. Standard IBM JCL keywords

IBM JCL keywords provide XPAF with job-specific values. The IBM JCL keywords that XPAF accepts are listed on the pages that follow. If XPAF does not support an IBM JCL keyword, you do not need to remove it from the statement; XPAF ignores it.

Specifying IBM JCL keywords

Unless otherwise noted, XPAF will recognize and process IBM JCL keywords coded on either the OUTPUT or SYSOUT DD statements.

Coding IBM JCL keywords

XPAF follows standard IBM JCL coding conventions. Items such as commas, equal signs, parentheses, and asterisks are required entries and must be coded exactly as they appear in the syntax definitions.

For detailed information on coding JCL, refer to the appropriate IBM JCL reference manual.

Standard IBM JCL support

The following IBM JCL keywords are supported by XPAF.

ADDRESS

Description Specifies a descriptive address to be used on the separator pages of an output dataset. This value also is available in user exit 05 for constructing customized banner pages.

Scope For JES2 and JES3 systems running at version 4.2 or higher, affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to decentralized and PCL-capable printers if you have changed the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'.

Syntax ADDRESS=('*string1*'[,...,'*string4*'])

where

'*string*' The 1- to 60-character address enclosed in single quotation marks. Each address can include alphanumeric or national ($, #, @) characters.

Example

```
//OUT2  OUTPUT  ADDRESS=('LAB A',
//  '123 Sunshine Parkway',
//  'Sandy Beach, FL',
//  '32111')
```

Overrides You can override this keyword by specifying a value in the XODBADRT field in @XODB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

BUILDING

Description Specifies a building identification to be used on the separator pages of an output dataset. This value is also available in user exit 05 for constructing customized banner pages.

Scope For JES2 and JES3 systems running at version 4.2 or higher, affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to decentralized and PCL-capable printers if you have changed the SETC statement in sample user exit XUXIT05B from ‘REMOTE’ to ‘LOCAL’.

Syntax BUILDING='*string*'

where

'*string*' The 1- to 60-character building identification enclosed in single quotation marks. The building identification can include alphanumeric or national ($, #, @) characters.

Example

```
//OUT2  OUTPUT  BUILDING='RED@640'
```

Overrides You can override this keyword by specifying a value in the XODBBLDT field in @XODB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

CHARS

Description Specifies the fonts used for AFP line data when no font name is specified in the PAGEDEF. If CHARS specifies the same name as the SYSFONT initialization parameter, the CHARS name is ignored. To use the CHARS name for AFP processing, the SYSFONT initialization parameter and the CHARS IBM JCL keyword must specify different names.

If you include the UCS IBM JCL keyword in your JCL but not the CHARS IBM JCL keyword, XPAF uses the UCS value as a CHARS value unless you include UCS=Y in the initialization or printer profile parameters.

If neither the CHARS nor the UCS IBM JCL keywords are in effect, XPAF uses the SYSFONT initialization parameter value as a CHARS value.

Scope Affects processing of AFP data streams sent to all types of printers. Also affects processing of XJCF simulation mode data streams sent to all types of printers.

Syntax CHARS=(*font-name1*[,...,*font-name4*])

where

font-name The font name.

Example //OUT1 OUTPUT DEST=PRNTR1,CHARS=(PR12,PB14)

Overrides None.

Related information See also the UCS and SYSFONT initialization parameters, the UCS printer profile parameter, and the UCS IBM JCL keyword.

See also the OPTCD and TRC IBM JCL keywords.

CKPTPAGE

Description Specifies the number of physical pages to be transmitted or printed before the next SYSOUT dataset checkpoint is taken.

Scope Affects processing of all data streams to centralized printers. Affects processing of DJDE, page-formatted, and AFP data streams to remote printers.

Syntax CKPTPAGE=*nnnnn*

where

nnnnn 1 through 32767.

Example //OUT1 OUTPUT CKPTPAGE=25

Overrides This keyword overrides the CKPTPAGE JES printer definition parameter.

CLASS

Description Specifies the operator-assigned output class for the job.

For DJDE data streams when running in XJCF simulation mode:

Determines which DJDEs are generated for an XJCF simulation job, based on the entries for the class in the XJCFSIM table.

Scope Affects processing of all types of data streams sent to all types of printers. When running in XJCF simulation mode, affects processing of DJDE data streams sent to all types of printers.

Syntax CLASS=*class*

where

class The single character or digit output class for the job. You can specify A through Z or 0 through 9.

Example

```
//OUT1  OUTPUT  CLASS=D
```

Overrides None.

CONTROL

Description Specifies either that each logical record starts with a carriage control character or that the output will be printed with single, double, or triple spacing.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax

```
CONTROL={ PROGRAM }
        { SINGLE  }
        { DOUBLE  }
        { TRIPLE  }
```

where

PROGRAM Begins each logical record in the dataset with a carriage control character.

SINGLE Forces single spaced output.

DOUBLE Forces double spaced output.

TRIPLE Forces triple spaced output.

Example

```
//OUTDS8  OUTPUT  CONTROL=PROGRAM
```

Overrides None.

COPIES

Description Specifies the number of copies of the SYSOUT dataset to be printed. JES retransmits the document for the specified number of copies.

If printing is duplex and more than one copy is specified, you may need to include dataset separators or the SIDE=NUFRONT extended JCL keyword to insure that the first page of each copy begins on the front side of the page.

Using COPIES in conjunction with the XCOPY extended JCL keyword is not recommended. If you use both keywords, the total number of copies will be the product of the two. Also, your banner, separator, and message pages may print out of sequence.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to all types of printers.

Syntax **For DJDE data streams:**

COPIES=*nnn*

For page-formatted and AFP data streams:

COPIES={ *nnn* | *(group-value1[,...,group-value8])* }

where

nnn The number of copies of the SYSOUT dataset to be printed. For JES2, you can specify a value from 1 through 255; for JES3, you can specify a value from 0 through 255.

group-value The number of copies of each page to be printed before the next page is printed. For JES2, you can specify a value from 1 through 255; for JES3, you can specify a value from 1 through 254. You can code a maximum of 8 group-values.

Example //OUT2 OUTPUT COPIES=3

Overrides None.

Related information See also the STAPLE and XCOPY extended JCL keywords.

DATACK

Description Indicates whether data-off-page or invalid character error messages are reported or blocked.

If an existing form contains any errors, you should specify DATACK=UNBLOCK, and the REVOVLY extended JCL keyword will determine the error.

For page-formatted data streams:

DATACK processing is not performed for forms.

Scope Affects processing of page-formatted and AFP data streams sent to all types of printers.

Syntax

```
DATACK= { BLOCK   }
        { UNBLOCK }
        { BLKCHAR }
        { BLKPOS  }
```

where

BLOCK	Blocks all error messages.
UNBLOCK	Reports all error messages.
BLKCHAR	Blocks invalid-character errors; in XPAF, reports data-off-page error messages.
BLKPOS	Blocks data-off-page errors, but allows invalid character messages. No messages are printed in XPAF.

Example

```
//OUT1  OUTPUT  DATACK=BLOCK
```

Overrides None.

Related information See also the VPA initialization and printer profile parameters.

For AFP data streams, these restrictions apply:

- For centralized and decentralized printers, the paper size specified within XPAF must correspond to the paper size being used at the printer. Additionally, overlays that are converted for one paper size can be used in a document with a different paper size only if you specify the REVOVLY extended JCL keyword.
- For centralized and decentralized printers, overlays cannot be used with different PMODEs. For example, an overlay converted with IBMPMODE, PMODE=LAND, or in short edge feed documents can be used only with PMODE=PORT or long edge feed documents if you specify the REVOVLY extended JCL keyword.
- For decentralized printers, for previously unvalidated overlays, the dimensions of images for any included page segments are not known. If the origin of the image lies within the valid printable area, it will be printed without causing a hardware error.
- For decentralized printers, if you have problems with an unvalidated converted overlay, you should reconvert the overlay via the REVOVLY extended JCL keyword.

DEPT

Description Specifies a department identification to be used on the separator pages of an output dataset. This value also is available in user exit 05 for constructing customized banner pages.

Scope For JES2 and JES3 systems running at version 4.2 or higher, affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to decentralized and PCL-capable printers if you have changed the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'.

Syntax DEPT='*string*'

where

'*string*' The 1- to 60-character department identification enclosed in single quotation marks. The department identification can include alphanumeric or national ($, #, @) characters.

Example

```
//OUT2  OUTPUT  DEPT='PAYROLL'
```

Overrides You can override this keyword by specifying a value in the XODBDPTT field in @XODB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

DEST

Description Selects a specific printer from the group of printers defined by an output class. If the output class contains only one Xerox printer, you do not need to specify a destination.

For DJDE data streams when running in XJCF simulation mode:

Determines which DJDEs are generated for an XJCF simulation job, based on the entries for the DEST in the XJCFSIM table.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax DEST=*printer-name*

where

printer-name A specific printer from the group of printers defined by an output class.

Example

```
//OUT2  OUTPUT  CLASS=A,DEST=PRNTR1
```

Overrides None.

FCB

Description Specifies the Forms Control Buffer (FCB) image that JES uses to print a SYSOUT dataset. The FCB image specifies the form length and LPI to print.

If the JCL for an AFP data stream includes the FCB IBM JCL keyword but not the PAGEDEF IBM JCL keyword, the FCB value is used as a PAGEDEF value. However, the FCB value is not used as a PAGEDEF value if either of these two conditions exist:

- If FCB=Y is included in the initialization or printer profile parameters
- If XJCF simulation processing is in effect

Scope Affects processing of DJDE data streams sent to centralized printers, AFP data streams sent to all types of printers, and XJCF simulation jobs sent to all types of printers.

Syntax FCB=*fcb-name*

where

fcb-name The 1- to 4-character name of the FCB image. The name can include alphanumeric or national ($, #, @) characters.

Example //OUT2 OUTPUT FCB=ABC1

Overrides This keyword overrides the FCB initialization and/or printer profile parameters. An FCB IBM JCL keyword on a SYSOUT DD statement overrides an FCB IBM JCL keyword on the OUTPUT statement.

Related information See also the PAGEDEF and SYSFCB initialization parameters and the PAGEDEF IBM JCL keyword.

FLASH

Description Specifies the Xerox form to be used. FLASH support must be active in the FORMDEF for the document, and the FLASH name must be identical to the forms name. Ensure that the centralized Xerox form has been loaded to the native form library.

If FLASH specifies the same name as the SYSFLSH initialization parameter, the FLASH name is ignored. To use the FLASH name for AFP processing, the SYSFLSH initialization parameter and the FLASH IBM JCL keyword must specify different names.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax FLASH=*form-name*

where

form-name The 1- to 4-character form name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Example //OUT2 OUTPUT FLASH=FRM1

Overrides None.

FORMDEF

Description Specifies the AFP resource that defines the appearance of the page on the form. XPAF automatically retrieves the form definition during printing.

If you are using inline resources, the form definition name can either match the resource name in the inline resource, or it can be set to 'dummy.'

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax FORMDEF=*resource-name*

where

resource-name The 1- to 6-character resource name. The name can include alphanumeric characters.

Example

```
//OUT1  OUTPUT  DEST=PRNTR2,FORMDEF=010110
```

Overrides This keyword overrides the FORMDEF initialization parameter.

FORMS

Description Determines which DJDEs are generated for an XJCF simulation job, based on the entries for the form in the XJCFSIM table.

Scope Affects processing of XJCF simulation mode, VIPP, and DJDE data streams.

Syntax FORMS=*form-name*

where

form-name The 1- to 8-character form name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Example

```
//OUT2  OUTPUT  FORMS=STMT99
```

Overrides None.

LINECT

Description Specifies the maximum number of lines JES will print on each output page.

There is no DJDE to replace the LINECT IBM JCL keyword. XPAF maintains the line count for documents as follows: if a skip-to-channel-n is encountered, it is honored, and the current line count is reset to zero. When the number of lines printed equals the line count value passed to XPAF by JES, a skip-to-channel-1 is generated. If you enter a line count value of 0, the skip-to-channel-1 feature is disabled.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax LINECT=*nnn*

where

nnn 0 through 255. Specify LINECT=0 when using the BOF extended JCL keyword.

Example

```
//OUT2  OUTPUT  LINECT=50
```

Overrides None.

Related information See also the BOF and TOF extended JCL keywords.

MAILBCC

Description Specifies up to three e-mail addresses that can be used by XPAF in the “BCC”, blind copies, field of a generated e-mail.

Scope Affects processing of all documents sent via e-mail.

Syntax MAILBCC=(emailaddr[,emailaddr[,emailaddr]])

where

emailaddr The 1- to 90-character email address to be used in the “bcc” field of the e-mail.

Default None

Example

```
//OUT1   OUTPUT
MAILBCC=(‘john.smith@example.net’,accts@example.net)
```

Overrides None.

MAILCC

Description Specifies up to three e-mail addresses that can be used by XPAF in the “CC”, copies, field of a generated e-mail.

Scope Affects processing of all documents sent via e-mail.

Syntax MAILCC=(emailaddr[,emailaddr[,emailaddr]])

where

emailaddr The 1- to 90-character email address to be used in the “cc” field of the e-mail.

Default None

Example

```
//OUT1   OUTPUT
MAILCC=(‘john.smith@example.net’,accts@example.net)
```

Overrides None.

MAILFILE

Description Specifies the file name to be used by XPAF when the document is attached to an e-mail. Since the file type is generated by XPAF based on the output type of the file, do not include the file type in the MAILFILE keyword.

Scope Affects processing of all documents sent via e-mail.

Syntax MAILFILE=’filename’

where

filename The 1- to 90-character file name that will be used when the document is attached to the e-mail.

Default The JES job name from the job that generated the output.

Example

```
//OUT1   OUTPUT  MAILFILE=(‘AcctMonthEnd(Oct08)’)
```

Overrides None.

MAILFROM

Description Specifies the e-mail addresses that will be used by XPAF in the “From” field of a generated e-mail.

Scope Affects processing of all documents sent via e-mail.

Syntax MAILFROM=(emailaddr)

where

emailaddr The 1- to 90-character email address that will be used in the “From” field of the e-mail

Default The value for the MAILFROM parameter specified in the EMAILADR table.

Example //OUT1 OUTPUT MAILFROM=‘xpaf40.sys01@example.net’

Overrides None.

MAILTO

Description Specifies up to three e-mail addresses that can be used by XPAF in the “To” field of a generated e-mail.

Scope Affects processing of all documents sent via e-mail.

Syntax MAILTO=(emailaddr[,emailaddr[,emailaddr]])

where

emailaddr The 1- to 90-character email address that will be used in the “to” field of the e-mail.

Default The value derived from matching USER field in the EMAILADDR table.

Example //OUT1 OUTPUT
MAILTO=(‘john.smith@example.net’,accts@example.net)

Overrides None.

NAME

Description Specifies a descriptive name to be used on the separator pages of an output dataset. This value also is available in user exit 05 for constructing customized banner pages.

For JES2 systems, if you omit the NAME IBM JCL keyword, XPAF uses the PROGRAMMER NAME field from the job card for this value.

Scope For JES2 and JES3 systems running at version 4.2 or higher, affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to decentralized and PCL-capable printers if you have changed the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'.

Syntax NAME='*string*'

where

'*string*' The 1- to 60-character name enclosed in single quotation marks. The name can include alphanumeric or national ($, #, @) characters.

Example //OUT2 OUTPUT NAME='Mr. T. Smith'

Overrides You can override this keyword by specifying a value in the XODBNAMT field in @XODB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

NOTIFY

Description Identifies up to four user IDs to be notified of a print job's status. When this keyword is included on the JCL OUTPUT statement, a message is displayed on the identified users' consoles.

- For JES2 systems, the status message is issued when all the SYSOUT datasets for an output group have finished printing.
- For JES3 systems, the status message is issued when the SYSOUT datasets for one job on a specific printer have finished printing.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax NOTIFY=(*userid*1[,...,*userid4*])

where

userid The 1- to 7-character valid TSO user ID that the system will notify. The *userid* can include alphanumeric characters.

Example //OUT2 OUTPUT NOTIFY=(PGREENE,RBLACK)

Overrides None.

OPTCD

Description

For DJDE and page-formatted data streams:

Instructs the system to recognize the font index byte in the input data stream. If you are using font indexing in the input data stream to select the fonts for a document, you must specify the DCB option OPTCD=J on the SYSOUT DD statement in the JCL used to submit this job. Alternatively, you can use the TRC IBM JCL keyword.

For AFP data streams:

Specifies whether a TRC is contained in each logical record. You must specify the DCB option OPTCD=J on the SYSOUT DD statement in the JCL used to submit this job. The TRC selects a font for the logical record based on the fonts specified by the CHARS IBM JCL keyword or the page definition. XPAF recognizes the TRC in the print data stream. Alternatively, you can use the TRC IBM JCL keyword.

Scope

Affects processing of DJDE, page-formatted, and AFP data streams sent to all types of printers.

Syntax

OPTCD=*font-index*

where

font-index The font index.

Example

```
//SYSUT2  DD  DCB=(OPTCD=J)
```

Overrides

None.

Related information

See also the CHARS and TRC IBM JCL keywords.

PAGEDEF

Description

Specifies the AFP resource that defines how the line data is placed on a logical page. XPAF automatically retrieves the specified page definition for AFP line format data. If you are using inline resources, the page definition name can either match the resource name in the inline resource, or it may be set to ‘dummy’.

If PAGEDEF specifies the same name as the SYSFCB initialization parameter, the PAGEDEF name is ignored. To use the PAGEDEF name for AFP processing, the SYSFCB initialization parameter and the PAGEDEF IBM JCL keyword must specify different names.

If you include the FCB IBM JCL keyword in your JCL but not the PAGEDEF IBM JCL keyword, XPAF uses the FCB value as a PAGEDEF value unless you included FCB=Y in the initialization or printer profile parameters or XJCF simulation processing is in effect.

Scope

Affects processing of AFP data streams sent to all types of printers.

Syntax

PAGEDEF=*resource-name*

where

resource-name The resource name.

Example //OUT1 OUTPUT DEST=PRNTR1,PAGEDEF=STD3

Overrides This keyword overrides the PAGEDEF initialization parameter.

Related information See also the FCB and SYSFCB initialization parameters, the FCB printer profile parameter, and the FCB IBM JCL keyword.

PRMODE

Description Identifies the process mode required to print this dataset.

For any dataset that contains DJDE extended JCL keywords or contains a DJDE identifier in the first data record, XPAF assumes DJDE processing even if you specify PRMODE=LINE. However, AFP parameters override this processing. For example, for any dataset that contains AFP extended JCL keywords or contains a X'5A' carriage control in the first data record, XPAF assumes AFP processing no matter what you specify in PRMODE.

Scope Affects processing of line-mode, DJDE, XES, AFP, and VIPP data streams sent to all types of printers.

Syntax

$$\text{PRMODE=}\left\{\begin{array}{c}\text{DJDE}\\ \text{LINE}\\ \text{PAGE}\\ \text{VIPP}\end{array}\right\}$$

where

DJDE Specifies DJDE processing. For non-AFP data streams, this value forces DJDE processing for jobs sent to decentralized and PCL-capable printers.

LINE Specifies line-mode processing.

PAGE Specifies AFP processing.

VIPP Specifies VIPP processing.

Example //OUT2 OUTPUT PRMODE=LINE

Overrides AFP processing overrides all other data stream processing.

Related information Refer to *Section Four: Printing Documents with XPAF* for more information about how XPAF determines the processing mode.

ROOM

Description Specifies a room identification to be used on the separator pages of an output dataset. This value also is available in user exit 05 for constructing customized banner pages.

For JES2 systems, if you omit the ROOM IBM JCL keyword, XPAF uses the four-character ROOM field defined in the JES2 accounting parameter from the job card for this value.

Scope For JES2 and JES3 systems running at version 4.2 or higher, affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to decentralized and PCL-capable printers if you have changed the SETC statement in sample user exit XUXIT05B from ‘REMOTE’ to ‘LOCAL’.

Syntax ROOM='*string*'

where

'*string*' The 1- to 60-character room identification enclosed in single quotation marks. The room identification can include alphanumeric or national ($, #, @) characters.

Example

```
//OUT2  OUTPUT  ROOM='301 West Side'
```

Overrides You can override this keyword by specifying a value in the XODBROMT field in @XODB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

TITLE

Description Specifies a descriptive title to be used on the separator pages of an output dataset. This value is also available in user exit 05 for constructing customized banner pages.

Scope For JES2 and JES3 systems running at version 4.2 or higher, affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to decentralized and PCL-capable printers if you have changed the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'.

Syntax TITLE='*string*'

where

'*string*' The 1- to 60-character title enclosed in single quotation marks. The title can include alphanumeric or national ($, #, @) characters.

Example

```
//OUT2  OUTPUT  TITLE='Quarterly Report'
```

Overrides You can override this keyword by specifying a value in the XODBTLET field in @XODB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

TRC

Description

For DJDE and page-formatted data streams:

Instructs the system to recognize the font index byte in the input data stream. If you are using font indexing in the input data stream to select the fonts for a document, you must specify TRC=YES on the SYSOUT DD statement in the JCL used to submit this job. Alternatively, you can use the OPTCD IBM JCL keyword.

For AFP data streams:

Specifies whether a Table Reference Character (TRC) is contained in each logical record. The TRC selects a font for the logical record based on the fonts specified by the CHARS IBM JCL keyword or the page definition. XPAF recognizes the TRC in the print data stream. Alternatively, you can use the OPTCD IBM JCL keyword.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to all types of printers.

Syntax TRC={ YES | NO }

where

YES XPAF recognizes the TRC in the print data stream.

NO XPAF does not recognize the TRC in the print data stream.

Example

```
//OUT2  OUTPUT  CLASS=A,DEST=PRINTR1,
//  CHARS=(GA15,PB12),TRC=YES
```

Overrides None.

Related information See also the CHARS and OPTCD IBM JCL keywords.

UCS

Description Specifies the Universal Character Set (UCS) that JES uses to print a SYSOUT dataset.

When processing AFP data streams, the CHARS IBM JCL keyword overrides all UCS IBM JCL keywords if CHARS is used on either a SYSOUT DD statement or OUTPUT JCL statement. If your JCL includes UCS but not CHARS, the UCS value is not used as a CHARS value if UCS=Y is included in either the initialization or printer profile parameters.

Scope Affects processing of DJDE and AFP data streams sent to centralized printers.

Syntax UCS=*char-set*

where

char-set Universal character set JES uses to print a SYSOUT dataset.

Example

```
//OUT2  OUTPUT  UCS=AA11
```

Overrides This keyword overrides the UCS initialization and/or printer profile parameters. A UCS IBM JCL keyword on a SYSOUT DD statement overrides a UCS IBM JCL keyword on the OUTPUT statement.

Related information See also the SYSFONT initialization parameter and the CHARS IBM JCL keyword.

USERDATA

Description Specifies user-defined information to be used on the separator pages of an output dataset. This value is also available in user exit 05 for constructing customized banner pages.

Scope For JES2 and JES3 systems running at version 4.2 or higher, affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to all printers if you have changed the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'.

Syntax USERDATA=('*string1*'[,...,'*string16*'])

where

'*string*' The 1- to 60-character string enclosed in single quotation marks. Each string can include alphanumeric or national ($, #, @) characters.

Example

```
//OUT2  OUTPUT  USERDATA=('SENSITIVE DATA.',
//  'DO NOT THROW AWAY.',
//  'THIS DATA MUST BE DESTROYED',
//  'IN ACCORDANCE WITH',
//  'COMPANY REGULATIONS.')
```

Overrides You can override this keyword by specifying a value in the XODBUSRT field in @XODB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

USERLIB

Description Specifies up to eight alternate resource libraries to use when printing documents.

For page-formatted data streams:

These libraries may contain page formats. No other resources are supported for this keyword.

When a page format is required by a job and you specify this keyword, XPAF first searches the datasets specified by USERLIB for the requested page format. If the page format does not exist in any of these datasets, XPAF then searches the appropriate libraries listed in the XOSF start-up proc.

Any resource downloaded from the page format will be deleted from the printer when the job is completed.

For AFP data streams:

These libraries may contain any or all of the following resource types: PAGEDEFs, FORMDEFs, page segments, and overlays. USERLIB capability for fonts is not supported.

When a resource is required by a job and you specify this keyword, XPAF first searches the datasets specified by USERLIB for the requested resource. If the resource does not exist in any of these datasets, XPAF then searches the appropriate libraries listed in the XOSF start-up proc.

If XPAF uses a resource from a library specified in USERLIB, the associated resources are deleted from the printer when the job is completed. Also, the associated resources are not stored in the native libraries.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax USERLIB=(*library-name1*[,...,*library-name8*])

where

library-name The library name.

Example

```
//OUT2  OUTPUT  USERLIB=('USER.PAGEFORM',
//  'TEST.PAGEFORM')
```

Overrides None.

43. XPAF extended JCL keywords

XPAF extended JCL keywords provide XPAF with job- and output-specific values. For example, you can set XSHADE=Y in your initialization parameters so that cells are enhanced within AFP images, but you can set XSHADE=N in your extended JCL so that, for a specific job, cells are not enhanced within AFP images.

Specifying XPAF extended JCL keywords

Unless otherwise noted, XPAF will recognize and process extended JCL keywords coded on either the OUTPUT or SYSOUT DD statements.

Coding XPAF extended JCL keywords

XPAF follows standard IBM JCL coding conventions. Items such as commas, equal signs, parentheses, and asterisks are required entries and must be coded exactly as they appear in the syntax definitions.

Default values do not exist for variables of extended JCL keywords. Therefore, when specifying multiple variables for an extended JCL keyword, you cannot omit any values. For example, this is not a valid statement:

```
//REPORT1 OUTPUT RTEXT=('TAX REPORT',,33,24,2)
```

For detailed information on coding JCL, refer to the appropriate IBM JCL reference manual.

DJDE data streams

For DJDE data streams, extended JCL keywords override any corresponding DJDE keywords included in the initial packet of a document. These extended JCL keywords can be coded only on the OUTPUT statement.

If your document contains an initial DJDE packet, make sure it is coded so that it combines correctly with the DJDEs generated by the XPAF extended JCL. For example, when the FONTS statement contains multiple fonts and exceeds the size of one DJDE record, you must use multiple FONTS statements. Each DJDE statement must end with a semicolon (;) or a comma and a semicolon (,;). Refer to the DJDE section of your printer manual for more information about coding DJDEs.

Parameter/keyword processing hierarchy

XPAF allows you to specify, at three different levels, certain controls used in processing documents. The levels are:

- Initialization parameters which establish system-wide defaults
- Printer profile parameters which establish printer specific defaults
- Extended JCL keywords which establish job specific values

In general, XPAF processes parameters and keywords according to this hierarchy:

- Printer profile parameters override initialization parameters.
- Extended JCL keywords override initialization and/or printer profile parameters.

Exceptions to this rule are noted in this chapter.

XPAF extended JCL support

The following extended JCL keywords are supported by XPAF.

BANSTYLE

Description Identifies the banner page style to be produced by XPAF when header, dataset, or trailer pages are requested. This value also is available in user exits 02 and 05 for constructing customized banner pages.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of all types of data streams sent to centralized printers. Also affects processing of all types of data streams sent to all printers if you have changed the SETC statement in sample user exit XUXIT05B from 'REMOTE' to 'LOCAL'.

Syntax BANSTYLE=*style-name*

where

style-name The 1- to 4-character user-defined banner page style name used in user exits 02 and 05. The name can include alphanumeric, national ($, #, @), or special characters.

The two system-defined banner page style names are JES and XPAF. JES specifies the JES banner page style, and XPAF specifies the XPAF banner page style. For BANSTYLE=JES, only applies to JES2 and JES3 systems at version 4.2 or higher. If BANSTYLE=NONE is specified, no banner pages will be produced.

Example //REPORT OUTPUT BANSTYLE=PAY1

In this example, PAY1 is passed to the XDIBBANS field in @XDIB in user exits 02 and 05. You can code user exit 05 to give you additional banner page styles. User exit 05 could generate a special payroll banner page if it detected PAY1 in the XDIBBANS field.

Overrides This keyword overrides the BANSTYLE initialization and/or printer profile parameters. You can override this keyword by specifying a value in the XDIBBANS field in @XDIB in user exit 02.

Related information Refer to *Section Two: Installing and Customizing XPAF* for more information about user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

BEGIN1–BEGIN4

Description Defines the origins for up to four logical pages per physical page. The BEGIN DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax BEGIN*n*=(*vpos,unit-measure,hpos,unit-measure*)

where

n 1 through 4.

vpos The starting vertical position for all lines of the logical page.

hpos The starting horizontal position for the first line of the logical page.

For *vpos* and *hpos*, if you specify a decimal value, use the letter P to identify the decimal point. Enter a valid value using one of these formats:

000P001 to 999P999 (for a decimal number)
0000001 to 9999999 (for a whole number)

unit-measure The unit of measure for the *vpos* and *hpos* values. You must specify a type for both the *vpos* and *hpos* variables. Enter one of these values:

CM	Centimeters
DOTS	300 dpi
IN	Inches
XDOTS	600 dpi

Example

```
//REPORT  OUTPUT  BEGIN1=(1P5,IN,25,CM),
//  BEGIN2=(7,IN,25,CM)
```

Overrides None.

BFORM1–BFORM3

Description Identifies the names of up to three forms to be printed on the back side of a duplex page. The BFORM DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax BFORM*n*=(*form-name,value1,value2*)

where

n	1 through 3.
form-name	The 1- to 6-character form name. The name can include alphanumeric or national ($, #, @) characters.
value1	1 through 250. The beginning copy number to which the form applies.
value2	1 through 250. The number of copies to which a specified form applies.

Example

```
//REPORT1  OUTPUT  BFORM1=(XVGB,1,2),
//  BFORM2=(XVRL,3,3)
```

Overrides None.

BOF

Description Specifies the number of lines from the top of the page to the last print line on the page (bottom of form). When using this keyword, set the JES line count parameter to 0 (LINECT=0). The BOF DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax BOF=*nnn*

where

nnn	0 through 255.

Example

```
//REPORT  OUTPUT  BOF=66
```

Overrides None.

Related information See also the LINECT IBM JCL keyword and the TOF extended JCL keyword.

CHAN01–CHAN12

Description Assigns a carriage control value to a channel assignment. You can assign up to eight values per channel assignment. The ASSIGN DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax CHAN*nn*=(*value1*[,...,*value8*])

where

nn 01 through 12.
value 1 through 255.

Example

```
//REPORT  OUTPUT  CHAN01=(1,5,10,25),
//  CHAN02=(30,35,40)
```

Overrides None.

CLUSTRTB

Description Identifies the cluster mapping table used by XPAF to map a centralized paper tray cluster name to a paper tray on a decentralized or PCL-capable printer.

This table resides in the library specified in the XOSF start-up proc DD statement named by the PAPTBLDD initialization or printer profile parameter.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of DJDE data streams sent to decentralized and PCL-capable printers.

Syntax CLUSTRTB=*table-name*

where

table-name The 1- to 16-character table name. The name can include alphanumeric or national ($, #, @) characters.

Example

```
//REPORT  OUTPUT  CLUSTRTB=PRTR001
```

Overrides This keyword overrides the CLUSTRTB printer profile parameter.

Related information If a document being printed includes a PDL-defined paper size that is not supported by the target printer as defined in the cluster mapping table, document processing is terminated. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

CME

Description Identifies the copy modification entry (CME) to be used for printing this document. The MODIFY DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax CME=*copymod*

where

copymod The 1- to 8-character CME name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT CME=CDOD03

Overrides None.

COLLATE

Description Specifies whether the printed output is collated. The COLLATE DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax COLLATE={YES | NO}

where

YES Collates printed output.
NO Does not collate printed output.

Example //REPORT OUTPUT COLLATE=Y

Overrides None.

COLORIMG (for AFP data streams)

Description Identifies the color to be applied to images for this job; the color of the images is not changed permanently. You may specify any highlight color or black.

- If the image is monochrome, this color overrides the existing color.
- If the image is two-color, this color overrides the highlight color. The black portion of the image still prints as black.

Scope Affects processing of AFP data streams sent to centralized highlight color printers.

Syntax COLORIMG=*color*

where

color The 1- to 6-character color name. The name can include alphanumeric or national ($, #, @) characters.

Example //OUT2 OUTPUT COLORIMG=BLUE

This example replaces the existing color (including black) with blue if the image is monochrome, or overrides the highlight color with blue if the image is two-color.

Overrides None.

Related information These conditions apply:

- This keyword has no effect on images embedded within a form that is printed as a .FRM, since the images are not referenced independently in the data stream.
- If you specify MERGEOVL=Y in your initialization parameters, printer profile, or extended JCL, COLORIMG has no affect on images within forms. However, other image resources will be affected.
- This keyword does not apply color to text. If a converted AFP resource contains both image and text elements, color will be applied to the images, but not to the text.
- Solid horizontal and vertical lines within a converted AFP overlay are processed as text; therefore, color is not applied to them.
- The highlight color loaded on the printer will determine the color of the image.
- For documents containing images colorized via the IID structured field, if there are multiple .IMG images and or text which contain different highlight colors within the same job, the printer will not be able to reconcile the conflict. As a result, either an error may occur at the printer or some of the color images may print as black. For additional information on using color images, refer to “Using color images” in *Section Four: Printing Documents with XPAF*.

COLORIMG (for DJDE data streams)

Description Identifies the color to be applied to IMAGE DJDE records that are not already coded with an INKREF name. You can specify up to eight ink and image name pairs. Additionally or alternatively, you can specify an ink name to be applied to any images that are not already coded with color. No DJDE is created. This command modifies existing IMAGE and GRAPHIC DJDEs.

Scope Affects processing of DJDE data streams sent to centralized highlight color printers.

Syntax COLORIMG=(*color1*[,...,*color8*])

where

color The 1- to 6-character color name. The name can include alphanumeric or national ($, #, @) characters.

Examples //REPORT OUTPUT COLORIMG=BLUE

This example adds blue to any image that does not already have a color specified via an INKREF name.

//REPORT OUTPUT COLORIMG=(RED,ABC,RED,DEF)

This example adds red to the images named ABC and DEF if they do not already have a color specified via an INKREF name.

Overrides None.

DATA

Description Specifies the beginning location and length of printable data within an input record. The DATA DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax DATA=(*value1*,*value2*)

where

value1 0 through 254. The starting location of the print data within an input record.

value2 0 through 255. The length of the data to be printed. XPAF limits the length to 255; however, in ONLINE mode using optimization (the normal XPAF mode), the printer limit is 214. Any characters beyond this limit are ignored.

Example //REPORT OUTPUT DATA=(2,130)

Overrides None.

DELFONT

Description Downloads the named font to the printer from the appropriate native font library. The font is deleted from the printer after the document has been printed. You can specify up to eight font names.

For DJDE data streams:

The FILE DJDE is created.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax DELFONT=(*font-name1*[,...,*font-name8*])

where

font-name The 1- to 6-character font name. The name can include alphanumeric characters and can include these wildcard characters:

- * Used to specify all fonts, or used in combination with a generic name to specify a group of fonts. Example: FONT*
- ? Used as a positional wildcard character within a font name. Example: FNT?BC

Example //OUT1 OUTPUT DELFONT=FNTABC

Overrides None.

DELFORM

Description Downloads the named form to the printer from the appropriate native form library. The form is deleted from the printer after the document has been printed. You can specify up to eight form names.

For DJDE data streams:

The FILE DJDE is created.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax DELFORM=(*form-name1*[,...,*form-name8*])

where

form-name The 1- to 6-character form name. The name can include alphanumeric characters and can include these wildcard characters:

- * Used to specify all forms, or used in combination with a generic name to specify a group of forms. Example: FORM*
- ? Used as a positional wildcard character within a form name. Example: FRM?BC

Example //OUT1 OUTPUT DELFORM=FRMABC

Overrides None.

DELIMAGE

Description Downloads the named image to the printer from the appropriate native image library. The image is deleted from the printer after the document has been printed. You can specify up to eight image names.

For DJDE data streams:

The FILE DJDE is created.

Scope Affects processing of all types of data streams sent to centralized printers.

Syntax DELIMAGE=(*image-name1*[,...,*image-name8*])

where

image-name The 1- to 6-character image name. The name can include alphanumeric characters and can include these wildcard characters:

- * Used to specify all images, or used in combination with a generic name to specify a group of images. Example: IMG*
- ? Used as a positional wildcard character within an image name. Example: IMG?BC

Example //OUT1 OUTPUT DELIMAGE=IMGABC

Overrides None.

DELLOGO

Description Downloads the named logo to the printer from the appropriate native logo library. The logo is deleted from the printer after the document has been printed. You can specify up to eight logo names.

For DJDE data streams:

The FILE DJDE is created.

Scope Affects processing of DJDE and page-formatted data streams sent to centralized printers.

Syntax DELLOGO=(*logo-name1*[,...,*logo-name8*])

where

logo-name The 1- to 6-character logo name. The name can include alphanumeric characters and can include these wildcard characters:

- * Used to specify all logos, or used in combination with a generic name to specify a group of logos. Example: LOGO*
- ? Used as a positional wildcard character within a logo name. Example: LGO?BC

Example //OUT1 OUTPUT DELLOGO=LGOABC

Overrides None.

DJDE

Description Specifies whether XPAF creates dynamic job descriptor entries (DJDEs) from extended JCL for the document at print time. Unless you specify DJDE=NO, DJDEs will be created from extended JCL at print time. No DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax DJDE={YES | NO}

where

YES Creates DJDEs at print time.
NO Does not add DJDEs to the user's data stream.

Example //REPORT OUTPUT DJDE=NO

Overrides None.

DJDESCAN

Description Indicates whether the performance option of not processing duplicate DJDEs found in large print datasets is to be used. If used, duplicate DJDEs found in a dataset will not be parsed and processed for resource requirements repeatedly by XOSF. These DJDEs will still be sent to the printer, so the print job will not be compromised in any way. This can cause a big performance enhancement on very large print jobs that repeatedly use the same DJDEs. Note that the XOSF page and/or impression counts may be slightly off because DUPLEX=YES or NO will not be recognized by XOSF in this case.

Scope Affects processing of EBDIC DJDE streams sent to centralized printers.

Syntax DJDESCAN={ **Y** or N }

where

Y Activates the DJDE scanning feature so that duplicate DJDEs will not be parsed.

N All DJDEs are parsed.

Default N

Example //REPORT OUTPUT DJDESCAN=Y

Overrides This keyword overrides the DJDESCAN printer profile parameter.

DUPLEXSW

Description Indicates whether the printer's plexing mode will switch between simplex and duplex.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers.

Syntax DUPLEXSW={ YES | NO }

where

YES Switches the printer's plexing mode between simplex and duplex mode based on the value specified for DUPLEX in each individual copy group.

NO Does not switch the printer's plexing mode. XPAF searches the FORMDEF to determine if DUPLEX is specified in any of the copy groups. If it is, the entire document will be printed in duplex mode. Any simplex copy groups will be printed with blank back pages. If DUPLEX is not specified, the entire document is printed in simplex mode.

Example //REPORT OUTPUT DUPLEXSW=Y

Overrides This keyword overrides the DUPLEXSW initialization and/or printer profile parameters.

Related information For more information about printing duplex documents, refer to *Section Four: Printing Documents with XPAF*.

FEED

Description Specifies the printer tray from which paper will be selected, or the name or reference ID of the paper to be used. The FEED DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax

```
FEED={ AUX       }
      { MAIN      }
      { OPR       }
      { stock-ref }
```

where

AUX	Uses the auxiliary tray for this printer.
MAIN	Uses the main tray for this printer.
OPR	Uses the tray specified by the printer default.
stock-ref	The 1- to 6-character stock reference name. The name can include alphanumeric or national ($, #, @) characters. Uses the tray that contains a specified paper type.

Example //REPORT OUTPUT FEED=MAIN

Overrides The FEED extended JCL keyword overrides both the printer default and the FEED JDE/JDL command.

Related information For cluster mapping tables, any value you enter here must match a valid entry in the currently active cluster mapping table.

FINDEX

Description Specifies the field within a user record which contains the index to a specific font. The FONTINDEX DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax

```
FINDEX={ NONE                 }
       { (value1,value2,value3) }
```

where

NONE	Overrides an existing font index value (for example, one specified in the PDL).
value1	0 through 250. Indicates the byte position relative to zero of the font index value.
value2	0 or 1. Indicates the initial value of the index:

0 Indicates that a font index of 0 is associated with the first entry in the font list.

1 Indicates that a font index of 1 is associated with the first font.

value3 1 through 7. Indicates the number of low order bits in the font index byte to be used as the font index value.

Examples

```
//REPORT  OUTPUT  FINDEX=(10,0,3)
//REPORT  OUTPUT  FINDEX=NONE
```

Overrides None.

FONT0–FONT15

Description Specifies up to 16 fonts to be used during a print job and, optionally, the line spacing to be used with each font. The FONTS DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax FONT*nn*=(*font-name*,[*spacing*,[*unit-measure*]])

where

nn 0 through 15.

font-name The 1- to 6-character font name. The name can include alphanumeric characters.

spacing A number specifying the lines per inch or the dots per line to be used for line spacing. If you specify a decimal value, use the letter P to identify the decimal point. Enter a valid value using one of these formats:

000P01 to 999P99 (for a decimal number)
000001 to 999999 (for a whole number)

unit-measure Specifies the units for *spacing*. Enter one of these values:

LPI	Lines per inch (default value)
DOTS	300 dpi
XDOTS	600 dpi

Examples

```
//REPORT  OUTPUT  FONT0=(L0112B)
//REPORT  OUTPUT  FONT1=(L0112C,6P5)
//REPORT  OUTPUT  FONT2=(L0112D,50,DOTS)
```

Overrides None.

FORMAT

Description Identifies the PDE to be used to format a document. The FORMAT DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax FORMAT=*pde-name*

where

pde-name The 1- to 6-character name for the desired PDE. The name can include alphanumeric or national ($, #, @) characters.

Example

```
//REPORT  OUTPUT  FORMAT=FMT1
```

Overrides None.

ICATALOG

Description Identifies the ink catalog to be used when ink references do not specify a catalog. The ICATALOG DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized highlight color printers.

Syntax ICATALOG=*inkcat*

where

inkcat The 1- to 6-character ink catalog name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic character.

Example //REPORT1 OUTPUT ICATALOG=CAT001

Overrides None.

IDFAULT

Description Identifies the ink to be used when an ink is not specified in a resource; for example, a page number where no ink has been specified in the NUMBER DJDE or extended JCL keyword. The IDFAULT DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized highlight color printers.

Syntax IDFAULT=*inkref-name*

where

inkref-name The 1- to 6-character ink name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic character.

Example //REPORT1 OUTPUT IDFAULT=BLUE

Overrides None.

IDR

Description Specifies the ink descriptor name. The IDR DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized highlight color printers.

Syntax IDR=*inkdesc*

where

inkdesc The 1- to 32-character existing IDR name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT IDR=GALLEYJET545

Overrides None.

IFONTRES

Description Specifies which of the user's AFP font libraries is to be referenced at print time. A value of 240 indicates use of the font library defined by the IBMFONTDD initialization parameter. A value of 300 indicates use of the font library defined by the IBMFONT300 initialization parameter.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IFONTRES= { 240 | 300 }

where

240 Indicates that the 240 dpi font library is used
300 Indicates that the 300 dpi font library is used

Default 240

Example IFONTRES=300

Overrides This keyword overrides the IFONTRES initialization and/or printer profile parameter.

Related information See also the IBMFONTDD and IBMFONT300 initialization parameters.

ILIST

Description Specifies up to eight ink reference names to be used in an ink table and referenced by the ink index. The ILIST DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized highlight color printers and decentralized full color printers.

Syntax ILIST=(*inkref-name1*[,...,*inkref-name8*])

where

inkref-name The 1- to 6-character existing ink table name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT ILIST=(RED,BLUE,GREEN)

Overrides None.

IMAGE

Description Defines image positioning and color parameters for the named image. The IMAGE DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax IMAGE=(*image-name,vpos,unit-measure,hpos,unit-measure, hold,scaling*[,(*table-name1*,...,*table-name8*)])

where

image-name The 1- to 6-character image name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

vpos The vertical offset of the image from the logical page origin.

hpos The horizontal offset of the image from the logical page origin.

For *vpos* and *hpos*, if you specify a decimal value, use the letter P to identify the decimal point. Enter a valid value using one of these formats:

000P01 to 999P99 (for a decimal number)
000001 to 999999 (for a whole number)

unit-measure The unit of measure for the vpos and hpos values. You must specify the units for both the *vpos* and *hpos* variables. Enter one of these values:

CM	Centimeters
DOTS	300 dpi
IN	Inches
XDOTS	600 dpi

hold Indicates whether the image will be printed on all pages. Enter one of these values:

HOLD	Prints on all pages
NOHOLD	Prints on one page

scaling Indicates whether the image is to be scaled.

- When printing on centralized printers, enter a fraction in the form *n/d*. Both *n* and *d* must be integers in the range of 1 to 8, thereby specifying a value from 1/8 to 8.
- When printing on decentralized printers, enter 1, 2, or 4. The default is 1. Due to printer image processing limitations, no other values are supported.

table-name Optional, for highlight color printing only. The 1- to 6-character ink table name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic character. You can specify up to eight ink tables.

Examples

```
//REPORT  OUTPUT  IMAGE=(IMG1,2,IN,1P5,IN,HOLD,1)
//REPORT  OUTPUT  IMAGE=(IMG2,5P2,IN,3,IN,HOLD,1,
//  (INKS,RED,BLUE,GREEN))
```

Overrides None.

IMGTYPE

Description Specifies whether to convert AFP images from their original resolution to 300 dpi.

NOTE: If you have previously scaled an image using a product other than XPAF, the quality of that image rescaled through XPAF may not match the original.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax IMGTYPE= { 0 | 1 | 3 }

where

0 Does not scale the image dimension but does scale the position of the image. Image position scaling allows the image to print in the correct relative location on the page when printed on a Xerox printer as opposed to printing on an IBM printer. Image position scaling is increased by a factor of 25%.

For some IM-type images, image dimension scaling does occur when specifying 0. For example, non-page segment images that include shading are scaled. For these exceptions, image dimension scaling is increased by a factor of 25%.

NOTE: If you specify 0, the size of the converted image will print smaller in XPAF (by a factor of 20%) than the original 240 dpi image printed in AFP.

1 Scales the image dimension and image position of an AFP image to 300 dpi before sending it to the printer. IOCA-encoded images are scaled from any resolution to 300 dpi. All other AFP images are scaled from 240-to-300 dpi, an increase of 25%.

3 Scales the image dimension and image position of an AFP image to 300 dpi based on the current L-units value specified in the IDD or IID structured field of the image. IOCA-encoded images are scaled from any resolution to 300 dpi. For IM-type images, any L-units value that does not specify 300 dpi is assumed to be 240 dpi.

Default 0

Example IMGTYPE=1

Overrides This keyword overrides the IMGTYPE initialization and/or printer profile parameters.

Related information See also the IMAGEPROC and IMAGETONE printer profile parameters.

INKINDEX

Description Specifies the field within a user record which contains the index to a specific ink reference name. The INKINDEX DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized highlight color printers.

Syntax INKINDEX={ NONE | *(value1,value2,value3)* }

where

NONE Overrides an existing ink index value (for example, one specified in the PDL).

value1 0 through 250. Indicates the byte position relative to zero of the ink index value.

value2 0 or 1. Indicates the initial value of the index:

0 Indicates that a font index of 0 is associated with the first entry in the font list.

1 Indicates that a font index of 1 is associated with the first font.

value3 1 through 7. Indicates the number of low order bits in the ink index byte to be used as the ink index value.

Examples

```
//REPORT  OUTPUT  INKINDEX=NONE
//REPORT  OUTPUT  INKINDEX=(10,0,3)
```

Overrides None.

INKXLIB

Description Specifies the DD statement that defines the library where the color cross-reference tables are stored.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to centralized highlight color printers, and processing of DJDE data streams sent to decentralized full color printers.

Syntax INKXLIB=*ddname*

where

ddname The 1- to 8-character DD name. The DD name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic character.

Example

```
//REPORT  OUTPUT  INKXLIB=INKXLIB1
```

Overrides This keyword overrides the INKXLIB initialization and/or printer profile parameters.

INKXREF

Description Identifies the name of the color cross-reference table, and optionally, alters the color cross-references within the table for the current document only. You can specify up to eight pairs of old and new inks.

For DJDE data streams:

No DJDE is created. This command allows inline modification of any ink reference name on any DJDE statement to the new ink reference name specified in the table.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to centralized highlight color printers.

Syntax INKXREF=*(ink-table*[,('*old1*=*new*1'[,...,'*old8*=*new8*'])])

where

ink-table The name of the color cross-reference table. Enter one of these values:

- * Dynamically creates a new table.
- *name* The 1- to 8-character name of an existing color cross-reference table. The name can include alphanumeric or national ($, #, @) characters.

old The 1- to 6-character existing ink reference name that you want to change. The name can include alphanumeric or national ($, #, @) characters.

new The 1- to 6-character new name to be substituted for the old name. The name can include alphanumeric or national ($, #, @) characters.

Examples

```
//REPORT  OUTPUT  INKXREF=XREF1
```

This example instructs XPAF to use the color cross-reference table XREF1 stored in INKXLIB.

```
//REPORT  OUTPUT  INKXREF=(XREF1,('RED=PINK',
//   'BLUE=BLACK'))
```

This example instructs XPAF to use the color cross-reference table XREF1 stored in INKXLIB and substitute PINK for RED and BLACK for BLUE.

```
//REPORT  OUTPUT  INKXREF=(*,('RED=BLACK'))
```

This example instructs XPAF to create a table dynamically and substitute BLACK for RED.

Overrides This keyword overrides the INKXREF initialization and/or printer profile parameters.

INVERT

Description Inverts the image on a physical page by 180 degrees. The INVERT DJDE is created.

Scope Affects processing of DJDE data streams sent to 4635 and 4635MX printers.

Syntax

```
INVERT={ FRONT }
       { BACK  }
       { BOTH  }
       { NONE  }
```

where

FRONT	Specifies page inversion on front sides.
BACK	Specifies page inversion on back sides.
BOTH	Specifies page inversion on front and back sides.
NONE	Specifies turning page inversion off.

Example

```
//REPORT1  OUTPUT  INVERT=BACK
```

Overrides None.

IRESULT

Description Identifies the ink to be used when different inks overlay on a pixel.

For DJDE data streams:

The IRESULT DJDE is created.

Scope Affects processing of DJDE and AFP data streams sent to centralized highlight color printers.

Syntax

```
IRESULT={ BLACK  }
        { COLOR  }
        { DEFAULT }
```

where

BLACK	Prints the pixel in BLACK.
COLOR	Prints the pixel in the highlight color.
DEFAULT	Uses the default value on the printer, which can be BLACK or COLOR.

Example

```
//REPORT1  OUTPUT  IRESULT=COLOR
```

Overrides None.

Related information If this keyword is not specified for a highlight color printer, the result of overlapping images for different colors is determined by the equivalent default value at the printer.

For documents containing images colorized via the IID structured field, if there are multiple RES .IMG images which contain different highlight colors within the same job, the printer will not be able to reconcile the conflict. As a result, either an error may occur at the printer or some of the color images may print as black.

ITEXT

Description Specifies a text message to be sent to the printer operator during input processing.

For DJDE data streams:

The ITEXT DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized printers.

Syntax

```
ITEXT= { NONE     }
       { 'string' }
```

where

NONE Specifies that no text message is sent to the printer.

'*string*' The 1- to 60-character message enclosed in single quotation marks. In the message, you can include uppercase A-Z, 0-9, and these special characters: @, #, $, !, %, &, *, (,), _, -, +, =, :, ", ?, /, a space, and a comma. Refer to the appropriate printer reference manual for information on how to include lowercase letters or any special characters not listed in this definition.

Examples

```
//REPORT1  OUTPUT  ITEXT='PAYROLL REPORT'
//REPORT2  OUTPUT  ITEXT=NONE
```

Overrides None.

JDE

Description Identifies the job descriptor entry (JDE) to be used for this document.

For DJDE data streams:

The JDE DJDE is created.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to centralized printers.

Syntax JDE=*jde-name*

where

jde-name The 1- to 6-character JDE name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT JDE=NAME1

Overrides The JDE you specify here overrides the default JDE specified by either:

- DEFJDE initialization parameter
- JDE printer profile parameter
- METAJDE initialization and/or printer profile parameter

The JDE must be part of the PDL that has been loaded into the XPAF library (identified by the PDLLIB initialization or printer profile parameter) using the PDL loader. For page-formatted data streams, it also must reference a VOLUME CODE=NONE statement.

JDL

Description Identifies the job descriptor library (JDL) to be used for this document.

For DJDE data streams:

The JDL DJDE is created.

Scope Affects processing of DJDE, page-formatted, and AFP data streams sent to centralized printers.

Syntax JDL=*jdl-name*

where

jdl-name The 1- to 6-character JDL name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT JDL=NAME1

Overrides The JDL you specify here overrides the default JDL specified by either the:

- DEFJDL initialization parameter
- JDL printer profile parameter
- METAJDL initialization and/or printer profile parameter

The JDL must be loaded into the XPAF library (identified by the PDLLIB initialization or printer profile parameter) using the PDL loader. For page-formatted data streams, it also must reference a VOLUME CODE=NONE statement.

MAP

Description Identifies the file name that references a previously created font mapping file in the PDL for the applicable printer. The font mapping file is used for font cross-referencing when feeding the short edge of large paper (for example, 11 by 17 inches) into the printer.

For DJDE data streams:

The MAP DJDE is created.

Scope Affects processing of DJDE data streams sent to 4635, 4635MX, and 4135 printers.

Syntax MAP=*file-name*

where

file-name The 1- to 6-character file name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic character.

Example //REPORT OUTPUT MAP=NAME1

Overrides None.

Related information For more information, refer to the *Xerox 4135 Laser Printing System PDL/DJDE Reference Version 3*.

MARGIN

Description Specifies the page margins for the document to be printed. The MARGIN DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax MARGIN=(*value,unit-measure*)

where

value The document margin. If you specify a decimal value, use the letter P to identify the decimal point. Enter a valid value using one of these formats:

000P01 to 999P99 (for a decimal number)000001 to 999999 (for a whole number)

unit-measure The unit of measure for value. Enter one of these values:

CM	Centimeters
IN	Inches
POS	Character positions

Example //REPORT OUTPUT MARGIN=(2P5,CM)

Overrides None.

MERGEOVL

Description Indicates whether overlays will be consolidated.

Include MERGEOVL=Y in your JCL if you want to merge all the overlays in a copy group the first time that the copy group is used in a document. Each overlay in the copy group is converted, then the individual converted overlays are consolidated into a single .FRM. The .FRM is not saved in the native form library, but will be reused each time the copy group is called. At completion of the document, the .FRM is deleted from the printer. Depending on the complexity of the document, enabling this feature may improve your printer's performance.

All of the inline images included in the overlays are consolidated into a single image. The consolidated image can be reused each time the copy group is called. At completion of the document, the consolidated image is deleted from the printer.

If you include MERGEOVL=N in your JCL, the converted overlays are not consolidated. Instead, only the first converted overlay is processed as a .FRM; subsequent converted overlays are merged with variable data on the page.

Scope Affects processing of AFP documents that include multiple overlays in a copy group sent to centralized printers.

Syntax MERGEOVL={ YES | NO }

where

YES Overlays are consolidated.
NO Overlays are not consolidated.

Example //REPORT OUTPUT MERGEOVL=Y

Overrides This keyword overrides the MERGEOVL initialization and/or printer profile parameters.

Related information If you specify MERGEOVL=Y, the COLORIMG extended JCL keyword has no affect on images within forms. However, other image resources will be affected. For more information, see the COLORIMG extended JCL keyword.

NUMBER

Description Establishes page numbering for the document to be printed. The NUMBER DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax

```
NUMBER={ NO                                          }
       { (value1,value2,value3[,value4,inkref-name]) }
```

where

NO	Pages are to be unnumbered.
value1	-9999 through 99999. The starting page number, which can be negative or positive. The page number is not printed until it becomes positive, so a negative value creates unnumbered pages up to the page you want numbered.
value2	-250 through 250. The line number, which can be negative or positive, on which each page number should appear.
value3	-250 through 250. The number of the ending column, which can be negative or positive, for the page number sequence.
value4	Optional. 1 through 127. The font index to be used.
inkref-name	Optional, for highlight color printing only. The 1- to 6-character ink reference name of the color in which to print the page number. The name can include alphanumeric or national ($, #, @) characters.

Example

```
//REPORT  OUTPUT  NUMBER=(-1,1,129,1,BLUE)
```

Overrides None.

Related information See also the FINDEX extended JCL keyword for more information about the font index.

OPWRITER

Description Directs output for a specific job to any combination of file, disk, and physical printer.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of all types of data streams sent to all types of printers with the exception of printers using TCP/IP protocol.

Syntax

```
OPWRITER={ TAPE[,ONLY]      }
         { DISK[,ONLY]      }
         { TAPE,DISK[,ONLY] }
```

where

TAPE*n* Writes the dataset on a tape volume. *n* is optional and indicates the tape density as defined by the DEN z/OS JCL parameter. XPAF supports tape densities 2, 3, and 4 only.

DISK Writes the dataset to a disk dataset. XPAF generates an output dataset name in the format *prefix.printerid.date.time*.

ONLY Writes the dataset to the TAPE and/or DISK dataset, but not to the printer defined by the printer profile.

If you omit ONLY, the document prints on the printer defined in the printer profile in addition to being written to file and/or disk.

Example

```
//REPORT  OUTPUT  OPWRITER=(TAPE,DISK,ONLY)
```

Overrides Values specified for OPWRITER are used in addition to or in place of values specified for WRITER. For example, if WRITER=(LOCAL,DISK,ONLINE) is specified in the printer profile and OPWRITER=ONLY is specified in the JCL, the document is written to DISK in online format; no output is printed.

Related information See also the OPDALLOC, OPDUNIT, OPHLQ, OPTEXPTD, OPTUNIT, OPTVOLCT, and OPVOLSER initialization parameters. For further information about printing documents from file and/or disk, refer to *Section Four: Printing Documents with XPAF*.

OTEXT

Description Directs a text message to the printer operator during printing.

For DJDE data streams:

The OTEXT DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized printers.

Syntax

OTEXT= { NONE | ('*string*'[, *passnum*, WAIT]) }

where

NONE	Specifies that no text message is sent to the printer.
'*string*'	The 1- to 60-character message enclosed in single quotation marks. In the message, you can include uppercase A-Z, 0-9, and these special characters: @, #, $, !, %, &, *, (,), _, -, +, =, :, ", ?, /, a space, and a comma. Refer to the appropriate printer reference manual for information on how to include lowercase letters or any special characters not listed in this definition.
passnum	END or a number from 1 to 255. The message is displayed on the operator console for the copy number specified or for the last copy if END is specified.
WAIT	Suspends printing until the printer operator responds with CONTINUE.

Examples

```
//REPORT1  OUTPUT  OTEXT='PINK PAPER IN TRAY1'
//REPORT2  OUTPUT  OTEXT=('THIRD COPY PRINTING',3)
//REPORT3  OUTPUT  OTEXT=('CHECKS IN TRAY1',1,WAIT)
//REPORT4  OUTPUT  OTEXT=('CHANGE PAPER',END,W)
//REPORT5  OUTPUT  OTEXT=NONE
```

Overrides None.

OVERPRT

Description Specifies the type of overprinting to be performed by the printer. The OVERPRINT DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax

```
OVERPRT={ PRINT  }
        { PRINT2 }
        { MERGE  }
        { IGNORE }
```

where

PRINT	Prints all overprint lines on top of the first line without regard to data or character spacing.
PRINT2	Prints up to two consecutive lines per line.
MERGE	The same as PRINT except when used with FONTINDEX or CME processing. For more information, refer to the 9790/8790 or 4050 printer reference manual.
IGNORE	Ignores all overprint lines.

Examples

```
//REPORT1  OUTPUT  OVERPRT=PRINT
//REPORT2  OUTPUT  OVERPRT=MERGE
//REPORT3  OUTPUT  OVERPRT=PRINT2
```

Overrides None.

PAGEFORM

Description Identifies the page format to be used for this document.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of page-formatted data streams sent to all types of printers.

Syntax PAGEFORM=*pageform*

where

pageform	The 1- to 8-character page format name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Example

```
//REPORT  OUTPUT  PAGEFORM=NTC1004
```

Overrides None.

PALETTE

Description Identifies the color palette to be used on the page. The PALETTE DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized highlight color printers.

Syntax PALETTE=*palette*

where

palette An existing 1- to 6-character color palette name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT1 OUTPUT PALETTE=SIMPLE

Overrides None.

PAPERSIZ

Description Specifies the paper size to be used for this document. The paper loaded in the tray from which this job feeds must be the size you specify here.

NOTE: When using manual feed paper, documents should be printed with separators turned off.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPERSIZ=*paper-size*

where *paper-size* is

A3	16.54 by 11.69 inches.
A4	8.27 by 11.69 inches.
A5	5.83 by 8.27 inches.
B4	9.84 by 13.9 inches.
LEGAL	8.5 by 14 inches.
LEGL13	8.5 by 13 inches.
LETTER	8.5 by 11 inches.
LONG	11 by 17 inches.
STATMT	5.5 by 8.5 inches.
paper-name	Any 1- to 6-character alphanumeric, user-defined name from a paper name table.

These values are also supported by decentralized and PCL-capable printers:

#7	3.78 by 7.5 inches.
#10	4.25 by 9.5 inches.
A6	4.12 by 5.83 inches.
C5	6.38 by 9.02 inches.
DL	4.33 by 8.66 inches.
B5	6.93 by 9.84 inches.
EXEC	7.25 by 10.5 inches.
POST	3.5 by 5.5 inches.

You also can specify PAPERSIZ to match the exact dimensions of any corresponding paper size loaded in your printer. To do so, enter the values for PAPERSIZ as:

PAPERSIZ=(*width,height,unit-measure*)

where

width	The paper width (x axis).
height	The paper height (y axis).

unit-measure The unit of measure, specified by one of these:

CM	Centimeters
DOTS	300 dpi
IN	Inches
MM	Millimeters
XDOTS	600 dpi

If you specify a decimal value, use the letter P to identify the decimal point. Enter a valid value using one of these formats:

000P01 to 999P99 (for a decimal number)
000001 to 999999 (for a whole number)

Examples

//REPORT OUTPUT PAPERSIZ=LETTER

In this example, the dimensions defined for LETTER in the currently active paper name table are used. If there is no paper name defined or if there is no entry for LETTER in the currently active paper name table, the dimensions shown here for LETTER (8.5 by 11 inches) are used.

//REPORT OUTPUT PAPERSIZ=(9P84,13P9,IN)

In this example, the dimensions 9.84 by 13.9 inches are used.

//REPORT OUTPUT PAPERSIZ=NEWSIZ

In this example, the dimensions for the NEWSIZ user-defined paper name in the currently active paper name table are used.

Overrides

This value overrides the PAPERSIZ or PAPERHIT and PAPERWID initialization parameters and the PAPERSIZ printer profile parameter.

For paper name tables, if you have modified the dimensions of a paper name in the currently active paper name table, those dimensions will override the default dimensions shown in this Syntax section.

For cluster mapping tables, the value you specify here overrides any paper name values in the currently active cluster mapping table. All other cluster mapping table processing occurs normally. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

Related information

If you specify a paper name that is defined in a paper name table, make sure that paper name table has been specified in the PAPNAMTB initialization parameter, printer profile parameter, or extended JCL keyword. If you specify a paper name that is not defined in a paper name table, XPAF uses the values shown in this Syntax section to determine the paper size. If the paper name is not listed in the Syntax section, the paper size defaults to 8.5 by 11 inches.

For AFP data streams, XPAF uses the entries in the currently active varying paper size table to determine which tray select command to issue to decentralized and PCL-capable printers. If a valid varying paper size table is not specified, XPAF issues a tray select command based on three criteria: the AFP bin number within the copy group, the paper name specified in PAPERSIZ, and the printer type. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

PAPNAMTB

Description Identifies the paper name table used by XPAF to determine the physical paper size dimensions that correlate to a specified paper name. The paper name can be specified in the varying paper size tables, in the cluster mapping tables, or by the PAPERSIZ initialization parameter, printer profile parameter, and extended JCL keyword.

This table resides in the library specified in the XOSF start-up proc DD statement named by the PAPTBLDD initialization or printer profile parameter.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PAPNAMTB=*table-name*

where

table-name The 1- to 16-character table name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT PAPNAMTB=PNAME01

Overrides This keyword overrides the PAPNAMTB initialization and/or printer profile parameters.

Related information See also the PAPERSIZ initialization parameter, printer profile parameter, and extended JCL keyword. Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

NOTE: XPAF cannot verify that the paper size specified matches the paper actually loaded on the printer.

PCLREQ

Description Indicates whether XES-to-PCL conversion is requested, or if the document is converted to the default printer command language or is passed through without conversion.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of all types of data streams sent to PCL-capable printers.

Syntax PCLREQ={DEFAULT | GEN | PASS}

where

DEFAULT	Converts the document to the default printer command language specified by the PCL printer profile parameter.
GEN	Converts the document to PCL5 format.
PASS	Indicates that the document is a pass-through job; no conversion is performed.

Example //OUT2 OUTPUT PCLREQ=GEN

Overrides This keyword overrides the PCLREQ printer profile parameter.

Related information If you specify PCL=PCL5 in your printer's profile and you have not specified a value for PCLREQ in either your printer's profile or extended JCL, XPAF will set PCLREQ to a value of GEN.

PDE

Description Identifies the page description entry (PDE) to be used to format a document. The FORMAT DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax PDE=*pde-name*

where

pde-name	The 1- to 6-character PDE name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT PDE=PDE1

Overrides None.

PMODE

Description Specifies the hardware page origin (printing orientation) and affects the entire document except for job/dataset separators. The standard origin is the top left corner of the page when P (portrait) is specified for PMODE.

If the origin should be the top left corner of a landscape page, set PMODE to L (landscape). When an original document is wider than it is tall (deep), set PMODE=L. For example, specify PMODE=L for a document that has been designed for a continuous-forms printer on which letter-size paper is fed sideways to reduce meter usage.

The settings for PMODE in XPAF are equivalent to the PSF medium orientation, which is described in the MDD structured field description in the *Advanced Function Printing: Data Stream Reference*.

For DJDE data streams:

The PMODE DJDE is created.

Scope Affects processing of all types of data streams sent to all types of printers.

Syntax PMODE={ LANDSCAPE | PORTRAIT }

where

LANDSCAPE Specifies landscape.
PORTRAIT Specifies portrait.

Examples

```
//REPORT  OUTPUT  PMODE=L
//REPORT  OUTPUT  PMODE=P
```

Overrides The value you specify for the PMODE extended JCL keyword overrides the value specified for either the IBMPMODE or PMODE initialization parameters.

Related information See also the IBMPMODE and PMODE initialization parameters.

REVFONT

Description Downloads the named font(s), up to eight, to the printer from the appropriate native font library. For decentralized printers that can permanently store resources, the font is stored on the printer. For centralized printers, the font is stored on the printer unless the printer profile specifies DELFONT=YES. Only fonts that are referenced in the document are revised.

For DJDE data streams:

The FILE DJDE is created.

For AFP data streams:

Only Xerox fonts that are referenced in the document are downloaded; do not specify an IBM font name with this keyword. Also, you must resubmit the job using the appropriate REVxxxxx keywords in the extended JCL.

Scope Affects processing of all types of data streams sent to centralized printers, decentralized printers that can permanently store resources, and PCL-capable printers.

Syntax REVFONT=(*font-name1*[,...,*font-name8*])

where

font-name The 1- to 6-character font name that can include alphanumeric or national ($, #, @) characters.

You also can use wildcard characters for documents printed on centralized printers:

* Used to specify all fonts, or used in combination with a generic name to specify a group of fonts. Example: FONT*

? Used as a positional wildcard character within a font name. Example: FNT?BC

Example //OUT1 OUTPUT REVFONT=FNTABC

Overrides None.

REVFORM

Description Downloads the named form(s), up to eight, to the printer from the appropriate native form library. For decentralized printers that can permanently store resources, the form is stored on the printer. For centralized printers, the form is stored on the printer unless the printer profile specifies DELFORM=YES. Only forms that are referenced in the document are revised.

For DJDE data streams:

The FILE DJDE is created.

For AFP data streams:

The form must be a preconverted overlay that is:

- Stored in the centralized form library
- Called in the input data stream by its overlay name

Also, you must resubmit the job using the appropriate REV*xxxxx* keywords in the extended JCL.

Using this keyword eliminates the overhead of reconverting an overlay to a Xerox form and storing the form again in a native library during document processing.

Scope Affects processing of all types of data streams sent to centralized printers, decentralized printers that can permanently store resources, and PCL-capable printers.

Syntax REVFORM=(*form-name1*[,...,*form-name8*])

where

form-name The 1- to 6-character form name that can include alphanumeric or national ($, #, @) characters.

You also can use wildcard characters for documents printed on centralized printers:

* Used to specify all forms, or used in combination with a generic name to specify a group of forms. Example: FORM*

? Used as a positional wildcard character within a form name. Example: FRM?BC

Example //OUT1 OUTPUT REVFORM=FRMABC

Overrides None.

REVIMAGE

Description Downloads the named image(s), up to eight, to the printer from the appropriate native image library. For decentralized printers that can permanently store resources, the image is stored on the printer. For centralized printers, the image is stored on the printer unless the printer profile specifies DELIMAGE=YES. Only images that also are referenced in the document are downloaded.

For DJDE data streams:

The FILE DJDE is created.

For AFP data streams:

The image must be a preconverted page segment that is:

- Stored in the centralized image library
- Called in the input data stream by its page segment name

Also, you must:

- Issue the REFRESH operator command for the appropriate resource libraries.
- Resubmit the job using the appropriate REVxxxxx keywords in the extended JCL.

Using this keyword eliminates the overhead of reconverting a page segment to a Xerox image and storing the image again in a native library during document processing.

Scope Affects processing of all types of data streams sent to centralized printers, decentralized printers that can permanently store resources, and PCL-capable printers.

Syntax REVIMAGE=(*image-name1*[,...,*image-name8*])

where

image-name The 1- to 6-character image name that can include alphanumeric or national ($, #, @) characters.

You also can use wildcard characters for documents printed on centralized printers:

* Used to specify all images, or used in combination with a generic name to specify a group of images. Example: IMG*

? Used as a positional wildcard character within an image name. Example: IMG?BC

Example //OUT1 OUTPUT REVIMAGE=IMGABC

Overrides None.

REVLOGO

Description Downloads the named logo(s), up to eight, to the printer from the appropriate native logo library. The logo is stored on the printer unless the printer profile specifies DELLOGO=YES. Only logos that are referenced in the document are revised.

For DJDE data streams:

The FILE DJDE is created.

Scope Affects processing of DJDE and page-formatted data streams sent to centralized printers.

Syntax REVLOGO=(*logo-name1*[,...,l*ogo-name8*])

where

logo-name The 1- to 6-character logo name that can include alphanumeric or national ($, #, @) characters.

You also can use these wildcard characters:

* Used to specify all logos, or used in combination with a generic name to specify a group of logos. Example: LOGO*

? Used as a positional wildcard character within a logo name. Example: LGO?BC

Example //OUT1 OUTPUT REVLOGO=LGOABC

Overrides None.

REVOPSEG

Description Specifies whether page segments will be revised when an overlay referring to them is revised.

To use this keyword with an AFP data stream, you must resubmit the job using the appropriate REVxxxxx keywords in the extended JCL.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax REVOPSEG={YES | NO}

where

YES Any page segments referred to by an overlay will be revised during document processing if the REVOVLY extended JCL keyword is included in the JCL used to submit the job.

NO Any page segments referred to by an overlay will not be revised as a part of REVOVLY processing. However, one or more page segments can still be revised separately using the REVPSEG extended JCL keyword.

NOTE: Specifying REVOPSEG=NO is not applicable when the AUTOREV initialization or printer profile parameter is set to either AFP or BOTH. REVOPSEG will default to YES.

Example //OUT2 OUTPUT REVOPSEG=N

Overrides This keyword overrides the REVOPSEG initialization and/or printer profile parameters.

Related information See also the REVOVLY and REVPSEG extended JCL keywords and the AUTOREV initialization and printer profile parameters.

REVOVLY

Description

Converts the named overlay(s), up to eight, to a Xerox form. Any page segments associated with the overlay are converted to Xerox images. If any page segments have already been converted, they will not be revised if REVOPSEG=N is specified. The converted Xerox form and any associated Xerox images are then stored in the appropriate native form and image libraries and downloaded to the printer.

Xerox forms are stored in native libraries only when printing to centralized printers. The form is stored on the printer unless the printer profile specifies DELFORM=YES.

Xerox images are always stored in native libraries, regardless of whether you are printing to a centralized or a decentralized printer. Any images that are associated with the converted overlay are permanently stored by the printer unless the printer profile specifies DELIMAGE=YES.

The specified overlay must be called in the input data stream by its overlay name. Even if the overlay has previously been converted to a Xerox form, this keyword reconverts the overlay, stores the resulting Xerox form and any Xerox images in native libraries, and downloads the new versions of the form and any images to the printer.

To use this keyword with an AFP data stream, you must resubmit the job using the appropriate REVxxxxx keywords in the extended JCL.

Scope

Affects processing of AFP data streams sent to all types of printers.

Syntax

REVOVLY=(*overlay-name1*[,...,*overlay-name8*])

where

overlay-name The 1- to 6-character overlay name, excluding the O1 prefix. The name can include alphanumeric or national ($, #, @) characters.

You also can use wildcard characters for documents printed on centralized printers:

- * Used to specify all overlays or, in combination with a generic name, to specify a group of overlays. Example: OVL*
- ? Used as a positional character within an overlay name. Example: OVL?BC

Example

```
//OUT1  OUTPUT  REVOVLY=OVLABC
```

Overrides

None.

Related information

See also the UNIQNAME initialization and printer profile parameters and the REVOPSEG and REVPSEG extended JCL keywords.

REVPSEG

Description

Converts the named page segment(s), up to eight, to a Xerox image, stores the converted image in the appropriate native image library, and downloads the image to the printer. The image is stored on the printer unless the printer profile specifies DELIMAGE=YES.

The specified page segment must be called in the input data stream by its page segment name. Even if the named page segment has previously been converted to a Xerox image, this keyword reconverts the page segment, stores the resulting Xerox image in a native library, and downloads the new version of the image to the printer.

To use this keyword with an AFP data stream, you must resubmit the job using the appropriate REV*xxxxx* keywords in the extended JCL.

Scope

Affects processing of AFP data streams sent to all types of printers.

Syntax

REVPSEG=*(pseg-name1*[,...,*pseg-name8*])

where

pseg-name The 1- to 6-character page segment name that can include alphanumeric or national ($, #, @) characters:

- If the page segment member uses the S1 prefix, do not include that prefix in the page segment name you enter here.
- If the page segment member does not use the S1 prefix, enter the first six characters of the page segment member.

You also can use wildcard characters for documents printed on centralized printers:

* Used to specify all page segments or, in combination with a generic name, to specify a group of page segments. Example: PSG*

? Used as a positional character within a page segment name. Example: PSG?BC

Example

```
//OUT1  OUTPUT  REVPSEG=(PSGABC,A1PSGA)
```

Overrides

None.

Related information

See also the REVOPSEG and REVOVLY extended JCL keywords.

RFORM

Description Specifies the form to be printed with all RTEXT pages. The RFORM DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax RFORM={ NONE | *form-name* }

where

NONE	No form is printed with the RTEXT page.
form-name	The 1- to 6-character form name. The name can include alphanumeric or national ($, #, @) characters.

Examples

```
//REPORT1  OUTPUT  RFORM=FORM12
//REPORT2  OUTPUT  RFORM=NONE
```

Overrides None.

RTEXT

Description Specifies a text message to be printed on a separate page preceding a report. Do not use this keyword with the RTEXTID extended JCL keyword. If both keywords are specified, the results are unpredictable. The RTEXT DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax

RTEXT= { NONE | *('string',passnum,value1,value2,value3)* }

where

NONE	Specifies that no text message is sent to the printer.
'*string*'	The 1- to 60-character message enclosed in single quotation marks. In the message, you can include uppercase A-Z, 0-9, and these special characters: @, #, $, !, %, &, *, (,), _, -, +, =, :, ", ?, /, a space, and a comma. Refer to the appropriate printer reference manual for information on how to include lowercase letters or any special characters not listed in this definition.
passnum	ALL or a number from 1 to 255. The message is printed on a separate page preceding the report for the copy number specified or for every copy if ALL is specified.
value1	1 through 255. The line number at which the text is to begin printing.
value2	1 through 250. The column number at which the text is to begin printing.
value3	1 through 127. The index (beginning with 1) of the PDE font in which the text is to print.

Examples

```
//REPORT1  OUTPUT  RTEXT=('TAX REPORT',1,30,14,2)
//REPORT2  OUTPUT  RTEXT=('TAX REPORT',ALL,30,24,2)
//REPORT3  OUTPUT  RTEXT=NONE
```

Overrides None.

RTEXTID

Description Specifies the name of a cataloged file of RTEXT commands that reside on the printer. Do not use this keyword with the RTEXT extended JCL keyword. If both keywords are specified, the results are unpredictable. The RTEXT DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax RTEXTID=*file-name*

where

file-name The 1- to 6-character name of a previously compiled file. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT RTEXTID=COVER2

Overrides None.

SF1

Description Specifies that XPAF will send a DJDE to the printer to control signal function 1 at the start of a page. This signal is used by the printer to communicate with document finishing equipment that is provided by third-party vendors. XPAF does not determine the function of signal function 1; the function is defined by the document finishing equipment supplied by the third-party vendor. The SF1 DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized printers using DFA version 4.1 or higher. You must specify FEATURE=DFA in the printer's profile for this keyword to take effect.

Syntax SF1={YES / NO}

where

YES Sends the SF1=YES DJDE to the printer to raise (that is, turn on) signal function 1.

NO Sends the SF1=NO DJDE to the printer to lower (that is, turn off) signal function 1.

Example

```
//OUT2  OUTPUT  SF1=Y
```

Overrides You can override this keyword by specifying a value in the XDJDSF1 field in @XDJD in user exit 02.

Related information See also the FEATURE printer profile parameter.

Refer to *Section Four: Printing Documents with XPAF* for more information on using this keyword in your data stream, and refer to *Section Two: Installing and Customizing XPAF* for more information on user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

Refer to the finishing equipment documentation supplied by your third-party vendor for more information about the equipment's use of signal functions.

SF2

Description Specifies that XPAF will send a DJDE to the printer to control signal function 2 at the start of a page. This signal is used by the printer to communicate with document finishing equipment that is provided by third-party vendors. XPAF does not determine the function of signal function 2; the function is defined by the document finishing equipment supplied by the third-party vendor. The SF2 DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized printers using DFA version 4.1 or higher. You must specify FEATURE=DFA in the printer's profile for this keyword to take effect.

Syntax SF2={YES | NO}

where

YES Sends the SF2=YES DJDE to the printer to raise (that is, turn on) signal function 2.

NO Sends the SF2=NO DJDE to the printer to lower (that is, turn off) signal function 2.

Example

```
//OUT2  OUTPUT  SF2=Y
```

Overrides You can override this keyword by specifying a value in the XDJDSF2 field in @XDJD in user exit 02.

Related information See also the FEATURE printer profile parameter.

Refer to *Section Four: Printing Documents with XPAF* for more information on using this keyword in your data stream, and refer to *Section Two: Installing and Customizing XPAF* for more information on user exits. Review the comments in the appropriate sample user exit member in XPFSAMP for more information on how to modify the sample.

Refer to the finishing equipment documentation supplied by your third-party vendor for more information about the equipment's use of signal functions.

SHIFT

Description Specifies a shift of the page data for binding purposes. This option can be used to shift data toward the outer edge of the page, to prevent text from being obscured when pages are bound together or hole-punched. The SHIFT DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax

```
SHIFT= { (value1,value2) }
       {      YES       }
       {      NO        }
```

where

(value1,value2) The displacement, in dots, of the front (value1) and back (value2) of the page.

If you enter only one value, that value is assumed to be an entry for value1. To specify a value for only value2, enter a value for both value1 and value2, but set the value for value1 to 0.

The allowed displacement value can be from -75 dots to 75 dots (.25 inch). The minus sign (-) is valid when preceding either value1 or value2. Do not enter a plus sign (+) to indicate a positive value. Since the displacement is always calculated in dots, do not specify a unit of measure.

If you specify a decimal value, use the letter P to identify the decimal point. Enter one of these values:

-75P00 to 75P00 (for a decimal number)
-75 to 75 (for a whole number)

YES Uses the default shift of 75 and -75 dots (75,-75).

NO Does not shift.

Examples

```
//REPORT1  OUTPUT  SHIFT=YES
```

In this example, the default shift of 75 dots on both sides of the page is used.

```
//REPORT1  OUTPUT  SHIFT=(50,-50)
```

In this example, data is shifted 50 dots on both sides of the page.

```
//REPORT1  OUTPUT  SHIFT=NO
```

In this example, no shift on either side of the page is used.

Overrides None.

SIDE

Description Specifies positioning of the first logical page of the document to the first logical page of a physical sheet. The SIDE DJDE is created.

Scope Affects processing of DJDE data streams sent to printers that support duplex printing.

Syntax SIDE=(*side-opt*,*offset-opt*)

where

side-opt Selects the physical side for printing. Enter one of these values:

BACK
NEXT
NUFRONT
NUBACK

offset-opt Specifies whether the document is offset in the printer output stacker. Enter one of these values:

NOFFSET
OFFSET

Example

```
//REPORT  OUTPUT  SIDE=(NUF,OFFSET)
```

Overrides None.

STAPLE

Description Identifies whether copy sets are stitched on a printer that is configured with a stitcher/stacker.

Staple processing is handled by the PDL on the printer; therefore, when you use the STAPLE extended JCL keyword, you also must:

- Specify FEATURE=STITCHER in the printer profile for the destination printer.
- Specify JDE=*jdename* in the extended JCL. The JDE extended JCL keyword must name a JDE that is coded for stapling.

Xerox supplies a sample JDE called PGSTAP in the XPFSAMP member DFAULT. If desired, you can use your own JDE. The JDE must contain statements similar to:

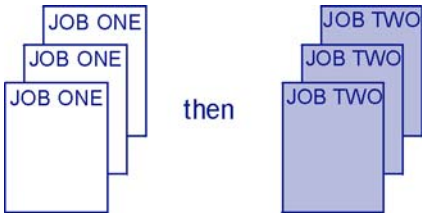
```
VOLUME  CODE=NONE;

OUTPUT  STAPLE=YES,NT01=YES,FACEUP=YES;
```

It must be loaded into the PDL library on the host, downloaded to the printer, and compiled.

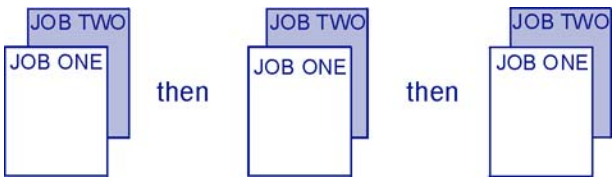
Stapling is triggered by the END DOCUMENT (EDT) structured field. When XPAF encounters an EDT structured field, it sends down an RSTACK to initiate stapling at the printer.

When using either the COPIES IBM JCL keyword or the XCOPY extended JCL keyword in conjunction with STAPLE, individual copies will be collated correctly; however, copy sets for each job will be collated differently.

For example, if you specify XCOPY=3 and STAPLE=Y in your JCL, you will receive this output:



If you specify COPIES=3 and STAPLE=Y in your JCL, you will receive this output:



For DJDE data streams:

No DJDE is created.

Scope Affects processing of page-formatted and AFP data streams sent to centralized printers equipped with the stitcher option.

Syntax STAPLE={YES | NO}

where

YES Copy sets are stitched.
NO Copy sets are not stitched.

Example //REPORT1 OUTPUT STAPLE=YES,JDE=PGSTAP

Overrides None.

Related information See also the COPIES IBM JCL keyword and the XCOPY extended JCL keyword.

STOCKS

Description Defines the stockset and its associated stock(s) to be used in a report. The STOCKS DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized printers.

Syntax STOCKS=*stockset-name*

where

stockset-name The 1- to 6-character stockset name. The name can include alphanumeric.

Example //REPORT1 OUTPUT STOCKS=STOCK1

Overrides None.

TOF

Description Specifies the line with reference to the top of the page on which the first line of text is to print in an overflow condition. The TOF DJDE is created.

For TOF to work properly, you must:

- Set a value for BOF or accept its default value.
- Set a JES line count that is equal to zero.

When data overflows the page as defined by the BOF value, then the TOF value is applied on the next page. For more information, refer to the description of BOF/TOF in the appropriate printer manual.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax TOF=*nnn*

where

nnn 1 through 255.

Example //REPORT OUTPUT TOF=1

Overrides None.

Related information See also the LINECT IBM JCL keyword and the BOF extended JCL keyword.

TWOUP

Description When XPAF is operating in XJCF simulation mode, TWOUP specifies the presentation of the document on a Xerox centralized printer.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of XJCF simulation mode and centralized printers.

Syntax TWOUP={YES | NO}

where

YES Two or more logical pages will appear on the physical page.

NO Only one logical page will appear on the physical page.

Example //REPORT OUTPUT TWOUP=YES

Overrides None.

VARPAPTB

Description Identifies the varying paper size table used by XPAF to determine the physical paper size which corresponds to the AFP bin number for the current printer. XPAF evaluates the currently active paper name table to determine the dimensions of the paper name specified in this table.

This table resides in the library specified in the XOSF start-up proc DD statement named by the PAPTBLDD initialization or printer profile parameter.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax VARPAPTB=*table-name*

where

table-name The 1- to 16-character table name. The name can include alphanumeric or national ($, #, @) characters.

Example //REPORT OUTPUT VARPAPTB=PRTR01A

Overrides This keyword overrides the VARPAPTB initialization and/or printer profile parameters.

Related information Refer to *Section Three: Managing Resources with XPAF* for more information on paper-related table processing.

NOTE: XPAF cannot verify that the paper size specified matches the paper actually loaded on the printer.

XCOPY

Description

Specifies the number of copies of the document to be printed using the DJDE COPIES function. The COPIES DJDE directs a Xerox centralized printer to print copies of a report or document automatically, without the host having to process the data and transmit it to the printer more than once.

This keyword is designed to take advantage of the performance benefits of this feature of Xerox centralized printers. For decentralized and PCL-capable printers, the function of this keyword is simulated by processing and transmitting the data multiple times (as with the COPIES IBM JCL keyword).

Using XCOPY in conjunction with the COPIES IBM JCL keyword is not recommended. If you use both keywords, the total number of copies will be the product of the two. Also, your banner, separator, and message pages may print out of sequence.

For DJDE data streams:

The COPIES DJDE is created.

Scope

Affects processing of DJDE, page-formatted, and AFP data streams sent to all types of printers.

Syntax

XCOPY=*nnnnn*

where

nnnnn 1 through 32767.

Example

//REPORT OUTPUT XCOPY=5

Overrides

None.

Related information

See also the COPIES IBM JCL keyword and the STAPLE extended JCL keyword.

XDUPLEX

Description Specifies whether printing will occur on one or both sides of the paper.

For DJDE data streams:

The DUPLEX DJDE is created.

For AFP data streams:

This keyword only applies to documents that have simplex copy groups within a FORMDEF.

Scope Affects processing of all types of data streams except XES sent to all types of printers.

Syntax **For all data streams except XES and AFP:**

XDUPLEX={ YES | NO }

where

YES Prints on both sides (duplex).
NO Prints on one side only (simplex).

For AFP data streams:

XDUPLEX={ YES | NO | TUMBLE }

where

YES Simplex documents are printed on both sides (duplex).

NO Duplex processing is not affected.

TUMBLE Simplex documents are printed on both sides with top-to-bottom orientation (tumble duplex).

Example //REPORT OUTPUT XDUPLEX=Y

Overrides For AFP data streams, this keyword overrides the duplexing option in the FORMDEF.

Related information For AFP data streams, these restrictions apply:

- If the printer does not support duplex mode, the data will be printed in simplex mode.
- If the copy group is not simplex only, specifying this keyword has no affect on the printed data.
- If the MCC structured field contains more than one copy subgroup, specifying this keyword has no affect on the printed data.
- If the copy group MMC structured field has CFC active, specifying this keyword has no affect on the printed data.
- SMF accounting is not affected by this keyword. The number of logical impressions is accumulated, not the physical number of printed pages.

XFILE

Description Identifies the name of a file you are downloading to the printer. The file can be either card-image or Xerox-labeled. The FILE DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers. When sent to decentralized or PCL-capable printers only .FRM and .IMG files are recognized and are treated as temporary resources.

Syntax

```
XFILE={ NULL                                                  }
      { (file-name,file-type,file-format,storage-option[,nn]) }
```

where

NULL	For Xerox-labeled files, the DJDE created will be FILE=(). The file name and type can then be retrieved from the label, and multiple labeled files can be downloaded using a single command.
file-name	The 1- to 6-character file name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.
file-type	The 1- to 3-character file type, which can be any valid file type supported by the printer for file downloading. The type can include alphabetic characters.
file-format	Indicates the file format. Enter one of these values: C Card-image format. L Xerox-labeled format.
storage-option	Indicates the file storage option. Enter one of these values: D Delete the file after this document has been printed. P Store the file permanently.
nn	Indicates the maximum card image count (for card-image files only).

Example

```
//REPORT  OUTPUT  XFILE=(FAL12,IMG,L,D)
```

Overrides None.

XFORM1–XFORM3

Description Identifies the names of up to three forms to be printed on the document. If the document is duplexed, this form will be printed on both sides of the page. To print a different form on the back side of the page, use the BFORMn extended JCL keyword. The FORMS DJDE is created.

Scope Affects processing of DJDE data streams sent to all types of printers.

Syntax XFORM*n*=(*form-name,value1,value2*)

where

n	1 through 3.
form-name	The 1- to 6-character form name. The name can include alphanumeric or national ($, #, @) characters.
value1	1 through 250. The beginning ply (pass number) to which the form applies
value2	1 through 250. The number of plies (passes) to which the form applies.

Example

```
//REPORT  OUTPUT  XFORM1=(XVGB,1,2),
//  XFORM2=(XVRL,3,3)
```

Overrides None.

XIPADDR

Description Specifies the IP address or host name of the printer. Refer to your vendor's TCP documentation for information on defining a host names table.

Scope Affects processing of all types of data streams sent to either decentralized or PCL-capable printers using the TCP/LPR or TCP/IP protocols.

Syntax XIPADDR= { *ip-address* | *host-name* }

where

ip-address The 7- to 39-character IP address of this printer.

host-name The 1- to 50-character host name of this printer as defined in your host names table. The host name can include alphanumeric, national ($, #, @), or special characters.

Default None.

Example XIPADDR=13.245.113.77

Overrides None.

Related information See also the LPRBNDRY, LPRDSN, LPRJCL, LPRQNAME, TCPMODE, and TCPPORT printer profile parameters for information on setting up your system for TCP printing.

For LPR protocol requests, see also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP printing.

XJCFSIM

Description Indicates whether XJCF simulation is in effect for this print job.

Scope Affects processing of XJCF simulation mode and DJDE data streams sent to all types of printers.

Syntax XJCFSIM={ **Y**ES | **N**O | **F**IRST }

where

YES Activates XJCF simulation for this job and overrides any value set in the XJCFMODE printer profile parameter.

NO Does not activate XJCF simulation for this job.

FIRST Activates XJCF simulation for only the first dataset in the output group.

Example //REPORT OUTPUT XJCFSIM=Y

Overrides None.

Related information See also the XJCFMODE printer profile parameter.

XJOBTMEM

Description Specifies Xerox job ticket information to be retrieved from the dataset defined by LPRDSN.

Scope Affects processing of all types of data streams sent to NPS or DocuSP printers.

Syntax XJOBTMEM=*nnnnnnnn*

where

nnnnnnnn The 1- to 8-character name for the desired job ticket member name. The name can include alphanumeric or national ($, #, @) characters.

Example XJOBTMEM=XJOBTICK

Related Information LPRDSN specifies the name of the PDS in which the member resides.

For more information on job tickets see the XJOBTMEM printer profile parameter, and refer to chapter 13, "Setting up PCL-capable printers" in *Section Two: Installing and Customizing XPAF*.

XLCDSHSP

Description Specifies the percentage of black coloring to be used when converting LCDS heavy shading to PDF. A lower value will produce lighter shading. A value of 0 will produce white or no shading. A value of 100 will produce a black box.

Scope Affects processing of all LCDS documents transformed to PDF.

Syntax XLCDSLSP=*nnn*

where

nnn A value in the range 0 to 100 indicating the amount of back to be used in the PDF shading.

Default The value specified by the LCDS_Heavy_Shading_Percent printer profile parameter.

Example //REPORT OUTPUT XLCDSLSP=50

Overrides None.

XLCDSLSP

Description Specifies the percentage of black coloring to be used when converting LCDS light shading to PDF. A lower value will produce lighter shading. A value of 0 will produce white or no shading. A value of 100 will produce a black box.

Scope Affects processing of all LCDS documents transformed to PDF.

Syntax XLCDSLSP=*nnn*

where

nnn A value in the range 0 to 100 indicating the amount of back to be used in the PDF shading.

Default The value specified by the LCDS_Light_Shading_Percent printer profile parameter.

Example //REPORT OUTPUT XLCDSLSP=5

Overrides None.

XLCDSMSP

Description Specifies the percentage of black coloring to be used when converting LCDS medium shading to PDF. A lower value will produce lighter shading. A value of 0 will produce white or no shading. A value of 100 will produce a black box.

Scope Affects processing of all LCDS documents transformed to PDF.

Syntax XLCDSMSP=*nnn*

where

nnn A value in the range 0 to 100 indicating the amount of back to be used in the PDF shading.

Default The value specified by the LCDS_Medium_Shading_Percent printer profile parameter.

Example //REPORT OUTPUT XLCDSMSP=15

Overrides None.

XLPRMEM

Description Specifies the name of the member that contains skeleton JCL that is invoked for BATCH LPR Processing. The member must reside in the PDS dataset referenced by the LPRDSN parameter.

Scope Affects processing of all documents transmitted via BATCH LPR (TCPMODE=LPR)

Syntax XLPRMEM=member-name

where

member-name The 1- to 8-character member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The value specified by the LPRJCL printer profile parameter.

Example XLPRMEM=MYLPRJCL

Overrides None.

XLPRQNAM

Description Specifies the queue name on the LPD server that will receive print jobs. For the default queue name of the printers and interface devices, refer to the applicable vendor documentation.

Scope Affects processing of all types of data streams sent to printers using the TCP/LPR or TCP/IP protocols.

Syntax XLPRQNAM=*queue-name*

where

queue-name The 1- to 50-character queue name on this printer. The queue name can include alphanumeric, national ($, #, @), or special characters. Spaces are not valid characters within the queue name.

Default None.

Example XLPRQNAM=PASSTHRU

Overrides None.

Related information See also the XIPADDR, LPRBNDRY, LPRDSN, LPRJCL, TCPMODE, and TCPPORT printer profile parameters for information on setting up your system for TCP printing.

For LPR protocol requests, see also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP batch printing.

XMP

Description Identifies the XMP to be used for this document. Depending on the value specified, the effect is to maximize throughput or minimize toner usage.

For DJDE data streams:

The XMP DJDE is created.

Scope Affects processing of DJDE data streams sent to centralized highlight color printers.

Syntax XMP={NONE / ALL}

where

NONE Uses the SYSGENed XMP.

ALL When a report requires highlight color mode for any page, all remaining unprinted pages of the report are printed in the highlight color mode.

Example //REPORT1 OUTPUT XMP=ALL

Overrides None.

XPDFDPLX

Description Specifies whether the created PDF document should include blank pages to correctly position front and back sides when the PDF file is printed as a duplex document.

Scope Affects processing of all PDF documents.

Syntax XPDFDPLX= { FULL | MIXED }

where

FULL or F indicates that blank pages should be inserted into the PDF document.

MIXED or M indicates that blank pages should not be inserted into the PDF document.

Default XPDFDPLX=MIXED

Example XPDFDPLX=F

Overrides None.

Related Information See also the PDFDUPLEX FEATURE= printer profile parameter.

XPDFFSUB

Description Specifies the name of the member that contains the PDF font substitution table to be used for this job. The member must reside in the XINPARM PDS dataset.

Scope Affects processing of all PDF documents.

Syntax XPDFFSUB=member-name

where

member-name The 1- to 8-character member name. The name can include alphanumeric or national ($, #, @) characters. The first character must be an alphabetic or national character.

Default The value specified by the XPDFFSUB initialization or printer profile parameters.

Example XPDFFSUB=MYFNTSUB

Overrides None.

XPDFOPW

Description Specifies that the created PDF document should be encrypted using the owner password provided.

Scope Affects processing of all PDF documents.

Syntax XPDFOPW=owner-password

where

owner-password The 1- to 32-character owner password. The password can include alphanumeric or special (/, +, <) characters.

Default None.

Example XPDFFOPW=’My+Secret16’

Overrides None.

Related Information See also the XPDFPERM and XDPFUPW Extended JCL keywords.

XPDFPERM

Description Specifies the user permissions associated with an encrypted PDF document

Scope Affects processing of encrypted PDF documents.

Syntax XPDFPERM= { NONE | VIEW | PRINT | FULL }

where

N or NONE	The user is unable to print, copy text to the clipboard from, or extractpages from the PDF document.
V or VIEW	The user is unable to print, copy text to the clipboard from, or extract pages from the PDF document.
P or PRINT	The user can print the document, but cannot extract pages or copy text to the clipboard.
F or FULL	Full permissions are granted. The user can print, extract pages and copy text to the clipboard from the PDF document but cannot change the owner or user password.

Default None.

Example XPDFPERM=P

Related Information See also the XPDOPW and XDPFUPW Extended JCL keywords.

A PDF document will only be encrypted if the owner password has been given.

XPDFUPW

Description Specifies the user password to be used when encrypting a PDF document.

Scope Affects processing of encrypted PDF documents.

Syntax XPDFUPW=user-password

where

owner-password	The 1- to 32-character owner password. The password can include alphanumeric or special (/, +, <) characters.

Default None.

Example XPDFFUPW='SecureDocument'

Overrides None.

Related information See also the XPDFPERM and XDPFUPW Extended JCL keywords.

A PDF document will only be encrypted if the owner password has been given.

XPDFVIEW

Description Specifies the viewing orientation of PDF files created from AFP documents. The orientation specified in the MDD structure field for the page will be ignored and the orientation will be set based on the value specified. All pages in the created PDF file with have the same orientation.

Scope Affects processing of AFP documents converted to PDF.

Syntax XPDFVIEW={ LANDSCAPE | PORTRAIT }

where

L or LANDSCAPE	The viewing orietntation is set to landscape.
P or PORTRAIT	The viewing orientation is set to portrait

Default None.

Example //REPORT OUTPUT XPDFVIEW=L

Overrides None.

XPJLMEM

Description Specifies a PJL member to be retrieved from the dataset defined by LPRDSN.

Scope Affects processing of all types of data streams sent to PCL-capable printers.

Syntax XPJLMEM=*nnnnnnnn*

where

nnnnnnnn	The 1- to 8-character name for the desired PJL member name. The name can include alphanumeric or national ($, #, @) characters.

Example XPJLMEM=XPJL3COP

Related information For more information on PJL see the XPJLMEM printer profile parameter, and refer to chapter 13, “Setting up PCL-capable printers” in *Section Two: Installing and Customizing XPAF*.

XSHADE

Description Specifies whether to enhance cells within AFP images that are recognized as a shading pattern.

For DJDE data streams:

No DJDE is created.

Scope Affects processing of AFP data streams sent to all types of printers.

Syntax XSHADE={YES | NO}

where

YES Shading cells will be enhanced.

NO Shading cells will not be enhanced; standard image processing is used.

Example //OUT1 OUTPUT XSHADE=NO

Overrides None.

XSHIFT

Description Allows shifting of the image of the form and data on a page in the x-direction. This keyword may be used to shift the image of the data for short-edge binding, finishing, and edgemarking. The XSHIFT DJDE is created.

Scope Affects processing of DJDE data streams sent to 4635 and 4635MX printers.

Syntax XSHIFT={*nn* | NO}

where

nn An integer from -75 to 75, inclusive. This value specifies a shift amount in the x-direction on the front and back side. Each dot is 1/300 of an inch.

NO Specifies that no shift occurs.

Example //REPORT1 OUTPUT XSHIFT=-75

Overrides None.

XSPLTMEM

Description Specifies the trigger definition member name to be used when splitting an LCDS job.

Scope Affects processing of LCDS data streams converted to PCL or PDF.

Syntax XSPLTMEM=*memname*

where

memname The 1 to eight charter member name

Example //REPORT1 OUTPUT XSPLTMEM=PAYROLL2

Overrides None.

XSPPCODE

Description Specifies a one to 12 digit passcode to be.used when sending a PCL document to a printer that supports the “Secure Print” feature.

Scope Affects processing of all PCL documents.

Syntax XSPPCODE=passcode

where

passcode the 1 to 12 digit pass code

Default None

Example //REPORT OUTPUT XSPPCODE=123456789

Overrides None.

Related information Refer to the “Specifying a Secure Print Pass code feature for Xerox PCL devices” section for more information.

XTCPPORT

Description Specifies the TCP/IP port number of this printer. Refer to your DocuPrint NIC documentation to determine the correct port number to use.

Scope Affects processing of all types of data streams sent to all printers connected via TCP/IP.

Syntax XTCPPORT=*nnnnn*

where

nnnnn 0 through 65535.

Default 515 (For LPR protocol)

No default for other protocols.

Example XTCPPORT=2000

Overrides None.

Related information See also the IPADDR, LPRBNDRY, LPRDSN, LPRJCL, LPRQNAME, and TCPMODE printer profile parameters for information on setting up your system for TCP batch printing.

For LPR protocol requests, see also the OPDALLOC, OPDUNIT, OPHLQ, and OPVOLSER initialization parameters for information on specifying the characteristics of the interim dataset used during TCP batch printing.

XUSERAC1-XUSERAC3

Description Specifies user-defined variable information used as a substitute parameter in XJOBTMEM, XPJLMEM, or XVIPPMEM.

Scope Affects processing of all types of data streams sent to PCL-capable and VIPP-enabled printers.

Syntax XUSERACn=*nnnnnnnnnnnn*

where

nnnnnnnnnnnn The 1- to 12-character user-defined variable. The name can include alphanumeric or national ($, #, @) characters.

Example XUSERAC1=JCLDATASET

Related information See also “Using the insertion feature to add PJL and job ticket commands,” in *Section Two: Installing and Customizing XPAF*.

See also chapter 37, “Printing VIPP documents” in *Section Four: Printing Documents with XPAF*.

XVIPPMEM

Description Specifies the VIPP member to be retrieved from the dataset defined by LPRDSN.

Scope Affects processing of line-mode data streams sent to VIPP-enabled printers.

Syntax XVIPPMEM=*nnnnnnnn*

where

nnnnnnnn The 1- to 8-character name for the desired VIPP member name. The name can include alphanumeric or national ($, #, @) characters.

Example XVIPPMEM=XPAFJDT

Related Information LPRDSN specifies the name of the PDS in which the member resides.

For more information on VIPP see the PRMODE JCL keyword, and refer to chapter 37, "Printing VIPP documents" in *Section Four: Printing Documents with XPAF*.

44. Parameter and keyword summary

This appendix lists every initialization parameter, printer profile parameter, IBM JCL keyword, and XPAF extended JCL keyword supported by XPAF in alphabetical order. If an initialization parameter or printer profile parameter has a default value, it is listed. Keywords do not have default values. For more information about a specific parameter or keyword, see the appropriate parameter or keyword chapter in Section Five.

Summary table

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
ACB	✓				No default value
ADDRESS			✓		Not applicable
AFPDSHDR	✓	✓			Dependent on individual variables; see parameter definition
AFPJOBHDR	✓	✓			Dependent on individual variables; see parameter definition
AFPJOBTLR	✓	✓			Dependent on individual variables; see parameter definition
AFPMSGDS	✓	✓			Dependent on individual variables; see parameter definition
ALOGDSN	✓				No default value
AUTOREV	✓	✓			Initialization: N Printer profile: AUTOREV initialization parameter value
BANNERJDL	✓				N
BANRESET	✓	✓			Y
BANSTYLE	✓	✓		✓	Initialization: XPAF Printer profile: BANSTYLE initialization parameter value
BEGIN1–BEGIN4				✓	Not applicable
BFORM1–BFORM3				✓	Not applicable
BOF				✓	Not applicable

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
BUFSIZE		✓			512
BUILDING			✓		Not applicable
CFONTLIB	✓				CFONTLIB
CFORMLIB	✓				CFORMLIB
CHAN01–CHAN12				✓	Not applicable
CHARS			✓		Not applicable
CHARSET		✓			USENGLISH
CIMAGELIB	✓				CIMGLIB
CKPTPAGE			✓		Not applicable
CLASS			✓		Not applicable
CLOGOLIB	✓				CLOGOLIB
CLUSTRTB		✓		✓	DEFAULT*xxxx*, where *xxxx* is the printer model or DPNP for NPS printers
CME				✓	Not applicable
COLLATE				✓	Not applicable
COLORIMG				✓	Not applicable
COMSSID	✓				JES
COMSSTYP	✓				No default value
CONCHAR	✓				$
CONROUTE	✓				Default values are specified in the DEFAULT statement in CONSOL*nn* member of SYS1.PARMLIB
CONTROL			✓		Not applicable
CONVERTER		✓			274
COPIES			✓		Not applicable
DATA				✓	Not applicable
DATACK			✓		Not applicable
DEFILIND	✓				N
DEFJDE	✓				DFLT

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
DEFJDL	✓				DFAULT
DEFLINE	✓	✓			Initialization: LINE Printer profile: The DEFLINE initialization parameter value
DELFONT		✓		✓	NO
DELFORM		✓		✓	NO
DELIMAGE		✓		✓	NO
DELLOGO		✓		✓	NO
DEPT			✓		Not applicable
DEST			✓		Not applicable
DEVICE		✓			No default value
DFONTLIB	✓				DFONTLIB
DFORMLIB	✓				DFORMLIB
DIMAGELIB	✓				DIMGLIB
DJDE				✓	Not applicable
DJDEOF01–DJDEOF09	✓				0
DJDESCAN		✓		✓	N
DJDESK01–DJDESK09	✓				0
DSGROUP	✓				N
DUPLEXSW	✓	✓		✓	Initialization: N Printer profile: DUPLEXSW initialization parameter value
EMAILMAX		✓			None
EMAILXN		✓			The type of document that is being generated
ESTAE	✓				Y
ETV	✓				8
FCB	✓	✓	✓		Initialization: N Printer profile: FCB initialization parameter value

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
FCBPREF	✓				FCB2
FEATURE		✓			Dependent on printer type; see parameter definition
FEED				✓	Not applicable
FINDEX				✓	Not applicable
FLASH			✓		Not applicable
FNTLGOCONV	✓	✓			Initialization: AUTO Printer profile: The FNTLGOCONV initialization parameter value
FNTTBLDD	✓	✓			TABLELIB
FONT0–FONT15				✓	Not applicable
FONTLIB		✓			Centralized printers: CFONTLIB initialization parameter value Decentralized printers: DFONTLIB initialization parameter value PCL-capable printers: DFONTLIB initialization parameter value
FONTLIST		✓			No default value
FORMAT				✓	Not applicable
FORMDEF	✓	✓	✓		A10110
FORMDEFDD	✓				FDEFLIB
FORMLIB		✓			Centralized printers: CFORMLIB initialization parameter value Decentralized printers: DFORMLIB initialization parameter value PCL-capable printers: DFORMLIB initialization parameter value
FORMLIST		✓			No default value
FORMS			✓		Not applicable
IBMFONT300	✓				IBMFONT3
IBMFONTDD	✓				IBMFONT
IBMPMODE	✓				Y
ICATALOG				✓	Not applicable
IDEN01–IDEN09	✓				No default value

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
IDENIDX		✓			0
IDFAULT				✓	Not applicable
IDR				✓	Not applicable
IFONTRES	✓	✓		✓	240
ILIST				✓	Not applicable
IMAGE				✓	Not applicable
IMAGEINIMP		✓			blank
IMAGELIB		✓			Centralized printers: CIMAGELIB initialization parameter value Decentralized printers: DIMAGELIB initialization parameter value PCL-capable printers: DIMAGELIB initialization parameter value
IMAGELIST		✓			No default value
IMAGEMAXO		✓			16
IMAGEMAXP		✓			16
IMAGEMAXS		✓			16
IMAGEMODE		✓			LIN
IMAGEOPTM		✓			TIME
IMAGEOUTIMP		✓			blank
IMAGEPROC		✓			1
IMAGERVID		✓			N
IMAGETONE		✓			120
IMAGETYPIMP		✓			NONE
IMGTYPE	✓	✓		✓	0
INKINDEX				✓	Not applicable
INKXLIB	✓	✓		✓	Initialization: TABLELIB Printer profile: INKXLIB initialization parameter value
INKXREF	✓	✓		✓	Initialization: No default value Printer profile: INKXREF initialization parameter value

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
INVERT				✓	Not applicable
IPADDR		✓			No default value
IPVERSION	✓	✓			Initialization: 4 Printer profile: The IPVERSION initialization parameter value
IRESULT				✓	Not applicable
ITEXT				✓	Not applicable
JDE		✓		✓	DEFJDE initialization parameter value
JDL		✓		✓	DEFJDL initialization parameter value
JESCOPIES		✓			PROCESS
JESNEWS	✓				EXIT
LANDFONT		✓			Centralized printers: L0112B Decentralized printers: XCP14-L or XCP14iso-L PCL-capable printers: L0112B
LIBRARY		✓			No default value
LINECT			✓		Not applicable
LOGOLIB		✓			CLOGOLIB initialization parameter value
LOGOLIST		✓			No default value
LPRBNDRY		✓			GROUP
LPRDSN		✓			No default value
LPRJCL		✓			No default value
LPRQNAME		✓			No default value

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
LPSRELEASE		✓			**Device** **Default** DOCUSPC V3A DOCUSPL V3A DP180LPS V3A DPLPSC V3A DP96LPS V3A 377CF V99 4050 V35 4090 V35 4135 V3A 4197 V1.22 420CFT V99 4635 V3A 4635MX V3A 4850 V37 4890 V37 4900 V1.10
LUTYPE		✓			No default value
MAP				✓	Not applicable
MARGIN				✓	Not applicable
MEMORY		✓			12M
MERGEOVL	✓	✓		✓	Initialization: No default value Printer profile: MERGEOVL initialization parameter value
METAJDE	✓	✓			Initialization: PGMODE Printer profile: METAJDE initialization parameter value
METAJDL	✓	✓			Initialization: DFAULT Printer profile: METAJDL initialization parameter value
MODE		✓			EBCDIC
MSFSUPPMEM	✓				No default value
MSGFEED	✓	✓			Initialization: MAIN Printer profile: MSGFEED initialization parameter value
MSGTHMAX	✓				25
NAME			✓		Not applicable
NOSTORE	✓	✓			Initialization: N Printer profile: NOSTORE initialization parameter value
NOTIFY			✓		Not applicable

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
NUMBER				✓	Not applicable
OFFSTACK	✓	✓			Initialization: Y Printer profile: OFFSTACK initialization parameter value
OPDALLOC	✓				1
OPDUNIT	✓				SYSDA
OPHLQ	✓				XPAF
OPTCD			✓		Not applicable
OPTEXPDT	✓				00000
OPTUNIT	✓				file
OPTVOLCT	✓				5
OPVOLSER	✓				No default value
OPWRITER				✓	Not applicable
OTEXT				✓	Not applicable
OVERLAYDD	✓				OVERLIB
OVERPRT				✓	Not applicable
PAGEDEF	✓	✓	✓		A06460
PAGEDEFDD	✓				PDEFLIB
PAGEFORM				✓	Not applicable
PAGEFORMLIB		✓			PGFRMDD initialization parameter value
PAGESEGDD	✓				PSEGLIB
PALETTE				✓	Not applicable
PAPERHIT	✓				No default value
PAPERSIZ	✓	✓		✓	Initialization: LETTER Printer profile: PAPERSIZ initialization parameter value
PAPERUM	✓				No default value
PAPERWID	✓				No default value

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
PAPNAMTB	✓	✓		✓	Initialization: DEFAULT Printer profile: The PAPNAMTB initialization parameter value
PAPTBLDD	✓	✓			Initialization: TABLELIB Printer profile: PAPTBLDD initialization parameter value
PCL		✓			Centralized printers: META Decentralized printers: XES PCL-capable printers: PCL5
PCLREQ		✓		✓	DEFAULT
PDE				✓	Not applicable
PDLLIB	✓	✓			Initialization: PDLLIB Printer profile: PDLLIB initialization parameter value
PDLOBJ		✓			No
PFILE	✓				No default value
PFONTLIB	✓	✓			Initialization: PFONTLIB Printer profile: PFONTLIB initialization parameter value
PFORMLIB	✓	✓			Initialization: PFORMLIB Printer profile: PFORMLIB initialization parameter value
PGFRMDD	✓				PAGEFORM
PIMAGELIB	✓	✓			Initialization: PIMGLIB Printer profile: PIMAGELIB initialization parameter value
PMODE	✓			✓	P
PORTFONT		✓			Centralized printers: P0612A Decentralized printers: Titan10iso-P PCL-capable printers: P0612A
PRINTENV	✓				MONO
PRINTMSG	✓	✓			Initialization: E Printer profile: PRINTMSG initialization parameter value
PRMODE			✓		Not applicable

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
PROFDD	✓				XINPARM
REVFONT				✓	Not applicable
REVFORM				✓	Not applicable
REVIMAGE				✓	Not applicable
REVLOGO				✓	Not applicable
REVOPSEG	✓	✓		✓	Initialization: Y Printer profile: REVOPSEG initialization parameter value
REVOVLY				✓	Not applicable
REVPSEG				✓	Not applicable
RFORM				✓	Not applicable
RLIC	✓				UC3SA1
RLID	✓				UD3SA1
RMTTBL	✓				No default value
ROOM			✓		Not applicable
RSTACK	✓	✓			Initialization: BOTH Printer profile: RSTACK initialization parameter value
RTEXT				✓	Not applicable
RTEXTID				✓	Not applicable
SAFLOGAI	✓				Y
SAFLOGNF	✓				Y
SAFLOGNO	✓				Y
SAFLOGNS	✓				Y
SDLCRLC		✓			Y
SELECT		✓			PRINT1
SERIAL		✓			blank
SETUP	✓	✓			Initialization: N Printer profile: SETUP initialization parameter value

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
SF1				✓	Not applicable
SF2				✓	Not applicable
SFONTLIB		✓			CFONTLIB initialization parameter value
SFORMLIB		✓			CFORMLIB initialization parameter value
SHARE		✓			N
SHIFT				✓	Not applicable
SHRACQTIME	✓	✓			Initialization: 3 Printer profile: SHRACQTIME initialization parameter value
SHRMSGINT	✓	✓			Initialization: 1 Printer profile: SHRMSGINT initialization parameter value
SIDE				✓	Not applicable
SIMAGELIB		✓			CIMAGELIB initialization parameter value
SLOG	✓				XOAF: N XOSF: Y
SLU		✓			No default value
SMF	✓				Y
SNAPCLAS	✓				X
STAPLE				✓	Not applicable
STARTJDEL		✓			PPT
STOCKS				✓	Not applicable
SUBSYS	✓				XOSF
SUBTASKS	✓				37
SYSFCB	✓				No default value
SYSFLSH	✓				No default value
SYSFONT	✓				GT15
SYSUCS	✓				No default value

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
TCPABORT	✓				NOTRANSMIT
TCPBIND		✓			No default value
TCPBUFSIZE	✓				66000
TCPCONNECT	✓				OPEN
TCPIPJOB	✓				TCPIP
TCPLPRDSN	✓				DELETE
TCPMODE		✓			No default value
TCPPORT		✓			515
TCPRETRY	✓				3,HOLD
TDF	✓				N
TITLE			✓		Not applicable
TOF				✓	Not applicable
TRC			✓		Not applicable
TWOUP				✓	Not applicable
UCS	✓	✓	✓		Initialization: N Printer profile: UCS initialization parameter value
UCSPREF	✓				UCS2
UNIQNAME	✓	✓			Initialization: N Printer profile: UNIQNAME initialization parameter value
UNIT		✓			No default value
USERDATA			✓		Not applicable
USERLIB			✓		Not applicable
USRXIT01–USRXIT32	✓				No default value
USRXITWA	✓				4K
VARPAPTB	✓	✓		✓	No default value
VPA	✓	✓			Initialization: L Printer profile: VPA initialization parameter value

Parameter/ Keyword name	Initialization parameter	Printer profile parameter	IBM JCL keyword	XPAF extended JCL keyword	Parameter default value
WRITER		✓			Centralized printers: LOCAL Decentralized printers: REMOTE PCL-capable printers: REMOTE
XCOPY				✓	Not applicable
XCORE	✓				512K
XDUPLEX				✓	Not applicable
XFILE				✓	Not applicable
XFORM1–XFORM3				✓	Not applicable
XIPADDR				✓	None
XJCFMODE		✓			N
XJCFSIM				✓	Not applicable
XJOBTMEM		✓		✓	Not applicable
XLOG	✓				XOAF: N XOSF: Y
XLOGDSN	✓				No default value
XLPRQNAM				✓	No default value
XMP				✓	Not applicable
XPJLMEM		✓		✓	Not applicable
XSHADE	✓	✓		✓	Initialization: Y Printer profile: XSHADE initialization parameter value
XSHIFT				✓	Not applicable
XTCPPORT				✓	515 for LPR protocol. No default for other protocols
XUSERAC1–XUSERAC3		✓		✓	Not applicable
XVIPPMEM		✓		✓	Not applicable
XWRLIB	✓				XWRLIB

Section Six: XPAF Messages

This section describes the messages that are issued by XPAF software. *It* helps you interpret and respond to the messages you may encounter as you use XPAF. It is designed for system administrators, systems programmers, application programmers, console operators, and any others who are interested in XPAF's message output.

This section includes ISPF messages (that is, XOAF and XPFE messages) and XPAF system messages. For a complete definition of these types of messages, refer to chapter 45, "Message overview."

The messages are grouped by component. Each component's messages are contained in a separate chapter. The chapters are presented in alphabetical order by component name. For example, to find message XDI2610W, first turn to the chapter titled "XDI messages." Then scan the message numbers until you find XDI2610W.

Within a chapter, the messages are listed numerically, in hexadecimal order, by message ID number. For example, in the THM messages chapter, message THM2209E appears before message THM220AE.

Gaps in the numbering order do not imply that messages are missing.

If you need to call Xerox Technical Support, record all message numbers and the corresponding messages so they are available if the support team member asks for them. If a system abend occurs, print and save the SYSUDUMP for problem analysis.

45. Message overview

XPAF issues two types of messages: ISPF and system. This section describes the two types of messages and how they are issued.

ISPF messages

XPAF writes ISPF messages only to the TSO terminal; they are not written to the z/OS system log (SYSLOG) nor the XOAF log dataset.

ISPF issues two versions of each message, both of which are provided in this document:

- A short version that appears on the first row of an XOAF panel.
- A long version that appears on the third row of an XOAF panel. This message is displayed only when you press the PF1 key or enter HELP when a short message is displayed.

NOTE: If you are using the ISPF window “pop-up” option for messages, the long version of the ISPF message can be displayed anywhere on the panel.

If the long version of a message overwrites the option or command line, press **ENTER** to refresh the panel display.

This sample panel shows both versions of an ISPF message:

Short ISPF Message

Long ISPF Message

```
Xerox Output Administrative Facility MISSING REQUIRED ENTRY
Maintain Resident Font Lists

XOAF008E - ENTER LIST NAME AT THE CURSOR POSITION.
COMMAND ===>

* On COMMAND line, enter 'C' to create, 'D' to delete, or 'U' to update a list.

  Dataset Name: TABLELIB

     List Name:
```

NOTE: Other ISPF messages may be issued from the host system. These messages are issued without a message number and prefix, and include both uppercase and lowercase characters. Because these messages are not issued by XPAF, they are not documented.

XPAF system messages

XPAF system messages may be issued by Xerox Output Administrative Facility (XOAF), Xerox Output Services Facility (XOSF), and Xerox Direct Print Services (XDS).

XPAF may issue more than one message for some error conditions. Use the messages collectively to help identify and correct errors.

XOAF messages

XPAF writes XOAF messages to the TSO terminal. Depending on your site's logging setup, XOAF messages may also be written to the z/OS system log (SYSLOG) and/or the XOAF log dataset. For information about message logging, refer to *Section Two: Installing and Customizing XPAF*.

XOAF system messages that are written to the TSO terminal are issued as interactive, on-screen messages in response to XOAF activities. They are displayed at the bottom of a panel, as shown in this figure:

```
                    Xerox Output Administrative Facility
                    Load Centralized Images to a Native Library

COMMAND ===>

  INPUT
    Dataset Name:
     Member Name:

  OUTPUT
    Dataset Name:
     Member Name:



UPL1406I RESOURCE GRAPH21 LOADED SUCCESSFULLY
```

XOAF Message

Some XOAF system messages displayed on your TSO terminal exceed 80 characters, resulting in a truncated message. To read the complete message, access the SYSLOG or XOAF log dataset for your XOAF session.

NOTE: If you have set up your ISPF user environment to display PF key values at the bottom of every panel, you may not be able to view XOAF system messages.

XOSF messages

XPAF writes XOSF messages to the host operator console. Depending on your site's logging setup, XOSF messages may also be written to the z/OS system log (SYSLOG) and/or the XOSF log dataset. They are displayed within the system log, as shown in this figure:

XOSF Messages

```
11.52.15.26 JOB15959 $HASP165 BA00000A
11:52:24.57 STC15961 00000098  XIN0015I XPAF V3R0 INITIALIZATION COMPLETE
11:52:24.74 STC15961 00000098  XDI3402I IT03 XOSF FSS CONNECTED TO JES2
11:52:25.02 STC15961 00000098  XDI3423I PRT9720 FSA CONNECTED TO JES2
11:52:25.10 STC15961 00000098  XLW7107I ALLOCATING 0E26 TO PRT9720
11:52:25.11 STC15961 00000090  IEF236I ALLOC. FOR IT03 IT03
11:52:25.11 STC15961 00000090  IEF237I 0E26 ALLOCATED TO SYS00002
11:52:25.13 STC15961 00000098  XLW7108I 0E26 HAS BEEN ALLOCATED TO XOSF
11:52:25.13 STC15961 00000098  XLW7109I OPENING PRT9720 AT 0E26, SYS00002
11:52:30.24 CF99999  00000290  $CJ15957,OUTGRP=1.1.1
11:52:31.17 JOB15957 00000090  $HASP608 CF99999Z AWAITING PURGE  PRIORITY
11:52:33.26 JOB15957 00000090  $HASP250 CF99999Z IS PURGED
```

For information about setting up XOSF logging, refer to *Section Two: Installing and Customizing XPAF*.

XDS messages

XDS messages have one of three destinations:

- All subsystem messages concerning initialization, termination, and printer-related status are sent to the z/OS system log.
- All batch job processing messages are sent to the JES message logs.
- All XOSF messages are sent to the XOSF log dataset.

XDS messages are displayed within the system log, as shown in this figure:

```
11:46:46.22 JOB15953 00000090 $HASP150 AP99999X OUTGRP=2.1.1 ON PRT2265
11:46:46.24 STC15951 00000098 XDI3431I (JOB15953) (AP99999X) TRANSMITTING
11:46:46.29 STC15951 00000098 XDI3430I (JOB15953) () (STEP1) (SYSUT2) COPY
11:46:46.35 STC15951 00000090 $HASP150 COLOR01  OUTGRP=1.1.1 ON PRT229
11:46:46.37 STC15883 00000098 XCD4400I @@@DJDE FONTINDEX=(0,ONE),FONTS=(
11:46:46.42 STC15883 00000098 XDS1007E ERROR STARTING SUBYSTEM ADDRESS SP
11:46:46.45 STC15951 00000098 XLW7107I ALLOCATING 0B21 TO PRT2265
11:46:46.46 STC15951 00000090 IEF236I ALLOC. FOR XP65 XP65
11:46:46.46 STC15951 00000090 IEF237I 0B21 ALLOCATED TO SYS00002
11:52:31.17 JOB15957 00000090 $HASP608 CF99999Z AWAITING PURGE
11:52:33.26 JOB15957 00000090 $HASP250 CF99999Z IS PURGED
11:52:38.91          00000090 $HASP094 I/O ERROR ONLINE132 0574,27,0E00
```

XDS Message

Message format

Each message issued by XPAF has a unique number. This number may, however, be issued by multiple components. The format of the message varies depending on the message type.

NOTE: Messages ending with character strings 0001I and 0002I are informational, self-explanatory messages that can be issued by any XPAF component.

ISPF messages

The long version of each ISPF message is formatted as follows:

xxxxnnnt msgtext

where

xxxx The alphabetic prefix that identifies the component that issued the message: XOAF or XPFE.

nnn The alphanumeric message ID number.

t The message type. There are five types of XPAF messages:

- A Write to operator (with reply)
- E Recoverable error
- F Fatal error
- I Informational (console)
- W Warning

msgtext The text that appears on the TSO terminal.

The short version of each ISPF message consists of the message text only.

Example:

XPAF system messages

XPAF system messages are formatted as follows:

xxxnnnnt msgtext

where

xxx The alphabetic prefix that identifies the component that issued the message.

nnnn The alphanumeric message ID number.

t The message type. There are five types of XPAF messages:

A	Write to operator (with reply)
E	Recoverable error
F	Fatal error
I	Informational (console)
W	Warning

msgtext The text that appears on the console or printout.

Example:

How to interpret XPAF messages

For each message, the following information is provided:

Explanation: The explanation provides an interpretation of the message.

System response: The system response explains how the system reacts to the condition described.

User action: The user action describes the steps you can take to correct an error condition. If the message is informational (message type I), no user action typically is required.

Error, information, and return code values

Some XPAF messages contain error codes, information codes, and return codes. These codes define the module from which the message was issued, the severity of the message, and a description of the error. They may be part of the message text that is written to the operator console or the XPAF log.

While some of these codes are generated by XPAF, some are generated by VSAM or other z/OS services. The codes appear in hexadecimal and are indicated by these variables in the message text shown in this document:

- **EC=X'***error code*'
- **IC=X'***information code*'
- **RC=X'***return code*'

You should use the information provided in the explanation, system response, and user action for the message to determine the meaning of the message and what corrective action to take. If you require further help, make a note of the codes and the associated message numbers and call Xerox Technical Support. These values will help the support staff diagnose the error.

Message conventions

The following general conventions have been used in documenting all messages:

- Messages that are displayed on the console or TSO terminal are presented in uppercase, 10-point boldface type in this format:

  UPL1407F FATAL ERROR. UNABLE TO LOAD RESOURCE. SEE LOG

- If variable information is included in a message, it appears in lowercase, 10-point italic type. For example, message LDM210AW contains this text:

  READ BEYOND END OF FILE FOR *library member name* **IN** *library ddname/native library*

  At the console, the actual member and library name are identified in the message.

- When messages contain hexadecimal values, these values are preceded by an **X** and are surrounded by single quotation marks. For example, **RC=X'***return code***'** represents a hexadecimal return code value

LDM messages

LDM0302E **COULD NOT LOAD** *load module*. **RC=X'***return code***'**

Explanation: During start-up initialization, an error was encountered trying to load a required module into storage.

System response: XOSF initialization is terminated.

User action: Verify the region requirements for the XOSF start-up proc. Also verify the XOSF has the proper STEPLIB, LNKLIST, or LPA access to the required modules. Make the necessary changes to the XOSF start-up proc and restart XPAF.

LDM0724E **LDM ENCOUNTERED AN ERROR TRYING TO** *activity*

Explanation: This generic LDM error message was displayed by the XOAF font utility.

System response: Processing of the IBM font utility (UFTIFL) stops and table building is terminated.

User action: Check the LDM message in the log to determine if this is a user error.

LDM2101E **'***library ddname***' DD STATEMENT MISSING**

Explanation: The indicated DDNAME was not found in the z/OS Task I/O Table for the printer.

System response: The named library cannot be opened.

User action: Ensure that the DDNAME is present in the XOSF start-up proc. Verify that the initialization and printer profile parameters specifying DDNAMEs are correct.

LDM2102E **UNABLE TO DETERMINE DSORG FOR** *library ddname/native library* **DUE TO z/OS SERVICE FAILURE. RC=X'***return code***'**

Explanation: This is an internal error.

System response: The named dataset is not opened.

User action: Verify that the dataset is specified correctly. If it is, call Xerox Technical Support.

LDM2103E **COULD NOT** *function acb/rpl* **CONTROL BLOCK FOR** *library ddname/native library*. **RC=X'***return code***'; IC=X'***information code***'**

Explanation: This is an internal error.

System response: The named library is not opened.

User action: Call Xerox Technical Support.

LDM2104E **COULD NOT OPEN** *library ddname/native library*. **RC=X'***return code***'; IC=X'***information code***'**

Explanation: LDM was unable to open the named dataset.

System response: The named library is not opened.

User action: For a VSAM dataset, refer to the applicable *VSAM Administration: Macro Instruction Reference*. For a PDS, verify that the dataset is available.

LDM2105E *library ddname/native library* **IS NEITHER VSAM NOR PDS**

Explanation: This function requires a native library or a PDS, and the named dataset is neither.

System response: The named dataset is not opened.

User action: Correct the organization of the dataset.

LDM2106E *library ddname* **REFERENCES A DEVICE TYPE WHICH IS NOT DASD. DATASET MUST BE DASD-RESIDENT**

Explanation: While determining the unit address of a dataset, the dataset was found not to be disk-resident.

System response: The named dataset cannot be opened.

User action: Ensure that the dataset is disk-resident.

LDM2107E **NO I/O CONTROL BLOCK FOR** *library ddname/native library* **DURING LDM** *function name* **FUNCTION**

Explanation: This message may be preceded by additional messages indicating the cause of the error.

System response: The function is terminated. Processing continues.

User action: Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

LDM2108W **A LIST OF DIRECTORY ENTRIES (BUILDLIST) WAS REQUESTED FOR AN EMPTY DATASET:** *library ddname/native library*

Explanation: A component requested a list of the directory entries in the named library, but the dataset was empty.

System response: Processing continues.

User action: If the dataset is not empty, call Xerox Technical Support.

LDM2109W *function* **REQUESTED FOR** *library list name* **IN** *library ddname/native library* **BUT** *member* **IS NOT OPEN**

Explanation: This is an internal error.

System response: Processing continues.

User action: Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

LDM210AW **READ BEYOND END OF FILE FOR** *library member name* **IN** *library ddname/native library*

Explanation: This is an internal error.

System response: Processing continues.

User action: Call Xerox Technical Support.

LDM210BW **COULD NOT DELETE** *library member name* **IN** *library ddname/native library* **DUE TO** *condition*

Explanation: LDM could not delete the named member because of one of these conditions:

1. The specified member was not found in the named library.
2. A permanent I/O error occurred.
3. The named library was not open for output.
4. The named library had insufficient storage space.

System response: Processing continues.

User action: These are the possible user actions, which correspond to the Explanation variations (User action #1 matches Explanation #1, and so forth):

1. Verify the name and spelling of the specified member.
2. Correct the corrupted file. Corrupted files may need to be recreated or restored from a backup source. If the problem persists, call Xerox Technical Support.
3. Call Xerox Technical Support.
4. Increase the storage space in the named library.

LDM210CE **CALLER SUPPLIED RECORD AREA TOO SMALL BY X'***number bytes***' BYTES FOR** *library member name* **IN** *library ddname/native library*

Explanation: This is an internal error.

System response: Processing continues.

User action: Call Xerox Technical Support.

LDM210DI **REQUEST TO RESERVE** *resource native library* **REFUSED. RESOURCE ALREADY OWNED**

Explanation: This is an internal error.

System response: Processing continues.

User action: Call Xerox Technical Support.

LDM210EW **UNABLE TO RELEASE** *resource native library***. RESOURCE NOT OWNED BY TASK**

Explanation: This is an internal error.

System response: Processing continues.

User action: Call Xerox Technical Support.

LDM210FW *function* **FOR** *member name* **IN** *library ddname/native library* **FAILED DUE TO** *condition*

Explanation: One of these conditions exists:

1. The specified member was not found in the named library.
2. The dataset specified for the WRITE function has an invalid record length for the specified operation.
3. In the XOSF start-up proc, you specified a PDS instead of a native library.
4. The dataset specified is full or is out of directory space.

System response: Processing continues.

User action: These are the possible user actions, which correspond to the Explanation variations (User action #1 matches Explanation #1, and so forth):

1. Verify the name and spelling of the specified member.
2. Change the record length of the dataset.
3. Specify a native library in the XOSF start-up proc.
4. Increase the size of the library.

Check any accompanying messages for related errors.

LDM2110E **LDM FUNCTION CODE X'***function code***' INVALID**

Explanation: This is an internal error.

System response: Processing continues.

User action: Call Xerox Technical Support.

LDM2111E **LDM CALLED TO PERFORM UNSUPPORTED FUNCTION OF** *function code*

Explanation: This is an internal error.

System response: Processing continues.

User action: Call Xerox Technical Support.

LDM2112E **AVAILABLE BLOCK COUNT OF X'***block count***' IN** *library ddname/native library* **INSUFFICIENT TO SATISFY REQUEST FOR X'***blocks requested***' BLOCKS**

Explanation: While writing a list to a native library, there were not enough blocks available to meet requirements.

System response: Processing continues.

User action: Increase the library block count or delete members to release space.

LDM2113E **BPAM ERROR** *reading/writing library list name* **IN LIBRARY** *ddname/native library***, SYNAD ERROR TEXT=***synad error text*

Explanation: An error occurred while trying to process a PDS.

System response: Processing continues.

User action: Make sure you request the correct dataset. Proceed as indicated by the SYNAD error message text. The format of the SYNAD message is defined in the IBM manual, *z/OS Data Administration: Macro Instruction Reference*. This error can be caused by I/O errors on a PDS. If this is the case, recover the dataset. If the problem persists, call Xerox Technical Support.

LDM2114E **VSAM ERROR** *reading/writing library list name* **IN** *library ddname/native library***. RC=X'***return code***'; REASON CODE=X'***reason code***'**

Explanation: This is an internal error.

System response: Processing continues.

User action: If it is not a true I/O error, take the action indicated by the VSAM return and error codes. Refer to the VSAM documentation for more information on the VSAM return and error codes.

LDM2115E **NEITHER DDNAME NOR DSNAME SPECIFIED FOR LIBRARY ALLOCATION**

Explanation: This is an internal error.

System response: The library is not allocated.

User action: Call Xerox Technical Support.

LDM2116E **UNABLE TO ALLOCATE DSNAME** *native library* **FOR INITIALIZATION, DYNAMIC ALLOCATION RC=X'***return code***'**

Explanation: An error occurred while allocating a dataset for formatting as a native library.

System response: Initialization is terminated.

User action: Verify that the correct library is being initialized. Check the return code in the appropriate z/OS publication on system macros and facilities.

LDM2117I **INITIALIZATION OF** *native library* **COMPLETE.** *block count* **BLOCKS**

Explanation: The dataset was successfully formatted for use by LDM.

System response: Processing continues.

User action: None required.

LDM2118I **LIBRARY BLOCK COUNT ERROR FOR** *library list name* **IN** *native library***. EXPECTED X'***block count***', FOUND X'***block count***'**

Explanation: While verifying the space map for the named library, the directory entry reported a different number of blocks from the number found by counting the blocks.

System response: Processing continues.

User action: The member may be corrupted. Use the LDM batch utility to verify that the member is correct, or delete the member and recreate it.

LDM2119I **SPACE MAP OF** *native library* **VERIFIED**

Explanation: All the members in a native library were checked.

System response: Processing continues.

User action: None required.

LDM211CE **DSNAME '***native library***' IS NOT STRUCTURED ACCORDING TO z/OS DATASET NAMING CONVENTIONS**

Explanation: This is an internal error.

System response: The named dataset is not allocated.

User action: Verify the named dataset is correct. Call Xerox Technical Support.

LDM211FE **DDNAME HAS NOT BEEN SPECIFIED EITHER IN PRINTER PROFILE OR XINPARM**

Explanation: A valid DD name must be assigned in the initialization parameters or the printer profiles.

System response: Processing is terminated.

User action: Correct either the printer profiles or the XINPARM dataset. If the problem persists, call Xerox Technical Support.

LDM2120E *product component* **DOES NOT SUPPORT UNDEFINED RECORDS. RC X'***lcaerrcd***'**

Explanation: The named product and component do not support datasets defined with RECFM=U (undefined) at this time.

System response: XOAF is terminated.

User action: Specify a dataset that has not been defined with RECFM=U. Try the request again.

LDM2121E **UNABLE TO STOW BLOCK** *library block number* **FOR** *library ddname/native library***. NATIVE LIBRARY IS FULL. RC=X'***return code***'; IC=X'***information code***'**

Explanation: A request to stow a library was attempted after a previous request failed.

System response: In XOSF, processing is terminated. The document is incomplete. In XOAF, the entry is removed.

User action: Enlarge the named native library and retry the request.

LDM2122W *function* **FAILED BECAUSE A REQUIRED SYSTEM OR PDL STATEMENT IS MISSING OR INVALID**

Explanation: One of these conditions exists:

- A required label is missing or invalid in the PDL.
- The system statement is missing or invalid in the PDL.

System response: Processing continues, but PDL loading is terminated.

User action: Correct the PDL, and retry. Check any accompanying messages for related errors.

LDM2134E **PREMATURE END OF FILE READING** *library list name* **IN LIBRARY** *ddname/native library*

Explanation: The forward chain pointer of a list in a native library indicated no more data, but the record pointers indicated there was data still to be read.

System response: Processing continues.

User action: The list is probably corrupted. Delete the list and rebuild it.

LDM2135E **UNABLE TO OPEN OFFLOAD OUTPUT DSNAME SYSUT2**

Explanation: LDM attempted to make a logical backup of a native library, but the OPEN of the output dataset (DDNAME SYSUT2) failed.

System response: Processing is terminated.

User action: This is probably a JCL error. Make sure SYSUT2 is present in the JCL.

LDM2136I **MEMBER** *member name* **OFFLOADED SUCCESSFULLY FROM** *native library***.** *number of records* **RECORDS**

Explanation: The specified member was offloaded successfully from the named library and contains the number of records specified.

System response: Processing continues.

User action: None required.

LDM2137I **LIBRARY** *native library* **OFFLOADED SUCCESSFULLY.** *number of members* **MEMBERS**

Explanation: The specified library was offloaded successfully.

System response: Processing continues.

User action: None required.

LDM2138E **RECORD SIZE INVALID FOR** *library*

Explanation: While initializing a VSAM dataset, LDMLINIT found that the record size specified in the DEFINE for the cluster was not equal to the control interval size minus 7.

System response: Processing is terminated.

User action: Correct the record size, and resubmit the job.

LDM2139E **CONTROL INTERVAL SIZE INVALID FOR** *native library*

Explanation: While initializing a VSAM dataset for use, the CISZ was found to be invalid. VSAM restrictions require the CISZ to be 512 bytes, 1KB, 2KB, or 4KB.

System response: Processing is terminated.

User action: Correct the VSAM CISZ in the DEFINE step for the named library, and resubmit the job.

LDM213AE **AVAILABLE BLOCK COUNT FOR** *native library* **DOES NOT MATCH SPACE MAP**

Explanation: While allocating library blocks, the available block count indicated that space was available, but the bitmap indicated no available space.

System response: Processing is terminated.

User action: Offload the named library, reinitialize it, and then reload it using the LDMUTIL batch utility.

LDM213BI *native library* **ALREADY FORMATTED FOR USE**

Explanation: While attempting to format a dataset for use by LDM, a SHOWCB request indicated that the dataset was not empty.

System response: The format is terminated.

User action: Use IDCAMS to delete and redefine the dataset if the format is required.

LDM213CE UNABLE TO OPEN RELOAD INPUT DSNAME SYSUT1

Explanation: During a reload, the dataset created by the offload function was read using a DD name of SYSUT1. This DD name was not in the JCL.

System response: Processing is terminated.

User action: Correct the JCL and rerun the job.

LDM213DI LIBRARY *native library* **RELOADED SUCCESSFULLY.** *number of members* **MEMBERS**

Explanation: The reload of the dataset completed successfully.

System response: Processing continues.

User action: None required.

LDM213EI MEMBER *library member name* **RELOADED SUCCESSFULLY TO** *native library***.** *number of records* **RECORDS**

Explanation: The native library member was restored successfully.

System response: Processing continues.

User action: None required.

LDM213FI UNABLE TO RESERVE *library member name/native library***. LIST IN USE ELSEWHERE**

Explanation: A component requested an enqueue of a list name, but another task was already using the resource.

System response: Processing is terminated.

User action: Try the function again. If the problem persists, determine which task has the resource in queue and attempt to resolve the conflict.

LDM2140E OPEN FOR *library list name* **IN LIBRARY** *ddname/native library* **REFUSED DUE TO PREVIOUS MEMBER NOT CLOSED**

Explanation: This is an internal error.

System response: Processing continues, but the OPEN request is terminated.

User action: Call Xerox Technical Support.

LDM2141E BLDL FAILED FOR DDNAME *library ddname***. RC=X'***bldl-r15***'; REASON CODE=X'***bldl-r0***'**

Explanation: XPAF failed while issuing a BLDL macro for the specified ddname library.

System response: Processing is terminated.

User action: If this message is preceded by messages XEI3307E and XEI3308I, the failure is for the specified ddname library, and the reason code is the hexadecimal number of entries in the library chain. You must reduce the number of entries in the chain before you restart XPAF.

For BLDL return code and reason code meanings, refer to the *z/OS Data Administration: Macro Instructions Reference*. If this is not an environmental error, call Xerox Technical Support.

LDM2142I NATIVE LIBRARY IS EMPTY

Explanation: The native library accessed contains no members.

System response: Processing continues.

User action: None required.

LDM2143I LIBRARY ALLOCATION LARGER THAN MAXIMUM SUPPORTED SIZE

Explanation: A native library was allocated that is larger than the maximum size XPAF supports.

System response: The maximum amount of space XPAF can use is initialized. The rest is unused.

User action: Issue an IDCAMS LISTCAT for the library. If the difference between the High Used RBA and the High Allocated RBA is significant, delete the library, reallocate it using the maximum size supported by XPAF, and initialize the library again.

LDM2144E VSAM BLOCK FOR MEMBER *member name* **IN** *filename* **HAS ZERO RECORDS.**

Explanation: While reading the named member a VSAM block containing no data was read.

System response: Processing is terminated.

User action: The named member is probably corrupted. Delete and then recreate the member.

LDM3010F COULD NOT GET X'*bytes of storage***' BYTES OF MEMORY** *activity*

Explanation: This is an internal error.

System response: Processing continues.

User action: Specify a larger region size. If using XOSF, restart the FSS. If using XOAF, reattempt the task which caused the failure.

LDM3011E COULD NOT RELEASE X'*amount of storage***' BYTES OF MEMORY FROM LOCATION X'***getmained area address***'** *activity*

Explanation: This is an internal error.

System response: XPAF processing continues.

User action: None required. If the problem persists, call Xerox Technical Support.

LDM3015E **COULD NOT** *activity* **LIBRARY** *library dsname*. **LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified library.

System response: LDMUTIL processing is terminated.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

LDM3016E **COULD NOT** *activity* **MEMBER** *member name* **OF LIBRARY** *native library operation*. **LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified member.

System response: LDM offload processing is terminated.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

LDM3017E **COULD NOT** *command* **LCA** *native library operation*. **LDM RC=X'***return code***'**

Explanation: This is an internal error.

System response: LDM offload processing is terminated.

User action: Increase the region size and make sure the dataset is correct and online. Try the request again.

LDM3040F **A FATAL READ ERROR OCCURRED WHILE READING DATASET: DDNAME/DSNAME.**

Explanation: An LDM request to build a directory list has returned a negative member count.

System response: The DDNAME and Data Set name of the corrupted library will be displayed. A return code will be passed back to the calling program and that program may issue additional messages and will determine further actions to be taken.

User action: If the problem persists, you may need to re-DEFINE and INITIALIZE the failing library. If the problem still persists, call Xerox Technical Support.

LDM3041F **NON-POSITIVE DIRECTORY BLOCK COUNT FOUND IN DATASET: library ddname/native library**

Explanation: LDM encountered an invalid directory block count when processing the named library.

System response: The requested LDM function fails and an error return code is passed back to the calling module.

User action: The VSAM library listed in the message is corrupt. Restore the library from a previous good backup, or re-initialize the library.

LDM3415E **ALLOCATION FOR DSNAME=***native library* **FAILED. RC=X'***return code***'; REASON CODE=X'***reason code***'**

Explanation: LDM was requested to connect to a dataset by dataset name. z/OS dynamic allocation failed.

System response: The library connection is not made. Processing continues.

User action: A return code of 12 indicates an internal error; call Xerox Technical Support. For any other return and reason codes, take action as described in the z/OS publication on dynamic allocation system macros and facilities.

LDM4004F **LDMMAIN DETECTED AN INVALID** *control block name* **CONTROL BLOCK AT LOCATION X'***address***'**

Explanation: This is an internal error.

System response: LDMMAIN processing is terminated for this function. XOAF processing continues.

User action: Check accompanying messages for more information about the failure. Ensure that the dataset is available and is not damaged, then rerun the request. If this fails, call Xerox Technical Support.

LDM4013E **XEI INITIALIZATION FAILED**

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

LDM4014E **MSF INITIALIZATION FAILED**

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

LDM4015E **LDM INITIALIZATION FAILED**

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

LDM4016E **OPEN PRINT DCB FAILED**

Explanation: An error occurred while opening the print dataset.

System response: Processing is terminated.

User action: Specify the correct print DCB and try again.

LDM4017E LDMUTIL INVALID COMMAND

Explanation: The LDMUTIL program does not recognize the specified command.

System response: Processing is terminated.

User action: Specify the correct command and try again.

LDM4018E REQUESTED FUNCTION FAILED

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

LDM4019F DIRECTORY OF *library ddname/native library* **IS CORRUPTED. CURRENT BLOCK: RBA=X'***rba address***'**

Explanation: LDM has detected an invalid directory structure.

System response: Processing continues.

User action: Correct the corrupted file. Corrupted files may need to be recreated or restored from backup source. If the problem persists, call Xerox Technical Support.

MSF messages

MSF0217E *module name* **FAILED. UNABLE TO ALLOCATE** *library ddname/native library***. RC=X'***return code***'**

Explanation: The attempt to allocate the named dataset failed.

System response: Processing continues. Message suppression is ignored.

User action: Make sure the named dataset is cataloged and available to XPAF. Try the request again. If the problem persists, call Xerox Technical Support.

MSF3360E LOGGING IS SET ON, BUT NO XLOG DATASET WAS SPECIFIED IN XINPARM FOR XLOGDSN. LOGGING DISABLED

Explanation: XLOG=Y was specified in the initialization parameter library, but there was no value specified for the XLOGDSN initialization parameter. When XLOG=Y is specified, there must be a corresponding XLOGDSN entry with a log dataset name specified.

System response: Processing continues, but logging is disabled.

User action: Specify a log dataset name for the XLOGDSN initialization parameter and retry the request.

MSF8001E INVALID FUNCTION REQUEST PASSED TO MSFMAIN BY MODULE *module name***. FUNC=C'***ccc***', OR X'***xxxxxx***'**

Explanation: This is an internal error.

System response: The request is ignored. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8002W MODULE *module name* **REQUESTED NON-EXISTENT MESSAGE** *message number*

Explanation: This is an internal error.

System response: The request is ignored. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8003W MODULE *module name* **REQUESTED MESSAGE** *message number* **WHICH IS LESS THAN ONE BYTE LONG**

Explanation: This is an internal error.

System response: The requested message is not logged. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8004E USER AREA LENGTH IN MCBLOCK IS LESS THAN ONE BYTE. REQUESTING MODULE=*module name***, MSG ID=***message id*

Explanation: This is an internal error.

System response: The message is constructed and logged by MSF as requested, but is not returned in the user area to the requesting module. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8005E INVALID SUPPRESS/ENABLE VALUE REQUEST PASSED TO MSF BY MODULE *module name***. VALUE=C'***c***', OR X'***xx***'**

Explanation: This is an internal error.

System response: The request is invalid and is ignored by MSF. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8006W CONSOLE SUPPRESSION REQUESTED FOR NON-EXISTENT MESSAGE *message id*

Explanation: This message may be returned as part of the response to an operator request to suppress console messages. It indicates that the displayed message was part of the request but was not in the message table.

System response: The operator request processing continues for valid message numbers and message types. XPAF processing continues.

User action: Verify the message number and whether that message can be suppressed. If the problem persists, call Xerox Technical Support.

MSF8007W CONSOLE ENABLEMENT REQUESTED FOR NON-EXISTENT MESSAGE *message id*

Explanation: This message may be returned as part of the response to an operator request to enable console messages. It indicates that the displayed message was part of the request but is not in the message table.

System response: The operator request processing continues for valid message numbers and message types. XPAF processing continues.

User action: Verify the message number and whether that message can be suppressed. Messages that cannot be suppressed cannot be enabled, either. If the problem persists, call Xerox Technical Support.

MSF8008I MESSAGE SUPPRESSION PROCESSING COMPLETE

Explanation: MSF completed processing an operator request to suppress console messages.

System response: Valid message numbers/message types displayed in the operator request were marked for console suppression. Messages marked for suppression continue to appear on the console if they are critical to the proper operation of XPAF. XPAF processing continues.

User action: None required.

MSF8009I MESSAGE ENABLEMENT PROCESSING COMPLETE

Explanation: MSF completed processing an operator request to enable console messages.

System response: Valid message numbers/message types displayed in the operator request were enabled for console appearance. XPAF processing continues.

User action: None required.

MSF8010E MODULE *module name* **MADE AN SIL REQUEST BUT THE USER AREA CONTAINED AN INVALID STRING. VALUE=X'***xxxxxx***', OR C'***ccc***'**

Explanation: This is an internal error.

System response: The processing request is ignored. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8011I INTENSIVE LOGGING INDICATOR SET ON

Explanation: The intensive logging indicator has been set on in response to an operator command.

System response: Messages that are to be logged only when intensive logging is on now appear. XPAF processing continues.

User action: None required.

MSF8012I INTENSIVE LOGGING INDICATOR SET OFF

Explanation: The intensive logging indicator has been set off in response to an operator command.

System response: Messages that are to be logged only when intensive logging is on do not appear. XPAF processing continues.

User action: None required.

MSF8031W THERE IS NO MESSAGE TEXT IN THE PROTOTYPE PASSED TO MSFCON. REQUESTER=*module name***, MSG ID=***message id***

Explanation: This is an internal error.

System response: The requested message is not logged. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8032W MODULE *module name* **PROVIDED FEWER SUBSTITUTION PARAMETERS THAN MESSAGE** *message* **ID EXPECTS**

Explanation: This is an internal error.

System response: The requested message is logged without a value inserted in any field for which no substitution value was available. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8033W **USER AREA PROVIDED TO MSFCON SHORTER THAN THE EXPANDED MESSAGE. REQUESTING MODULE=***module name***, MSG ID=***message id*

Explanation: This is an internal error.

System response: The truncated message is logged or returned to the requester as displayed. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8034E **MSFCON FOUND AN INVALID CONVERSION FACTOR PASSED BY MODULE** *module name* **FOR MESSAGE** *message id*

Explanation: This is an internal error.

System response: The requested message is neither logged nor returned to the requesting module. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8035W **MODULE** *module name* **PROVIDED MORE SUBSTITUTION PARAMETERS THAN MESSAGE** *message id* **EXPECTS**

Explanation: This is an internal error.

System response: The requested message is logged or returned to the requester as displayed. Extra insertion values are ignored. XPAF processing continues.

User action: Call Xerox Technical Support.

MSF8036W **MODULE** *module name* **REQUESTED MESSAGE** *message id* **THAT BECAME LONGER THAN 222 BYTES ON EXPANSION AND WAS TRUNCATED**

Explanation: Messages may not exceed the limit of 222 characters due to the size of the XPAF log record. During expansion of a message prototype with insertion values, the displayed message exceeded the maximum length.

System response: The message is truncated at 222 bytes. The truncated message is logged or returned to the requester as displayed. XPAF processing continues.

User action: This message may occur during normal operation due to the inclusion of variable length data (such as dataset names) in informational messages. If you believe this is a problem, call Xerox Technical Support.

MSF8037E **MSF UNABLE TO CONSTRUCT MESSAGE** *message id* **FOR MODULE** *module name*

Explanation: An internal error prevented the MSF from producing the requested message. The most likely reason for this error is a lack of dynamic storage in XPAF's region. If the region is too small, other parts of XPAF are probably affected, too. This message appears when there is no space left in the region.

System response: This error message is logged and processing continues.

User action: Increase the region size. If the problem persists, call Xerox Technical Support.

MSF8038W MSF UNABLE TO SUPPRESS OR ENABLE NON-SUPPRESSIBLE MSG ID='*message id***'**

Explanation: The named message ID was identified as suppressed or enabled, but this message is considered non-suppressible. It may not be selected for suppression.

System response: Processing continues. Suppression is ignored for this message.

User action: Remove the message number from the suppression member identified by the MSFSUPPMEM initialization parameter in XINPARM.

MSF8040W MESSAGE THRESHOLD OF *value* **HAS BEEN REACHED. SYSLOG MESSAGES WILL BE LOGGED IN XLOG ONLY**

Explanation: The message threshold established by the MSGTHMAX initialization parameter has been reached for the dataset currently being transmitted to the printer.

System response: All further messages that are issued while this dataset is being transmitted are written only to the XLOG. Processing continues.

User action: Review the XLOG to determine whether the messages issued after this message are important to the successful completion of the job.

MSF8050F ERROR DURING ATTEMPT TO LOAD MSFTBLD. RC=X'*return code***'; IC=X'***information code***'**

Explanation: This is an internal error.

System response: XPAF initialization fails. XPAF processing is terminated.

User action: Call Xerox Technical Support.

MSF8051F ERROR DURING ATTEMPT TO LOAD MSFMAIN. RC=X'*return code***'; IC=X'***information code***'**

Explanation: This is an internal error.

System response: XPAF initialization fails. XPAF processing is terminated.

User action: Call Xerox Technical Support.

MSF8052F ERROR DURING ATTEMPT TO LOAD MSFDAIR. RC=X'*return code***'; IC=X'***information code***'**

Explanation: An attempt to load support module MSFDAIR has failed.

System response: XOSF or XOAF processing is terminated.

User action: Call Xerox Technical Support.

MSF8053F ERROR DURING ATTEMPT TO GET STORAGE. RC=X'*return code***'; IC=X'***information code***'**

Explanation: An attempt to load storage has failed.

System response: XOSF or XOAF processing is terminated.

User action: Increase the region size and try the request again. If it fails, call Xerox Technical Support.

MSF8062E DAIRFAIL RETURNED CONDITION CODE=X'*return code***'**

Explanation: This is an internal error.

System response: Error processing continues. This error prevents certain debugging messages from being produced.

User action: Call Xerox Technical Support.

MSF8063E MODULE '*calling module***' PASSED AN INVALID FUNCTION TYPE (X'***function type***') TO MSFDAIR**

Explanation: This is an internal error.

System response: Error processing continues. This error prevents certain debugging messages from being produced.

User action: Call Xerox Technical Support.

MSF8064W SUPPRESSION ATTEMPTED BUT MEMBER=*member name* **WAS NOT FOUND IN** *library ddname/dataset name***. RC=X'***return code***'**

Explanation: The named member was specified on the MSFSUPPMEM initialization parameter, but was not found in the dataset pointed to by the XINPARM DD statement in the XOSF start-up proc.

System response: Processing continues. Suppression is ignored.

User action: Ensure that the specified member name is spelled correctly and that it is present in the dataset pointed to by the XINPARM DD statement in the XOSF start-up proc.

MSF8065W SUPPRESSION FAILED. MISSING REQUIRED HEADER '*header name***' FROM MEMBER=***member name* **IN** *library ddname/dataset name*

Explanation: The named header was not found in the specified member as the first non-comment line starting in column 1.

System response: Processing continues. Messages are not suppressed.

User action: Make sure that the required header is the first non-comment line starting in column 1.

MSF8066W **SUPPRESSION FAILED. INVALID SYNTAX FOUND IN MEMBER=***member name* **FROM** *library ddname/dataset name*

Explanation: The named member has either a comma in the wrong place or the ending delimiter ‘) ’ is missing.

System response: Processing continues. Messages are not suppressed.

User action: Correct the syntax error and try the request again.

MSF8067W **SUPPRESSION FAILED. UNABLE TO ACQUIRE AN LCA FOR** *library ddname/dataset name***. RC=X'***return code***'**

Explanation: LDM failed to acquire storage to build an LCA.

System response: Processing continues. Messages are not suppressed.

User action: Increase the region size. If this does not fix the problem, call Xerox Technical Support.

MSF9900I *ibm message number / ibm message text*

Explanation: This IBM message was issued by an IBM service used by XPAF.

System response: Processing is not directly affected. The messages describe a problem that may affect the job in progress.

User action: Look up the IBM message number in the appropriate IBM documentation. If you need help resolving the problem, call Xerox Technical Support.

THM messages

THM2201E **INTERNAL ERROR:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM2202E **INVALID COMMAND:** *invalid command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM2203E **GETMAIN FAILED:** *thm command*. **TABLE=***table command*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Increase the region size and try the function again.

THM2204E **TABLE WAS NOT OPENED WITH THIS TCB:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM2205E **INVALID EYECATCHER:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM2206E **LIBRARY IS FULL:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM2207E **TOO FEW OPERANDS:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM2208E **TDB IS TOO SHORT:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM2209E **ERROR WHILE EDITING NEW TABLE DEFINITION:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM220AE **CHANGED TABLE HAS DUPLICATE KEY:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support

THM220CE **THIS TCB CANNOT BE USED FOR:** *thm command*. **TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: This is an internal error.

System response: A non-zero return code is issued.

User action: Call Xerox Technical Support.

THM220DW **STOW IS NOT TO SAME LIBRARY. TABLE=***table name*, **DDNAME/DSNAME=***table ddname/table library name*

Explanation: The STOW list contains references to tables that do not belong in the same library.

System response: XPAF processing continues.

User action: None required.

UFL messages

UFL0303E **FIRST RECORD OF** *member name* **IS NOT A VALID HEADER RECORD**

Explanation: The format of the input does not conform to the Xerox header record format. If the input is a sequential dataset, the word INPUT appears in the message text. If the input is a member of a PDS, the member name is given.

System response: Processing is terminated and the font is not loaded.

User action: Verify that the input is a valid font. If the problem persists, call Xerox Technical Support.

UFL0305E **COULD NOT** *activity* **TABLE** *table name operation***. THM RC=X'***return code***'**

Explanation: An attempt to process the indicated table failed. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

UFL0308I *number fonts* **PROCESSED.** *number* **WITH ERRORS**

Explanation: The identified number of fonts have been loaded. Some may have loaded with errors.

System response: Font loading is terminated. XOAF processing continues.

User action: If no errors are indicated, no action is required. If errors occurred, review the XOAF log for more information.

UFL0501E **COULD NOT** *activity* **FOR MEMBER** *member name* **OF DSNAME** *dataset name***. EI RC=X'***return code***'**

Explanation: The indicated activity for the named dataset member could not be performed.

System response: Font loading is terminated.

User action: If the problem persists, call Xerox Technical Support.

UFL0503E *process type* **IS MISSING THE PROPER FONT TYPE OR IS AN INVALID FONT TYPE**

Explanation: The named process type was not appropriate for the selected load function.

System response: Font loading is terminated.

User action: Specify a valid font process type. The font type can be 2700, 270X, 270R, 9700, or REPL. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for the font types that are valid for each load function. If the problem persists, call Xerox Technical Support.

UFL0504E MISSING OR INVALID *dataset name* **DSNAME**

Explanation: The indicated dataset name was either missing or not formatted properly.

System response: Font loading is terminated.

User action: Enter the specified input or output dataset correctly.

UFL0505E OUTPUT DATASET *dataset name* **IS NOT A VSAM LIBRARY**

Explanation: The named output dataset is not a VSAM dataset.

System response: Font loading is terminated.

User action: Specify a native library as the target library. If the problem persists, call Xerox Technical Support.

UFL0506E WORK AREA ADDRESS NOT SPECIFIED

Explanation: The calling program did not construct the parameter list properly.

System response: Font loading is terminated.

User action: If problem persists, call Xerox Technical Support.

UFL0507W WARNING: FONT ASCII NAME *ascii name* **AND FONT RAD50 NAME** *rad50 name* **DO NOT MATCH. FONT STORED WITH NAME** *rad50 name*

Explanation: When it loaded this centralized font to the font library, XOAF determined that the ASCII font name and RAD50 font header name do not match.

System response: The font is loaded into the font library. The RAD50 name is used to create a XPAFXFI table entry for this font in the font table library.

User action: None required.

UFL050AI AFW ENTRY BUILT FOR FONT *font name*

Explanation: An XPAFAFW table entry was successfully created for the named replica font.

System response: XPAF processing continues.

User action: None required.

UFL050BE COULD NOT BUILD AN AFW ENTRY FOR *font name*

Explanation: While loading a replica font to a native library, the font loader was unable to generate an XPAFAFW table entry for the named replica font.

System response: Processing continues.

User action: Check the specified input font and ensure that it is a valid replica font.

UFL050CI **FONT** *font name* **LOADED SUCCESSFULLY TO** *dataset name*

Explanation: The named font was loaded successfully to the native library specified by *dataset name*.

System response: XOAF processing continues.

User action: None required.

UFL0741W **FONT** *font name* **LOADED. NO AFW ENTRY BUILT DUE TO ORIENTATION MISMATCH**

Explanation: The orientation indicated by the last character of the font name does not match the orientation specified using the TSO/batch command or XOAF option to load custom replica fonts. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for more information on the command. Refer to *Section Three: Managing Resources with XPAF* for more information on the XOAF options.

System response: XOAF processing continues. The custom font is loaded, but no XPAFAFW table entry is created.

User action: If you want an XPAFAFW table entry to be created, correct the orientation specified on the XOAF panel or TSO/batch command, then try again. If an XPAFAFW table entry is not needed, no action is required.

UFL1422E **INPUT MEMBER NAME MUST BE PRESENT IF RESOURCE IS PDS OR CONTAINS NO HEADER**

Explanation: The input dataset is a partitioned dataset. A member name must be specified if the input is partitioned.

System response: Command processing is terminated.

User action: Specify the relevant member name or enter an asterisk (*) to load all members.

UFL1425E **INPUT MEMBER** *member name* **OF DSNAME '***dataset name***' IS EMPTY**

Explanation: The member specified as input for the font load does not contain any data.

System response: Command processing is terminated.

User action: Specify a member that contains the font to be loaded.

UFL1426E **INPUT DSNAME '***dataset name***' IS EMPTY**

Explanation: The sequential dataset specified as input for the font load does not contain any data.

System response: Command processing is terminated.

User action: Specify a sequential dataset or a member of a PDS that contains the font to be loaded.

UFL3015E **COULD NOT** *activity* **LIBRARY** *library ddname activity***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified library.

System response: Font loading is terminated.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

UFL3016E **COULD NOT** *activity* **MEMBER** *member name* **OF LIBRARY** *library dsname operation***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified member.

System response: Font loading is terminated.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

UFL3017E **COULD NOT** *activity* **LCA** *activity***. LDM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Font loading is terminated.

User action: Call Xerox Technical Support.

UFL3018E **COULD NOT ACQUIRE TCB** *activity***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

UFL4211E **LOGICAL RECORD LENGTH OF** *input* **DATASET MUST BE 128**

Explanation: When loading custom Xerox fonts, the LRECL cannot be greater than 128 bytes.

System response: The task is terminated.

User action: The dataset needs to be redefined with LRECL=128.

UFL6402E **COULD NOT** *command* **ITEM** *item name* **IN TABLE** *table name activity***. THM RC=X'***return code***'**

Explanation: The requested processing could not be performed on the specified table. This message is issued for diagnostic purposes. *Activity* identifies the type of processing that was being performed when the error occurred.

System response: Font loading is terminated.

User action: Call Xerox Technical Support.

UFT messages

UFT0300E *module name* **FAILED TO** *activity***. PROGRAM** *module name status*

Explanation: An error occurred, either during initialization or shut down of the LDM or THM environment.

System response: Processing continues or is terminated, as indicated in the message.

User action: If the named module failed to initialize, call Xerox Technical Support. If the named module failed to terminate, check for additional messages in the system log. If no other error messages appear in the log, font table library processing was not affected and processing can continue. If there are additional error messages in the log, refer to the explanations for those messages to determine if additional action is necessary.

UFT0305E **COULD NOT** *thm function* **TABLE** *table name operation***. THM RC=X'***return code***'**

Explanation: The named THM function failed. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

UFT0700E **AN ERROR HAS OCCURRED IN PROCESSING. SEE LOG FOR MORE INFORMATION**

Explanation: An error occurred during the creation of IBM-related tables.

System response: Depends on the type of error. Refer to the messages in the XLOG for more information.

User action: If the problem persists, call Xerox Technical Support.

UFT0701I *function* **COMPLETED** *successfully/unsuccessfully*

Explanation: The indicated function completed as specified.

System response: XPAF processing continues.

User action: Check the system log for errors or for more information. If the problem persists, call Xerox Technical Support.

UFT0702E **COULD NOT** *command* **FILE** *file name operation***. EI RC=X'***return code***'**

Explanation: The named file did not respond to the indicated command.

System response: Command processing is terminated.

User action: Use the return code as a guide to determine the exact nature of the problem.

UFT0705E SPECIFIED FONT INFORMATION TABLE *name* **DOES NOT EXIST**

Explanation: The font specified by UFTMAIN to create font translation tables does not exist in the XPAFXFI table.

System response: The request cannot be processed.

User action: Specify the correct font name or create a XPAFXFI table entry. If the problem persists, call Xerox Technical Support.

UFT0706E UNKNOWN KEYWORD *keyword* **ENCOUNTERED IN LIST** *list name* **IN DSNAME** *dataset name*

Explanation: The indicated keyword was found while creating a character mapping table using the data provided in the named dataset and list.

System response: Character mapping table creation is terminated.

User action: Correct the contents of the dataset and try again. If the problem persists, call Xerox Technical Support.

UFT0708E CHARACTER ID *charid* **ALREADY EXISTS IN TABLE** *character mapping table name***. REQUEST IGNORED**

Explanation: The CREATE function could not be used to replace an existing entry in the named character mapping table.

System response: The replace is ignored and no change is made.

User action: If the change is required, you must rebuild the character mapping table. If this condition results from a keying error, correct it and try again. If the problem persists, call Xerox Technical Support.

UFT0709E UNABLE TO CONVERT CHARACTER *character* **TO BINARY FORMAT**

Explanation: To store font widths and heights in the XPAFXFI table, the values must be converted from character to binary format. The conversion terminated when a non-numeric value was entered.

System response: XPAFXFI table processing is terminated.

User action: Enter only numeric values for font width and height. If the problem persists, call Xerox Technical Support.

UFT070AI PROCESSING COMPLETE. SEE LOG FOR MESSAGES

Explanation: Processing is complete, but errors occurred during processing.

System response: XPAF processing continues.

User action: Examine the messages in the log to determine which errors have occurred. To learn the appropriate user action, refer to the documentation for each message.

UFT070BE *function* **UNSUCCESSFUL.** *charid* **DOES NOT EXIST IN THE IPSTND TABLE**

Explanation: An attempt was made to create, update, or delete a character mapping entry in the IPSTND table. However, the named *charid* does not exist and therefore could not be created, updated, or deleted.

System response: The character mapping entry is not created, updated, or deleted.

User action: Verify that the *charid* matches the one you are trying to create, update, or delete.

UFT070CE **COULD NOT** *function charid* **AS IT IS A DEFAULT ENTRY**

Explanation: The named charid is an XPAF default entry and cannot be modified or deleted. You cannot modify any of the XPAF-supplied entries. Modifying this entry would affect all AFP documents printed through XPAF.

System response: The named function is terminated.

User action: If you are adding a new font to XPAF, you must convert the font to the Xerox ISO8859-1 mapping convention. For instructions, refer to *Section Three: Managing Resources with XPAF*. If the ISO8859-1 convention is used, you do not need to modify any default IPSTND entries.

UFT070DE *function* **ABORTED. COULD NOT FIND IPDFLT TABLE**

Explanation: While attempting to create, update, or delete an IPSTND entry, the IPDFLT table was not found in the library in which the font tables are stored.

System response: Processing is terminated.

User action: The IPDFLT table must be present before the IPSTND table can be modified.

UFT070EE *function* **UNSUCCESSFUL.** *character set name* **DOES NOT EXIST IN I2X TABLE**

Explanation: The character set you were creating, updating, or deleting does not exist in the XPAFI2X table.

System response: Processing is terminated.

User action: Verify that you entered the correct character set name and try the function again. If the problem persists, call Xerox Technical Support.

UFT070FE *function* **UNSUCCESSFUL. PLANE** *plane* **IS RESERVED FOR XEROX USE**

Explanation: The plane you selected for the character identifier you are adding to the IPSTND table is reserved for Xerox use.

System response: The IPSTND entry is not created.

User action: Change the plane number to one that is available for customer modification. Currently, planes 00 through 0B are reserved for Xerox use; planes 0C through 0F are available for customer use. Note that it is the last character of the ‘PLANE’ number entry that references the plane.

UFT0712I **TABLE MERGE COMPLETED SUCCESSFULLY.** *table count* **TABLES MERGED INTO FILE DDNAME BASELIB**

Explanation: The font table library merge process ended without error. This message lists the number of tables merged into the base library.

System response: Processing continues.

User action: None required.

UFT0713I **ITEM** *item name* **FROM TABLE** *table name*, **FILE DDNAME DELTLIB WAS** *thm process description* **INTO TABLE** *table name*, **FILE DDNAME BASELIB**

Explanation: This message is written to the UFTPRINT file when an individual table item from the delta library is either inserted or replaced into the base font library table during font table merge processing.

System response: Processing continues.

User action: None required.

UFT0714I *item count* **ITEMS INSERTED.** *item count* **ITEMS REPLACED INTO FILE DDNAME BASELIB**

Explanation: This message identifies the number of items inserted and the number of items replaced in the base font table library. It is displayed when the font table library merge process is complete.

System response: Processing continues.

User action: None required.

UFT0715I **DELTA FILE CREATE COMPLETED SUCCESSFULLY.** *table count* **DELTA TABLES CREATED, IN FILE DDNAME DELTLIB**

Explanation: The font table library delta create process ended without error. This message identifies the number of tables created.

System response: Processing continues.

User action: None required.

UFT0723W **MEMBER** *member name* **DOES NOT CONTAIN A VALID** *item name*. **MEMBER NOT PROCESSED**

Explanation: The named item (such as a code page control structured field or code page index) was not found in the named member. The member probably contains a corrupted character set or code page.

System response: The named member is bypassed and processing continues with the next member.

User action: Make sure the named member is free of corrupted data. Trying to print AFP documents that refer to corrupted resources can result in documents that cannot be printed (due to IBM-to-Xerox conversion errors).

UFT0724E LDM ENCOUNTERED AN ERROR TRYING TO *action*

Explanation: LDM encountered an error while processing fonts.

System response: IBM font utility (UFTIFL) processing and table creation are both terminated.

User action: See the LDM message in the log to determine how to respond to the error.

UFT0730W THE FOLLOWING CHARIDS ARE NOT SUPPORTED IN THE IPSTND TABLE:

Explanation: When converting an IBM font library, some charids were found that did not have a corresponding entry in the IPSTND table. This message is always accompanied by message UFT0731W that lists the unsupported charids.

System response: Processing is terminated for this font. The font cannot be used with XPAF.

User action: If the named character is required, you must add it to XPAF using the XOAF Update the IPSTND Table on the Install Custom Replica Fonts (Version 5 encoding or below) menu. For information about using custom fonts, refer to *Section Three: Managing Resources with XPAF*.

UFT0731W *charid charid charid charid charid charid charid*

Explanation: This message lists the character IDs associated with message UFT0730W.

System response: Refer to message UFT0730W.

User action: Refer to message UFT0730W.

UFT0732W THE FOLLOWING CHARACTER SETS DO NOT HAVE A VALID I2X TABLE ENTRY:

Explanation: While creating the font tables that contain IBM font characteristics, XOAF found some character sets that did not have a corresponding entry in the XPAFI2X table. This message is always accompanied by message UFT0733W, which lists the affected character sets.

The XPAFI2X table, which is supplied with XPAF, identifies the replica fonts that make up a supported IBM character set. These messages indicate that you are using an IBM font for which there is no XPAF-supplied replica font.

System response: Processing completed. For all character sets that were missing XPAFI2X table entries, no XPAFEFW table entry was created.

User action: If the named character set is required, call Xerox Font Services to obtain the necessary custom fonts for these character sets. For information about using custom fonts, refer to *Section Three: Managing Resources with XPAF*.

UFT0733W *charset charset charset charset charset charset charset charset charset*

Explanation: This message lists the character sets associated with message UFT0732W.

System response: Refer to message UFT0732W.

User action: Refer to message UFT0732W.

UFT0734W THE FOLLOWING REPLICA FONTS DO NOT HAVE A VALID AFW TABLE ENTRY:

Explanation: The fonts listed in message UFT0735W were referenced in an XPAFI2X table entry, but a corresponding XPAFAFW table entry for the font was not found.

System response: The XPAFEFW table entries for the listed character sets are not built.

User action: Make sure the XPAFI2X table entry specifies the correct font name. If the XPAFI2X table entry is correct, then ensure that the replica font has been loaded into the native font library with the TYPE(REPL) parameter specified.

UFT0735W *font font font font font*

Explanation: This message lists the fonts associated with message UFT0734W.

System response: Refer to message UFT0734W.

User action: Refer to message UFT0734W.

UFT0736E *function* **UNSUCCESSFUL. THE HIGHEST PLANE AVAILABLE IS 0F**

Explanation: You attempted to update or create a table entry in a plane greater than 0F.

System response: The table entry remains unchanged. Processing continues.

User action: Create or update an entry in plane 0C, 0D, 0E, or 0F. Anything less than 0C is protected, and anything greater than 0F does not exist.

UFT0737W NOT ALL CHARIDS IN CHARACTER SET charset COULD BE FOUND IN CODE PAGE codepage. SEE LOG FOR DETAILS.

Explanation: While generating an XPAFIFW or XPAFIFW3 table entry for the indicated character set and code page, message UFT073DW was issued to the XOAF or XOSF LOG.

System response: Processing continues.

User action: Refer to the corresponding XOAFLOG or XOSFLOG and refer to the UFT073DW messages to determine which CHARIDS could not be found.

UFT073AW UNABLE TO BUILD AN IFW TABLE ITEM FOR MEMBER *member name*

Explanation: A call to UFTIFLIW to build an XPAFIFW table entry returned a non-zero return code.

System response: IBM font utility processing and table creation are both terminated.

User action: See the system log message to determine how to respond to the error. If the problem persists, call Xerox Technical Support.

UFT073CE **UNABLE TO FIND REPLICA FONT FOR PLANE** *plane id* **IN CHAR SET** *character set name* **IN IBM-TO-XEROX TABLE**

Explanation: XOAF could not find a replica font for the named plane ID in the identified character set in the XPAFI2X table.

System response: The XPAFEFW table entry is not built. Processing continues.

User action: Take these steps:

- Using the custom font documentation you received from your font vendor, verify that you specified the correct split and plane numbers in the IPSTND and/or XPAFI2X tables.
- Verify that all point sizes in the XPAFI2X table have a “P” prefix.

After correcting any problems, rerun RJOB105. If the problem persists, contact your font vendor to confirm that you received the correct character mapping values.

UFT073DW **UNABLE TO MATCH FNI CHARID** *charid* **FROM CSN** *character set name* **TO CPI RECORD IN** *code page name* **CODE PAGE**

Explanation: The *charid* in the FNI record of the *character set name* member was not found in the CPI record of the *code page name* member.

System response: No XPAFIFW table entry is created.

Verify that RJOB105 (update IBM font characteristics information) has been run during the installation process for the font libraries named by your print jobs. For more information, refer to *Section Two: Installing and Customizing XPAF*. If the problem persists, call Xerox Technical Support.

UFT073EW **IBM CHARACTER ID** *charid* **IS NOT PRESENTLY SUPPORTED**

Explanation: The named *charid* found in an IBM code page member does not have a matching character in Xerox’ replica fonts.

System response: The affected XPAFE2A table is built, but a default ASCII value is used to represent the missing character ID.

User action: If the problem persists, call Xerox Technical Support.

UFT073FW *character set name* **CHARACTER SET NAME NOT FOUND IN I2X TABLE. NOT PRESENTLY SUPPORTED**

Explanation: While creating XPAFEFW table items, an IBM character set name was found that was not represented in the XPAFI2X table. Xerox does not have fonts to duplicate the appearance of the named character set.

System response: No XPAFEFW table item is built for this character set name. Processing continues.

User action: If the named character set is required, call Xerox Technical Support.

UFT0740I **ENTRY ADDED TO I2X FOR** *character set id* **BASED ON EXISTING ENTRY FOR** *model character set id*

Explanation: The named character set was found in the IBM font library that is not supported in the XPAFI2X table. However, the characteristics of the unsupported font (size, typeface name, style, and weight) match those of a supported character set. The XPAFI2X table entry of the supported character set was used as a model to create a new entry for the unsupported character set.

System response: Processing continues.

User action: Make sure the new character set is an acceptable substitute for the unsupported IBM character set. The newly created character set will be used whenever the unsupported font is specified in an AFP document. If the newly created font is not an acceptable substitute for the unsupported IBM font, call Xerox Font Services to obtain a custom font.

UFT1403F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *ldm process name* **LDM PROCESSING. RC=X'***return code***'; IC=X'***lcaerrcd***'. UNABLE TO** *process description* **FILE DSNAME** *dataset name*

Explanation: RC is the return code from the LDM function. IC is the error code returned by the LCAERRCD field. This message is preceded by either message ULL1407F or MSF9900I, which provides more information about the result of this error.

System response: Font table processing is terminated.

User action: Correct the problem identified by LDM and rerun the job. If the problem continues, call Xerox Technical Support.

UFT1404W **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *ldm process name* **LDM PROCESSING. RC=X'***return code***'; IC=X'***lcaerrcd***'. UNABLE TO** *process description* **FILE DSNAME** *dataset name*

Explanation: RC is the return code from the LDM function. IC is the error code returned by the LCAERRCD field. Additional system log messages may provide more information.

System response: Font table processing is not affected. Processing continues.

User action: Correct the problem identified by LDM. If the problem persists, call Xerox Technical Support.

UFT1423E **UNABLE TO BUILD DIRECTORY LIST FOR DSNAME** *dataset name***. LDM RC=***return code*

Explanation: RC is the error code returned by the LCAERRCD field. Additional system log messages may provide more information.

System response: Font table processing is terminated.

User action: Correct the problem identified by LDM and rerun the job. If the problem persists, call Xerox Technical Support.

UFT3018E **COULD NOT ACQUIRE TCB** *operation*. **THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

UFT4005E **THM ERROR DURING** *operation* **FOR** *table name* **ITEM KEY** *key*. **THM IC=X'***information code***'; RC=X'***return code***'**

Explanation: This is an internal error.

System response: Conversion is terminated.

User action: Call Xerox Technical Support.

UFT4012E **INVALID PARAMETER LIST PASSED TO** *module name*

Explanation: This is an internal error.

System response: Conversion is terminated.

User action: Call Xerox Technical Support.

UFT6261E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING** *option* **LDM PROCESSING. RC=X'***return code***'; IC=X'***lcaerrcd***'. UNABLE TO OBTAIN LCA FOR FILE DDNAME** *file ddname*

Explanation: RC is the return code from the LDM function. IC is the error code returned by the LCAERRCD field. Additional system log messages may provide more information.

System response: Font table processing is terminated.

User action: Correct the problem identified by LDM and rerun the job. Other messages should precede this message and provide more information. If the problem persists, call Xerox Technical Support.

UFT6262E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *option* **LDM PROCESSING. RC=X'***return code***'; IC=X'***lcaerrcd***'. UNABLE TO** *action* **FILE DDNAME** *image library ddname*

Explanation: RC is the return code from the LDM function. IC is the error code returned by the LCAERRCD field. Additional system log messages may provide more information.

System response: Font table processing is not affected. Processing continues.

User action: Correct the problem identified by LDM. Other messages should precede this message and provide more information. If the problem persists, call Xerox Technical Support.

UFT6402E **COULD NOT** *thm command* **ITEM** *item key* **IN TABLE** *table name* **IN LIBRARY DDNAME** *file ddname operation*. **THM RC=X'***return code***'**

Explanation: This message is issued for diagnostic purposes. *Operation* identifies the type of processing that was being performed when the error occurred. The THM command can be INSERT, GET, or REPLACE:

- For INSERT, there are two possibilities:
  - If the error occurred while processing the delta file create (module UFTDLTC) and the return code value is 4, then the item being inserted already exists.
  - If the return code value is greater than 4 or if the error occurred while processing the table file merge, this is an internal error.
- For GET or REPLACE, this is an internal error.

System response: Processing is terminated.

User action: There are two alternatives:

- If the THM command was INSERT, rerun the delta file create (module UFTDLTC). Make sure the delta file VSAM cluster has been deleted and redefined. Other messages should precede this message and provide more information. If the problem continues, call Xerox Technical Support.
- If the THM command was GET or REPLACE, call Xerox Technical Support.

UFT6421E **ENTRY FOR THE** *character set/code page item name* **COULD NOT BE** *inserted/replaced* **IN THE** *table name* **TABLE**

Explanation: This message is issued when an entry cannot be inserted or replaced in named table, which can be either the CPGID or the FGID table. *Item name* is the name of the character set or code page for which the error occurred.

System response: Font table update processing is terminated.

User action: Examine your font table library to determine if the named table exists or is in error. Verify that the IBM font library is valid. Resubmit the job.

UIL messages

UIL0001I *message text*

Explanation: *Message text* consists of a message produced by another component. Refer to the chapter of the specified component for an explanation of this message.

System response: Refer to the documentation for the specified component.

User action: Refer to the documentation for the specified component.

UIL0203E **THM ERROR IN MODULE** *module name*. **CMD=***thm command*; **IC=X'***thm-information code*'; **RC=X'***thm-return code*'

Explanation: While attempting to process an XPAF VSAM dataset, an unexpected error was encountered. Other messages are usually issued along with this message to further identify the operation that failed.

System response: The current operation is terminated.

User action: Verify that all of the required XPAF libraries are present and not corrupted. If you believe you are receiving this message in error, call Xerox Technical Support.

UIL0701I *loader name* **COMPLETED** *status*

Explanation: The named loader finished processing either successfully or unsuccessfully.

System response: XOAF processing continues.

User action: Check the system log for errors or for more information if it finished unsuccessfully. If the problem persists, call Xerox Technical Support.

UIL1104E *loader name* **ERROR: NO INPUT RECORDS FOUND IN INPUT MEMBER**

Explanation: The color conversion table loader found no records to process.

System response: Color conversion table loader processing is terminated.

User action: Verify that the input member has records, and reload the color conversion table.

UIL1107E **INPUT FILE (***dataset name***) MUST BE A PARTITIONED DATASET**

Explanation: The dataset specified as input to the color conversion table loader is not a partitioned dataset. You must specify a PDS member as input to the color conversion table loader.

System response: Color conversion table loader processing is terminated.

User action: Check the input dataset name and ensure a PDS is specified.

UIL1109E VALIDATION ERRORS HAVE OCCURRED. SEE UJLLIST FOR DETAILS

Explanation: The color conversion table loader encountered one or more validation errors in the ISL source.

System response: The color conversion table loader continues validating the remaining ISL.

User action: To locate the errors, examine the UJLLIST output. Correct the errors, and reload the color conversion table.

UIL3018E COULD NOT ACQUIRE TCB *activity***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

UIL7501E *ldm command* **ERROR. EC=X'***error code***'**

Explanation: An error occurred while attempting to access a PDS or native library. EC is the error code returned from the LDM.

System response: Color conversion table loader processing is terminated.

User action: Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

UIL9099E UNABLE TO ALLOCATE STORAGE FOR *activity*

Explanation: Storage was needed for the named activity, but could not be obtained.

System response: Color conversion table loader processing is terminated.

User action: Verify that the region size is large enough to acquire work areas, and resubmit the job.

UIX messages

UIX0220E **DATASET** *dataset name* **NOT FOUND**

Explanation: The named dataset does not appear in the system catalog.

System response: XOAF processing is terminated.

User action: Make sure the dataset name was entered correctly, then retry the option.

UIX0701I *function* **COMPLETED** *status*

Explanation: The indicated function completed either successfully or unsuccessfully.

System response: XOAF processing continues.

User action: Check the system log for errors or for more information. If the problem persists, call Xerox Technical Support.

UIX0711I **NO UPDATES REQUESTED FOR TABLE**

Explanation: While updating a color cross-reference table, you did not enter any values in the ‘Set’ and ‘To’ fields.

System response: The color cross-reference table is not updated. XOAF returns to the Maintain Color Cross-Reference Tables panel.

User action: None required. If you wish to update the color cross-reference table, enter the appropriate values in the ‘Set’ and ‘To’ fields before you press ENTER.

UIX3018E **COULD NOT ACQUIRE TCB** *operation***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

UIX4005E **THM ERROR DURING** *operation* **FOR** *table name***, ITEM KEY** *key***. THM IC=X'***information code***'; RC=X'***return code***'**

Explanation: An error occurred in table processing.

System response: Processing is terminated.

User action: Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

UIX4009E **TABLE** *table name* **DOES NOT EXIST**

Explanation: The specified table name was not found in the dataset.

System response: Processing is terminated.

User action: Enter a unique table name and try the request again.

UIX4010E **TABLE** *table name* **ALREADY EXISTS**

Explanation: A request to create a new table was entered, but the specified table name was found in the dataset.

System response: Processing is terminated.

User action: Enter a unique table name and try the request again.

UJL messages

UJL0001I *message text*

Explanation: *Message text* consists of a message produced by another component. Refer to the chapter of the specified component for an explanation of this message.

System response: Refer to the documentation for the specified component.

User action: Refer to the documentation for the specified component.

UJL0002I **ERROR OPENING** *dataset name*. **RC=X'***return code***'**

Explanation: An error occurred while attempting to access a PDS or native library.

System response: PDL loader processing is terminated.

User action: Other messages accompany this message and provide more information. If the problem persists, call Xerox Technical Support.

UJL0003I *message text*

Explanation: This message is produced with all attempts to use the PDL loader to load a file type other than a PDL object file.

System response: File is ignored.

User action: Verify that you are specifying PDL object files when using PDL object management.

UJL0202E **THM UNABLE TO ACQUIRE TCB FOR MODULE** *module name*. **RC=X'***return code***'**

Explanation: The THM GETTCB request failed for the named module.

System response: XOAF processing is terminated.

User action: This error may be due to insufficient storage. Increase the region size and retry the option. If the option fails again for the same reason, call Xerox Technical Support.

UJL0203E **THM ERROR IN MODULE** *module name*. **CMD=***thm command***; IC=X'***thm-information code***'; RC=X'***thm-return code***'**

Explanation: While attempting to process an XPAF VSAM dataset, an unexpected error was encountered. Other messages are usually issued along with this message to further identify the operation that failed.

System response: The current operation is terminated.

User action: Verify that all of the required XPAF libraries are present and not corrupted. If you believe you are receiving this message in error, call Xerox Technical Support.

UJL0308I *number resource* **PROCESSED.** *number* **WITH ERRORS**

Explanation: The identified number of resources have been loaded. Some may have loaded with errors.

System response: Resource loading is terminated. XOAF processing continues.

User action: If no errors are indicated, no action is required. If errors occurred, review the XOAF log for more information.

UJL0505E **OUTPUT DSNAME** *dataset name* **IS NOT A VSAM LIBRARY**

Explanation: The named output dataset is not a VSAM dataset.

System response: PDL loader processing is terminated.

User action: Use a native VSAM dataset as the target library. If the problem persists, call Xerox Technical Support.

UJL0601I **PDL LOADER COMPLETED SUCCESFULLY FOR MEMBER** *name*

Explanation: The PDL loader successfully processed the named member.

System response: XOAF processing continues.

User action: None

UJL0602E **PDL LOADER COMPLETED UNSUCCESFULLY FOR MEMBER** *name*

Explanation: The PDL loader encountered errors when processing the named member.

System response: XOAF processing continues.

User action: Check the XOAFLOG and the UJLLIST output for more information. Correct any errors found and reload the resource. If the problem persists, contact Xerox technical support.

UJL0701I *loader name* **COMPLETED** *status*

Explanation: The named loader finished processing either successfully or unsuccessfully.

System response: XOAF processing continues.

User action: Check the system log for errors or for more information if it finished unsuccessfully. If the problem persists, call Xerox Technical Support.

UJL1104E *loader name* **ERROR: NO INPUT RECORDS FOUND IN INPUT MEMBER**

OR

loader name **ERROR: PCLVER NOT SUPPLIED, V35 ASSUMED**

Explanation: Either the PDL loader found no records to process or the PCLVER parameter was missing from the command.

System response: PDL loader processing is terminated. If the PCLVER was not supplied, then the default is used.

User action: If PDL loader processing is terminated, verify that the input member has records, and reload the PDL. No action is required for the latter message.

UJL1107E **INPUT FILE (***dataset name***) MUST BE A PARTITIONED DATASET**

Explanation: The dataset specified as input to the PDL loader is not a partitioned dataset (PDS). You must specify a PDS member as input to the PDL loader.

System response: PDL loader processing is terminated.

User action: Check the input dataset name and ensure a PDS is specified.

UJL1109E **VALIDATION ERRORS HAVE OCCURRED. SEE UJLLIST FOR DETAILS**

Explanation: The PDL loader encountered one or more validation errors in the PDL.

System response: PDL loader processing continues validating the remaining PDL.

User action: To locate the errors, examine the UJLLIST output. Correct the errors, and reload the PDL.

UJL1117W *file name* **IS NOT A PDL OBJECT FILE. FILE IS NOT LOADED**

Explanation: The object file being loaded is not a JDL, PDE, CME, TST, STK, IDR, or LIB file.

System response: The file is ignored and is not loaded.

User action: Make sure that you have specified the correct member name in your PDS library.

UJL1121W **MISSING XPDL COMPILER RESOURCE FILE. XPDL COMPILE NOT POSSIBLE**

Explanation: Explanation: The XPDL Compiler function was requested via the XPDL=YES XINSXOAF XINPARM parameter, but at least one of the required resource files is missing.

System response: System response: The PDL Loader loads the JSL, but the XPDL compile is not possible.

User action: User action: Insure that the invoking JCL has the correct DD statements for CON, MSG, INVXLT, PCCFIL, TYPFIL and XPDLDFT or change XPDL=YES to XPDL=NO if the XPDL compile function is not desired.

UJL7501E **LDM** *command* **ERROR. EC=X'***error code***'**

Explanation: An error occurred while attempting to access a PDS or native library. EC is the error code returned from LDM.

System response: PDL loader processing is terminated.

User action: Correct the problem identified by LDM. Other messages accompany this message and provide more information. If the problem persists, call Xerox Technical Support.

UJL9099E **UNABLE TO ALLOCATE STORAGE FOR** *activity*

Explanation: Storage was needed for the stated *activity* but could not be obtained.

System response: PDL loader processing is terminated.

User action: Be sure the region size is large enough to acquire work areas.

ULL messages

ULL0001I LOGO LOAD SUCCESSFULLY COMPLETED

Explanation: XOAF displays this message after successfully loading a logo. Input resources of the same name replace any resources that previously existed in the native library.

System response: Processing continues.

User action: None.

ULL0126E UNABLE TO CLOSE *dataset name* **DSNAME**

Explanation: The #CLOSE macro issued a non-zero return code while attempting to close the named dataset.

System response: Processing continues. If there are no other errors, the dataset should be valid.

User action: Call Xerox Technical Support.

ULL0303E FIRST RECORD OF *member name* **IS NOT A VALID HEADER RECORD**

OR

FIRST RECORD OF INPUT IS NOT A VALID HEADER RECORD

Explanation: The format of the dataset or member's first record does not conform to the Xerox header record format. If the input is a sequential dataset, the word INPUT is substituted for *member name* in the message text.

System response: Logo loader processing is terminated.

User action: Verify that the input is a valid logo. If the problem persists, call Xerox Technical Support.

ULL1307E COULD NOT ALLOCATE AND OPEN *dataset name***. RC=X'***return code***'**

Explanation: The indicated dataset was allocated and opened but could not complete successfully. The return code indicates the cause of the error.

System response: Processing is terminated.

User action: Depends on the return code:

- If RC=000C, the dataset or DASD volume is full. Provide more space for the dataset.
- If RC=0016, a problem external to XPAF is preventing the dataset from being accessed.
- If RC=0024, the region size is too small to hold the control block. Increase the region size.
- For any other return code, call Xerox Technical Support.

ULL1403F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *process name* **LDM PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *process description* **FILE DSNAME** *dataset name*

Explanation: RC is the return code from the LDM function. IC is the error code returned by the LCAERRCD field. This message is preceded by either message ULL1407F or MSF9900I, which provides more information about the result of this error.

System response: The requested logo is not loaded.

User action: Correct the problem identified by LDM, then try to load the logo again.

ULL1404W **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *process name* **LDM PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *process description* **FILE DSNAME** *dataset name*

Explanation: RC is the return code from the LDM function. IC is the error code returned by the LCAERRCD field. This message is followed by message ULL1408W, which provides more information about this error.

System response: Logo loading is not affected. XOAF processing continues.

User action: Correct the problem identified by LDM, if possible. Otherwise, call Xerox Technical Support.

ULL1406I **RESOURCE** *logo name* **LOADED SUCCESSFULLY**

Explanation: This message is displayed on the XOAF panel following the successful loading of a specified logo.

System response: XOAF processing continues.

User action: None required.

ULL1407F **FATAL ERROR. UNABLE TO LOAD RESOURCE. SEE LOG**

Explanation: This message always follows message ULL1307E, ULL1403F, ULL1422E, or ULL1423E, and is displayed on the XOAF panel or batch listing after an unsuccessful attempt to load a specified logo.

System response: The requested logo is not loaded.

User action: Correct the problem identified by the associated messages, then try to load the logo again.

ULL1408W **MINOR ERROR. LOAD RESOURCE SUCCESSFUL. SEE LOG**

Explanation: This message always follows message ULL1404W or ULL3418E, and is displayed on the XOAF panel after loading a specified logo. This message indicates success by the logo loader, but failure by LDM or EI after the resource was loaded.

System response: XOAF processing continues.

User action: Correct the problem identified by the associated messages, if possible.

ULL1422E INPUT MEMBER NAME MUST BE PRESENT IF RESOURCE IS PDS OR CONTAINS NO HEADER

Explanation: When loading a centralized logo, the logo loader examines the header record to extract the name. No header record or name was found.

System response: Logo loading is terminated.

User action: If there is no header record, enter the name of the logo being loaded on the XOAF panel or in the TSO/batch command. For more information on the XOAF panel, refer to *Section Three: Managing Resources with XPAF*. For more information on the TSO/batch command, refer to the *XPAF TSO/Batch Commands Quick Reference Card*.

ULL1423E UNABLE TO BUILD DIRECTORY LIST FOR DSNAME *dataset name***. LDM RC=***return code*

Explanation: While attempting to load a centralized logo, the input member name was specified as an asterisk (*), indicating that all members were to be loaded. An LDM BLDL for the input dataset failed. Further information can be found in the log.

System response: Logo loading is terminated.

User action: Examine the input dataset to ensure that it is a PDS. If so, call Xerox Technical Support.

ULL1428W LOAD COMPLETED. SOME RESOURCES NOT LOADED. SEE LOG FOR DETAILS

Explanation: The logo load completed; however, one or more resources could not be loaded.

System response: XOAF processing continues.

User action: Refer to the system log for a supplementary message which will identify the invalid resource(s).

ULL3418E I/O ERROR READING DSNAME=*dataset name***. RC=X'***return code***'**

Explanation: An I/O error occurred while attempting to read the named dataset.

System response: Processing continues.

User action: Call Xerox Technical Support.

ULR messages

ULR0716I *member name* **RELOADED WITH USER DIRECTORY LENGTH 0**

Explanation: While using the reload function of the XOAF Manage Libraries option to reload an offloaded PDS member to an XPAF library, the member was reloaded without user directory information.

System response: The message is issued to the XOAF screen and to the XOAF log. The reload process is now complete.

User action: Verify that the resource will function correctly without the user directory information. If unusable resources are produced, use the LDM batch offload/reload process as an alternative.

ULR1104E *loader name* **ERROR:** *activity*

Explanation: The output dataset could not be successfully opened or may be in use by another user.

System response: The message is issued to the XOAF screen and to the XOAF log. The reload process is halted and is not completed.

User action: Verify that the output dataset name and the output member name are valid, then reinitiate the reload process.

ULR1107E **INPUT FILE (***dataset name***) MUST BE A PARTITIONED DATASET**

Explanation: The input file is not a partitioned dataset. Sequential files are not supported for this utility.

System response: The message is issued to the XOAF screen and to the XOAF log. The reload process is halted and is not completed.

User action: Specify a partitioned dataset as the input to this loader utility, then reinitiate the reload process.

ULR3015E **COULD NOT** *command* **LIBRARY** *native library dataset name* **DURING LDM RELOAD PROCESSING. LDM RC=X'***return code***'**

Explanation: The specified command could not be performed for the indicated library during the LDM reload process. The return code is specified in the message.

System response: The message is issued to the XOAF screen and to the XOAF log. The reload process is halted and is not completed.

User action: Verify that the input and output dataset names and members are valid, then reinitiate the reload process.

ULR3016E **COULD NOT** *command* **MEMBER** *member name* **OF LIBRARY** *library dataset name* **DURING LDM RELOAD PROCESSING. LDM RC=X'***return code***'**

Explanation: The specified command could not be performed for the indicated member of the referenced dataset.

System response: The message is issued to the XOAF panel and to the XOAF log. The reload process is halted and is not completed.

User action: Verify that the input and output dataset names and members are valid, then reinitiate the reload process.

ULR3017E **COULD NOT** *command* **LCA DURING LDM RELOAD PROCESSING. LDM RC=X'***return code***'**

Explanation: The referenced command could not be performed for an LCA during the LDM reload function.

System response: The message is issued to the XOAF panel and to the XOAF log. The reload process is halted and is not completed.

User action: Verify that the input and output dataset names and members are valid, then reinitiate the reload process.

UPL messages

UPL0001I *message text*

Explanation: All resources have been loaded successfully to a native library. Input resources of the same name have replaced any resources that previously existed in the native library.

System response: XOAF processing continues.

User action: None required.

UPL0126E **UNABLE TO CLOSE** *ddname* **DSNAME**

Explanation: This is an internal error.

System response: XOAF processing continues. If there are no other errors, the dataset is valid.

User action: Call Xerox Technical Support.

UPL0505E **OUTPUT DATASET** *dataset name* **IS NOT A VSAM LIBRARY**

Explanation: The dataset specified as output for the form or image load is not a native library.

System response: The resource load is terminated.

User action: Specify a valid native library as output.

UPL0710E **THE INPUT FILE MUST BE A PDS OR SEQUENTIAL DATASET**

Explanation: The dataset specified as input for the form or image load is not a sequential or partitioned dataset.

System response: The resource load is terminated.

User action: Ensure that you have not specified a native library as input for this function. Also verify that the correct dataset is specified.

UPL1307E **COULD NOT ALLOCATE AND OPEN** *dataset name***. RC=X'***return code***'**

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Verify that the dataset specified is valid. If the problem persists, call Xerox Technical Support.

UPL1401F FATAL ERROR. UNABLE TO ACQUIRE WORKING STORAGE. LOAD UNSUCCESSFUL

Explanation: Because it is unable to acquire storage via the Environmental Intermedium, UPLMAIN cannot log messages. This message is displayed on an XOAF panel following an unsuccessful attempt to load a form or image.

System response: The requested resource is not loaded.

User action: Increase the task region size, then try again to load the resource.

UPL1402W MINOR ERROR. UNABLE TO RELINQUISH WORKING STORAGE. LOAD SUCCESSFUL

Explanation: Because it is unable to release storage via the Environmental Intermedium, UPLMAIN cannot log messages. This message is displayed on an XOAF panel after a form or image resource has been loaded.

System response: XOAF processing continues.

User action: Correct the problem and continue loading any remaining resources.

UPL1403F FATAL ERROR ENCOUNTERED BY *module name* **DURING** *process name* **LDM PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *process description* **FILE DSNAME** *dataset name*

Explanation: RC is the return code from the LDM function. IC is the error code returned by the LCAERRCD field. This message is preceded by either message ULL1407F or MSF9900I, which provides more information about the result of this error.

System response: The requested resource is not loaded.

User action: Correct the problem identified by LDM, then try again to load the resource. If the problem persists, call Xerox Technical Support.

UPL1404W MINOR ERROR ENCOUNTERED BY *module name* **DURING** *process name* **LDM PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *process description* **FILE DSNAME** *dataset name*

Explanation: This is an internal error. Subsequent message(s) give more information.

System response: Resource loading is not affected. XOAF processing continues.

User action: Call Xerox Technical Support.

UPL1405F FATAL ERROR ENCOUNTERED BY *module name* **DURING RESOURCE LOAD PROCESSING. INPUT RECORD TOO LARGE FOR OUTPUT BUFFER. RESOURCE** *resource name* **NOT LOADED INTO LIBRARY** *dataset name*

Explanation: An input record is larger than the maximum output record size. Subsequent message(s) give more information.

System response: The requested resource is not loaded.

User action: Correct the identified problem, then try again to load the resource. If the problem persists, call Xerox Technical Support.

UPL1406I **RESOURCE** *resource name* **LOADED SUCCESSFULLY**

Explanation: XOAF displays this message after successfully loading a form or image. Input resources of the same name replace any resources that previously existed in the native library.

System response: Processing continues.

User action: None.

UPL1407F **FATAL ERROR. UNABLE TO LOAD RESOURCE. SEE LOG**

Explanation: This message always follows other messages and is displayed on an XOAF panel or batch listing following an unsuccessful attempt to load a form or image.

System response: The requested resource is not loaded.

User action: Correct the problem identified by the associated messages, then try again to load the resource. If the problem persists, call Xerox Technical Support.

UPL1408W **MINOR ERROR. LOAD RESOURCE SUCCESSFUL. SEE LOG**

Explanation: This message always follows other messages, and is displayed on an XOAF panel after a form or image has been loaded.

System response: XOAF processing continues.

User action: Correct the problem identified by the associated messages, if possible. Continue with the next resource load function.

UPL140AW **RESOURCE member IS A FONT AND WILL NOT BE LOADED**

Explanation: When attempting to load Centralized images, XOAF has encountered a font.

System response: The resource is not loaded. Processing continues.

User action: None.

UPL1421E **MEMBER** *member name* **IN** *dataset name* **DOES NOT CONTAIN A VALID HEADER RECORD. RESOURCE NOT LOADED**

Explanation: The named member did not contain a valid header record. XOAF could not load the resource.

System response: Processing is terminated.

User action: Correct the form or image and resubmit the job.

UPL1422E INPUT MEMBER NAME MUST BE PRESENT IF RESOURCE IS PDS

Explanation: A centralized form or image was being loaded from a PDS, but the PDS member name was not supplied.

System response: Resource loading is terminated.

User action: At the ISPF panel or in the TSO/batch command, enter the PDS member name to be loaded in the input member name. For information on the TSO/batch command, refer to *XPAF TSO/Batch Commands Quick Reference Card*.

UPL1423E UNABLE TO BUILD DIRECTORY LIST FOR DSNAME *dataset name***. LDM RC=***return code*

Explanation: While attempting to load forms or images, the input member name was specified as an asterisk (*), indicating that all members of a PDS were to be loaded. More information can be found in the log.

System response: Resource loading is terminated.

User action: Verify that the input dataset is a PDS. If so, call Xerox Technical Support.

UPL1425E *input* **MEMBER** *member name* **OF DSNAME** *dataset name* **IS EMPTY**

Explanation: The named member in the named dataset does not contain any data.

System response: Command processing is terminated.

User action: Ensure that the specified member contains the resource to be loaded.

UPL1426E *input* **DSNAME** *dataset name* **IS EMPTY**

Explanation: The sequential dataset named as input does not contain any data.

System response: Command processing is terminated.

User action: Ensure that the specified sequential dataset contains the resource to be loaded.

UPL1429E OUTPUT MEMBER NAME MUST BE PRESENT IF RESOURCE IS SEQUENTIAL FILE WITH NO HEADER

Explanation: A centralized form or image was being loaded from a sequential file, but there was no header record in the resource to identify the resource name.

System response: Resource loading is terminated.

User action: At the ISPF panel or in the TSO/batch command, enter the member name to be loaded in the output member name. For information on the TSO/batch command, refer to *XPAF TSO/Batch Commands Quick Reference Card*.

UPL1427I *module name*: **LENGTH OF** *resource* **'***resource name***' IS LESS THAN THE LENGTH SPECIFIED IN HEADER. RESOURCE NOT LOADED**

Explanation: While loading centralized forms or images to the appropriate library, XOAF encountered an invalid resource. The resource length specified in the header is greater than the actual length of the member.

System response: XOAF processing continues. Any remaining valid resources are loaded.

User action: Examine the named resource to verify that it is the correct type. For example, make sure you are not trying to load a font into the centralized form library. If the resource is valid, call Xerox Technical Support.

UPL1428W **LOAD COMPLETED. SOME RESOURCES NOT LOADED. SEE LOG FOR DETAILS**

Explanation: The form or image load completed; however, one or more resources could not be loaded. Message UPL1427I, which identifies the invalid resource(s), is written to the system log for each error encountered.

System response: XOAF processing continues.

User action: Refer to the user action for message UPL1427I.

UPL3010F **COULD NOT GET X'***number of bytes***' BYTES OF MEMORY** *activity*

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

UPL3011E **COULD NOT RELEASE X'***number of bytes***' BYTES OF MEMORY FROM LOCATION X'***address***'** *activity*

Explanation: This is an internal error.

System response: Processing may continue.

User action: Call Xerox Technical Support.

UPL3418E **I/O ERROR READING DSNAME=***dataset name***. RC=X'***return code***'**

Explanation: An I/O error occurred while reading the indicated dataset via the Environmental Intermedium. This error occurred while attempting to load forms or images.

System response: Resource loading is terminated.

User action: Correct the identified problem, then continue with the next resource load function. If the problem persists, call Xerox Technical Support.

UPL4211E LOGICAL RECORD LENGTH OF *ddname* **DATASET MUST BE** *nnn*

Explanation: The indicated resource dataset does not have a logical record length of the indicated number of bytes.

System response: Command processing is terminated, and the form is not loaded.

User action: Transfer the resource to a dataset that has a logical record length of the indicated number of bytes.

UTB messages

UTB0201E **COMMON WORK AREA ADDRESS WAS ZERO FOR MODULE** *module name*. **RC=X'***return code***'**

Explanation: This is an internal error.

System response: XOAF processing is terminated.

User action: Call Xerox Technical Support.

UTB0202E **THM UNABLE TO ACQUIRE TCB FOR MODULE** *module name*. **RC=X'***return code***'**

Explanation: The THM GETTCB request failed for the named module.

System response: XOAF processing is terminated.

User action: This error may be due to insufficient storage. Increase the region size and retry the option. If the option fails again for the same reason, call Xerox Technical Support.

UTB0203E **THM ERROR IN MODULE** *module name*. **CMD=***thm command***; IC=X'***thm-information code***'; RC=X'***thm-return code***'**

Explanation: While attempting to process an XPAF VSAM dataset, an unexpected error was encountered. Other messages are usually issued along with this message to further identify the operation that failed.

System response: The current operation is terminated.

User action: Verify that all of the required XPAF libraries are present and not corrupted. If you believe you are receiving this message in error, call Xerox Technical Support.

UTB0204E *option* **FAILED. TABLE** *table name* **NOT FOUND IN DSNAME** *dataset name*

Explanation: The identified option was attempted for the named table; however, the table could not be found in the named dataset.

System response: The requested option fails. XOAF processing continues.

User action: Ensure that you have specified a valid table name and dataset name, then retry the option.

UTB0205I **TABLE** *list name* **HAS BEEN DELETED FROM DSNAME** *dataset name*

Explanation: The named list was deleted successfully from the specified dataset.

System response: XOAF processing continues.

User action: None required.

UTB0206E *option* **FAILED FOR** *dataset name***. DSNAME INVALID**

Explanation: The identified option was attempted for the named dataset, but the dataset name was not specified according to z/OS standards or was blank.

System response: The requested option fails. XOAF processing continues.

User action: Correct the dataset name, then retry the option.

UTB0207E *option* **FAILED FOR** *table list name***. NAME INVALID**

Explanation: The identified option was attempted for the named list, but the list name was not specified according to IBM standard naming conventions or contained spaces.

System response: The requested option fails. XOAF processing continues.

User action: Correct the list name, then retry the option.

UTB0208E *option* **FAILED FOR TABLE** *list name* **BECAUSE TYPE CODE** *type code* **IS INVALID**

Explanation: This is an internal error.

System response: XOAF processing is terminated.

User action: Call Xerox Technical Support.

UTB0209I *update* **FAILED BECAUSE** *list name* **IS NOT A** *list type* **TABLE TYPE**

Explanation: The identified resource list could not be updated because it contained the wrong type of resource.

System response: The list update fails. XOAF processing continues.

User action: Select a list that is of the correct type. For example, if you wish to update a font list, ensure that the list you specify contains fonts.

UTB020AI **TABLE** *list name* **HAS BEEN UPDATED SUCCESSFULLY**

Explanation: The identified resource list was updated correctly.

System response: XOAF processing continues.

User action: None required.

UTB020BI **NO UPDATES REQUESTED FOR TABLE** *list name*

Explanation: While using the option to update a resident resource list, you did not specify any entries.

System response: XOAF processing continues.

User action: None required.

UTB020CE **FUNCTION=***function type* **FAILED. TABLE TYPE** *type* **INVALID. MUST BE FNTL OR FRML**

Explanation: The indicated function (A=Add, C=Change, D=Delete) could not be completed because the list type was invalid. The list type must be FNTL or FRML.

System response: The requested option fails. XOAF processing continues.

User action: Correct the TYPE parameter and resubmit the job.

UTB020DE *option* **FAILED BECAUSE ITEM** *list member name* **IS ALREADY IN TABLE** *list name*

OR

option **FAILED BECAUSE ITEM** *list member name* **IS NOT IN TABLE** *list name*

Explanation: The indicated *option* failed because the named item either already existed or did not exist in the list.

System response: XOAF processing is terminated.

User action: Correct the item name, then try the request again.

UTB020EE **FUNCTION** *function type* **INVALID. MUST BE (A)DD OR (D)ELETE**

Explanation: The indicated function is not valid.

System response: XOAF processing is terminated.

User action: Correct the error, then try the request again.

UTB020FI **ITEM** *list item name* **SUCCESSFULLY** *action* **TABLE LIST NAME**

Explanation: The indicated item was successfully added to, changed in, or deleted from the named list.

System response: XOAF processing continues.

User action: None required.

UTB0215E *action* **FAILED. UNABLE TO GET DIRECTORY LIST FOR DSNAME** *dataset name* **MEMBER** *member name*

Explanation: While searching for the member specified in the FROM parameter, an error occurred reading the directory of the named source dataset.

System response: XOAF processing is terminated.

User action: Make sure the dataset exists and is a PDS. If it does exist and it is a PDS, call Xerox Technical Support.

UTB0216E *action* **FAILED. SOURCE MEMBER** *list member name* **IS LOCATED IN** *list library name*

OR

action **FAILED. SOURCE MEMBER** *list member name* **IS NOT LOCATED IN** *list library name*

Explanation: The specified member did not exist in the named dataset.

System response: XOAF processing is terminated.

User action: Ensure that the specified source member name is correct, then rerun the request. If the request fails again, call Xerox Technical Support.

UTB0217E *allocation* **FAILED. UNABLE TO ALLOCATE** *list ddname/list library name*. **RC=X'***return code***'**

Explanation: Dynamic allocation of the dataset specified in the FROM parameter failed.

System response: XOAF processing is terminated.

User action: Ensure that the provided name is correct and that the dataset has enough storage to allow allocation. If so, call Xerox Technical Support.

UTB0218E *action* **FAILED. UNABLE TO OPEN** *list ddname/list library name*. **RC=X'***return code***'**

Explanation: This is an internal error.

System response: XOAF processing is terminated.

User action: Call Xerox Technical Support.

UTB0219E *action* **FAILED. MEMBER NAME** *list member name* **INVALID**

Explanation: The member name specified in the FROM parameter is incorrect according to standard naming conventions.

System response: XOAF processing is terminated.

User action: Correct the member name according to standards, then rerun the request.

UTB021AE *action* **FAILED. UNABLE TO ACQUIRE** *bytes of storage* **BYTES OF STORAGE FOR** *area*. **RC=X'***return code***'**

Explanation: The indicated action was unable to acquire the indicated number of bytes for the named area.

System response: XOAF processing is terminated.

User action: Increase the region size and rerun the request. If the problem persists, call Xerox Technical Support.

UTB021BE ACTION FAILED. UNABLE TO READ INPUT DSNAME *dataset name*. **RC=X'***return code***'**

Explanation: An error occurred while reading the named dataset.

System response: XOAF processing is terminated.

User action: Ensure that the dataset name is specified according to standard naming conventions, then rerun the request. If the problem persists, call Xerox Technical Support.

UTB021CI TABLE *list name* **CREATED WITH** *number of list entries* **ITEMS IN DSNAME** *list library name*

Explanation: The named list was created successfully in the named dataset with the specified number of items.

System response: XOAF processing continues.

User action: None required.

UTB021DE ACTION FAILED FOR *list name* **IN** *list ddname/list library name*. **DEVICE TYPE UNDEFINED**

Explanation: This is an internal error.

System response: XOAF processing is terminated.

User action: Call Xerox Technical Support.

UTB021EE ERROR OCCURRED IN IBM SYSTEM MACRO *operation*. **IC=X'***information code***'; RC=X'***return code***'**

Explanation: An XPAF internal error occurred while using an IBM system macro. RC contains the contents of register 15, and IC contains any information codes available for the named macro.

System response: XOAF processing is terminated.

User action: Refer to the IBM publication that lists the return codes associated with IBM system macros. If the problem persists, call Xerox Technical Support.

UTB0220E DATASET '*list library name***' NOT FOUND**

Explanation: The named dataset was not found.

System response: XOAF processing is terminated.

User action: Supply a valid dataset name that is cataloged, then try the request again.

UTB4010E TABLE *list name* **ALREADY EXISTS**

Explanation: The named list was not created because a list of the same name already exists.

System response: XOAF processing is terminated.

User action: To create a new list, enter a unique name.

UTB6209E **INVALID FUNCTION** *invalid function* **PASSED TO** *module name*

Explanation: This is an internal error.

System response: XOAF processing is terminated.

User action: Call Xerox Technical Support.

UTB6210W **TABLE** *thm list* **EXISTS. ENTER FONTS TO RELOAD TABLE OR 'CANCEL'**

Explanation: The specified list name already exists. This message is displayed while loading a font list table.

System response: XOAF processing continues.

User action: Continue entering fonts to reload the list, or enter **CANCEL** to keep the list in its current form.

UTB6211E *operation failed***. DUPLICATE ENTRY ON** *dataset name* **MEMBER:** *member name*

Explanation: The THM request failed, due to the duplicate entry on the input dataset.

System response: XOAF processing is terminated.

User action: Edit the input dataset and remove the duplicate entry. Then retry the option.

XAE messages

XAE0001I *message text*

Explanation: *Message text* consists of a message produced by another component. Refer to the chapter of the specified component for an explanation of this message.

System response: Refer to the documentation for the specified component.

User action: Refer to the documentation for the specified component.

XAE0700E AN ERROR HAS OCCURRED IN PROCESSING. SEE LOG FOR MORE INFORMATION

Explanation: This message appears when any error occurs building IBM-related tables.

System response: Depends on the error messages in the XLOG.

User action: Depends on the error messages in the XLOG.

XAE4201E UNEXPECTED END OF FILE WHILE READING *member name*

Explanation: While converting a centralized form to decentralized format, an end-of-file condition was reached before processing was completed.

System response: Processing is terminated with incomplete output.

User action: Check the log for related messages. Verify that the input form member has not been corrupted during a MOVE or COPY and that it is not empty. If you cannot locate the problem, call Xerox Technical Support.

XAE4202E XEI COULD NOT READ *member name***. RC=X'***return code***'**

Explanation: This is an internal error.

System response: Processing is terminated with incomplete output.

User action: Call Xerox Technical Support.

XAE4203E FAILURE DURING TABLE FETCH. THM EC=*error code*

Explanation: This is an internal error.

System response: Processing is terminated with incomplete output.

User action: Call Xerox Technical Support.

XAE4204E LDM FAILURE WRITING UDK OUTPUT. LDM EC=*error code*

Explanation: This is an internal error.

System response: Processing is terminated with incomplete output.

User action: Call Xerox Technical Support.

XAE4205E **MISSING OR INVALID** *item dataset name*

Explanation: The missing or invalid item is required and must conform to z/OS naming conventions.

System response: Processing is terminated.

User action: Ensure that the item is correct and try again.

XAE4206E **CANNOT USE SAME DSNAME FOR BOTH OUTPUT AND INPUT**

Explanation: The output dataset name and member are the same as the input dataset name and member.

System response: Processing is terminated.

User action: Specify an output dataset name/member combination that is different from the input dataset name/member. Retry the option.

XAE4207E **MODULE** *module name* **NOT IN MEMORY**

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

XAE4208E *type of fail***. EC=X'***error code***', DSNAME=***dataset name*

Explanation: An error occurred accessing the named dataset.

System response: Processing is terminated with incomplete output.

User action: Examine the type of fail and error code for information on the error condition. Ensure the dataset and member specified as input exist. If unable to resolve, call Xerox Technical Support.

XAE4210I **CENTRALIZED FORM** *form name* **CONVERTED OK TO DECENTRALIZED FORM** *form name*

Explanation: Form conversion completed successfully.

System response: Processing continues.

User action: None required.

XAE4211E **LOGICAL RECORD LENGTH OF** *dataset description* **DSNAME MUST BE** *nnn* **BYTES**

Explanation: The indicated resource dataset does not have a logical record length of the indicated number of bytes.

System response: Command processing is terminated.

User action: Transfer the resource to a dataset that has an LRECL of the indicated number of bytes.

XAM messages

XAM0001I INCONSISTENCY BETWEEN TARGET PRINTER AND PRINTENV=COLR; PRINTENV=BOTH FORCED FOR THIS DOCUMENT

Explanation: A discrepancy exists between the target printer (monochrome) and the value specified in the PRINTENV initialization parameter (COLR). This discrepancy may cause a potential performance problem.

System response: Processing continues with a temporary setting of PRINTENV=BOTH for this document. This modification will maintain the integrity of the printed document, but may result in unnecessary overhead.

User action: Either correct the value for the PRINTENV initialization parameter, or use only highlight color printers. The printed document is unaffected by this discrepancy, but processing time may be increased significantly. Also, additional members may be created in the centralized image library that will never be referenced again, thus possibly wasting disk space.

XPAF will automatically correct any adverse processing caused by a discrepancy the next time those resources are referenced after the problem has been fixed. However, the correction process takes time and may result in additional processing overhead.

XAM2124E ERROR *activity* **LIBRARY** *library ddname library dataset name***. LDM RC=X'***return code***'; IC=X'***information code***'**

Explanation: A VSAM read error occurred while accessing the named library.

System response: Document processing is terminated.

User action: Make a note of the return codes. If the problem persists, call Xerox Technical Support.

XAM3010F COULD NOT GET X'*amount***' BYTES OF MEMORY** *activity*

Explanation: Sufficient storage was unavailable for the conversion program to obtain the requested amount for the required data buffer.

System response: The resource cannot be converted. Document processing is terminated. The document remains in the output buffer.

User action: Increase the region size allocated to the XOSF start-up proc, or drain the other printers, then retransmit the document. If the problem persists, call Xerox Technical Support.

XAM3011E COULD NOT RELEASE X'*amount***' BYTES OF MEMORY FROM LOCATION X'***address***'** *activity*

Explanation: The storage used for conversion processing was not released, and the document may be incorrect. This is an internal error.

System response: Document processing continues.

User action: Call Xerox Technical Support.

XAM3016E **COULD NOT** *command* **MEMBER** *member name* **OF LIBRARY** *library ddname resource type library*. **LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named command on the specified member.

System response: Document processing is terminated.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XAM3018E **COULD NOT ACQUIRE TCB** *activity*. **THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAM3725F **INVALID PIPELINE REQUEST:** *invalid request*

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAM4004F *module name* **DETECTED AN INVALID** *control block name* **CONTROL BLOCK AT LOCATION X'***address***'**

Explanation: This is an internal error.

System response: The overlay cannot be converted to a Xerox form. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XAM4006E **COULD NOT FIND** *table type* **TABLE. THM IC=X'***information code***'; RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAM4023E PAPERSIZ=*paper size parameter* **IS INVALID. LETTER ASSUMED**

Explanation: An invalid paper size value was specified in one of these parameters/keywords:

- Initialization parameter
- Printer profile parameter
- Extended JCL keyword

System response: Processing continues using 8.5 x 11 inch (LETTER) paper size.

User action: Correct the *paper size parameter* by entering a user-defined name that matches an entry in the currently active paper name table or one of these values:

#7
#10
A3
A4
A5
A6
B4
B5
C5
DL
EXEC
LEGAL
LEGL13
LETTER
LONG
POST
STATMT

XAM4110E THE BUFFER MANAGER REPORTED AN ERROR TO MODULE *module name***. RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAM4116W OVERLAY CONSOLIDATION FAILED. DOCUMENT PROCESSING CONTINUES

Explanation: XOSF encountered an error while consolidating the overlays in a copy group. This message is accompanied by other messages that provide more information about the error.

System response: Document processing continues. The overlays are processed as if consolidation had not been selected.

User action: None required.

XAM414FE *buffer name* **BUFFER CAPACITY EXCEEDED**

Explanation: The end-of-page processor buffers the page text fragments and overlay text fragments that comprise a page. The maximum amount of data that can be contained in the page buffer has been exceeded.

System response: Document processing is terminated.

User action: The document includes one or more pages that are too complex to be printed. If the document uses more than one medium overlay on any page, specify MERGEOVL=Y. This will combine all the overlays for a page into a single .FRM, reducing the size and complexity of the page buffer.

XAM4301W **X'***unsupported control character***' IS NOT A SUPPORTED** *control type* **CONTROL CHARACTER. SPACE 1 LINE IS ASSUMED**

Explanation: XAMLINE maintains a table of valid line printer carriage control characters. The line-mode data being transformed has machine carriage control characters, but the value of the named carriage control character was not found in the table.

System response: Document processing continues.

User action: If the control character is valid, call Xerox Technical Support. If the control character is invalid, determine if it is a valid ASA control character. If it is, resubmit the document and specify the correct record format in the DCB parameter for the file being printed.

XAM4302W **X'***control character***' IS A RESERVED** *machine* **CONTROL CHARACTER. DATA RECORD NOT PRINTED**

Explanation: Certain machine carriage control codes are reserved for printers. Printers ignore these codes and they produce no output.

System response: Document processing continues.

User action: Correct the data stream to use only valid output control commands. Reserved machine control codes are 02, 03, 04, 05, 06, 07, 0A, 12, 23, 43, 63, 6B, EB, FB, and F3.

XAM4303W **SKIP TO CHANNEL** *channel number* **NOT SUPPORTED IN** *resource name***. SPACE 1 LINE IS ASSUMED**

Explanation: XAMLINE searched all Line Descriptor records for the channel number specified in the carriage control character but did not find it in the named resource.

System response: Document processing continues.

User action: If the channel is specified in the named resource, call Xerox Technical Support. Otherwise, use one of these solutions:

- If the data stream is an AFP data stream, insert an Invoke Data Map structured field that names the correct data map.
- Modify the resource so that it supports the named channel.
- Change the data so that it does not call for the named channel.

XAM4310E **UNABLE TO PRINT VARIABLE DATA USING MEDIUM MAP** *map name* **IN FORMDEF** *formdef name* **DUE TO CONSTANT FORM SPECIFICATION.** *action*

Explanation: The conversion program has determined that the document contains variable data that will be printed using the named medium map in the named FORMDEF. However, the medium map calls for either one of two specifications that do not permit variable data:

- Constant forms on both sides in a duplex job
- Constant forms on the front of a simplex job

System response: Document processing is terminated.

User action: You have two alternatives:

- Remove CONSTANT BOTH (for duplex jobs) or CONSTANT FRONT (for simplex jobs) from the medium map.
- Use an IMM structured field to change medium maps before the variable data.

If the problem persists, call Xerox Technical Support.

XAM4328F **ERROR DETECTED PROCESSING** *resource type resource member name* **IN** *document part*

OR

ERROR DETECTED PROCESSING INLINE PAGEDEF/FORMDEF IN *document part*

Explanation: The resource processor detected an error in the input data stream while trying to convert an IBM AFP resource. The resource member name is displayed without its 2-character prefix. For example, a page segment named S1SAMP is identified in the message as SAMP. The document part is either DOCUMENT, AFPJOBHDR, AFPJOBTLR, AFPMSGDS or AFPDSHDR, referring to either the document itself or one of the AFP banner types.

System response: In most cases, document processing is terminated. If the resource is an inline PAGEDEF or FORMDEF, document processing may continue using the default values. If document processing is terminated, the document remains in the output queue.

User action: To help diagnose and resolve the problem, investigate any related messages issued by XRF. If the named resource is a page segment, check the printed output to verify correct text positioning. If processing is terminated, make sure the resource is called by a valid name in the data stream. Try to correct the problem and rerun the job. If the problem persists, call Xerox Technical Support.

XAM4329E **REQUESTED** *map type map name* **NOT FOUND IN** *resource type resource name*

Explanation: While processing a page format or an IDM structured field, the transform could not find the named copy modification, page layout, or data map in the named resource.

System response: Document processing is terminated.

User action: Make sure the required page format or PAGEDEF is present in the resource library. If resource libraries are concatenated, make sure the resource in error is stored in the first library in the chain. If not:

- Delete or rename any earlier libraries with resources of the same name, then use the XPAF operator command to refresh the resource directory.
- Rearrange the datasets in the concatenation to place the desired library at the head of the chain.

XAM4330E **CONDITIONAL PROCESSING CONTROL ID** *id* **NOT FOUND IN PAGEDEF** *pagedef name*

Explanation: While processing the line controls within PAGEDEF or page format for an page-formatted or AFP job, XPAF encountered a reference to a conditional processing test that was not included in the PAGEDEF or page format.

System response: Document processing is terminated.

User action: Locate a corrected copy of the PAGEDEF or page format, load it into your PDEFLIB, refresh the library directory, then resubmit the job.

XAM4331E **INVALID INLINE** *resource type* **STRUCTURED FIELD IS X'***structured field id***'**

Explanation: While processing an inline PAGEDEF or FORMDEF, the conversion program found that the structured field to be processed was not part of a PAGEDEF or FORMDEF.

System response: Document processing is terminated.

User action: Correct the inline resource and resubmit the documents.

XAM4333W **INVALID STRUCTURED FIELD ID X'***structured field id***' FOUND. CHECK OUTPUT FORMATTING**

Explanation: A 5A input record contained the named invalid structured field ID.

System response: Document processing continues without processing the 5A record.

User action: Check the output format for correctness. Make sure the structured field ID is valid and the introducer length is correct.

XAM4334E COMPOSED TEXT CONTROL LENGTH OR CHAINING ERROR ENCOUNTERED

Explanation: During processing of an AFP presentation text (CTX) block, an invalid CTX control chain or sequence has been encountered.

System response: The remainder of the CTX block is ignored, but processing of the page or resource continues.

User action: Check the CTX controls and freestanding text records for invalid chaining, sequence, or length errors. If the error occurs within an overlay, the overlay should be revised via auto revision or the REVOVLY.

XAM4336E UNSUPPORTED CTX CONTROL ENCOUNTERED: ctx_control

Explanation: During processing of an AFP composed text (CTX) block, an unsupported triplet was encountered.

System response: The unsupported CTX triplet is ignored, processing of the remainder of the CTX block continues.

User action: Check the CTX block and remove the unsupported triplet(s).

XAM4337W UNSUPPORTED PTX SEC COLOR SPACE ENCOUNTERED: xx

Explanation: While converting an AFP document a PTX structured field was encountered that contained a Set Extended Color triplet that called for a color space that is not recognized.

System response: The SEC triplet is ignored and the color is not changed.

User action: Check the AFP data stream to make sure the color space is valid. If so, contact Xerox Technical Support.

XAM4338W PTX SEC cspace COLOR SPACE IS NOT SUPPORTED AND IS IGNORED

Explanation: While converting an AFP document a PTX structured field was encountered that contained a Set Extended Color triplet that referred to a color space that is not supported.

System response: The SEC triplet is ignored and the color is not changed.

User action: Check the AFP data stream to make sure the color space is valid. If so, contact Xerox Technical Support.

XAM4354E CHECKPOINT (#CKPT) FAILED IN MODULE *module name***. RC=X'***return code***'**

Explanation: An error was returned by the operating system when XPAF tried to determine if a document had reached the threshold for taking a checkpoint.

System response: Document processing is terminated.

User action: Verify that there is not a problem with your job entry subsystem or with the document as stored by the operating system. If the problem persists, call Xerox Technical Support.

XAM530FE **ENTRY** *font* **NOT FOUND IN XPAFAFW. THM IC='***code***'**

Explanation: The fetch process failed when processing the XPAFAFW table for a replica font.

System response: Document processing is terminated.

This error usually indicates an error with font installation to the native libraries. If you have recently installed new or updated fonts, review the procedure for resource installation in *Section Two: Installing and Customizing XPAF*.

User action: to determine if the steps were completed correctly. If the problem persists, call Xerox Technical Support.

XAM6280I **XEROX .FRM FILE SIZE EXCEEDED FOR OVERLAY RESOURCE NAMED name (M).**

Explanation: A complex overlay has been converted to Xerox .FRM format, resulting in more data than the standard allows.

System response: Document processing continues. The .FRM will be merged with the page data and not be downloaded and referenced as a .FRM.

User action: Optimize the overlay referenced to reduce its complexity.

XAM6281F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *table* **BUILD PROCESSING. MAXIMUM NUMBER OF** *value* **ENTRIES EXCEEDED FOR OVERLAY RESOURCE NAMED** *form member name* **(M). IC=X'***address***'**

Explanation: This is an internal error. The overlay is too complex to be processed.

System response: The overlay cannot be converted to a Xerox form. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XAM6282F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING STORAGE INITIALIZATION PROCESSING. STORAGE ACQUIRED OF X'***acquired storage size***' BYTES DOES NOT MATCH STORAGE ALLOCATED OF X'***calculated storage size***' BYTES. IC=X'***acquired storage address***'**

Explanation: This is an internal error.

System response: The overlay cannot be converted to a Xerox form. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XAM6283F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *draw rule metacode data table* **BUILD PROCESSING.** *element* **DOES NOT SPECIFY** *parameter* **AS REQUIRED FOR OVERLAY RESOURCE NAMED** *form member name* **(M). IX=X'***address***'**

Explanation: This is an internal error.

System response: The overlay cannot be converted to a Xerox form. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XAM6284F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *element* **BUILD PROCESSING. METACODE TEXT DATE LENGTH IS LESS THAN 1 OR GREATER THAN 256 FOR OVERLAY RESOURCE NAMED** *form member name* **(M). IC=X'***address***'**

Explanation: This is an internal error.

System response: The overlay cannot be converted to a Xerox form. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XAM6285F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *element* **BUILD PROCESSING. INSUFFICIENT SPACE AVAILABLE TO CONTAIN** *image count* **GHO PACKET ENTRIES FOR OVERLAY RESOURCE NAMED** *form member name* **(M). IC='***address***'**

Explanation: This is an internal error.

System response: The overlay cannot be converted to a Xerox form. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XAM6307E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *ldm command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *command* **FILE DDNAME** *form library ddname* **FOR** *overlay* **RESOURCE NAMED** *form member name* **(***form orientation***)**

Explanation: This is an internal error.

System response: The conversion of the overlay to a Xerox form is not directly affected by this error. If *command* is FLCA, the preceding allocation failure may affect the final outcome of the document.

User action: Call Xerox Technical Support.

XAM6308E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *ldm command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *command* **FILE DDNAME** *form library ddname***, FOR** *overlay* **RESOURCE NAMED** *form member name* **(***form orientation***)**

Explanation: This is an internal error.

System response: The conversion of the overlay to a Xerox form is not directly affected by this error. However, the converted form could not be successfully written to the output form library. The final outcome of the document is at the discretion of the component or subcomponent that invoked XAMFRM.

User action: Call Xerox Technical Support. If the error message indicates that the system could not allocate the file, complete these steps:

- Verify that the native form library exists as specified in the XOSF start-up proc.
- Ensure that sufficient library space is available.

XAM6319F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *type of processing* **BUFFER STORAGE MANAGEMENT PROCESSING. RC=X'***return code***'; IC=X'***buffer control block address***'. UNABLE TO** *activity type* **DATA BUFFER, FOR OVERLAY RESOURCE NAMED** *form member name* **(M)**

Explanation: This is an internal error.

System response: The overlay cannot be converted to a Xerox form. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XAM7600E *module name* **ERROR PROCESSING AEG**

Explanation: The end-of-page processor invokes XRFAEG to rebuild the active environment group in case any page segments included in the overlay contain text. XRFAEG was unable to complete its processing normally.

System response: Document processing is terminated.

User action: This message is preceded by a message from XRFAEG. Refer to that message for the appropriate action. The probable cause of the error is a missing font. Ensure the font tables contained in the font table library correctly reflect the fonts contained in the IBM font libraries used by SCRIPT.

XAM7656W *resource type resource name* **IMAGE POSITION (***vpos,hpos***) IS OUTSIDE THE PHYSICAL PAGE BOUNDARY AND WILL NOT BE PRINTED**

Explanation: While processing an image within AFP resource *resource name* of type *resource type*, XOSF calculated a position that would place the image outside the physical page. *Vpos* and *hpos* are the vertical and horizontal positions in dots, relative to the Xerox page origin.

System response: Document processing continues, but the image is not printed.

User action: Ensure that the entire image fits within the physical page boundary for the paper size you are using. If the problem persists, call Xerox Technical Support.

XAM7657E **ONE OR MORE** *record types* **WERE SPECIFIED TO PRINT OUTSIDE THE VALID PRINTABLE AREA FOR** *area*

Explanation: You specified either UNBLOCK or BLKCHAR in the DATACK IBM JCL keyword. The specified data type was detected outside of the valid printable area (the lesser of the logical and physical page boundaries). Text strings and rules have been truncated at the point at which they exceed the valid printable area. Inline and page segment images are not printed if any part of them is outside the valid printable area. Error indicators on the page in question highlight the point at which the data

check occurred. When data checks have been detected for an overlay during conversion, the error message and error indicators relating to the page on which the converted overlay first appears is issued only once.

System response: Document processing continues.

User action: Refer to messages XAM7658E and XAM7659E for the page number, page side, and active environment details to determine the exact location of the errors. Ensure the correct medium map, data map, and paper size are in effect. If correct, check the logical page size, the coordinates and orientation of the data in error, the font size, and any other aspects of the page.

XAM7658E THE ABOVE ERRORS OCCURRED ON THE *page side* **OF PAGE** *page number*

Explanation: You specified either UNBLOCK or BLKCHAR in the DATACK IBM JCL keyword. Data-off-page conditions were detected on the specified side of the specified page within the document. Page counting starts with and includes separator pages. Error indicators on the page in question highlight the point at which the data check occurred.

System response: Document processing continues.

User action: Refer to messages XAM7657E and XAM7659E for the data types and the active environment details to determine the exact nature of the errors. Ensure the correct medium map, data map, and paper size are in effect. If correct, check the logical page size, the coordinates and orientation of the data in error, the font size, and any other aspects of the page.

XAM7659E MEDIUM MAP *medium map name* **AND DATA MAP** *data map name* **WERE ACTIVE WHEN THE ERRORS WERE DETECTED**

Explanation: You specified either UNBLOCK or BLKCHAR in the DATACK IBM JCL keyword. Data-off-page conditions were detected on a page using the specified medium map and data maps. Error indicators on the page in question highlight the point at which the data check occurred.

System response: Document processing continues.

User action: Refer to messages XAM7657E and XAM7658E for the data types, page number, and page side to determine the exact nature and location of the errors. Ensure that the correct medium map, data map, and paper size are in effect. If correct, check the logical page size, the coordinates and orientation of the data in error, the font size, and any other aspects of the page.

XAM9440E ABEND IN *module name* **SNAP DUMP ID=***dump id*

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAM9441E **ABEND CODE: SYSTEM=***system code***, USER=***user code*

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAM9442E **REGISTERS** *registers xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx*

Explanation: This message accompanies XAM9441E to provide additional diagnostic information.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAM9443E **NEXT INSTRUCTION IS:** *instruction*

Explanation: This message accompanies XAM9441E to provide additional diagnostic information.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAM9444E **INVALID BIN NUMBER** *bin number* **IN FORMDEF** *formdef name***. DEFAULT VALUE ASSIGNED**

Explanation: XPAF encountered a reference to a bin number in the named FORMDEF which has no corresponding entry in the varying paper size table.

System response: Document processing continues. The default bin number and paper size are used.

User action: Modify the named FORMDEF or add an entry to the varying paper size table for the bin number.

XAM9445E **ERROR PROCESSING THM** *command***. PROCESSING** *table*

Explanation: An error occurred while attempting to initialize one of the paper-related tables. The error occurred while processing the identified command on the specified table. This message is preceded by additional messages from THM that identify the exact cause of the problem.

System response: Processing continues, but AFP varying paper size support is disabled.

User action: To reenable AFP varying paper size support, correct the problem identified by the THM messages. Then, restart the printer.

XAM9446E COULD NOT ACQUIRE TCB, THM RC=*return code*

Explanation: An error occurred while attempting to initialize one of the paper-related tables. This message is preceded by additional messages from THM that identify the exact cause of the problem.

System response: Processing continues, but AFP varying paper size support is disabled.

User action: To reenable AFP varying paper size support, correct the problem identified by the THM messages. Then, restart the printer.

XAM9448F UNSUPPORTED *object* **STRUCTURED FIELD TYPE**

Explanation: An unsupported record was detected in the data stream. XPAF does not support this resource type.

System response: The document is aborted.

User action: Remove the unsupported records to print document.

XAU messages

XAU0305E **COULD NOT** *activity* **TABLE** *table name operation***. THM RC=X '***return code***'**

Explanation: An attempt to process the indicated table failed. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

XAU2134E **PREMATURE END OF FILE READING** *resource type for conversion* **IN** *resource name, library dataset name/native library name*

Explanation: A premature end-of-file condition was encountered when reading the named resource from the named resource library. This error may indicate that the resource name is invalid.

System response: Resource conversion is terminated.

User action: Make sure the named resource is valid. If the problem persists, call Xerox Technical Support.

XAU3010F **COULD NOT GET X'***amount***' BYTES OF MEMORY** *activity*

Explanation: Insufficient storage was available for the conversion program to obtain the requested amount for the required data buffer.

System response: Resource conversion cannot be completed successfully. Document processing is terminated.

User action: Increase the region size allocated to the XOSF start-up proc or drain another printer and retransmit the document. If the problem persists, call Xerox Technical Support.

XAU3011E **COULD NOT RELEASE X'***amount***' BYTES OF MEMORY FROM LOCATION X'***address' activity*

Explanation: This is an internal error. The storage used for conversion program processing was not released, and the document may be incorrect.

System response: Document processing continues.

User action: Call Xerox Technical Support.

XAU3018E **COULD NOT ACQUIRE TCB** *activity***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: XOSF processing is terminated.

User action: Call Xerox Technical Support.

XAU3725F **INVALID PIPELINE REQUEST:** *invalid request*

Explanation: This is an internal error.

System response: XOSF processing is terminated.

User action: Call Xerox Technical Support.

XAU4004F *module name* **DETECTED AN INVALID** *control block name* **CONTROL BLOCK AT LOCATION X '***address***'**

Explanation: This is an internal error.

System response: XOSF processing is terminated. The address space remains active.

User action: Call Xerox Technical Support.

XAU4006E **COULD NOT FIND** *table type* **TABLE. THM IC=X'***information code***'; RC=X'***return code***'**

Explanation: This is an internal error.

System response: XOSF processing is terminated.

User action: Call Xerox Technical Support.

XAU4023E **PAPERSIZ=***paper size parameter* **IS INVALID. LETTER ASSUMED**

Explanation: An invalid paper size value was specified in one of these parameters/keywords:

- Initialization parameter
- Printer profile parameter
- Extended JCL keyword

System response: Processing continues using 8.5 by 11 inch (LETTER) paper size.

User action: Correct the *paper size parameter* by entering a user-defined name that matches an entry in the currently active paper name table or one of these values:

#7	A5	C5	LEGL13	STATMT
#10	A6	DL	LETTER	
A3	B4	EXEC	LONG	
A4	B5	LEGAL	POST	

XAU4110E **THE BUFFER MANAGER REPORTED AN ERROR TO MODULE** *module name***. RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAU414FE *buffer name* **BUFFER CAPACITY EXCEEDED**

Explanation: While trying to add another text record for the current page, the document fragment buffer was found to be full. The buffer contains a page that is too complex for decentralized printing.

System response: Document processing is terminated, and the document is requeued.

User action: Try to reduce the complexity of the page, or send the output to a centralized printer.

XAU4212E **FRM** *name* **CONTAINS UNSUPPORTED EXTENDED TEXT LINE INFORMATION. FRM CONVERSION IS TERMINATED**

Explanation: The form header contains extended text line format data indicating that the centralized form uses double-byte fonts. These are not supported on decentralized printers.

System response: Form conversion is terminated, document processing halts, the job is requeued, and output is held.

User action: Choose one of these options:

- Print the job on a centralized printer.
- Print the job on a decentralized printer, either by recreating the form using standard fonts, or by removing the form from the page format.

XAU4213E **FRM** *name* **CONTAINS UNSUPPORTED DOUBLE-BYTE FONTS. FRM CONVERSION IS TERMINATED**

Explanation: The font list in the centralized form contains double-byte fonts, which are not supported on decentralized printers.

System response: Form conversion is terminated, document processing halts, the job is requeued, and output is held.

User action: Choose one of these options:

- Print the job on a centralized printer.
- Print the job on a decentralized printer, either by recreating the form using standard fonts, or by removing the form from the page format.

XAU4214E **FRM** *name* **CONTAINS UNSUPPORTED 600 DPI COMMANDS. FRM CONVERSION IS TERMINATED**

Explanation: The centralized form conversion encountered data which indicates that the form was created for a 600-dpi device. 600-dpi forms cannot be converted for use on a decentralized printer.

System response: Form conversion is terminated, document processing halts, the job is requeued, and output is held.

User action: Choose one of these options:

- On the FORMLIB DD statement, specify a library that contains centralized 300 dpi forms. If there is no such library, create one by recompiling the forms using 300-dpi fonts and font width tables.
- Print the job on a centralized printer.
- Print the job on a decentralized printer, either by recreating the form using standard fonts, or by removing the form from the page format.

XAU4301W **X'***unsupported control character***' IS NOT A SUPPORTED** *control type* **CONTROL CHARACTER. SPACE 1 LINE IS ASSUMED**

Explanation: The supplied carriage control character was not found in the list of supported controls for the indicated control type.

System response: Processing continues with single spacing for the current record.

User action: Determine the cause of the problem and correct it. The problem may be caused by:

- Specifying ASA controls with RECFM=FBM
- Specifying machine controls with RECFM=FBA
- Specifying no controls with RECFM=FBM or FBA

XAU4302W **X'***control character***' IS A RESERVED MACHINE CONTROL CHARACTER. DATA RECORD NOT PRINTED**

Explanation: Certain machine carriage control codes are reserved for printers. Printers ignore these codes and produce no output.

System response: Document processing continues.

User action: Correct the data stream to use only valid output control commands. Reserved machine control codes are 02, 03, 04, 05, 06, 07, 0A, 12, 23, 43, 63, 6B, EB, FB, and F3.

XAU4303W **SKIP TO CHANNEL** *channel number* **NOT SUPPORTED IN DATA MAP** *data map name*. **SPACE 1 LINE IS ASSUMED**

Explanation: The conversion program searched all Line Descriptor records for the channel number specified in the carriage control character but did not find it in the current data map.

System response: Document processing continues.

User action: If the channel is specified in the named data map, call Xerox Technical Support. Otherwise, use one of these solutions:

- Insert an IDM structured field that names the correct data map into the data stream.
- Modify the data map so it supports the specified channel.
- Change the data so that it does not call for that channel.

XAU4310E **UNABLE TO PRINT VARIABLE DATA USING MEDIUM MAP** *map name* **IN FORMDEF** *formdef name* **DUE TO CONSTANT FORM SPECIFICATION.** *document status*

Explanation: The conversion program has determined that the document contains variable data to be printed using the named medium map and FORMDEF. However, the medium map calls for one of two specifications that do not permit variable data:

- Constant forms on both sides in a duplex job
- Constant forms on the front of a simplex job

System response: Document processing is terminated.

User action: These are two alternatives:

- Remove CONSTANT BOTH (for duplex jobs) or CONSTANT FRONT (for simplex jobs) from the medium map.
- Use an IMM structured field to change medium maps before the variable data.

If the problem persists, call Xerox Technical Support.

XAU4328F **ERROR DETECTED PROCESSING** *resource type resource member name* **IN** *document part*

OR

ERROR DETECTED PROCESSING INLINE PAGEDEF/FORMDEF IN *document part*

Explanation: The resource processor detected an error in the input data stream while trying to convert an IBM AFP resource. The resource member name is displayed without its 2-character prefix. For example, a page segment named S1SAMP is identified in the message as SAMP. The *document*

part is either DOCUMENT, AFPJOBHDR, AFPJOBTLR, AFPMSGDS or AFPDSHDR, referring to either the document itself or one of the AFP banner types.

System response: In most cases, document processing is terminated. If the resource is an inline PAGEDEF or FORMDEF, document processing may continue using the default values. If document processing is terminated, the document remains in the output queue.

User action: Examine the system log for any related messages issued by XRF. If the named resource is a page segment, check the printed output to verify correct text positioning. If processing is terminated, make sure the resource is called by a valid name in the data stream. Try to correct the problem and rerun the job. If the problem persists, call Xerox Technical Support.

XAU4329E **REQUESTED** *map type map name* **NOT FOUND IN** *resource type resource name*

Explanation: While processing a page format or an IDM structured field, the transform could not find the named copy modification, page layout, or data map in the named resource.

System response: Document processing is terminated.

User action: Make sure the required page format or PAGEDEF is present in the resource library. If resource libraries are concatenated, make sure the resource in error is stored in the first library in the chain. If not:

- Delete or rename any earlier libraries with resources of the same name, then use the XPAF operator command to refresh the resource directory.
- Rearrange the datasets in the concatenation to place the desired library at the head of the chain.

XAU4330E **CONDITIONAL PROCESSING CONTROL ID** *id* **NOT FOUND IN PAGEDEF** *pagedef name*

Explanation: While processing the line controls within a PAGEDEF or page format for a page-formatted or AFP job, XPAF encountered a reference to a conditional processing test that was not included in the PAGEDEF or page format.

System response: Document processing is terminated.

User action: Locate a corrected copy of the PAGEDEF or page format, load it into your PDEFLIB, refresh the library directory, then resubmit the job.

XAU4331E **INVALID INLINE** *resource type* **STRUCTURED FIELD IS X'***structured field id***'**

Explanation: While processing an inline PAGEDEF or FORMDEF, the reported structured field was encountered. This field is not valid within this resource.

System response: Document processing is terminated.

User action: Correct the specified inline resource and resubmit the job.

XAU4333W INVALID STRUCTURED FIELD ID X'*structured field id*' FOUND. CHECK OUTPUT FORMATTING

Explanation: A 5A input record contained the named invalid structured field ID.

System response: Document processing continues without processing the 5A record.

User action: Check the output format for correctness. Make sure the structured field ID is valid and the introducer length is correct.

XAU4334E PRESENTATION TEXT CONTROL LENGTH OR CHAINING ERROR ENCOUNTERED

Explanation: During processing of an AFP presentation text (PTX) block, an invalid PTX control chain or sequence has been encountered.

System response: The remainder of the PTX block is ignored, but processing of the page or resource continues.

User action: Check the PTX controls and freestanding text records for invalid chaining, sequence, or length errors. If the error occurs within an overlay, once corrected, the overlay should be revised via the REVOVLY extended JCL keyword.

XAU4336E UNSUPPORTED CTX CONTROL ENCOUNTERED: ctx_control

Explanation: During processing of an AFP composed text (CTX) block, an unsupported triplet was encountered.

System response: The unsupported CTX triplet is ignored, processing of the remainder of the CTX block continues.

User action: Check the CTX block and remove the unsupported triplet(s).

XAU4337W UNSUPPORTED PTX SEC COLOR SPACE ENCOUNTERED: xx

Explanation: While converting an AFP document a PTX structured field was encountered that contained a Set Extended Color triplet that called for a color space that is not recognized.

System response: The SEC triplet is ignored and the color is not changed.

User action: Check the AFP data stream to make sure the color space is valid. If so, contact Xerox Technical Support.

XAU4338W PTX SEC cspace COLOR SPACE IS NOT SUPPORTED AND IS IGNORED

Explanation: While converting an AFP document a PTX structured field was encountered that contained a Set Extended Color triplet that referred to a color space that is not supported.

System response: The SEC triplet is ignored and the color is not changed.

User action: Check the AFP data stream to make sure the color space is valid. If so, contact Xerox Technical Support.

XAU4354E **CHECKPOINT (#CKPT) FAILED IN MODULE** *module name***. RC=X'***return code***'**

Explanation: An error was returned by the operating system when XPAF tried to determine if a document had reached the threshold for taking a checkpoint.

System response: Document processing is terminated.

User action: Verify that there is not a problem with your job entry subsystem or with the document as stored by the operating system. If the problem persists, call Xerox Technical Support.

XAU530FE **ENTRY** *font* **NOT FOUND IN XPAFAFW. THM IC='***code***'**

Explanation: The fetch process failed when processing the XPAFAFW table for a replica font.

System response: Document processing is terminated.

This error usually indicates an error with font installation to the native libraries. If you have recently installed new or updated fonts, review the procedure for resource installation in *Section Two: Installing and Customizing XPAF*.

User action: to determine if the steps were completed correctly. If the problem persists, call Xerox Technical Support.

XAU6307E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *ldm command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *command* **FILE DDNAME** *form library ddname***, FOR** *frm* **RESOURCE NAMED** *resource member name* **(***form orientation***)**

Explanation: This is an internal error.

System response: Conversion of the form to XES format is not directly affected by this error. Other related messages may provide more information about this error.

User action: Call Xerox Technical Support.

XAU6309F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *processing operation* **LDM** *ldm processing operation description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *library ddname* **FOR** *resource type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This may be an internal error. If it is an allocation error, the library specified by *library ddname* could not be allocated using LDM.

System response: Document processing is terminated, and the document remains in the output queue.

User action: Ensure that the requested resource has been loaded into the named library. If it is an allocation error, verify that the named library exists. If the problem persists, call Xerox Technical Support.

XAU6317E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **BUFFER STORAGE MANAGEMENT PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity type* **DATA BUFFER FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: Conversion of the form to XES format is not directly affected by this error. Other related messages may provide more information about this error.

User action: Call Xerox Technical Support.

XAU6319F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *type of processing* **BUFFER STORAGE MANAGEMENT PROCESSING. RC=X'***return code***'; IC=X'***buffer control block address***'. UNABLE TO** *activity type* **DATA BUFFER FOR** *frm* **RESOURCE NAMED** *resource member name* **(M)**

Explanation: This is an internal error.

System response: The form cannot be converted to XES format. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XAU6404E **RECORD EXCEEDS FRAGMENT SIZE. DATA LOSS IS EXPECTED**

Explanation: This is an internal error.

System response: The record is discarded and processing continues.

User action: Call Xerox Technical Support.

XAU6413E **IMAGE** *image name* **CANNOT BE ACCESSED IN SUPPLIED LIBRARIES**

Explanation: The indicated image could not be found in either the primary or secondary library.

System response: The requested image is ignored and processing continues.

User action: Supply the image in the correct library as named in the printer's profile.

XAU6501E **THM FETCH FAILURE. MODULE** *module name* **WAS UNABLE TO RETRIEVE** *resource name* **FROM TABLE** *table name***. IC=X'***information code***'**

Explanation: While attempting to retrieve the named resource from the named table, the transform encountered a THM FETCH error. XOSF may have been trying to retrieve a font found in a form header from the XPAFXFI table. The XPAFXFI table entry is based on the code page name and the font name.

System response: Processing is terminated.

User action: Make sure the font metric conversion job completed successfully. For more information about this job, refer to *Section Three: Managing Resources with XPAF*. If the conversion completed successfully, call Xerox Technical Support.

For page-formatted documents, in XOAF ensure that you have run the Update Xerox Font Characteristics Information option on the Xerox Page

Format Editor menu. For more information on using the page format editor, refer to *Section Eight: Xerox Page Format Editor User Guide*.

XAU7600E *module name* **ERROR PROCESSING AEG**

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XAU7653E TEXT RECORD WITH ZERO LENGTH ENCOUNTERED. OUTPUT MAY BE CORRUPTED

Explanation: During the processing of text and shading information for printing an AFP document on decentralized printers, XPAF encountered a zero length record where one was not expected.

System response: Document processing continues.

User action: This is often a problem with the document itself. Verify the validity of the document being printed, including any resources used (especially overlays). If you believe you are receiving this message with a valid document, call Xerox Technical Support.

XAU7654W *nn record type* **RECORDS FOR SIDE** *side number* **WERE REJECTED HAVING STARTING COORDINATES OFF PAGE**

Explanation: While processing a record, a negative coordinate or a coordinate beyond the physical page was encountered but not sent.

- *nn* is the number of records rejected.
- *record type* describes the type of record rejected (such as RULE, TEXT, or IMAGE).
- *side number* names the page number on which the error occurred.

System response: Page printing continues.

User action: Check the offset in the FORMDEF or in the IPS structured fields. Check the printed output to locate the problem records, and adjust the parameters and the page offset to correct the printing position.

XAU7657E ONE OR MORE *record types* **WERE SPECIFIED TO PRINT OUTSIDE THE VALID PRINTABLE AREA FOR** *area*

Explanation: You specified either UNBLOCK or BLKCHAR in the DATACK IBM JCL keyword. The specified data type was detected outside of the valid printable area (the lesser of the logical and physical page boundaries). Text strings and rules have been truncated at the point at which they exceed the valid printable area. Inline and page segment images are not printed if any part of them is outside the valid printable area. Error indicators on the page in question highlight the point at which the data

check occurred. When data checks have been detected for an overlay during conversion, the error message and error indicators relating to the page on which the converted overlay first appears are issued only once.

System response: Document processing continues.

User action: Refer to messages XAU7658E and XAU7659E for the page number, page side, and active environment details to determine the exact location of the errors. Ensure the correct medium map, data map, and paper size are in effect. If correct, check the logical page size, the coordinates and orientation of the data in error, the font size, and any other aspects of the page.

XAU7658E THE ABOVE ERRORS OCCURRED ON THE *page side* **OF PAGE** *page number*

Explanation: You specified either UNBLOCK or BLKCHAR in the DATACK IBM JCL keyword. Data-off-page conditions were detected on the specified side of the specified page within the document. Page counting starts with and includes separator pages. Error indicators on the page in question highlight the point at which the data check occurred.

System response: Document processing continues.

User action: Refer to messages XAU7657E and XAU7659E for the data types and the active environment details to determine the exact nature of the errors. Ensure the correct medium map, data map, and paper size are in effect. If correct, check the logical page size, the coordinates and orientation of the data in error, the font size, and any other aspects of the page.

XAU7659E MEDIUM MAP *medium map name* **AND DATA MAP** *data map name* **WERE ACTIVE WHEN THE ERRORS WERE DETECTED**

Explanation: You specified either UNBLOCK or BLKCHAR in the DATACK IBM JCL keyword. Data-off-page conditions were detected on a page using the specified medium map and data maps. Error indicators on the page in question highlight the point at which the data check occurred.

System response: Document processing continues.

User action: Refer to messages XAU7657E and XAU7658E for the data types, page number, and page side to determine the exact nature and location of the errors. Ensure the correct medium map, data map, and paper size are in effect. If correct, check the logical page size, the coordinates and orientation of the data in error, the font size, and any other aspects of the page.

XAU9440E ABEND IN *module name* **SNAP DUMP ID=***dump id*

Explanation: This is an internal error.

System response: Document processing is terminated and the XOSF address space remains active.

User action: Call Xerox Technical Support.

XAU9441E **ABEND CODE: SYSTEM=***system code***, USER=***user code*

Explanation: This is an internal error.

System response: Processing continues.

User action: Call Xerox Technical Support.

XAU9442E **REGISTERS** *registers xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx*

Explanation: This message accompanies XAU9441E to provide additional diagnostic information.

System response: Processing continues.

User action: Call Xerox Technical Support.

XAU9443E **NEXT INSTRUCTION IS:** *instruction*

Explanation: This message accompanies XAU9441E to provide additional diagnostic information.

System response: XOSF processing continues.

User action: Call Xerox Technical Support.

XAU9444E **INVALID BIN NUMBER** *bin number* **IN FORMDEF** *formdef name***. DEFAULT VALUE ASSIGNED**

Explanation: XPAF encountered a reference to a bin number in the named FORMDEF which has no corresponding entry in the varying paper size table.

System response: Document processing continues. The default bin number and paper size are used.

User action: Modify the named FORMDEF or add an entry to the varying paper size table for the bin number.

XAU9445E **ERROR PROCESSING THM** *command***. PROCESSING** *table*

Explanation: An error occurred while attempting to initialize one of the paper-related tables. The error occurred while processing the identified command on the specified table. This message is preceded by additional messages from THM that identify the exact cause of the problem.

System response: Processing continues, but AFP varying paper size support is disabled.

User action: To reenable AFP varying paper size support, correct the problem identified by the THM messages. Then, restart the printer.

XAU9446E COULD NOT ACQUIRE TCB, THM RC=*return code*

Explanation: An error occurred while attempting to initialize one of the paper-related tables. This message is preceded by additional messages from THM that identify the exact cause of the problem.

System response: Processing continues, but AFP varying paper size support is disabled.

User action: To reenable AFP varying paper size support, correct the problem identified by the THM messages. Then, restart the printer.

XAU9447W COLOR OUTPUT IN FORM *form name* **HAS BEEN DISCARDED**

Explanation: The color centralized form being converted to a decentralized form contains color ink resources, which are not supported on decentralized printers.

System response: Processing continues, but output consists of .FNT and .IMG data only. Any data using .INK resources is not printed.

User action: If you have a decentralized printer that supports color (for example, the 4700 printer), submit the job to that printer. Otherwise, you may wish to remove the color ink resources from the form.

XAU9448F UNSUPPORTED *object* **STRUCTURED FIELD TYPE**

Explanation: An unsupported record was detected in the data stream. XPAF does not support this resource type.

System response: The document is aborted.

User action: Remove the unsupported records to print document

XCC messages

XCC0203E **THM ERROR IN MODULE** *module name*. **CMD=***thm command*; **IC=X'***thm-information code*'; **RC=X'***thm-return code*'

Explanation: While attempting to process an XPAF VSAM dataset, an unexpected error was encountered. Other messages are usually issued along with this message to further identify the operation that failed.

System response: The current operation is terminated.

User action: Verify that all of the required XPAF libraries are present and not corrupted. If you believe you are receiving this message in error, call Xerox Technical Support.

XCC1101W *invalid channel number/invalid line number=number*. *assign*=(*values*)

Explanation: The ASSIGN keyword specified in either the PDL or the data stream contains an invalid channel number or line number. The message identifies the number in error, and the values you specified for the ASSIGN keyword.

System response: XOSF processing continues. Additional messages will be generated by the printer. The document may be terminated at the printer, or printed incorrectly.

User action: Correct the invalid channel number or line number.

- The channel number must be a number from 1 to 12.
- The line number must be a decimal number between 1 and 255, inclusive.

If you specified the ASSIGN keyword in the PDL, be sure to correct it on the printer and also in the native PDL library on the host.

XCC1222F *#varblk in xccmain detected error on get*

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XCC3010F **COULD NOT GET X'***amount*' **BYTES OF MEMORY** *activity*

Explanation: This is an internal error.

System response: Processing continues.

User action: Run the job using a larger region size. If the problem persists, call Xerox Technical Support.

XCC3011E **COULD NOT RELEASE X'***amount***' BYTES OF MEMORY FROM LOCATION X'***location***'** *name*

Explanation: This is an internal error.

System response: Document processing is terminated. The XOSF address space remains active.

User action: Call Xerox Technical Support.

XCC3016E **COULD NOT** *operation* **MEMBER** *member name* **OF LIBRARY** *dataset name* **FOR MODULE XCCPTERM. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named operation on the specified member.

System response: Document processing continues.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XCC4003E **FRAGMENT SIZE X'***fragment size***' DOES NOT AGREE WITH EXPECTED SIZE X'***expected fragment size***'** *activity*

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XCC4404E **NO LINE NUMBERS FOR ASSIGN DJDE KEYWORD**

Explanation: The DJDE or PDL contains an invalid ASSIGN keyword.

System response: Document processing continues, but the keyword is ignored.

User action: Correct the invalid keyword, and resubmit the job.

XCC4405E **INVALID REFERENCE MEMBER PRIORITY=***priority*

Explanation: This is an internal error. To determine the processing hierarchy for DJDE and PDL keywords, XOSF assigns each keyword a priority based on that keyword's origin. While processing this document, XOSF detected an invalid priority.

System response: Document processing is terminated. The job is requeued and held in the JES queue.

User action: Call Xerox Technical Support.

XCC6102W *resource type* **TABLE FULL.** *resource name* **NOT PROCESSED**

Explanation: The *resource name* could not be added to the internal table for that *resource type*.

System response: The named resource will not be processed for resource management and may not be downloaded to the centralized printer for this job.

User action: Run a job referencing the resource by itself to ensure XOSF will download the resource if required. Then, rerun the original job to ensure that it prints with the current version of the resource.

XCC6104E *member name* **NOT FOUND IN** *ddname* **PDL LIBRARY. PROCESSING INCOMPLETE**

Explanation: The named member could not be located in the native library associated with the DD name identified in the message.

System response: Processing continues without the missing member.

User action: Perform these steps:

- Verify that you specified the correct member name in the data stream and/or JCL for the job.
- Use the PDL loader to load the PDL into the library associated with the DD name identified in this message.

XCC6105I *file name* **NOT FOUND IN** *library name* **LIBRARY. DOWNLOADING** *file name*

Explanation: The PDL object member with a version number matching the printer's LPSRELEASE was not found in the PDLLIB, another version was found.

System response: The object file with the version number indicated in the message is downloaded to the printer. This message is only issued if intensive logging is turned on.

User action: If an object file with the matching version number exists it must be loaded into the PDLLIB with the PDL loader using the correct version number.

XCC6404E **RECORD EXCEEDS FRAGMENT SIZE. DATA LOSS IS EXPECTED**

Explanation: An input data record has exceeded the size of the output fragment. The output fragment is at least 512 bytes.

System response: Processing continues. The input record is truncated to the size of the output data block size.

User action: Ensure that the data being printed has a record length of 512 bytes or less. If the problem persists, call Xerox Technical Support.

XCC6417F **RESOURCE** *resource member name*, **TYPE** *resource type* **FAILED EXIT 6 AUTHORIZATION**

Explanation: The current user exit 06 has instructed XPAF to not allow the user to access this particular resource.

System response: The current print job is aborted.

User action: Contact your system programmer for information on the operation of user exit 06 at your site.

XCC6422I *printer name activity* **TO PAGE** *page number*

Explanation: The printer has performed the specified *activity*. *Activity* indicates a JES command to forward space or backspace to a specified *page number*.

System response: Processing continues.

User action: None required.

XCD messages

XCD0221E *option* **FAILED. TABLE** *table name* **NOT FOUND IN DDNAME** *table library ddname*

Explanation: The failed option was attempted for the specified table, but the table name could not be found in the dataset associated with the specified DD name.

System response: Document processing is terminated. The document is requeued to hold status.

User action: Correct the table name or the DD name, and resubmit the job.

XCD3010F **COULD NOT GET X'***amount***' BYTES OF MEMORY** *activity*

Explanation: Could not acquire memory for the named activity.

System response: Processing is terminated.

User action: Rerun the job using a larger region size. If the problem persists, call Xerox Technical Support.

XCD3011E **COULD NOT RELEASE X'***amount***' BYTES OF MEMORY FROM LOCATION X'***location' name*

Explanation: This is an internal error.

System response: Document processing is terminated. The XOSF address space remains active.

User action: Call Xerox Technical Support.

XCD3016E **COULD NOT** *operation* **MEMBER** *member name* **OF LIBRARY** *dataset name/ddname action***. LDM RC=X'***return code***'**

Explanation: The specified resource member could not be found in the specified library.

System response: Document processing is terminated.

User action: Add the member to the resource library or remove the reference to the library member from the document.

XCD3020E **COULD NOT** *operation* **MEMBER** *member name* **IN PRIMARY OR SECONDARY FORM LIBRARY**

Explanation: The document called for a form that XPAF could not find in either the primary or secondary form library.

System response: Document processing is terminated.

User action: Load the named form into one of the form libraries that is specified in the XOSF start-up proc.

XCD4155W MEMBER *name* WAS NOT FOUND IN THE LCDS TRIGGER LIBRARY. THE DOCUMENT WILL NOT BE SPLIT

Explanation: The specified member was not found in the LCDS trigger dataset, referenced by the TRIGGER DD statement in the XOSF started task procedure..

System response: Document processing continues, the document will not be split.

User action: Verify that the specified member name is the correct trigger file you want to use, or create a new member, with the name supplied, in the trigger dataset

XCD4156W UNABLE TO OPEN LCDS TRIGGER LIBRARY. THE DOCUMENT WILL NOT BE SPLIT

Explanation: XOSF was unable to open the trigger dataset pointed to by the TRIGGER DD statement in the XOSF started task procedure.

System response: Document processing continues, the document will not be split.

User action: Check that the TRIGGER DD statement in the XOSF started task procedure points to a valid partitioned dataset.

XCD4159W TRIGGER COMMAND INVALID: *command*

Explanation: An invalid command was entered in the trigger definition file.

System response: The invalid command is ignored. Processing continues.

User action: Edit the trigger definition file and correct the error.

XCD4160W TRIGGER COMMAND INVALID INTEGER: *command*

Explanation: A non-integer value was entered, for the command specified, in the trigger definition file.

System response: The invalid command is ignored. Processing continues.

User action: Edit the trigger definition file and correct the error.

XCD4161W TRIGGER COMMAND VALUE MUST BE GREATER THAN ZERO: *command*

Explanation: A value of zero was entered for a parameter that requires a value greater than zero.

System response: The invalid command is ignored. Processing continues.

User action: Edit the trigger definition file and correct the error.

XCD4162I TRIGGER COMMAND TRACE: *command*

Explanation: This is an informational message issued during processing of the trigger definition file, when TRACE=FILE has been specified.

System response: None. Processing continues.

User action: None

XCD4163I - NAMESTRING=*string*

Explanation: This is a trace message issued when a trigger record has been found that displays the contents of the record defined by the NAMESTART and NAMELENGTH parameters.

System response: None. Processing continues.

User action: None

XCD4164I - CHANGESTRING=*string*

Explanation: This is a trace message issued when a trigger has been found that displays the contents of the record defined by the CHANGESTART and CHANGELENGTH parameters.

System response: None. Processing continues.

User action: None

XCD4165E TRIGGER COMMAND INVALID HEX STRING: *parameter*

Explanation: A non-hexadecimal value was entered, for the command specified, in the trigger definition file. Hex strings are specified by using the two character hexadecimal notation where each character is in the range 0-9, A-F.

System response: The invalid command is ignored. Processing continues.

User action: Edit the trigger definition file and correct the error.

XCD4166I INPUT RECORD TOO SHORT TO TEST AS TRIGGER RECORD

Explanation: This is an informational message issued during trigger tracing indicating the input record is too short to match the requirements of a trigger record.

System response: None.

User action: None.

XCD4167I TRIGGER RECORD FOUND (CHANGE STRING DIFFERENT)

Explanation: This is an informational message, issued during trigger tracing, indicating the record that matches the trigger definition signifies a new segment as the “CHANGE” portion of the record is different from the previously detected trigger record.

System response: None.

User action: None.

XCD4168I TRIGGER RECORD FOUND (CHANGE STRING SAME AS PREVIOUS)

Explanation: This is an informational message, issued during trigger tracing, indicating the record that matches the trigger definition has the same “CHANGE” portion of the record as the previously detected trigger record. A new segment is not created.

System response: None.

User action: None.

XCD4169I TRIGGER TEST FOR RECORD *recnum*, **LOGICAL LINE NUMBER** *linenum*

Explanation: This is an informational message, issued during trigger tracing, indicating the input record number, *recnum*, and logical line number, *linenum*, of the record currently being tested. Note: Due to DJDE command merging and carriage control conversion/consolidation the record number may not match the actual input record number.

System response: None.

User action: None

XCD4170I TRIGGER:*trigger*

Explanation: This is an informational message, issued during trigger tracing, indicating the trigger test string specified in the trigger definition file.

System response: None.

User action: None.

XCD4170I RECORD:*record*

Explanation: This is an informational message, issued during trigger tracing, indicating the portion of the record taht is defined as the trigger.

System response: None.

User action: None.

XCD4329E REQUESTED FONT *font name* **NOT FOUND IN** *library name*

Explanation: The specified font is not in the named font library or the XPAFXFI table.

System response: Document processing continues, using the default values of 8.1 LPI and 13.6 CPI.

User action: Verify that the specified font is the correct font you want to use, or create an entry in the XPAFXFI table for the missing font.

XCD4335I FONT INFORMATION FOR *font name* NOT FOUND IN XPAFXFI TABLE. USING INFORMATION FROM THE PRIMARY OR SECONDARY FONT LIBRARY

Explanation: The required entry in the XPAFXFI table does not exist for the specified font.

System response: Document processing continues. The font information will be retrieved from the primary or secondary font library. CCMV01 will be used for both the centralized and decentralized character mapping table names for printing this document.

User action: Verify that the specified font is the correct font you want to use, or create an entry in the XPAFXFI table for the specified font.

XCD4400I *message text*

Explanation: You specified TDF=Y in your initialization parameters to activate the tracking DJDE facility. This message identifies the DJDEs going to a decentralized printer.

System response: XOSF processing continues.

User action: None required.

XCD4410W A BLANK NON-METACODE RECORD HAS BEEN IGNORED.

Explanation: While processing a metacode data stream, an input record containing all EBCDIC spaces (X'40') and a carriage control of X'09' (Space-one-after) was encountered.

System response: Processing continues, but the blank record will be ignored. Since there are no metacodes or ASCII data in the record, it is assumed that this record was inserted erroneously.

User action: If a line of @-signs is really desired (ASCII X'40') the data stream should be changed to include an EOL metacode (X'01') at the end of the print line. This will insure that the line is recognized as a metacode print line and will not be dropped.

XCD4504E FRM CONTAINS NO DATA EXCEPT HEADER

Explanation: While processing the centralized form header, the number of blocks in the form data was found to be zero.

System response: Centralized-to-decentralized form conversion is terminated.

User action: Check for form compilation errors. Correct any errors, and recompile the centralized form.

XCD4506E FRM CONTAINS UNSUPPORTED TEXT LINE INFORMATION

Explanation: The form header indicates that extended text line format was used. This conversion does not support extended line format

System response: Centralized-to-decentralized form conversion is terminated.

User action: This message is accompanied by a message from the Environmental Envelope. Refer to the user action for that message.

XCD4508E PREVIOUS ERROR. TRANSFORM TERMINATED

Explanation: A previous error was detected on return to the main conversion processor.

System response: Centralized-to-decentralized form conversion is terminated.

User action: Refer to the user action for the previously displayed error message.

XCD4510E *resource name* **READ FROM** *library name* **WAS NOT A** *specified format*

Explanation: The resource read from the specified library was not in the format defined for that library.

System response: Document processing is terminated and the document is requeued.

User action: Ensure that the FORMLIB and IMAGELIB printer profile parameters point to decentralized resource libraries and that the SFORMLIB and SIMAGELIB printer profile parameters point to the centralized resource libraries. Delete any centralized resources from the decentralized libraries and resubmit the job.

XCD4511F FORM form REFERENCES UNDEFINED COLOR 'color'

Explanation: While converting the LCDS.FRM, *form*, to decentralized format, XPAF encountered a color ink reference, *color*, which is not defined in the color conversion table.

System response: Document processing is terminated. The document is aborted and placed in hold status.

User action: Add the color to the color conversion table and release the held job.

XCD4508E FORM form REFERENCES UNDEFINED COLOR 'color'

Explanation: While converting the LCDS.FRM, *form*, to decentralized format, XPAF encountered a color ink reference, *color*, which is not defined in the color conversion table.

System response: Document processing is terminated. The document is aborted and placed in hold status.

User action: Add the color to the color conversion table and release the held job

XCD450DE DOUBLE BYTE FONTS NOT SUPPORTED

Explanation: While processing the form header, double-byte fonts (Kanji characters) were found in the form.

System response: Centralized-to-decentralized form conversion is terminated. The form cannot be converted.

User action: None required.

XRF6256E SEVERE ERROR ENCOUNTERED BY XCDOUT. *reason*

Explanation: This is an internal error.

Reason is one of these conditions:

- NO FONTS AVAILABLE TO PRINT DOCUMENT
- FONT REFERENCED NOT IN FONT LIST, FONT0 USED
- DATA/COMMAND BUFFER IS FULL.

System response: Document processing is terminated.

User action: Call Xerox Technical Support

XCD6402E **COULD NOT** *command* **ITEM** *table entry* **IN TABLE** *table name operation*. **THM RC=X'***return code***'**

Explanation: This message is issued for diagnostic purposes. *Operation* identifies the type of processing that was being performed when the error occurred. The specified table entry was not found in the specified table.

System response: Processing continues.

User action: Correct the table entry in the specified table:

- The named paper name entry should be corrected in the named paper name table.
- The named cluster name entry should be corrected in the named cluster mapping table.
- The named character mapping table entry should be corrected in the XPAFA2A table.
- The named font name entry should be corrected in the XPAFXFI table.

XCD6413E **IMAGE** *image name* **CANNOT BE ACCESSED IN SUPPLIED LIBRARIES**

Explanation: The indicated image could not be found in either the primary or secondary library.

System response: The requested image is ignored and processing continues.

User action: Supply the image in the correct library as named in the printer's profile.

XCD7009F *module name* **RECEIVED AN INVALID FUNCTION REQUEST CODE. FUNCTION=C'***command***' OR X'***command***'**

Explanation: This is an internal error. This message may indicate incompatible communications specifications.

System response: Document processing is terminated. The printer is drained.

User action: If you are using either the 871 CM or BARR/SNA RJE to remotely attach a centralized printer to the host, ensure that the printer's profile specified XNS=NO. In the printer's profile, the default is XNS=YES because centralized printers are normally channel-attached.

XCD7101E *module name* **RECEIVED AN INVALID REQUEST OF** *invalid request*

Explanation: An incorrect function request was made to the named module. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XCD7501E **LDM** *command* **ERROR. EC=X'***error code***'**

Explanation: An error occurred while processing an LDM command.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XCD9099E **UNABLE TO ALLOCATE STORAGE FOR** *activity*

Explanation: Storage was needed for the stated *activity* but could not be obtained.

System response: Document processing is terminated.

User action: Verify that the region size is large enough to acquire work areas, and resubmit the job.

XCN messages

XCN0301I **FONT** *font name* **CONVERTED TO CODE PAGE** *code page name*, **CHARACTER SET** *character set name*

Explanation: Font metrics conversion completed successfully. The named font was converted to the named code page and character set.

System response: XOAF processing continues.

User action: Run DCFINDEX before you compile a DCF document that references the converted Xerox font.

XCN0303E **FIRST RECORD OF** *dataset name* **IS NOT A VALID HEADER RECORD**

Explanation: The format of the first record in the named dataset does not conform to the required Xerox header record format.

System response: Font conversion is terminated.

User action: Verify that the input dataset is a font.

XCN0304E **SECOND RECORD OF** *font name* **IS NOT A VALID DESCRIPTION RECORD**

Explanation: The format of the second record of the indicated font in the dataset does not conform to the required Xerox description record format.

System response: Font conversion for the indicated font is terminated.

User action: Verify that the input dataset contains a valid font.

XCN0305E **COULD NOT** *command* **TABLE** *table name operation*. **THM RC=X'***return code***'**

Explanation: An attempt to process the named table failed. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Font conversion is terminated.

User action: Call Xerox Technical Support.

XCN0306E **FONT** *font name* **FAILED TO CONVERT. SEE LOG FOR MORE INFORMATION**

Explanation: The named font was not converted.

System response: Font conversion is terminated.

User action: Examine the XOAF or system log to determine the cause of the failure.

Also, verify that the named centralized font is not FORMSX or FORMS$. FORMSX and FORMS$ have an equivalent decentralized font and are not subject to centralized-to-decentralized font conversion.

XCN0307I **FONT** *font name* **CONVERTED TO CHARACTER SET** *character set name*

Explanation: The named Xerox font was converted successfully to the named IBM font. In addition to the indicated character set, a coded font was generated with the same name as the indicated font. The coded font begins with an X*n* prefix (where *n* is the same number as in the character set number).

System response: Processing continues.

User action: Run DCFINDEX before you compile a DCF document that references the converted Xerox font.

XCN0325I **FONT** *font name* **CONVERTED**

Explanation: The named Xerox font was successfully processed by Xerox-to-IBM font conversion. Since no output file was specified for the conversion, an IBM character set was not created. However, the required table entries in TABLELIB were updated.

System response: Processing continues.

User action: None required.

XCN030AE *entry* **NAME MISSING FROM FONT INFORMATION TABLE FOR FONT** *font name*

Explanation: While trying to convert Xerox font metrics for the named font, the XPAFXFI table entry for the font was found to be missing the input (Xerox) code page name.

System response: Font metrics conversion for this font is terminated. If other fonts are being converted, processing of those fonts continues.

User action: Add the appropriate code page name to the XPAFXFI table entry for the font, then retry the conversion.

XCN1701I *requested count resource* **PROCESSED.** *converted count resource* **CONVERTED. SEE LOG FOR DETAILS**

Explanation: This message lists the number of fonts processed and the number of fonts converted successfully.

System response: Processing continues.

User action: Check the XOAF or system log for information about any unconverted fonts.

XCN1706I **UNABLE TO LOCATE MEMBER (***member name***)**

Explanation: When using the XOAF option to convert a Xerox font to IBM format, an invalid member name was specified in the ‘Member Name’ field.

System response: Font conversion is terminated.

User action: Verify that the member name is located in the specified library, and that the member name is spelled correctly. If wildcards are being used, verify that at least one member in the specified library matches the wildcard name. Once any errors have been corrected, retry the option.

XCN3010F **COULD NOT GET X'***bytes of memory***' BYTES OF MEMORY** *activity*

Explanation: This is an internal error.

System response: Font conversion is terminated.

User action: Call Xerox Technical Support.

XCN3011E **COULD NOT RELEASE X'***bytes of memory***' BYTES OF MEMORY FROM LOCATION X'***address' activity*

Explanation: XPAF encountered an error while attempting to release storage to the operating system.

System response: The current operation is terminated.

User action: This is generally an internal error within XPAF. If the problem persists, call Xerox Technical Support.

XCN3015E **COULD NOT** *operation* **LIBRARY** *dataset name activity***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified library.

System response: Font conversion is terminated.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XCN3016E **COULD NOT** *operation* **MEMBER** *member name* **OF LIBRARY** *dataset name activity***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified member.

System response: Processing of the named member is terminated. Processing of other members continues.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XCN3017E **COULD NOT** *operation* **LCA** *activity***. LDM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Font conversion is terminated.

User action: Call Xerox Technical Support.

XCN3018E **COULD NOT ACQUIRE TCB** *activity***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Font conversion is terminated.

User action: Call Xerox Technical Support.

XCN6402E **COULD NOT** *command* **ITEM** *item name* **IN TABLE** *table name operation***. THM RC=X'***return code***'**

Explanation: This message is issued for diagnostic purposes. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Font conversion is terminated.

User action: If the message indicates that an item could not be read, ensure that the item exists and you have properly specified the name. If the problem persists, call Xerox Technical Support.

XDI messages

XDI0001I ***ERROR - PDS REFRESH NO LONGER REQUIRED OR SUPPORTED***

Explanation: This is an informational message that is issued in response to a MODIFY (F) command to an XOSF address space requesting a refresh of a PDS library. With the introduction of AUTOREV support, PDS libraries no longer require refreshing and the REFRESH command is no longer supported.

System response: Processing continues.

User action: No action required.

XDI0002I **XBPAM OPEN FAILED, PAMFUNRC=***rc*

Explanation: While attempting to open the user job type table for XJOBTYPE=USER processing, an error was detected.

System response: Processing is terminated for the current document.

User action: Check the value of the XPSMJOBT initialization parameter. Verify that the specified member exists and is available to XPAF.

XDI0203E **THM ERROR IN MODULE** *module name***. CMD=***thm command***; IC=X'***thm-information code***'; RC=X'***thm-return code***'**

Explanation: While attempting to process an XPAF VSAM dataset, an unexpected error was encountered. Other messages are usually issued along with this message to further identify the operation that failed.

System response: The current operation is terminated.

User action: Verify that all of the required XPAF libraries are present and not corrupted. If you believe you are receiving this message in error, please call Xerox Technical Support.

XDI021AE *action* **FAILED. UNABLE TO ACQUIRE** *bytes of storage* **BYTES OF STORAGE FOR** *area***. RC=X'***return code***'.**

Explanation: The indicated option was unable to acquire the indicated number of bytes for the named area.

System response: XOAF processing is terminated.

User action: Increase the region size and rerun the request. If the problem persists, call Xerox Technical Support.

XDI0221E *option* **FAILED. TABLE** *table name* **NOT FOUND IN DDNAME** *table library ddname*

Explanation: The failed option was attempted for the specified table, but the table name could not be found in the dataset associated with the specified DD name.

System response: Document processing is terminated. The document is requeued to hold status.

User action: Correct the table name or the DD name, then resubmit the job.

XDI0724E **LDM ENCOUNTERED AN ERROR TRYING TO** *action*

Explanation: XOSF encountered an error while attempting to open the printer profile dataset. The *action* can be one of the following:

- GET LCA, which generally occurs because of a memory shortage.
- ALLOCATE PROFILE PARMLIB, which occurs because the DD name specified in the PROFDD initialization parameter is invalid or the DD statement is missing from the XOSF start-up proc.
- BLDL PROFILE LIBRARY, which indicates that either there is a memory shortage or a permanent I/O error was detected when the system attempted to process the printer profile dataset.

System response: XOSF is not initialized.

User action: Ensure that the PROFDD initialization parameter points to a valid DD name. The default for this parameter is XINPARM. Verify that the DD statement is included in the XOSF start-up proc, and that the printer profile dataset is usable.

XDI2605W **REQUEST FROM** *operator/tso id* **TO** *activity on/off/user text* **WAS FAILED BY USER SECURITY EXIT WITH RC=X'***return code***'**

Explanation: The refresh security exit could not process the request from the indicated user.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

XDI2608I **REQUEST TO SET REFRESH SECURITY** *on/off/user text* **PROCESSED SUCCESSFULLY**

Explanation: You issued a SET REFRESH SECURITY command to set the refresh security on or off, or to pass user-defined data to the refresh security exit.

System response: The request was processed successfully.

User action: None required.

XDI2609W KEYWORD MISSING ON SET REFRESH SECURITY COMMAND

Explanation: You issued a SET REFRESH SECURITY command to set the refresh security exit, but omitted either a user text string or the required keyword ON or OFF.

System response: Command processing is ignored.

User action: Reissue the command specifying either ON, OFF, or a text string in quotes (up to 72 bytes).

XDI2610W USER REFRESH SECURITY EXIT NOT ACTIVE

Explanation: You issued a SET REFRESH SECURITY command to set refresh security with a user-defined text string, but the exit is not active. The exit may not be installed, or it may have been turned off previously by an abend.

System response: Command processing is ignored.

User action: Verify that the user exit is installed properly. Correct any problems that may have caused the user exit to abend. Restart XOSF.

XDI2625W UNABLE TO LOAD PROGRAM *load module name* **FOR USER EXIT**

Explanation: During initialization, you specified the name of a load module to be used as a user exit in the USRXIT*nn* initialization parameter. XOSF could not locate the specified load module.

System response: Processing continues. The user exit is marked inactive and is not called.

User action: Verify that the name entered in the USRXIT*nn* initialization parameter is specified and spelled correctly, is alphanumeric, and is all uppercase. Also verify that the load module has been link-edited into either the z/OS link list library or the XPAF STEPLIB on the system where XOSF is executing.

In addition, you should confirm that no errors occurred while link-editing the user exit load module, and verify that it has not been marked nonexecutable.

If the exit is found in the z/OS link list library, make certain that the LLA has been refreshed since the exit was link-edited, establish that the LLA is inactive, or that an IPL has been performed for z/OS since the exit was link-edited.

If the exit is found in the XPAF STEPLIB or the problem persists, call Xerox Technical Support.

XDI3010F COULD NOT GET X'*bytes***' BYTES OF MEMORY** *activity*

Explanation: The memory required for the specified activity could not be acquired.

System response: Normal processing for the job continues. Processing for the requested address space is disabled.

User action: Increase the region size of the requested address space. Restart the address space and resubmit the job.

XDI3011E **COULD NOT RELEASE X'***bytes of memory***' BYTES OF MEMORY FROM LOCATION X'***address***'** *activity*

Explanation: XPAF encountered an error while attempting to release storage back to the operating system.

System response: The current operation is terminated.

User action: This is generally an internal error within XPAF. If the problem persists, call Xerox Technical Support.

XDI3401E **INVALID XOSF OPERATOR COMMAND**

Explanation: You entered an invalid XOSF command.

System response: Command processing is ignored. XOSF processing continues.

User action: Enter the correct command.

XDI3402I *task name* **XOSF FSS CONNECTED TO** *subsystem name*

Explanation: During initialization, the FSS level of the XOSF address space established communication with the spool subsystem, either JES2, JES3, or another non-JES subsystem.

System response: The named subsystem initiates the processing that requests an FSA printer level connection.

User action: None required.

XDI3403E *task name* **XOSF FSS TERMINATING ABNORMALLY**

Explanation: The FSS-level task of the XOSF address space encountered an unrecoverable error. A system dump may be produced.

System response: The XOSF address space is terminated.

User action: Restart XOSF.

XDI3404E **XOSF** *level of connection* **NOT CONNECTED TO** *subsystem name***. RC=X'***return code***'; REASON CODE=X'***reason code***'**

Explanation: XOSF attempted to connect to the named subsystem, but the subsystem was unable to establish the connection as indicated by the return and reason codes.

System response: Processing is terminated, and the XOSF address space is terminated.

User action: Attempt to restart the printer under which the address space was started. If this attempt fails, call Xerox Technical Support.

XDI3405I *task name* **XOSF ADDRESS SPACE ENDING**

Explanation: The XOSF FSS environment was requested to terminate normally.

System response: Processing is completed.

User action: None required.

XDI3406E z/OS/370 SP IS NOT SUPPORTED

Explanation: You tried to start XPAF in an unsupported environment.

System response: XPAF initialization is terminated.

Ensure that you are using an operating environment that is supported. For the minimum z/OS/JES levels currently supported by XPAF, refer to *Section Two: Installing and Customizing XPAF*.

XDI3407I REFRESH COMPLETED FOR PDS TYPE *pds type*, **DDNAME=***ddname*

Explanation: A PDS refresh was requested for the specified PDS type.

System response: The refresh completed successfully.

User action: None required.

XDI3408E INTERNAL ERROR: UNABLE TO LOCATE THE XSLCB

Explanation: In XDIRFTSK, the LOCSLCB macro did not return the address of the XSLCB.

System response: Refresh processing is terminated.

User action: Call Xerox Technical Support.

XDI3409E INTERNAL ERROR: PROGRAM LOGIC ERROR. ECB OFFSET=X'*offset value***'**

Explanation: While determining which ECB was posted in XDIRFTSK, the search went beyond the last ECB on the list.

System response: Refresh processing is terminated.

User action: Call Xerox Technical Support.

XDI3410W REFRESH THRESHOLD HAS BEEN EXCEEDED

Explanation: The maximum PDS refresh limit (as defined by the REFRSHMAX initialization parameter) has been reached for the day.

System response: The refresh operation is not performed.

User action: You can reset the refresh count using the RESET THRESHOLD operator command. After the reset, you can reissue the REFRESH command that failed. If you are frequently exceeding the refresh limit, you may want to increase its value as specified in your XINPARM library.

XDI3411I REFRESH THRESHOLD RESET TO *threshold*

Explanation: You issued a RESET THRESHOLD command to change the maximum number of times the PDS REFRESH command can be executed in a single day.

System response: The system shows the new threshold.

User action: None required.

XDI3412E **STARTING SUBSYSTEM,** *actual subsystem name***, DOES NOT MATCH SUBSYSTEM EXPECTED BY XOSF:** *expected subsystem name*

Explanation: The actual subsystem that started XOSF does not match the expected communicating subsystem specified in the XOSF COMSSID initialization parameter.

System response: XOSF initialization is terminated.

User action: Correct the value specified in the XOSF COMSSID initialization parameter. Ensure that XOSF is defined correctly to the starting subsystem. For JES, this is done in the FSSDEF statement in the JES2 or JES3 initialization parameters. For non-JES subsystems, refer to the installation instructions for those products.

XDI3413E **OPEN FOR DSNAME** *dataset name* **FAILED**

Explanation: An unsuccessful attempt was made to open the named log dataset.

System response: Processing continues, but the log dataset is disabled.

User action: Look at the messages that were issued prior to this message to determine the cause of the failure. If further assistance is required, call Xerox Technical Support.

XDI3414W **JES2 HCCT NOT FOUND. DEFAULT JES2 COMMAND CHARACTER ASSUMED**

Explanation: The JES2 HCCT control block, where the command character for JES2 commands is maintained, was not found because the SSCTSUS2 field of the primary JES2 SSCT did not have a valid address. Also, the CONCHAR initialization parameter was either not specified, or was specified with the default value of $.

System response: The JES2 command character default, $, is assumed. Any user-defined command character is ignored.

User action: Specify a user-defined command character via the CONCHAR initialization parameter that matches the command character specified in your JES2 initialization parameters. If the problem persists, call Xerox Technical Support.

XDI3416E **UNRECOGNIZED SUBSYSTEM. XCOMSENV=X'***xosf environment flag value***'. XCOMSSTY=X'***xosf subsystem flag value***'**

Explanation: This is an XOSF internal error.

System response: The printer is drained.

User action: Call Xerox Technical Support with the flag values.

XDI3417I *jobnumber jobname stepname ddname* **PRINTING** *status* **ON** *printer name* **AT** *system name*

Explanation: The print request has completed output processing for the identified job on the identified printer at the named system. The submitter of the print job used the NOTIFY IBM JCL keyword to identify which user IDs should be notified when the print request has completed.

The printing status of the identified job on the identified printer is one of these options:

- Canceled: the operator or XPAF has canceled the job
- Completed: the job has completed normally
- Interrupted: the operator has interrupted the job
- Restarted: the operator has restarted the job
- Forward spaced: the operator has forward spaced the job
- Backspaced: the operator has backspaced the job

System response: XOSF processing continues.

User action: None required.

XDI3418E **I/O ERROR READING DSNAME=***dataset name***. RC=X'***return code'*

Explanation: This is an internal error.

System response: Command processing is ignored. XOSF processing continues.

User action: Call Xerox Technical Support.

XDI3419I *printer name job number ddname* **IMPRESSIONS=***side count* **PAGES=***page count* **ETIME=***elapsed time*

Explanation: At the end of each dataset transmission, the FSA logs the total number of impressions, the total number of pages, and the elapsed time in minutes and tenths of a minute.

System response: None.

User action: None required.

XDI3420E **INVALID JES2 (PDDB NOT FOUND) CONTROL BLOCK (***printer name***)**

Explanation: The FSA was unable to find the JES2 PDDB for the current dataset.

System response: The FSA is terminated.

User action: Restart the printer (FSA) and call Xerox Technical Support.

XDI3421E **INVALID JES2 (GCBIOT=0) CONTROL BLOCK (***control block name***)**

Explanation: The FSA found a “zero” anchor in the GCB control block for GCBIOTTR.

System response: The FSA is terminated.

User action: Restart the printer (FSA) and call Xerox Technical Support.

XDI3422E **INVALID FSA (*control block name*) CONTROL BLOCK (*printer name*)**

Explanation: The FSA found an invalid FSS control block.

System response: The FSA is terminated.

User action: Call Xerox Technical Support.

XDI3423I *printer name* **FSA CONNECTED TO** *subsystem name*

Explanation: The FSA established connection with the spool subsystem. Subsystem name is JES2, JES3, or another non-JES subsystem.

System response: The named subsystem acknowledges connection with the FSA and continues printer start-up.

User action: None required.

XDI3424E **XOSF (NUCLEUS) REQUESTS FSA TERMINATION (*printer name*)**

Explanation: The FSA encountered an error condition and was requested to terminate by the NUCLEUS subcomponent.

System response: The FSA is terminated.

User action: Check the system and XOSF logs for additional messages and error information. Try to restart the FSA. If the problem persists, call Xerox Technical Support.

XDI3425E **(*job number*) (*job name*) INCOMPLETE REQUEUED (*printer name*)**

Explanation: The FSA encountered an error that caused XOSF to stop processing documents.

System response: The FSA stops processing the current document and requeues the data to JES.

User action: Check the system and XOSF logs for additional messages and error information relating to the document transmission. Check the printer type and its resources to make sure they are compatible with the document type. Restart the printer (FSA).

XDI3426E **FSA DOCUMENT CLOSE PROCESSING ERROR (*printer name*)**

Explanation: The FSA encountered an error during document CLOSE processing.

System response: The FSA is terminated.

User action: Restart the printer (FSA). Do not allow JES to schedule this document. Check the system log for additional information about this document transmission.

XDI3427E **FSA JES CHECKPOINT ERROR (*printer name*)**

Explanation: The FSA encountered an error while taking a checkpoint during document transmission.

System response: The FSA is terminated.

User action: Restart the printer. Check the system and XOSF logs for more information about this document. Review the z/OS/JES logs for an indication of errors.

XDI3428E **FSI GETREC FAILURE IDX/EOF/IOE (*printer name*)**

Explanation: The FSA tried to get the next logical record from JES and encountered an error indicator set by the FSI.

System response: Depending upon the severity of the error, the FSA either is terminated or reschedules the document.

User action: Restart the printer. If the problem persists, call Xerox Technical Support.

XDI3429W **SJF ERROR ON DEVICE** *printer name*. **SJF RC=X'***return code***' OR X'***reason code***'; JDVTNAME=***jdvt name***; KWL=X'***kwl address***'.** *message text*

Explanation: An error occurred while SJF was processing a request. The first 4 bytes of SJFRC indicate the SJF return code; the last 4 bytes indicate the SJF reason code. *jdvt name* is the name of the JDVT that the request was processed against. If the name is omitted, then the request is for the default JDVT. The keyword list (KWL) is the address of the list of keywords being processed for this request. Any additional message text is a description of the SJF reason code associated with this SJF request.

System response: An attempt will be made to process the document. However, no extended JCL keyword values will be applied to the document. Unpredictable results may occur.

User action: Call Xerox Technical Support.

XDI3430I **(*job number*) (*proc name*) (*step name*) (*ddname*) COPY** *current copy count* **OF** *total copy count* **SELECTED FOR (*printer name*)**

Explanation: For each dataset within a job, XOSF displays the current document being transmitted to a particular printer.

System response: None.

User action: None required.

XDI3431I **(*job number*) (*job name*) (*user-id*) TRANSMITTING TO (*printer name*)**

Explanation: This message identifies the JES job number, job name and submitter's user-id of the job that is currently active on the specified printer.

System response: The job is transmitted to the printer.

User action: None required.

XDI3432W JCL RETRIEVE ERROR FOR *job number job name* **ON** *printer name*. **SJF RC=***nnnnnnnn*

Explanation: An error occurred during the initialization processing of a document to be transmitted. SJF service errors were encountered while retrieving JCL parameters originally specified when the job was executed. The return code is in hexadecimal.

System response: XPAF attempts to transmit the document using known or default characteristics.

User action: The user action depends on the return code issued:

- If RC='X000000C', increase the value of the REGION parameter on the XOSF start-up proc or increase the value specified in the XCORE initialization parameter.
- If RC='X00000014' or 'X00000020', ensure that the XPAFJCL job has been run to install XPAF extended JCL on:
  - The system on which XPAF is running
  - The system where the job that created the document was originally executed

  If the systems are different, both need to be running the same maintenance level of XPAF extended JCL.

  You also should verify that you performed an IPL with CLPA after applying XPAF maintenance to XFSJDT00 or XESJDT00.
- For all other return codes, call Xerox Technical Support.

XDI3433E FSA CONNECT FAILURE (FSICON) FOR (*printer name***). FSI RC=X'***return code***'; FSI REASON CODE=X'***reason code***'**

Explanation: XPAF was unable to connect the FSA printer task to JES.

System response: The task is terminated.

User action: Call Xerox Technical Support.

XDI3434E FSA ABNORMAL TERMINATION FOR DEVICE (*printer name***). ABEND CODE X'***abend code***'**

Explanation: The ESTAE routine intercepted an abend that occurred during XOSF FSA processing while printing a SYSOUT dataset or during printer initialization or termination.

System response: The printer is drained. All other XOSF tasks continue processing.

User action: Review preceding error messages for SYSOUT dataset or environmental errors. If preceding messages do not clarify this error, call Xerox Technical Support.

XDI3435I FSA DISCONNECTING FOR DEVICE (*printer name***)**

Explanation: The FSA disconnects for this printer.

System response: The FSA is terminated.

User action: None required.

XDI3436E FSA STOP DEVICE FAILURE FOR (*printer name*). RC=*return code*

Explanation: The FSA encountered an error while stopping this printer.

System response: Normal processing cannot continue. The FSA is terminated.

User action: Restart the printer (FSA).

XDI3437E FSA START DEVICE FAILURE FOR (*printer name*). RC=*return code*

Explanation: The FSA encountered an error while starting this printer.

System response: The FSA is terminated.

User action: Restart the printer (FSA).

XDI3438E FSA GET DATASET FAILURE FOR (*printer name*). RC=*return code*

Explanation: The FSA encountered an error while requesting a dataset allocation from JES.

System response: The FSA is terminated.

User action: Call Xerox Technical Support.

XDI3439E FSA OPEN INITIALIZATION ERROR FOR (*printer name*). RC=*return code*

Explanation: The FSA was unable to start processing the document. The XOSF OPEN DOCUMENT process encountered an unrecoverable error condition.

System response: The FSA is terminated.

User action: Study the system log for more information.

XDI3440E FSA SYSOUT PROCESSING FAILURE FOR (*printer name*). RC=*return code*

Explanation: An error occurred during document transmission processing. The error was so severe that the FSA could not continue.

System response: The FSA is terminated.

User action: Examine the system log for more information.

XDI3442E FSA POSTED IN ERROR WITH NO DSNAME (*printer name*)

Explanation: This is an internal error.

System response: The FSA is terminated.

User action: Call Xerox Technical Support.

XDI3443I DEVICE ACQUIRED. READY FOR WORK (*printer name*)

Explanation: The FSA successfully reacquired the printer and is ready to begin normal processing.

System response: Documents that JES has queued to this printer are processed.

User action: None required.

XDI3444I FSA UNABLE TO ACQUIRE SHARED DEVICE (*printer name*)

Explanation: The FSA tried to acquire the specified printer for *nnnnn* minutes, where *nnnnn* is specified by the SHRACQTIME initialization or printer profile parameter. During that time, the printer was not available.

System response: The FSA is terminated for the specified printer.

User action: Restart the FSA when the printer is available.

XDI3445I ATTEMPTING TO ACQUIRE SHARED DEVICE *(printer name*)

Explanation: If there is output scheduled by JES, the FSA tries for *nnnnn* minutes to acquire the specified printer where *nnnnn* is specified by the SHRACQTIME initialization or printer profile parameter. This message is issued every *nnnnn* minutes, where *nnnnn* is specified by the SHRMSGINT initialization or printer profile parameter.

System response: The system tries to acquire the specified printer.

User action: None required.

XDI3446I FSA HAS RELEASED SHARED DEVICE (*printer name*)

Explanation: The FSA has released the specified printer. The thread remains available and JES continues to schedule output for that printer.

System response: If there is output scheduled for the specified printer, the FSA tries to reacquire the printer.

User action: None required.

XDI3447I REQUEST FOR SHARED DEVICE RELEASE (*printer name*)

Explanation: A printer that is currently allocated to an FSA was requested by another application.

System response: When the printer is available for release (when it is not currently active), XOSF releases it. The FSA does not disconnect.

User action: None required.

XDI3448I XOSF DEVICE SHARING ENABLED FOR (*printer name*)

Explanation: XOSF encountered a printer for which device sharing has been enabled.

System response: The printer is eligible to be shared with multiple XPAF applications or within the current XOSF address space.

User action: None required.

XDI3449I FSA HAS BEEN REQUESTED TO TERMINATE FOR (*printer name*)

Explanation: The printer was requested to terminate because of an error condition or was shut down by the operator.

System response: The printer task is terminated.

User action: Check the z/OS console log or XLOG for other error messages immediately preceding this message.

XDI3450E FSA ENVIRONMENT SETUP FAILURE. FSA ENDING

Explanation: During the setup of an FSA, an error occurred that prevented further initialization.

System response: The printer thread is terminated. The FSS address space remains active for other printers.

User action: Allocate more storage to XPAF and restart the FSA.

XDI3451E DEVICE INIT REQUEST FAILED FOR (*printer name*). RC=*return code*

Explanation: The FSA was unable to allocate or initialize the specified printer.

System response: The FSA is terminated.

User action: Check the XOSF log for more messages.

XDI3452E SUBSYSTEM NAME (*xosfname*) IS ALREADY IN USE BY ANOTHER XOSF ADDRESS SPACE

Explanation: The named subsystem was specified for the SUBSYS initialization parameter for this address space, but the name is being used by another XOSF address space.

System response: XOSF is terminated.

User action: Change the value specified for the SUBSYS initialization parameter to a valid subsystem name that is not specified for any other XOSF subsystem. To determine subsystem name an active XOSF address space is currently using, enter the DISPLAY SUBSYS command.

XDI3453E XOSF FSS (*xosfname*) NOT FOUND OR NOT DEFINED

Explanation: The initialization process could not find the named subsystem.

System response: XOSF is terminated.

User action: Verify the XPAF subsystem name is included in member IEFSSN*xx* of SYS1.PARMLIB. If the XPAF subsystem name is included and you received this message, or if you have just added the XPAF subsystem name, you will need to re-IPL your system for the changes to take effect. Refer to *Section Two: Installing and Customizing XPAF*.

XDI3454E XDI OFFSET TABLE NOT FOUND OR LOADED (XDIOFTAB)

Explanation: The XDIOFTAB could not be found in a library available to the FSS or could not be loaded into memory.

System response: XPAF initialization is terminated.

User action: The source XDIOFTAB shipped with XPAF must be assembled and linked into the XPAF library per the installation instructions. Install the XDIOFTAB module at the user level.

XDI3456E z/OS VERSION/LEVEL *version/level* NOT SUPPORTED

Explanation: You tried to start XOSF in an unsupported environment.

System response: Initialization is terminated.

Ensure that you are using an z/OS level that is supported. For the minimum z/OS/JES levels currently supported by XPAF, refer to *Section Two: Installing and Customizing XPAF*.

XDI3457E *job entry subsystem name* VERSION/LEVEL *jes version/level* NOT SUPPORTED

Explanation: You tried to start XOSF in an unsupported JES environment.

System response: Initialization is terminated.

User action: The user action depends on how you define the JES subsystem:

- If you are using JES2 or JES3 as the primary subsystem, verify that the system is running the correct version and level of JES2 or JES3.
- If you are using JES2 or JES3 as a primary subsystem and have named it something other than JES2 or JES3, verify that a valid subsystem name was specified in the COMSSID initialization parameter.
- If you are using JES2 or JES3 as a secondary subsystem verify that the subsystem is started.
- If you are using JES2 or JES3 as the secondary subsystem, verify that a valid subsystem name was specified in the COMSSID initialization parameter.

For the minimum z/OS/JES levels currently supported by XPAF, refer to *Section Two: Installing and Customizing XPAF*.

XDI3458I **XJCL ERROR ON** *keyword***.** *error text* **PARAMETER IGNORED**

Explanation: An invalid situation was encountered with an XPAF extended JCL keyword. The error text gives more information about the nature of the problem.

System response: The keyword listed is ignored and processing continues.

User action: Correct the keyword and rerun the job.

XDI3459E **z/OS SUBSYSTEM NAME** *name* **NOT SUPPORTED**

Explanation: There are two possible explanations:

- The subsystem name under which XPAF is initialized is not supported by XPAF.
- In a JES3 environment, the same name is specified for both the XOSF start-up proc and the z/OS subsystem being used by XPAF. In this case, JES3 attempts to start XPAF on behalf of the z/OS Master Scheduler Subsystem (MSTR).

System response: Initialization is terminated.

User action: Ensure that the subsystem name is either JES2 or JES3. If you are operating in a JES3 environment, be sure that the XPAF subsystem name in SYS1.PLIB(IEFSSN*xx*) is not the same as the XOSF start-up proc name.

XDI3460I

TASK#	**TASK-ID**	**DOCUMENT-ID**	**TOT-REC**	**PR-REC**	**T-PAGE**	**P-PAGE**
task number	*task id*	*document id*	*total records*	*records printed*	*total pages*	*pages printed*

DISPLAY ACTIVE JOBS COMMAND COMPLETED

OR

TASK#	**TASK-ID**	**TYPE**	**CUU/SLU**	**DOCUMENT-ID**	**STATUS**
task number	*task id*	*type*	*cuu/slu*	*document id*	*status*

DISPLAY ACTIVE TASK COMMAND COMPLETED

Explanation: You requested a display of information from XPAF.

System response: The information is displayed.

User action: For help interpreting these messages, refer to *Section Seven: XPAF Operator Guide*.

XDI3461I **XOSF XLOG=***log dataset name* **HAS BEEN REFRESHED**

Explanation: In response to the REFRESH XLOG command, the XLOG buffer was written to the named XLOG dataset. The XLOG dataset contains all the messages issued by XOSF at the time the command was issued.

System response: Processing continues.

User action: None required.

XDI3462I UNABLE TO RELEASE LOCK FOR XSTCB CHAIN

Explanation: A lock was obtained using the#SLOCK macro. An attempted lock release by #SUNLOCK failed because the lock ID for the release did not match the lock ID for the lock.

System response: The processing for the current task or job continues. Processing for subsequent tasks or jobs may be affected.

User action: Bring the XPAF address space down, then restart XPAF. If the problem persists, call Xerox Technical Support.

XDI3466E PRINTER (*printer name*) FSA ID (*fsa id*) HAS EXCEEDED THE MAXIMUM (*number*) PRINTERS SUPPORTED

Explanation: The named printer exceeds the maximum number of print devices that is currently supported.

- JES2: This message is issued when 64 printers are already started and a sixty-fifth printer is started.
- JES3: Only the first 64 printers defined in the JES INIT deck are recognized. This message is issued when any printer other than the first 64 defined to JES is started, even if no other printers are already started.
- CMA-SPOOL or CA-SPOOL: This message is issued when 64 printers are already started and a sixty-fifth printer is started.

System response: The named printer is not started. All other valid printers in the address space continue normal functions.

User action: Remove all but 64 printers from your JES INIT deck.

- JES2: Use $PPRT*nnnn* to drain one printer to allow the desired printer to use the FSA.
- JES3: Do not start any printers except the first 64 defined in the JES INIT deck.
- CMA-SPOOL or CA-SPOOL: Use P,PRT*nnnn* to drain one printer to allow the desired printer to use the FSA.

XDI3467I LOGGING IS ACTIVE TO *xlog dataset name*

Explanation: *xlog dataset name* identifies the dataset to which messages will be written when XOSF logging is active. This message is displayed in response to the DISPLAY ACTIVE XLOG command.

System response: None.

User action: None required.

XDI3468I LOGGING IS INACTIVE TO BOTH CURRENT AND ALTERNATE XLOGS

Explanation: This message indicates that neither the current nor alternate XLOG has been activated.

System response: None.

User action: Activate the current or alternate XLOG using one of these methods:

- Issue the SET XOSF LOGGING ON command.
- Specify XLOG=Y in the initialization parameters. If you choose this option, you must refresh the XOSF address space.

For either option to work, you must specify a valid dataset name in the XLOGDSN and/or ALOGDSN initialization parameters.

XDI3469W *keyword* **DJDE FOUND. FURTHER CHECKPOINTING DISABLED**

Explanation: A DJDE keyword affecting the appearance of subsequent records has been detected.

System response: Checkpointing is terminated for this job. If the job stops and restarts for any reason, it will restart from the last valid checkpoint before the DJDE keyword was detected.

User action: Consider not using checkpointing when printing this job in the future.

XDI3470I CURRENT XLOG DSNAME=*log dataset name*

Explanation: This message identifies the current XLOG dataset name. The message appears in response to the DISPLAY ACTIVE XLOG command.

System response: None.

User action: None required.

XDI3471I ALTERNATE XLOG DSNAME=*log dataset name*

Explanation: This message identifies the alternate XLOG dataset name. The message appears in response to the DISPLAY ACTIVE XLOG command.

System response: None.

User action: None required.

XDI3472E *function* **FAILED FOR PROGRAM** *program name* **IN** *module name***. RC=X'***return code***'; REASON CODE=X'***reason code***'**

Explanation: Either a BLDL to locate a program or a LOAD to bring a program into virtual storage was issued, but the service routine could not honor the request.

System response: The task is terminated.

User action: If the failed function is LOAD, an invalid parmlist has been specified. Call Xerox Technical Support.

If the failed function is BLDL, the action to take depends on the return and reason codes:

Return Code	Action
4	The load module was not found. Verify that the program name exists in the XPAFLIB specified in the XOSF start-up proc. If it is not found, check the last application of XPAF maintenance or the last XPAF installation for errors on this program name. If errors are found, correct them and restart XPAF.
8	Action depends on the reason code: If the reason code is 0, an I/O error has occurred on the load library directory. Restart XPAF. If the problem persists, recreate the load library or move the location of the load library. If the condition still persists, call Xerox Technical Support. If the reason code is 4, increase the region size and restart XPAF. If the reason code is 8, verify that the PPT entry in SYS1.PARMLIB(SCHED*nn*) specifies key 1. If the PPT entry is correct, call Xerox Technical Support.

XDI3473E **GETMAIN FOR** *number* **BYTES FAILED FOR** *control block* **IN** *program name***. RC=X'***return code***'**

Explanation: The program indicated issued a GETMAIN request that could not be honored.

System response: The task is terminated.

User action: Increase the region size or decrease the number of printer tasks running in the XOSF address space and restart XOSF. If the error persists, call Xerox Technical Support.

XDI3474E INITIALIZATION ERROR FOR ACTIVE PRINTER DEVICE LIST. *reason*

Explanation: An internal error occurred while allocating the APDL control block during print task initialization. *Reason* is one of these options:

- XSLCB NOT FOUND
- FIRST APDL EMPTY
- INVALID APDL FOUND
- NO MATCHING DEVICE FOUND
- NO MATCHING FSS/FSA
- APDL NOT ALLOCATED

System response: The task is terminated.

User action: Ensure the XPAF subsystem name in XINPARM or on the EXEC PARM statement matches the name in SYS1.PARMLIB(IEFSSN*nn*). Restart XOSF. If the condition persists, call Xerox Technical Support.

XDI3475E ERROR IN SET ESTAE RECOVERY ROUTINE FOR MODULE *module name***. RC=X'***return code***'**

Explanation: XPAF was unable to set an ESTAE recovery routine for the specified module.

System response: If ESTAE=Y was specified in the initialization parameters, the task is terminated. If ESTAE=N, this error is treated as a warning and processing continues.

User action: If the condition persists, call Xerox Technical Support.

XDI3476E INVALID JES FSS CONTROL BLOCK, *control block name***, WAS FOUND AFTER** *printer* **CONNECTED**

Explanation: The FSA connect with JES was successful, but an error was encountered while validating control blocks returned by the FSI.

System response: The task is terminated.

User action: Call Xerox Technical Support.

XDI3477E INVALID JES COMPONENT SPECIFIED IN XOSF ENVIRONMENT FLAG. THE XCOMSENV VALUE IS X'*value***'**

Explanation: The XPAF environment flag, COMSENV, shows neither JES2 nor JES3 as the primary job entry subsystem.

System response: The task is terminated.

User action: Call Xerox Technical Support.

XDI3478E JES FSS/FSA NOT CONNECTED FOR DEVICE *printer name***. STATUS FLAG X'***value***'**

Explanation: After the FSS or FSA connected for the specified printer, an error was posted in the JES FSCB status flag.

System response: The task is terminated.

User action: Call Xerox Technical Support.

XDI3479E **FSA** *subtask name* **FAILED FOR** *printer name*. **RC=X'***return code***'**

Explanation: XPAF was unable to start or stop an FSA subtask for the listed device.

System response: For start errors, the printer is drained. For stop errors, the printer may remain active but is unable to process additional output.

User action: Call Xerox Technical Support.

XDI3480I **LOGGING HAS BEEN ENABLED TO** *xlog dataset name*

Explanation: This message appears in response to the SET XOSF LOGGING ON command.

System response: None.

User action: None required.

XDI3481I **LOGGING HAS BEEN DISABLED TO** *xlog dataset name*

Explanation: This message appears in response to either of these commands:

SET XOSF LOGGING OFF
DISPLAY ACTIVE XLOG

System response: None.

User action: None required.

XDI3482E **NO ALTERNATE XLOG DSNAME SPECIFIED**

Explanation: The SWITCH XLOG command was issued, but one of two conditions may exist:

- No alternate XLOG dataset has been specified on the PARM parameter of the EXEC statement in the XOSF start-up proc or on the ALOGDSN initialization parameter of the XINSXOSF member of XINPARM.
- The primary and alternate XLOG dataset names are identical.

System response: The command is ignored. XOSF processing continues.

User action: Create a second XLOG dataset if necessary. Update the ALOGDSN parameter on the PARM parameter of the EXEC statement or in the XINSXOSF member of XINPARM. You must restart your FSS for this to take effect.

XDI3484E **JOB** *job name job number* **STEP** *step name* **DDNAME** *dataset definition* **ON** *printer name* **INCOMPLETE AND REQUEUED**

Explanation: An error occurred that prevented XOSF from completely printing the specified SYSOUT dataset.

System response: XOSF returns the SYSOUT dataset to JES in hold status and marks it incomplete.

User action: Check the log for preceding error messages pertaining to this SYSOUT dataset or printer. For the printer type specified in the printer profile member, verify that the resources are compatible with the type of SYSOUT dataset being printed.

XDI3485E **NUCLEUS DOCUMENT CLOSE PROCESSING ERROR FOR JOB** *job number job name* **STEP** *step name* **DDNAME** *dataset definition* **ON** *printer name***. RC=X'***return code***'**

Explanation: An error occurred while XOSF was processing a SYSOUT dataset. The reasons for the error are explained in preceding error messages.

System response: The printer is drained.

User action: If the preceding messages do not explain the error or provide corrective action, call Xerox Technical Support.

NOTE: Do not attempt to reprint the document.

XDI3486I *module name* **DETECTED UNSUPPORTED FSI** *fsi function* **ID X'***function id***'**

Explanation: JES issued an FSI function that was not recognized as valid by XOSF.

System response: The FSI function is ignored. Processing continues.

User action: If the problem persists, call Xerox Technical Support.

XDI3487E **JES2** *control block* **CONTROL BLOCK NOT FOUND FOR JOB** *job name job number* **ON** *printer name*

Explanation: When opening a JES2 SYSOUT dataset, XOSF was unable to locate the named control block.

System response: The SYSOUT dataset is not printed, and the printer is drained.

User action: Ensure installation job UMJOB101 has been run successfully. This job reapplies the JES offset table, XDIOFTAB, and must be run after XPAF or JES2 maintenance is applied.

If the problem persists after XDIOFTAB has been reapplied successfully, call Xerox Technical Support.

XDI3488I **JOB** *job name job number* **STEP** *step name* **DDNAME** *dataset definition name* **RESTARTED FROM CHECKPOINT**

Explanation: Previously, the SYSOUT dataset was partially printed. It is now being reprinted beginning from the last JES checkpoint position.

System response: The SYSOUT dataset is printed beginning from the record or page indicated by the JES checkpoint.

User action: None required.

XDI3489I **JOB** *job name job number* **STEP** *step name* **DDNAME** *dataset definition name* **HELD IN JES FOR XOSF DECACHING**

Explanation: XPAF caching was selected, and the dataset is being returned to JES in hold status.

System response: After the dataset is printed from the Xerox printer disk, it is purged from JES.

User action: None required.

XDI3492W **INVALID COMMAND TO XOSF OPERATOR INTERFACE**

Explanation: There was a syntax error in one of these commands:

- REFRESH DDNAME. DDNAME is not a valid PDS DD name.
- SET SYSTEM LOGGING ON/OFF. The last operand is not ON or OFF.
- SET SMF RECORDING ON/OFF. The last operand is not ON or OFF.
- SET STATISTICS ON/OFF. The last operand is not ON or OFF.
- TERMINATE TASK *nn*. The *nn* variable must be a numeric subtask ID.

System response: Command processing is terminated.

User action: Correct the indicated error, then reissue the command.

XDI3493E **SUBTASK FREE CHAIN LOCK CONTAMINATED**

Explanation: When you issued the TERMINATE TASK *nn* command, XPAF detected errors in the free chain lock.

System response: Display processing is terminated. The task remains active.

User action: Shut down all printers in the XPAF address space and restart XPAF. If the problem persists, call Xerox Technical Support.

XDI3494W INVALID TASK ID

Explanation: You issued the TERMINATE TASK *nn* command, but XOSF could not locate a subtask with an ID of *nn*.

System response: Display processing is terminated. The task remains active.

User action: Issue the DISPLAY ACTIVE TASKS command to determine the correct subtask number, then reissue the TERMINATE TASK *nn* command.

XDI3496I REFRESH THRESHOLD=*nnnnnnn***, RESET DATE=***yyddd***, TIME=***hh:mm***

Explanation: You issued a DISPLAY REFRESH STATS command.

System response: The system displays all statistics relating to the PDS refresh facility.

- *nnnnnnn* is the current value of the maximum refreshes allowed in a 24 hour period.
- *yyddd* is the Julian date when the maximum refresh count was set back to this value.
- *hh:mm* is the time of day when the maximum refresh count was set back to this value (*hh* is hours, *mm* is minutes).

User action: None required.

XDI3497I NUMBER OF REFRESHES REMAINING=*nnnnnnn*

Explanation: *nnnnnnn* is the number of PDS refreshes still available for the current 24 hour period. This information is displayed in response to a DISPLAY REFRESH STATS command.

System response: In related messages, the system displays all statistics relating to the PDS refresh facility.

User action: None required.

XDI3498I *ddname* **REFRESHES=***nnnnnnn***; USER=***userid***; DATE=***yyddd***; TIME=***hh:mm***

Explanation: You issued a DISPLAY REFRESH STATS command.

System response: The system displays all statistics relating to the PDS refresh facility.

- *ddname* is the DD name of the PDS being refreshed (ALL, FONTLIB, FORMDEF, OVERLAY, PAGESEG, PAGEFORM, or PAGEDEF).
- *nnnnnnn* is the number of times the named PDS has been refreshed.
- *userid* is either OPER or the user ID of the last user who requested a refresh of the named PDS.
- *yyddd* is the Julian date when the last refresh of the named PDS occurred.
- *hh:mm* is the time of day when the last refresh of the named PDS occurred (*hh* is hours, *mm* is minutes).

User action: None required.

XDI3499I *xosfname* **SUBSYSTEM NAME:** *xid*

Explanation: You issued a DISPLAY SUBSYS command.

System response: The subsystem name is displayed. Xosfname is the job name of the XOSF started task, and xid is the 1- to 4-character subsystem name.

User action: None required.

XDI3500I **XOSF SYSTEM LOGGING TURNED** *system status*

Explanation: You issued the SET SYSTEM LOGGING command.

System response: The indicated XOSF system logging option is set.

User action: None required.

XDI3501I **XOSF SHUTTING DOWN**

Explanation: The XOSF address space has begun shutting down. The shutdown may have been initiated internally or by the user.

System response: The XOSF address space is terminated.

User action: If the shutdown is in response to the operator command, the user action is none. If it is system-initiated, check the z/OS console log or XLOG for other error messages immediately preceding this message.

XDI3502I **XOSF SHUTDOWN CANCELLED**

Explanation: After the system shutdown request was issued, you indicated that XOSF was to continue processing instead of being terminated.

System response: Processing continues.

User action: None required.

XDI3503I **TASK:** *printer name status job number job name* **DEVICE:** *printer address/vtam primary lu name vtam secondary lu name* **(***device type***)**

Explanation: You issued a command requesting that XOSF shut down, or an internal error occurred, but the specified printer tasks have not been drained.

System response: None.

User action: This message accompanies XDI3504A, asking you to confirm the shutdown.

XDI3504A *system id job name* **CONTINUE WITH XOSF SHUTDOWN?**

Explanation: XOSF has been requested to shut down. The console operator is asked to confirm the request.

System response: XOSF waits for the operator's reply.

User action: Enter **Y** to continue the shutdown, or **N** to cancel the shutdown.

XDI3505I **XOSF DISPLAY SYSTEM COUNTERS** *status*

Explanation: You issued the DISPLAY SYSTEM COUNTERS command.

System response: XOSF displays the system counters.

User action: None required.

XDI3506I *name ===> nn name ===> nn***.**

Explanation: You issued the DISPLAY SYSTEM COUNTERS command.

System response: XOSF displays the system counters. *Name* is the name of the XOSF counter being displayed. *nn* is the current value of the counter being displayed.

User action: None required.

XDI3511I **REFRESH REQUEST HAS BEEN POSTED**

Explanation: You issued the REFRESH command.

System response: The request is being processed. Message XDI3407I should follow, indicating the completion of the refresh processing.

User action: None required.

XDI3512I **REFRESH SPECIFIED IS ALREADY IN PROGRESS**

Explanation: You issued the REFRESH DDNAME command, but one of these conditions has occurred:

- An XOAF refresh has already been requested.
- A prior refresh operator command has been issued and the BLDL processing has not completed.

System response: The original request is processed, but the duplicate request is not.

User action: If necessary, reissue the request.

XDI3513W **XDIRFRSH UNABLE TO FIND XSLCB**

Explanation: You issued the REFRESH command. XPAF encountered an error in processing the XPAF subsystem linkage.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

XDI3514I **XOSF SYSTEM SMF RECORDING TURNED** *smf recording status*

Explanation: You issued the SET SMF RECORDING command.

System response: The specified SMF logging option is set.

User action: None required.

XDI3516I XOSF TERMINATE TASK REQUEST COMPLETED

Explanation: You issued the TERMINATE TASK command.

System response: The task identified in the command is terminated.

User action: None required.

XDI3517E UNABLE TO OBTAIN A FREE XRQBLK

Explanation: XOSF was unable to acquire an XRQBLK in response to a TERMINATE TASK command.

System response: The task specified in the command remains active.

User action: Call Xerox Technical Support.

XDI3518E ERROR ENCOUNTERED WHILE PROCESSING A TERMINATE TASK REQUEST. RC=*return code*

Explanation: You issued the TERMINATE TASK command, but XOSF was unable to terminate the task.

System response: The task specified in the command remains active.

User action: Call Xerox Technical Support.

XDI3521E INVALID JES3 CONTROL BLOCK FOR JOB *job name job number* **ON** *printer name*

Explanation: When opening a JES3 SYSOUT dataset, XOSF encountered an invalid JES3 SRL.

System response: The SYSOUT dataset is not printed, and the printer is drained.

User action: Ensure installation job UMJOB101 has been run successfully. This job reapplies the XDIOFTAB and must be run after XOSF or JES3 maintenance is applied.

If the problem persists after XDIOFTAB has been reapplied successfully, call Xerox Technical Support.

XDI3522E FSA *request type* **REQUEST FAILURE FOR JOB** *job name job number* **STEP** *step name* **DDNAME** *dataset definition name* **ON** *printer name***. FSI RC=X'***return code***'; REASON CODE=X'***reason code***'**

Explanation: An error occurred on a call to JES through the FSI. The FSA request type is one of these:

GET RECORD	Requesting a print record from JES
OOP	Output on Operator Observation Point
RELEASE DATASET	Returning the SYSOUT dataset to JES.

System response: The FSS request is not fulfilled.

User action: If the FSI request is RELEASE DATASET, determine whether the job should be manually released or purged from JES. Call Xerox Technical Support.

XDI3525W SSI JES3 S34 GETMAIN FAILED FOR *number* **BYTES WITH RC X'***return code***'**

Explanation: A JES3 SSI request was made but there was insufficient virtual storage available to create the JES3 S34 work area control block.

System response: The SSI request is bypassed; other XOSF processing continues.

User action: Increase the value specified for the REGION parameter on the XOSF start-up proc and restart the XOSF address space.

XDI3526W SSI JES3 LEVEL *level* **UNSUPPORTED**

Explanation: A JES3 SSI request was made but the version of JES3 running is not supported by XOSF. *Level* is the 6- to 8-character JES3 release, feature, or selectable unit identifier.

System response: The SSI request is bypassed; other XOSF processing continues.

Install a level of JES3 that is supported by XOSF. Refer to refer to *Section Two: Installing and Customizing XPAF* for the minimum JES levels currently supported by XPAF.

XDI3527E SUBSYSTEM NAME *subsystem name* **IS NOT ALLOWED FOR XOSF**

Explanation: The named subsystem specified by the SUBSYS initialization parameter is not allowed for use by XOSF.

System response: Initialization processing is terminated.

User action: Specify a valid subsystem name from IEFSSN*nn* for the SUBSYS initialization parameter. Ensure that the subsystem name specified has been specifically designated for use by XOSF.

XDI3530E *module* **ABENDED IN ROUTINE** *routine***. CC=X'***completion code***'**

Explanation: An abend in XOSF processing was intercepted.

System response: The task is terminated.

User action: Call Xerox Technical Support with the module name, routine name, completion code, accompanying dump, and XOSF log.

XDI3540E VALIDATION TABLE CORRUPTED. MAX TASK REDUCED BY 1

Explanation: A subtask ATTACH was attempted, but no free entries in the subtask table could be found.

System response: The subtask is not attached. The maximum number of subtasks is reduced by one. XPAF continues processing other tasks.

User action: Call Xerox Technical Support.

XDI3541E UNABLE TO *operation* **PROGRAM** *program name*

Explanation: When starting a new subtask, a program to be loaded or attached could not be located.

System response: The subtask is not loaded or attached. Other tasks continue processing.

User action: Be sure the named program is either in the XPAF STEPLIB concatenation or in the z/OS link list. Resubmit the subtask start.

XDI3542E INSUFFICIENT STORAGE TO START SUBTASK

Explanation: Insufficient virtual storage was available to hold the program information parameters while attaching a new subtask.

System response: The subtask is not attached. Other tasks continue processing.

User action: Perform one or both of these actions:

- Increase the private region virtual storage available below the 16M line by increasing the value of the REGION parameter on the EXEC statement in the XOSF start-up proc.
- Reduce the number of printers running in the FSS.

If the problem persists, call Xerox Technical Support.

XDI3543E ERROR OCCURRED DURING CROSS MEMORY INSTRUCTION

Explanation: An error occurred executing a Set Secondary Address Space instruction, a Move to Current Primary instruction, or a Move to Current Secondary instruction while attaching a new subtask.

System response: The subtask is not attached. Other tasks continue processing.

User action: Call Xerox Technical Support.

XDI3544W UNKNOWN TIMER XRQBLK ON SUBTASK XSTCB

Explanation: An invalid entry in the Timer Service queue was found while deleting a subtask.

System response: Processing continues.

User action: If the problem persists, call Xerox Technical Support.

XDI3545W UNKNOWN ESTAE PROGRAM ON SUBTASK XSTCB

Explanation: An error occurred deleting the ESTAE recovery program while deleting a subtask.

System response: XPAF processing continues.

User action: If the problem persists, call Xerox Technical Support.

XDI3546E UNKNOWN UNCHAINED XSTCB

Explanation: The subtask control block to be unchained could not be located while deleting a subtask.

System response: The subtask is not deleted. XOSF attempts to continue processing other tasks.

User action: Terminate all printer tasks as soon as possible. Stop and restart the XOSF address space. If the problem persists, call Xerox Technical Support.

XDI3547W SUBTASK LOCK CHAIN CONTAMINATED

Explanation: An invalid lock queue entry was found while deleting a subtask.

System response: XPAF processing continues.

User action: If the problem persists, call Xerox Technical Support.

XDI3548E UNABLE TO CLOSE THE LOG DSNAME *dataset name*

Explanation: An unsuccessful attempt was made to close the named log dataset.

System response: Processing continues, but logging is disabled.

User action: Look at the messages that were issued prior to this message to determine the cause of the failure. If further assistance is required, call Xerox Technical Support.

XDI3549I THE LOG DSNAME WAS SWITCHED FROM *dataset name* **TO** *dataset name*

Explanation: The “FROM” log dataset was closed. The “TO” log dataset was opened and is the currently active log.

System response: Processing continues.

User action: None required.

XDI3550W AN ERROR OCCURRED WHEN SWITCHING FROM LOG *dataset name* **TO LOG** *dataset name***. LOGS NOT SWITCHED**

Explanation: You issued the SWITCH XLOG command, but XEIMAIN could not complete the request successfully.

System response: Processing continues, but the logs are not switched.

User action: Look for the messages that were issued prior to this message to determine the failure. If further assistance is required, call Xerox Technical Support.

XDI3551E UNABLE TO REFRESH LOG DSNAME *dataset name*

Explanation: You issued the REFRESH XLOG command, but XEIMAIN could not complete the request successfully.

System response: Processing continues, but the named log dataset is not refreshed.

User action: Look for messages that were issued prior to this message to determine the cause of the failure. If further assistance is required, call Xerox Technical Support.

XDI3552E UNABLE TO '*requested action***' BECAUSE XEIMAIN IS DAMAGED**

Explanation: Either an internal component requested service from XEIMAIN or you issued a command, but XEIMAIN was unable to respond to this request.

System response: Processing continues, but the request is not processed.

User action: Look for messages that were issued prior to this message to determine the cause of the failure. If further assistance is required, call Xerox Technical Support.

XDI3553E THE XOSF ROUTER FOUND AN INVALID REQUEST BLOCK. RC=X'*return code***'**

Explanation: While attempting to attach a subtask, XDIRTIAS found an invalid request block.

System response: Processing continues, but the subtask is not started.

User action: Call Xerox Technical Support.

XDI3554E THE XOSF ROUTER FOUND AN INVALID BUFFER ADDRESS IN XRQBLK. RC=X'*return code***'**

Explanation: While attempting to attach a subtask, XDIRTIAS found an invalid buffer address in the XRQBLK.

System response: Processing continues, but the subtask is not started.

User action: Call Xerox Technical Support.

XDI3555E THE XOSF ROUTER WAS UNABLE TO FIND THE AUTOSTART TABLE. RC=X'*return code***'**

Explanation: While attempting to attach a subtask, XDIRTIAS was unable to find the autostart subtask table.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

XDI3556E **THE XOSF ROUTER WAS UNABLE TO FIND THE AUTOSTART MODULE** *module name***. TASK NOT STARTED**

Explanation: While attempting to attach a subtask, XDIRTIAS was unable to find the named module to be loaded as a subtask.

System response: Processing continues, but the subtask is not started.

User action: Call Xerox Technical Support.

XDI3596E **XDIOFTAB JES LEVEL IS *otab-level* AND DOES NOT MATCH SYSTEM JES LEVEL OF *sys-level***

Explanation: While starting XOSF, it was determined that the level of the operating system JES (*sys-level*) does not match the level of the XOSF offsets table, XDIOFTAB (*otab-level*).

System response: Processing is terminated and the XOSF address space will be shut down.

User action: Re-assemble the XDIOFTAB using current JES and System MACLIBs.

XDI3597I **CPUID=cpuid**

Explanation: This informational message is displayed at XOSF startup.

System response: Processing continues.

User action: None required.

XDI3598I **XDIOFTAB=*otab-level***

Explanation: This informational message is displayed at XOSF startup.

System response: Processing continues.

User action: None required.

XDI3599I **SYSTEM=*sys-level*, JES2 *jes-level*, XPAF *xpaf-level***

Explanation: This informational message is displayed at XOSF startup and displays the current operating system, JES and XPAF levels.

System response: Processing continues.

User action: None required.

XDI3614E *printer***: INVALID PPT VALUE (***value***) FOR** *parameter***.** *action*

Explanation: An invalid value was entered for the specified parameter in the named printer profile.

System response: The *action* indicates whether the printer profile is built. Most invalid values are ignored; however, some result in a “Cannot build PPT” action.

User action: All errors must be corrected. Edit the printer profile and correct the invalid value.

XDI3615E *printer*: **PPT BUILD ERROR:** *message profile-statement*

Explanation: The identified *profile-statement* in the specified printer profile contains an error, identified by the *message*.

System response: Most invalid values are ignored, and the printer profile is built.

User action: All errors must be corrected to avoid further errors that may occur when you try to print. Edit the printer profile and correct the invalid profile statement.

XDI3947E **INVALID JFCB FOUND FOR DDNAME** *ddname*

Explanation: A pointer from the TIOT to a JFCB was found to have an invalid prefix (C'JFCF' at the displacement 12, decimal). This error occurred while attempting to determine the dataset name(s) associated with a resource PDS *ddname*.

System response: This DD name is ignored. Attempts to refresh this resource directory by dataset name will fail, and attempts to refresh by DD type will have unpredictable results.

User action: In the XOSF start-up proc, examine the JCL for this DD. Correct any errors.

XDI4153E **MEMBER** *printer* **NOT FOUND IN LIBRARY** *library name*

Explanation: The named member was not found in the named library.

System response: A profile is not built for the named printer.

User action: Add the printer profile member to the library designated on the PROFDD statement in the XINSXOSF member of XINPARM.

XDI4154E **LOAD MODULE** *module name* **NOT FOUND**

Explanation: The named required load module could not be located.

System response: For errors in XPAF initialization or in the FSS, XPAF is terminated. For errors in all other areas, the printer is drained.

User action: Ensure all maintenance has been applied successfully and the load library to which the maintenance has been applied is in the XOSF start-up proc STEPLIB concatenation. If the problem persists, call Xerox Technical Support.

XDI4332E **THM ERROR DETECTED IN** *module name* **WHILE** *action* **THE** *table name* **TABLE**

Explanation: During the processing of the JCL keywords for the job, XPAF encountered an error trying to process one of the required tables. *Action* is either OPENING, READING, UPDATING, INSERTING, etc.

System response: Document processing is terminated.

User action: This is generally a problem with the allocation of members in the TABLELIB dataset. Verify that XPAF is allocated to the proper dataset and that the required members are present.

XDI7201E **ESTAE FAILURE ON ENTRY TO** *module name*. **RC=X'***return code***'; IC=X'***information code***'**

Explanation: The XPAF ESTAE routines were unable to complete recovery processing.

System response: The task is terminated.

User action: Call Xerox Technical Support.

XDI7202E **COULD NOT GET SUFFICIENT MEMORY** *action*

Explanation: A GETMAIN failed because there was insufficient memory.

System response: XPAF is not initialized.

User action: Increase the region size for XOSF and start XOSF again.

XDI7211W **SAF STATUS REQUEST RETURNED RC=X'***return code***'**

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, a RACSTAT macro returned a non-zero return code. This message is only issued if intensive logging is turned on.

System response: XOSF processing continues. USERLIB security authorization checking is not performed for this job step.

User action: If USERLIB security authorization checking is required, ensure that a security package is installed and active at a supported release level. For IBM's RACF, XPAF requires a minimum release level of 1.6. Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of the RACSTAT return codes.

XDI7212W **SAF** *action status* **FOR USERID=***userid***, FOR (***job number***) (***job name***)**

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, a RACROUTE macro returned a non-zero return code. This message is only issued if intensive logging is turned on.

System response: XOSF processing continues.

User action: See message XDI7213W to obtain the SAF return code, the RACF return code, and the RACF reason code. Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of these codes.

XDI7213W **SAF RC=X'***saf return code***'; RACF RC=X'***racf return code***'; RACF REASON CODE=X'***racf reason code***', FOR RACROUTE REQUEST=***action***

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, a RACROUTE macro returned a non-zero return code. This message is only issued if intensive logging is turned on.

System response: XOSF processing continues.

User action: Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of these codes.

XDI7214E **SAF** *action status* **FOR USERID=***userid***, FOR (***job number***) (***job name***)**

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, a RACROUTE macro returned a non-zero return code.

System response: The document is requeued on hold and marked as unprintable by XPAF.

User action: See message XDI7215E for the SAF return code, the RACF return code, and the RACF reason code. Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of these codes.

XDI7215E **SAF RC=X'***saf return code***'; RACF RC=X'***racf return code***'; RACF REASON CODE=X'***racf reason code***', FOR RACROUTE REQUEST=***action***

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, a RACROUTE macro returned a non-zero return code.

System response: The document is requeued on hold and marked as unprintable by XPAF.

User action: Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of these codes.

XDI7216W **SAF REQUESTED FUNCTION BYPASSED FOR USERID=***userid***, FOR USERLIB='***userlib dataset name***'**

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, a RACROUTE REQUEST=AUTH macro returned an SAF return code of 4. This message is only issued if intensive logging is turned on.

System response: XOSF processing continues.

User action: See message XDI7213W for the SAF return code, the RACF return code, and the RACF reason code. Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of these codes.

XDI7217E **USERID=***userid* **IS NOT AUTHORIZED BY SAF TO ACCESS USERLIB='***userlib dataset name***'**

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, a RACROUTE REQUEST=AUTH macro returned an SAF return code greater than 4.

System response: The document is requeued on hold and marked as unprintable by XPAF.

User action: Verify that the user is authorized to access the dataset. See message XDI7215E for the SAF return code, the RACF return code, and the RACF reason code. Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of these codes.

XDI7218W **SAF REQUESTED FUNCTION BYPASSED FOR USERID=***userid***, FOR (***job number***) (***job name***)**

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, either a RACSTAT macro returned a non-zero return code or a RACROUTE REQUEST=VERIFY macro returned an SAF return code of 4. This message is only issued if intensive logging is turned on.

System response: XOSF processing continues.

User action: See message XDI7211W for the RACSTAT return code, or message XDI7213W for the SAF return code, the RACF return code, and the RACF reason code. Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of these codes.

XDI7219E **SAF REQUESTED FUNCTION FAILED FOR USERID=***userid***, FOR (***job number***) (***job name***)**

Explanation: XPAF attempted to perform a security authorization check for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, a RACROUTE REQUEST=VERIFY macro returned an SAF return code greater than 4.

System response: The document is requeued on hold and marked as unprintable by XPAF.

User action: See message XDI7215E for the SAF return code, the RACF return code, and the RACF reason code. Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of these codes.

XDI7220E (*job number*) (*job name*) **ENCOUNTERED A CATALOG ACCESS ERROR FOR USERLIB='***userlib dataset name***'**

Explanation: XPAF attempted to locate a USERLIB dataset for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, the LOCATE macro returned a non-zero return code.

System response: The document is requeued on hold and marked as unprintable by XPAF.

User action: Verify that the USERLIB dataset is cataloged. See message XDI7221E for the LOCATE return code. Refer to the IBM publication *z/OS/DFP System Programming Reference* for an explanation of these codes.

XDI7221E **CATALOG ACCESS RC=X'***return code***'**

Explanation: XPAF attempted to locate a USERLIB dataset for a job that either specified the USERLIB IBM JCL keyword on the OUTPUT statement or inserted a USERLIB dataset name via user exit 02. Also, the LOCATE macro returned a non-zero return code.

System response: The document is requeued on hold and marked as unprintable by XPAF.

User action: Verify that the USERLIB dataset is cataloged. See message XDI7220E for the dataset name. Refer to the IBM publication *z/OS/DFP System Programming Reference* for an explanation of the LOCATE return codes.

XDI7501E **LDM** *command* **ERROR. EC=X'***error code***'**

Explanation: During checkpoint or USERLIB processing, an error was detected trying to access one of the required PDS libraries.

System response: Document processing is terminated.

User action: Verify that the required libraries are allocated and available to XPAF. If you believe you are receiving this message in error, call Xerox Technical Support.

XDI7503I **DATASET REPOSITIONING IN PROGESS.** *activity* **REQUEST IGNORED**

Explanation: A spacing request was received before a previous spacing request completed. *Activity* indicates a JES command to forward space or backspace a document.

System response: Request is ignored.

User action: Verify that the previous spacing request has completed, then reinitiate the JES command.

XDI7504E **COMSSID=***subsystem id* **SPECIFIES AN INVALID SUBSYSTEM NAME**

Explanation: The subsystem name was not found in the subsystem name table.

System response: XPAF terminates.

User action: Change the COMSSID= in XINPARMS to an existing subsystem, or, add the subsystem name to the subsystem name table.

XDS messages

XDS1000I SUBSYSTEM ACTIVE

Explanation: The XDS subsystem is active and ready to process print data from batch jobs or started tasks and to check the syntax of JCL submitted to JES that specifies the XDS subsystem name in the SUBSYS DD parameter.

System response: A start command is issued for the XOSF subsystem that is associated with XDS.

User action: Jobs specifying the XDS subsystem can be submitted to JES. After the XOSF FSS connect message is issued, XDS jobs can be executed.

XDS1001I SUBSYSTEM INACTIVE

Explanation: The XDS subsystem has terminated.

System response: None.

User action: Do not submit any jobs that specify the XDS subsystem.

User action: If there are jobs already submitted that specify the XDS subsystem, place them on hold until the XDS subsystem is restarted.

XDS1002E SUBSYSTEM INITIALIZATION ABENDED

Explanation: An abend occurred while XDS was initializing the subsystem interface.

System response: All common storage areas are freed. XDS is not initialized.

User action: Call Xerox Technical Support.

XDS1003E *module name* **STORAGE FOR REENTRANT WORK AREA UNAVAILABLE**

Explanation: Insufficient virtual storage was available to XDS in the private region.

System response: The XDS function being performed is terminated.

User action: Increase the region parameter on the EXEC statement of the JCL for the batch job or started task that issued the message. After increasing the region size, resubmit the print job.

User action: If the error occurred during XDS or XOSF initialization, follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*. If the problem persists, call Xerox Technical Support.

XDS1004E STORAGE FOR SSVT UNAVAILABLE

Explanation: Insufficient CSA virtual storage was available to XDS below the 16M line. Either CSA fragmentation occurred or the size of the CSA is insufficient for the number of tasks being run.

System response: XDS initialization is terminated. XOSF is not started.

User action: If the CSA is not fragmented, increase the CSA size as defined by the CSA parameter in SYS1.PARMLIB(IEASYS*xx*). IPL the system.

For additional information on defining CSA size, refer to the *z/OS Initialization and Tuning Reference*.

XDS1005E *module name* **ERROR DURING LOAD SSI/FSI FUNCTION ROUTINES**

Explanation: XDS was unable to locate all the required XDS load modules in the z/OS link list.

System response: For SSI routines, the XDS subsystem initialization is terminated. XOSF is not started. For FSI routines, XOSF initialization is terminated.

User action: Terminate XOSF by issuing one of these commands:

SYSTEM SHUTDOWN
STOP *xdsname*

Ensure all XDS load modules have been installed correctly in the z/OS link list. If maintenance has been applied recently, ensure that the z/OS link list address space has been refreshed. Issue the START *xdsstart* command to restart XDS, where *xdsstart* is the name of the XDS start-up proc in your JES-controlled PROCLIB.

XDS1006E STORAGE FOR SSI FUNCTION ROUTINES UNAVAILABLE

Explanation: Insufficient CSA virtual storage was available to XDS below and above the 16M line. Either CSA fragmentation occurred or the size of the CSA is insufficient for the number of tasks being run.

System response: XDS initialization is terminated. XOSF is not started.

User action: If the CSA is not fragmented, increase the CSA size as defined by the CSA parameter in SYS1.PARMLIB(IEASYS*xx*). IPL the system.

For additional information on defining CSA size, refer to *z/OS Initialization and Tuning Reference*.

XDS1007E ERROR STARTING SUBSYSTEM ADDRESS SPACE

Explanation: z/OS was unable to process the START command for XOSF.

System response: XDS subsystem initialization is terminated. XOSF is not started.

User action: Call Xerox Technical Support.

XDS1008E *module name* **ESTAE ERROR**

Explanation: XDS was unable to establish an ESTAE abend recovery exit.

System response: The XDS function being performed is terminated.

User action: Call Xerox Technical Support.

XDS1009E *module name* **SUBSYSTEM FUNCTION ROUTINE ABENDED**

Explanation: An abend occurred while XDS was performing a subsystem function.

System response: XDS recovers and attempts to clean up the SSI or FSI environment. For modules with names beginning with XDSFN or XDSSS, the print application running as an XDS batch job or started task is terminated with an error. For module names beginning with XDSFA or XDSFS, XOSF is terminated.

User action: For modules names beginning with XDSFA or XDSFS, follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*. If the problem persists, call Xerox Technical Support.

XDS1010E **SUBSYSTEM ADDRESS SPACE NOT ACTIVE**

Explanation: An FSI order was issued to XOSF or an XOSF command was issued using the XDS subsystem command character. The XOSF address space has terminated after the command or order was issued but before the request could be completed.

System response: The response differs by type of request:

- For commands, the command is ignored.
- For FSI disconnect orders, processing continues.
- For all other FSI orders, the print application running as a XDS batch job or started task is terminated with an error.

User action: Check the XOSF log for error messages and follow the action documented in the XOSF message.

XDS1011E *module name* **SUBSYSTEM ROUTINE ABENDED** *abend code*

Explanation: An abend occurred while XDS was performing a subsystem function.

System response: The XDS print application running as a batch job or started task is terminated with an error.

User action: Call Xerox Technical Support.

XDS1012E INVALID SUBSYSTEM PARMS FOR FUNCTION *subsystem function number*

Explanation: A subsystem request that specified invalid input parameters was issued to XDS.

System response: The response differs by function number:

- For functions 6, 7, and 16, the print application running as an XDS batch job or started task abends with an S013.
- For function 17, the print application running as an XDS batch job or started task abends with an S014.
- For function 38, the print application running as an XDS batch job or started task is terminated with a JCL error.
- For function 53 from XOSF at FSS initialization, XOSF processing is terminated.
- For function 53 from XOSF at printer initialization, the print application running as an XDS batch job or started task is terminated with an error.
- For function 255, an XDS command was issued by the operator. The command is ignored.

User action: The action differs by function number:

- For function 53 from XOSF at FSS initialization, follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*. If the problem persists, call Xerox Technical Support.
- For all functions, including function 53, call Xerox Technical Support.

XDS1013E FSI CALLER NOT AUTHORIZED

Explanation: XDS has received a request from XOSF, but XOSF is not APF-authorized.

System response: The request from XOSF is not processed. The XDS print application running as an XDS batch job or started task is terminated with an error.

User action: Verify that the XOSF load library name and volume serial number are correct in SYS1.PARMLIB(IEAAPF*xx*). Correct as necessary. If you made changes to SYS1.PARMLIB(IEAAPF*xx*), IPL the system. If the problem persists, call Xerox Technical Support.

XDS1014E FSS ALREADY ACTIVE

Explanation: An attempt to restart the XDS subsystem was made before the XOSF connected to a previously active XDS subsystem completed termination processing.

System response: XOSF is not restarted. The XDS subsystem is not initialized properly.

User action: Terminate XOSF. XOSF will perform its own recovery if the XOSF ESTAE initialization parameter specifies Y. Stop XDS. After XOSF recovery is complete, restart XDS. Refer to the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*.

XDS1015E STORAGE FOR FSI VECTOR TABLE UNAVAILABLE

Explanation: Insufficient virtual storage was available to XDS in the XOSF address space private region.

System response: XOSF is not started. The XDS subsystem is not initialized properly.

User action: Terminate XOSF. XOSF will perform its own recovery if the XOSF ESTAE initialization parameter specifies Y. Stop XDS. Increase the region parameter on the EXEC statement in the XOSF start-up proc or increase the value for the XOSF XCORE initialization parameter. After XOSF recovery is complete, restart XDS.

XDS1016E LINKAGE INDEX ERROR

Explanation: XDS was unable to obtain a cross memory linkage index.

System response: XOSF is not started. The XDS subsystem is not properly initialized.

User action: Terminate XOSF. XOSF will perform its own recovery if the XOSF ESTAE initialization parameter specifies Y. Stop XDS. Call Xerox Technical Support.

XDS1017E ERROR DURING LOAD FSI X-MEM ROUTINES

Explanation: XDS was unable to locate the functional subsystem cross memory Program Call (PC) instruction program.

System response: XOSF is not started. The XDS subsystem is not properly initialized.

User action: Terminate XOSF by issuing one of these commands:

SYSTEM SHUTDOWN
STOP *xdsname*

Ensure all XDS load modules have been installed correctly in the z/OS link list. If maintenance has been applied recently, ensure that the z/OS link list address space has been refreshed. Issue the START *xdsstart* command to restart XDS, where *xdsstart* is the name of the XDS start-up proc in your JES-controlled PROCLIB.

XDS1018E ENTRY TABLE ERROR

Explanation: XDS was unable to create an entry in the cross memory entry table.

System response: XOSF is not started. The XDS subsystem is not initialized properly.

User action: Terminate XOSF. XOSF will perform its own recovery if the XOSF ESTAE initialization parameter specifies Y. Stop XDS. Call Xerox Technical Support.

XDS1019E AUTHORITY INDEX ERROR

Explanation: XDS was unable to extract the XOSF authority index, or was unable to create a new cross memory authority index.

System response: XOSF is not started. The XDS subsystem is not initialized properly.

User action: Terminate XOSF. XOSF will perform its own recovery if the XOSF ESTAE initialization parameter specifies Y. Stop XDS. Call Xerox Technical Support.

XDS1020E INVALID COMMAND

Explanation: An XDS operator command was entered with an invalid or unrecognized command verb.

System response: The command is ignored.

User action: Reenter the command with the correct verb.

XDS1021E SUBSYSTEM INITIALIZATION FAILED

Explanation: The input parameters on the EXEC statement of the XDSSTART start-up proc are invalid.

System response: The XOSF START command is not issued.

Correct the input parameters on the EXEC statement. For more information, refer to *Section Two: Installing and Customizing XPAF*.

XDS1030E *module name* **FUNCTIONAL SUBSYSTEM ROUTINE ABENDED**

Explanation: An abend occurred while XDS was executing in the XOSF address space.

System response: For an FSS level error, XOSF is terminated.

For a printer task error, the print application running as an XDS batch job or started task is terminated with an error.

User action: For an FSS level error, follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*.

For an FSS level or printer task error, call Xerox Technical Support.

XDS1031A SET UP *printer name* **WITH** *form name* **FORMS FOR JOB** *job name*

Explanation: A notification of a change in forms was requested by the SETUP initialization or printer profile parameter.

System response: Printing is suspended by XOSF awaiting operator action. The print application running as an XDS batch job or started task also waits.

User action: Load the printer with the requested forms. Restart the printer by issuing the START PRT*nnnn* command.

XDS1050E UNKNOWN FSI FUNCTION

Explanation: XOSF sent the XDS subsystem an undefined or unrecognized FSI request.

System response: The request is ignored.

User action: Call Xerox Technical Support.

XDS1051E *module name* **INVALID PRINTER NAME**

Explanation: The printer name specified in the SUBSYS parameter of the print dataset DD statement is not between one and eight characters in length or does not start with an alphanumeric character.

System response: The print application running as an XDS batch job or started task is terminated with a JCL error.

User action: Correct the spelling of the printer name and resubmit the job.

XDS1052E *module name* **EXCESSIVE SUBSYSTEM PARAMETERS**

Explanation: More parameters were specified on the SUBSYS parameter of the print dataset DD statement than the XDS subsystem supports.

System response: The print application running as an XDS batch job or started task is terminated with a JCL error.

User action: Remove the extraneous parameters from the SUBSYS parameter of the print dataset DD statement and resubmit the job.

XDS1053E *module name* **MISSING SUBSYSTEM PARM**

Explanation: The printer name for the XDS job was not found on the SUBSYS parameter of the print dataset DD statement.

System response: The print application running as an XDS batch job or started task is terminated with a JCL error.

User action: Specify the printer name for the XDS job on the SUBSYS parameter of the print dataset DD statement and resubmit the job.

XDS1054E *module name* **INVALID SEP KEYWORD**

Explanation: The operand of the SEP keyword on the SUBSYS parameter of the print dataset DD statement is omitted or invalid.

System response: The print application running as an XDS batch job or started task is terminated with a JCL error.

User action: Correct the SEP operand and resubmit the job. Refer to the valid values and their descriptions as documented in *Section Four: Printing Documents with XPAF*.

XDS1055E **UNSUPPORTED SUBSYSTEM FUNCTION** *function number*

Explanation: The XDS subsystem received a subsystem request that is not supported by XDS.

System response: The request is not processed. An error return code is sent to the requester in the SSOB. The print application running as an XDS batch job or started task is terminated.

User action: Call Xerox Technical Support.

XDS1056E *module name* **INVALID SUBSYSTEM PARMS**

Explanation: The XDS subsystem received a subsystem request that had invalid input parameters or required input parameters that could not be located.

System response: The request is not processed. An error return code is sent to the requester in the SSOB.

The print application running as an XDS batch job or started task is terminated.

User action: Call Xerox Technical Support.

XDS1057E *module name* **FSI ENVIRONMENT ERROR**

Explanation: While processing a subsystem request for a batch job or started task that specified the XDS subsystem, one of these errors occurred:

- The XOSF address space was not running.
- XOSF had an error that prevented it from communicating further with the XDS subsystem.
- The XOSF printer task was terminating.
- The XOSF FSS was terminating.

System response: The print application running as an XDS batch job or started task is terminated.

User action: Check the XOSF log for error messages and follow the actions documented in the XOSF messages.

XDS1058E *module name* **ERROR LOADING SS SERVICE ROUTINE**

Explanation: XDS was unable to locate all the required XDS SSI support load modules in the z/OS link list.

System response: The print application running as an XDS batch job or started task is terminated.

User action: Ensure all XDS load modules have been correctly installed in the z/OS link list.

If XDS maintenance has been applied recently, ensure that the z/OS link list has been refreshed.

Resubmit the job.

XDS1059E *module name* **CROSS MEMORY ERROR**

Explanation: XDS encountered an error in establishing cross memory communication from the batch job or started task that specified the XDS subsystem in the XOSF address space.

System response: The print application running as an XDS batch job or started task is terminated.

User action: Call Xerox Technical Support.

XDS1060E **INVALID DD REQUEST PARMS**

Explanation: During allocation processing for the batch job or started task specifying the XDS subsystem, either the DD name was omitted, or required input parameters from z/OS allocation could not be located.

System response: The print application running as an XDS batch job or started task is terminated with a JCL error.

User action: Ensure the DD statement for the job contains a DD name. Resubmit the job. If the DD statement contains a valid DD name, call Xerox Technical Support.

XDS1061E *printer name* **ALLOCATED TO ANOTHER FSA**

Explanation: The print application running as an XDS batch job or started task specified a printer that is already in use by another XDS application.

System response: The print application running as an XDS batch job or started task is terminated with a JCL error.

User action: Schedule the job to run when the specified printer is free. Resubmit the job.

XDS1062A **JOB** *job name* **WAITING ON** *fss name* **FSS. REPLY WAIT OR CANCEL**

Explanation: The print application running as a batch job or started task has been waiting for a response from XOSF for over three minutes.

System response: The print application running as a batch job or started task waits for a reply from the operator.

User action: To continue to wait for XOSF to respond, enter **WAIT** or **W**. If XOSF does not respond within another three minutes, this message is repeated.

To terminate the print application running as an XDS batch job or started task, enter **CANCEL** or **C**.

XDS1063W **INVALID REPLY**

Explanation: The operator responded to message XDS1062A with an unrecognized reply.

System response: Message XDS1062A is reissued.

User action: Reply with one of the values in the User action description of message XDS1062A.

XDS1064E MAXIMUM NUMBER OF FSAS EXCEEDED

Explanation: An attempt was made by a single XDS subsystem to start more than 24 XDS jobs concurrently.

System response: The print application running as an XDS batch job or started task is terminated with a JCL error.

User action: There are two options:

- For each XDS subsystem, define 24 or fewer printer definitions in its associated XOSF.
- Schedule XDS jobs so that no more that 24 run at any one time.

XDS1065E START FSA ERROR FOR *printer name*

Explanation: XOSF was unable to start an FSA task for the printer.

System response: The print application running as an XDS batch job or started task is terminated with a JCL error.

User action: Check the XOSF log for error messages and follow the action documented for the message(s).

XDS1066E TIMER ERROR

Explanation: XDS encountered an z/OS timer services error while performing cross memory printer allocation, cross memory printer close, cross memory printer deallocation, or printer setup.

System response: The print application running as an XDS batch job or started task is terminated. The status of XOSF is unpredictable.

User action: Stop XOSF and XDS. Call Xerox Technical Support.

XDS1067E MISSING RECORD LENGTH

Explanation: The LRECL value was not specified for the dataset to be printed. This error was detected during dataset OPEN processing.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: Be sure the LRECL value is specified in one of these places:

- The DCB parameter in the DD statement
- The DCB or ACB macro within the print application program

XDS1068E INVALID BLOCK SIZE

Explanation: An invalid block size was found at dataset OPEN in the DCB or ACB.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: A correct block size for the DCB or ACB is an even multiple of LRECL for Fixed Block format or at least four bytes larger than LRECL for Variable Block format.

Correct the block size in these places:

- The DCB parameter in the DD statement
- The DCB or ACB macro within the print application program

XDS1069E INVALID DATASET ORGANIZATION

Explanation: For the print application running as an XDS started task or batch job, an unsupported dataset organization was found at dataset OPEN. XDS supports only BSAM and QSAM access methods. The dataset organization must be PS.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: Specify PS for the dataset organization in these places:

- The DCB parameter in the DD statement
- The DCB or ACB macro within the print application program

XDS1070E INVALID RECORD FORMAT

Explanation: An unsupported record format was found at dataset OPEN in the DCB or ACB for the print application running as an XDS batch job or started task. XDS supports these formats: Fixed, Fixed Block, Variable, and Variable Block. XDS does not support Undefined and Variable Block Spanned formats.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: Specify a record format supported by XDS in these places:

- The DCB parameter in the DD statement
- The DCB or ACB macro within the print application program

XDS1071E GETMAIN FAILED FOR SAMSI WORK AREA

Explanation: Insufficient private region virtual storage was available to XDS below the 16M line.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: Increase the value specified for the REGION parameter on the EXEC statement of the print application JCL for the batch job or started task. After increasing the region size, resubmit the job.

XDS1072E FSA ERROR

Explanation: An error occurred in the XOSF FSA task or elsewhere in XOSF. This occurred after the XDS subsystem successfully connected to the XOSF FSA at allocation time but before dataset OPEN in the print application running as an XDS batch job or started task.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: Check the XOSF log for error messages and follow the action documented in the XOSF messages.

XDS1073E FSA SHUTDOWN IN PROGRESS

Explanation: The XOSF printer task was:

- Interrupted by the operator
- Terminated due to an XOSF error

This occurred after the XDS subsystem successfully connected to the XOSF FSA at allocation time, but before dataset OPEN occurred in the batch job or started task that specified the XDS subsystem.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: If the printer task was interrupted by the operator, follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*. After XDS is restarted, resubmit the job.

XDS1074E FSA GDS PROCESSING SEQUENCE ERROR

Explanation: The XOSF printer task issued two consecutive FSA GET DATASET requests without an intervening RELEASE DATASET request.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: Call Xerox Technical Support.

XDS1075 DAMAGED SYSTEM CLOCK

Explanation: XDS encountered a system clock hardware error while performing dataset OPEN for a batch job or started task that specified the XDS subsystem.

System response: The batch job or started task specifying the XDS subsystem is terminated with an S013 abend.

User action: Correct the system clock error. Resubmit the job.

XDS1076E XDSSSPUT SAMSI PUT ROUTINE ABENDED *abend code*

Explanation: An abend occurred while XDS was performing a QSAM PUT or BSAM WRITE request. XDS was able to perform cleanup for the SSI.

System response: The print application running as a batch job or started task is terminated with an S001 abend.

User action: Call Xerox Technical Support.

XDS1077E SJF ERROR REASON CODE *return code*

Explanation: An error occurred processing OUTPUT JCL statements for the print application running as an XDS batch job or started task.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: If the DD statement containing the SUBSYS parameter also refers to any XPAF extended JCL, be sure XPAFJCL has been installed successfully on the system.

If XOSF maintenance has been applied for XPAF extended JCL support, be sure the corresponding maintenance to XDS has also been applied and the z/OS link list has been refreshed. Resubmit the job. If the error persists, call Xerox Technical Support.

XDS1078E OUTPUT JCL KEYWORDS EXCEED TU TABLE SIZE

Explanation: The sum of the lengths of all OUTPUT statement parameter operands contained in the DD statement for the XDS print job is larger than the maximum XDS supports.

System response: The print application running as an XDS batch job or started task is terminated with an S013 abend.

User action: If XOSF maintenance has been applied for XPAF extended JCL support, be sure the corresponding maintenance to XDS has been applied and the z/OS link list has been refreshed. Remove unnecessary or redundant OUTPUT statement parameters or use abbreviations for the parameter operands. Resubmit the job.

If the length of the OUTPUT statement cannot be reduced, call Xerox Technical Support.

XDS1080E AN ERROR OCCURRED IN XOSF, DOCUMENT ABORTED

Explanation: An exception error has occurred in XOSF.

System response: The print application running as an XDS batch job or started task is terminated with a non-zero return code.

User action: Check the XOSF log and/or the system log to determine what caused the document to terminate. Correct the error, then resubmit the job.

XDS1081E NO EXLST ADDRESS PROVIDED BY USER

Explanation: The user specified the DCB EXLST parameter and coded EXLST code X'09' on the EXLST parameter list in the print application indicating XOSF low-level message handling via an exit routine, but the address of this routine was never loaded into the EXLST parameter list.

System response: Processing continues, and the low-level XOSF message is passed back to the print application via WTO.

User action: Verify that the message exit routine address is loaded into the EXLST parameter list. Reassemble and link the user print application, and rerun the job.

XDS1090W SUBSYSTEM NOT DEFINED

Explanation: An attempt was made to terminate an XDS subsystem that had not been defined to z/OS.

System response: The request is ignored.

User action: Be sure the parameter on the EXEC statement of the XDSSTOP proc specifies the correct XDS subsystem name.

XDS1091W SUBSYSTEM STORAGE NOT FREED

Explanation: Freemain errors occurred during XDS subsystem termination.

System response: The XDS subsystem control blocks and/or load modules are not freed from CSA SUBPOOL 241. XDS subsystem termination continues.

User action: If this problem persists, schedule an IPL before CSA becomes exhausted or too fragmented. Call Xerox Technical Support.

XDS1092E MSTR SUBSYSTEM COMMUNICATION ERROR. RC=*return code*

Explanation: The master subsystem encountered an error verifying the existence of the XDS subsystem during XDS subsystem termination.

System response: The XDS subsystem is not terminated.

User action: Call Xerox Technical Support.

XDS1093E SUBSYSTEM TERMINATION ABENDED

Explanation: A recoverable abend occurred during XDS subsystem termination.

System response: The XDS subsystem is not terminated.

User action: Follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*. If the problem persists, call Xerox Technical Support.

XDS1094E FSA STILL ACTIVE

Explanation: The operator attempted to stop XOSF while an XOSF printer task was still processing a print application running as an XDS batch job or started task.

System response: The XDS subsystem is not terminated. XOSF termination continues.

User action: Follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*. Check the XOSF log for error messages and follow the user action documented for the message(s). Call Xerox Technical Support.

XDS1095E FSS STILL ACTIVE

Explanation: The operator attempted to stop XOSF while the FSS was actively processing another XDS subsystem request.

System response: The XDS subsystem is not terminated.

User action: Follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*. Ensure that there is no outstanding XDS activity before stopping XOSF.

XDS1096E FSS ALREADY DISCONNECTED

Explanation: The operator attempted to terminate XOSF a second time after the first termination attempt successfully disconnected the FSS from the XDS subsystem, but before the XDS subsystem terminated and/or the XOSF address space ended.

System response: The XOSF FSS is not disconnected. The XDS subsystem is not terminated.

User action: Follow the XDS recovery procedures documented in *Section Four: Printing Documents with XPAF*.

XDS1097E NOT FULL FUNCTION XDS SUBSYSTEM

Explanation: The operator attempted to terminate an XDS subsystem subset, which only checks JCL syntax.

System response: The XDS subsystem subset is not terminated.

User action: To terminate the XDS subsystem subset, IPL z/OS.

XDS1098I *control block name*

Explanation: The DISPLAY XDS command, which displays XDS control blocks, was entered. This message identifies the control block whose contents follow in message XDS1099I. This message is repeated for each control block displayed.

System response: None.

User action: None required.

XDS1099I *beginning address storage word storage word storage word storage word character representation*

Explanation: The DISPLAY XDS command, which displays XDS control blocks, was entered. This message displays four words of storage contained in the control block identified in the preceding XDS1098I message. The message is repeated as many times as required to display the entire control block. If the control block is not an even multiple of four words, the final display line will contain all zeros to the right of the last byte of the control block.

System response: None.

User action: None required.

XEI messages

XEI0001I **UNABLE TO RELEASE STORAGE DURING XPAF SHUTDOWN WHILE PROCESSING MODULE XEISUFF**

OR

UNABLE TO RELEASE LDM COMMON STORAGE WHILE PROCESSING MODULE XEISUFF

Explanation: This is an internal error.

System response: Document processing continues.

User action: None required. If the problem persists, call Xerox Technical Support.

XEI2601I **SWITCHING XLOG FROM** *xlog dataset name* **TO** *alog dataset name*

Explanation: XOSF was writing to or closing the XOSF log dataset and encountered a D37 abend. You specified an alternate XOSF log dataset and ESTAE recovery.

System response: XOSF stops logging to the XLOG and continues logging operations using the alternate log.

User action: Print and clear the XLOG dataset.

XEI2602W **ERROR DURING XLOG I/O OPERATIONS. XLOG FUNCTION DISABLED**

Explanation: XOSF was attempting to switch from the current log to the alternate log due to an out-of-space condition on the current log. However, it encountered one of these conditions:

- An out-of-space condition also existed on the alternate log.
- There was an I/O error on the alternate log.
- XOSF could not locate the alternate log.

System response: All logging to the current log and alternate log is terminated.

User action: Print and clear the alternate and/or current log datasets, then issue the SET XOSF LOGGING ON command to restart logging.

XEI3010F **COULD NOT GET X'***value***' BYTES OF MEMORY OBTAIN STORAGE REQUEST**

Explanation: A GETMAIN request could not allocate storage above the 16M line. XOSF attempted to acquire an additional storage area and space was not available. This condition is most likely to occur when many printers are processing jobs containing forms. This message is written only on the z/OS log.

System response: Processing is terminated, and the job is requeued.

User action: If the problem persists, increase the value specified for the REGION parameter on the XOSF start-up proc to a value that allows at least 8M additional above-the-line storage.

XEI3011E **COULD NOT RELEASE X'***amount***' BYTES OF MEMORY FROM LOCATION X'***address***'** *activity*

Explanation: This is an internal error.

System response: Document processing continues.

User action: None required. If the problem persists, call Xerox Technical Support.

XEI3301F **SUPPORT MODULE NAME INVALID IN XEILOAD, XOSF ABORTED. RC=X'***return code***'**

Explanation: XOSF attempted to load all XEI support modules and was unable to locate at least one of them.

System response: Processing is terminated.

User action: Review the XPAF installation or maintenance jobs to verify that no errors occurred for XEILOAD or any other XEI-prefixed load modules. If you find no errors, call Xerox Technical Support.

XEI3302W **LOG DATASET NOT EMPTY, UNABLE TO SWITCH TO DSNAME=***dataset name*

Explanation: An unsuccessful attempt was made to switch to the named dataset when it was not empty. This warning message will be produced if one of these conditions occurs:

- The currently active log is full, and automatic switching from an SD37 abend is attempted to a dataset that is not empty.
- You issue the SWITCH XLOG command to manually switch to a dataset that is not empty.

System response: Processing continues, but the log datasets are not switched.

User action: Clear the desired dataset either by using the ISPF editor to delete all of the contents, by running a batch job using IEBGENER to print and clear the log dataset, or by deleting and redefining the log dataset.

XEI3303W PRIMARY AND ALTERNATE LOG DATASETS FULL. LOGGING HAS BEEN DISABLED TO BOTH LOGS

Explanation: An unsuccessful attempt was made to switch datasets when both the primary and alternate logs were full. This warning message will be produced if one of these conditions occur:

- The currently active log is full, and automatic switching from an SD37 abend is attempted when both the primary and alternate log datasets are full.
- You issue the SWITCH XLOG command to manually switch the log datasets when both the primary and alternate log datasets are full.

System response: Processing continues, but logging to both the primary and the alternate log datasets is disabled.

User action: Clear the log datasets to restart logging either by using the ISPF editor to delete all of the contents, by running a batch job using IEBGENER to print and clear the log dataset, or by deleting and redefining the log datasets.

- For XOAF, exit XOAF, clear the logs, and reenter XOAF.
- For XOSF, after the logs are cleared, issue the SET XOSF LOG ON command to restart logging.

XEI3304E LOGGING DISABLED. UNABLE TO ALLOCATE LOG DSNAME=*dataset name*

Explanation: An unsuccessful attempt was made to dynamically allocate the named log dataset.

System response: Processing continues, but logging is disabled.

User action: Verify that the log dataset name is correct and cataloged. Also, verify that no exclusive enqueues are held against the log dataset by another task, such as IEBGENER, ISPF EDIT, or TSO. Then, retry the last request that caused this message to be issued.

- For XOAF, exit XOAF, then reenter XOAF.
- For XOSF, you may have to issue the SET XOSF LOG ON command to restart logging to the dataset.

XEI3305E UNABLE TO OPEN LOG. RC=X'*return code***', DSNAME=***dataset name*

Explanation: An unsuccessful attempt was made to open the named log dataset.

System response: Processing continues, but logging is disabled.

User action: Look up the specified return code for the z/OS OPEN macro in the appropriate IBM manual to determine the cause of the failure. When the problem is corrected, retry the request. If you need further assistance, call Xerox Technical Support.

- For XOAF, exit XOAF, then reenter XOAF.
- For XOSF, you may have to issue the SET XOSF LOG ON command to restart logging to the dataset.

XEI3306E **LOGGING DISABLED. I/O ERROR OCCURRED ON LOG DSNAME=***dataset name*

Explanation: The named log dataset has been corrupted and cannot be used in its current state. An I/O error was encountered when the BSAM CHECK macro was issued. The I/O error may have occurred when a batch job using IEBGENER was run to clear the named log dataset while XPAF had it open for OUTPUT EXTEND. This happened because XPAF allocates the log dataset with a DISP=SHR which allows browse or read access to the log data while XOAF or XOSF is active.

System response: Processing continues, but logging is disabled.

User action: Recover the log dataset using one of these methods:

- If you are using the ISPF editor, edit the named log dataset and add one character to the first line. Save the dataset, then reedit it and delete the first record. Save the dataset again.
- If you are redefining the log dataset, run a batch job using IEBGENER to delete and define the named log dataset or use ISPF option 3.2 to delete and define the named log dataset.

For XOAF, exit XOAF, then reenter XOAF.

For XOSF, issue the SET XOSF LOG ON command to start logging again.

XEI3307E *reqtype sssssssss* **BYTES SP** *ppp location* **16M FAILED. RC=X'xxxxxxxx'**

Explanation: A GETMAIN request was issued for ssssssss bytes from subpool ppp and storage was not available to satisfy the request. Reqtype will be GETMAIN or OBTAIN and location will be either ABOVE or BELOW. The RC (xxxxxxxx) indicates the return code from the OBTAIN or GETMAIN request.

System response: Message XEI3308I will follow this message, identifying the calling program. The return code will be passed back to the calling program and that program may issue additional messages and will determine further actions to be taken.

User action: Insure the REGION size in the XOSF start-up PROC is set to at least 6M. You may need to set it to 0M to insure the maximum amount of storage is available to the address space. Restart XOSF to eliminate any possible storage fragmentation that may exist. If the problem persists, call Xerox Technical Support.

XEI3308I **CALLING MODULE (***load module name***). EP=***entry point value***, OFFSET=***offset value*

Explanation: This message identifies the module that issued the request and follows one of these messages:

- XEI3307E for a GETMAIN request error
- XEI3309W, XEI3311E, or XEI3315W for a FREEMAIN error
- XEI3317W for a storage chaining error

If message XEI3010F is not displayed on the z/OS console, the storage request was for storage below the 16M line.

System response: See the subsequent message from the calling module to determine the system response. For message XEI3317W, processing continues.

User action: See the user action for the subsequent message and also the user action for XEI3307E, XEI3309W, XEI3311E, XEI3315W, or XEI3317W.

XEI3309W UNABLE TO FREE STORAGE AT *nnnnnnnn*

Explanation: A FREEMAIN request failed.

System response: The storage is not freed. Message XEI3308I identifies the module that initiated the FREEMAIN request.

User action: See the user action for the subsequent message from the calling module. If the condition persists, stop XOSF and then restart it. If the condition persists after restarting XOSF, call Xerox Technical Support.

XEI3310P PARTIAL PUTMNE ISSUED *address***. PUTMNE IGNORED**

Explanation: A FREEMAIN request was issued for an amount of storage that was less than the amount GETMAINed.

System response: The storage is not freed.

User action: If the problem persists, call Xerox Technical Support.

XEI3311E STORAGE VIOLATION DETECTED *address*

Explanation: A FREEMAIN request resulted in a storage violation.

System response: XPAF attempts to recover and issues message XEI3312I. Message XEI3308I identifies the module that initiated the FREEMAIN request.

User action: If the problem persists, call Xerox Technical Support.

XEI3312I STORAGE VIOLATION RECOVERY IN PROGRESS

Explanation: A storage violation occurred during the processing of a FREEMAIN request. See messages XEI3308I and XEI3311E for more information.

System response: XPAF attempts to recover.

User action: See the user action for message XEI3313I or XEI3314W.

XEI3313I STORAGE VIOLATION RECOVERY SUCCESSFUL

Explanation: XPAF was able to recover after encountering a storage violation. This error occurred while processing a FREEMAIN request.

System response: Processing continues.

User action: None required.

XEI3314W STORAGE VIOLATION RECOVERY FAILED

Explanation: While processing a FREEMAIN request, XOSF was unable to recover from a storage violation it encountered.

System response: The storage is not freed. Message XEI3308I identifies the module that issued the FREEMAIN request.

User action: See the user action for the subsequent message from the calling module. If the problem persists, call Xerox Technical Support.

XEI3315W POSSIBLE STORAGE VIOLATION *address*

Explanation: While processing a FREEMAIN request, XPAF encountered a corrupted storage chain.

System response: The corrupted storage block is removed from the storage chain. Message XEI3308I identifies the module that issued the FREEMAIN request.

User action: If the problem persists, call Xerox Technical Support.

XEI3316W INVALID XSTCB ADDRESS RECEIVED BY XEIEEXIT

Explanation: An abend occurred, and you specified recovery with the ESTAE=Y initialization parameter. XPAF was unable to continue due to an invalid XSTCB.

System response: Retry processing is not attempted. The abend is processed by z/OS RTM.

User action: Call Xerox Technical Support.

XEI3317W FSSB CHAIN ERROR DETECTED

Explanation: While processing a GETMAIN request, an invalid FSSB entry was encountered in the FSSB chain.

System response: A diagnostic SNAP dump with dump title ID=055 is taken. The FSSB chain is rewritten terminating at the last valid FSSB. GETMAIN processing continues. A virtual storage block of unknown size has been lost. Other printer tasks will continue processing.

User action: Schedule a restart of the address space as soon as possible. If the failing task is a printer task and it terminates, issue a JES start command to continue processing. Print the SNAP dump. Forward all SNAP dumps with ID=055 to Xerox Technical Support. Refer to your SNAPCLAS initialization parameter for the SNAP dump SYSOUT class.

XEI3318W FSSB ERROR SNAP DUMP FAILED. RC=*return code*

Explanation: This is an internal error in XEIFSNAP. The return code is from the FSSB diagnostic SNAP dump module XEISNAP, and its value may range from 1 to 255.

System response: The SNAP dump is bypassed or may be incomplete. Processing continues as documented in message XEI3317W.

User action: Forward the message text and any partial dump with SNAP dump ID=055 to Xerox Technical Support. See the action documented in message XEI3317W.

XEI3319E *abend code* **ABEND IN** *xei module*

Explanation: An abend occurred during XEI processing.

System response: Processing for the XEI function ends; other tasks continue processing.

User action: Call Xerox Technical Support.

XEI3327F ERROR IN LOADING XEIRTM AS THE RESOURCE MANAGER. RC=X'*return code***'**

Explanation: The XEIRTM module was not found in the system when the z/OS LOAD macro was issued.

System response: XOSF processing is terminated.

User action: Be sure the XEIRTM module is available in the normal z/OS load module search order. If it is, call Xerox Technical Support.

XEI3328F UNABLE TO *activity* **STORAGE FOR THE XCSA. RC=X'***return code***'**

Explanation: XOSF was unable to acquire or release storage for the XCSA control block.

System response: If storage was being acquired, XOSF is terminated. If storage was being released, XOSF continues processing.

User action: Call Xerox Technical Support.

XEI3329F UNABLE TO *activity* **THE RESOURCE MANAGER. RC=X'***return code***'**

Explanation: XOSF was unable to create or delete the XPAF resource manager.

System response: This process initiates recovery for abnormal address space termination to clean up common resources.

If the resource manager was being created, XOSF processing is terminated. If the resource manager was being deleted, XOSF processing continues; approximately 48 bytes of common storage remains allocated by z/OS for the undeleted resource manager.

User action: Call Xerox Technical Support.

XEI3335I FSA DISCONNECTING FOR DEVICE (*printer name***)**

Explanation: The FSA disconnects for this printer.

System response: The FSA is terminated.

User action: None required.

XEI3336I FSA STILL ACTIVE FOR DEVICE *device name*

Explanation: The FSA encountered an error disconnecting from JES while processing a TERMINATE TASK command for a printer task.

System response: The subtask is terminated. The JES status of the printer is unpredictable.

User action: Try to restart XOSF. If the problem persists, call Xerox Technical Support.

XEI3337I FSA DEVICE *device name* **CANCELED**

Explanation: A TERMINATE TASK command was issued for an active FSA task.

System response: A JES3 *CANCEL command is issued to notify JES3 that the task is being terminated abnormally.

User action: None required.

XEI3350F *module name* **FAILED TO DEFINE A RECOVERY ROUTINE. RC=X'***return code***'**

Explanation: The named module unsuccessfully attempted to create an ESTAE environment to handle potential errors that might occur within the module. A message with the appropriate return code was issued.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

XEI3351W UNABLE TO CLEAR USER FIELDS IN SSCT (*name***) AT ADDRESS (***address***)**

Explanation: The XOSF resource manager was unable to clear the SCCTSUSE and SSCTSUS2 fields at the named address for the named SSCT.

System response: The resource manager does not clear any fields, and XOSF continues processing.

This error may cause XOAF to terminate abnormally during PDS refresh processing.

User action: Call Xerox Technical Support.

XEI3352E UNABLE TO RELEASE STORAGE FOR (*control block***) ADDRESS (***address***). RC=X'***return code***'**

Explanation: The resource manager was unable to release storage for the named control block at the specified address.

System response: The resource manager attempts to continue processing.

User action: If an z/OS system abend accompanies the message, collect the information from the z/OS symptom dump and call Xerox Technical support.

If no z/OS system abend accompanies the message, determine the failure using the return code. Refer to the IBM publication that lists the return codes associated with the FREEMAIN macro.

XEI3353E ENTRY ALLOCATED BUT NOT VALID (*control block***) ADDRESS (***address***)**

Explanation: The resource manager was unable to release storage for the named control block. The entry in the XCSA was allocated, but the address or length was not valid.

System response: The resource manager does not attempt to free the storage. Processing continues.

User action: Call Xerox Technical Support.

XEI3354F XEIRTM WAS UNABLE TO ESTABLISH INPUT PARAMETERS. RC=04

Explanation: The pointers to required control blocks were not correct; the resource manager could not establish the input parameters from z/OS.

System response: The resource manager exits without attempting storage clean up.

User action: Call Xerox Technical Support.

XEI3355I *module name* **IS ATTEMPTING RECOVERY FROM THE ABEND**

Explanation: The resource manager experienced an abend and is attempting to recover from it.

System response: The resource manager continues processing if possible.

System response: None required.

XEI3356F *module name* **IS PERCOLATING ABEND. UNABLE TO FULLY RECOVER FROM THE ABEND.** *abend code*

Explanation: The named module was unable to recover from the abend stated in the message. The abend will be percolated to produce a dump.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

XEI3360E **LOGGING IS SET ON, BUT NO XLOG DATASET WAS SPECIFIED IN XINPARM FOR XLOGDSN. LOGGING DISABLED**

Explanation: You specified XLOG=Y in the initialization parameters, but did not specify a value for the XLOGDSN initialization parameter. When XLOG=Y is specified, there must be a corresponding XLOGDSN entry with a log dataset name specified.

System response: Processing continues, but logging is disabled.

User action: Specify a log dataset name for the XLOGDSN initialization parameter and retry the request.

XEI3361E **LOG DATA BUFFER ADDRESS ZERO, ENTRY NOT LOGGED IN DSNAME=***dataset name*

Explanation: A request was made to write an entry to the active log dataset, but the message address was zero and therefore invalid.

System response: Processing continues, but the entry will not be logged in the log dataset.

User action: Call Xerox Technical Support.

XEI3362E **COULD NOT GET XLOG BUFFER STORAGE. LOGGING HAS BEEN DISABLED. RC=X'***return code***'**

Explanation: A request was made to get internal storage for the XLOG buffer, but the GETMAIN request failed.

System response: Processing continues, but logging is disabled.

User action: Call Xerox Technical Support.

XEI3363W **LOG DATASET IS FULL. SWITCHED FROM DSNAME=***dataset name* **TO DSNAME=***dataset name*

Explanation: The currently active log dataset was switched to the alternate log dataset. This warning message will be produced if one of these actions is taken:

- The currently active log is automatically switched because of an SD37 abend.
- You issue the SWITCH XLOG command to manually switch the log datasets.

System response: Processing continues.

User action: Print and clear the log dataset that is full. XPAF will not overwrite existing data in a log dataset.

XEI3364E **BECAUSE OF ERROR, XEIMAIN IS PERMANENTLY DISABLED. REQUEST CAUSING ERROR.** *request type*

Explanation: The services provided by XEIMAIN are no longer available to any task. The current request is displayed in the message.

System response: Processing continues, but without any of the services offered by XEIMAIN.

User action: Call Xerox Technical Support.

XEI3365E **LOGGING ERROR, UNABLE TO LOG ENTRY TO LOG DSNAME=***dataset name*

Explanation: An unsuccessful attempt was made to log an entry to the log dataset. XEIMAIN was posted to log the entry, but returned a failed return code to XEIXLOG, indicating that the entry was not logged.

System response: Processing continues, but the entry is not logged in the log dataset.

User action: Call Xerox Technical Support.

XEI3398I **SDUMP** *activity***; RC='***xxxxxxxx***'X REASON CODE='***xxxxxxxx***'X**

Explanation: XOSF requested a system dump. The indicated activity for the SDUMP is either a successful capture or a failed capture.

System response: Processing continues.

User action: For a return code of zero, no action is required. For a non-zero return code, refer to the *z/OS Authorized Assembler Services Reference: SDUMPX Return and Reason Codes* for information on OS/390 V1R3 or higher.

XEI3399I SDUMP SUPPRESSED; REASON CODE='*xxxxxxxx*'X

Explanation: XOSF requested a system dump.

System response: Processing continues.

User action: You will receive one of the following valid reason codes (in hex):

- These reason codes indicate internal use only; if the problem persists, call Xerox Technical Support:

  x'02' through x'06' or x'10' through x'24'

- These reason codes indicate percolation only; no action is required:

  x'08' or x'26'

XEI3456E z/OS VERSION/LEVEL *version/level* NOT SUPPORTED

Explanation: You tried to start XOSF in an unsupported environment.

System response: Initialization is terminated.

Ensure that you are using an z/OS level that is supported. For the minimum z/OS/JES levels currently supported by XPAF, refer to *Section Two: Installing and Customizing XPAF*.

XEI3552E UNABLE TO *action requested* BECAUSE XEIMAIN IS DAMAGED

Explanation: Either an internal component requested service from XEIMAIN or you issued a command, but XEIMAIN was not able to respond to this request because of a previous ABEND from which it could not fully recover.

System response: Processing continues, but the request is not processed.

User action: Look for messages that were issued prior to this message to determine the cause of the failure. Bring down XPAF and restart it as soon as possible to clear the error. If further assistance is required, call Xerox Technical Support.

XEI7202E COULD NOT GET SUFFICIENT MEMORY FOR USER SMF BUFFER

Explanation: On returning from user exit 09 with a user supplied SMF record, XPAF was not able to acquire the storage necessary to process the record.

System response: The user supplied record is skipped.

User action: Increase the storage available to the XPAF start-up proc. Bring down XPAF and restart the proc.

User action:

User action:

User action:

User action:

User action:

User action:

User action:

XFC messages

XFC0303E FIRST RECORD OF *resource* **IS NOT A VALID HEADER RECORD**

Explanation: The format of the data's first record does not conform to the Xerox header record format.

System response: Font conversion is terminated.

User action: Verify that the input data is a font. If the problem persists, call Xerox Technical Support.

XFC0304E SECOND RECORD OF *font name* **IS NOT A VALID DESCRIPTION RECORD**

Explanation: The format of the second record of the indicated font in the dataset does not conform to the required Xerox description record format.

System response: Font conversion for the indicated font is terminated.

User action: Verify that the input dataset contains a valid font.

XFC0305E COULD NOT *command* **TABLE** *table name* **WHILE CONVERTING** *font name***. THM RC=X'***return code***'**

Explanation: During centralized-to-decentralized font conversion, the XPAFXFI table for the named font did not contain the necessary entries in the 'Centralized Character Mapping Name' and/or 'Decentralized Character Mapping Name' fields.

System response: Font conversion is terminated.

User action: Edit the XPAFXFI table for the named font, and ensure that there are valid values for the 'Centralized Character Mapping Name' and 'Decentralized Character Mapping Name' fields. Retry the conversion. For more information about font conversion, refer to *Section Three: Managing Resources with XPAF*.

XFC0306E *font font name* **FAILED TO CONVERT. SEE LOG FOR MORE INFORMATION**

Explanation: The identified font could not be converted from centralized format to decentralized format.

System response: Font conversion is terminated. XOAF processing continues.

User action: Review the system log for additional messages that identify the cause of the problem, and take the appropriate action.

Also, verify that the named centralized font is not FORMSX or FORMS$. FORMSX and FORMS$ have an equivalent decentralized font and are not subject to centralized-to-decentralized font conversion.

If the problem persists, call Xerox Technical Support.

XFC0308I *number fonts* **PROCESSED.** *number* **WITH ERRORS**

Explanation: The identified number of fonts have been converted. Some may have converted with errors.

System response: Font conversion is terminated. XOAF processing continues.

User action: If no errors are indicated, no action is required. If errors occurred, review the XOAF log for more information.

XFC0309E **FONT SIZE EXCEEDED AT CODE POINT X'***position***' WHILE DOING FONT** *font name*

Explanation: The named font exceeded the maximum font size of 64K.

System response: Font conversion is terminated, but processing continues.

User action: Call Xerox Technical Support.

XFC030AE *entry* **NAME MISSING FROM FONT INFORMATION TABLE FOR FONT** *font name*

Explanation: While trying to convert the named font from centralized format to decentralized format, the XPAFXFI table entry for the font was found to be missing the centralized or decentralized character mapping table name.

System response: Centralized-to-decentralized conversion for this font is terminated. If other fonts are being converted, processing of those fonts continues.

User action: Add the appropriate name to the XPAFXFI table entry for the font, then retry the conversion.

XFC0310I **FONT** *font name* **CONVERTED WITH** *number* **CHARACTERS**

Explanation: The identified font has been converted with the specified number of characters.

System response: Processing continues.

User action: None required.

XFC0315E **PROBLEM WITH CENTRALIZED OR DECENTRALIZED CHARACTER MAPPING TABLES. SEE LOG FOR DETAILS**

Explanation: During centralized-to-decentralized font conversion, XOAF could not locate the necessary entries in the ‘Centralized Character Mapping Name’ and/or ‘Decentralized Character Mapping Name’ fields in the XPAFXFI table.

System response: Font conversion is terminated.

User action: Edit the XPAFXFI table for the appropriate font, and ensure that there are valid values for the ‘Centralized Character Mapping Name’ and ‘Decentralized Character Mapping Name’ fields. Retry the conversion. For more information about font conversion, refer to *Section Three: Managing Resources with XPAF*.

XFC0316W THE RESOURCE *font name* **HAS A CHARACTER CODE OF X'***value***' WHICH EXCEEDS X'00FF'. THIS VALUE HAS BEEN TRUNCATED TO X'***value***'**

Explanation: The centralized to decentralized font conversion process encountered a problem with the indicated font. The specified character code was greater than X'FF', which is the highest possible character code within any given font.

System response: The message is issued to the XOAF screen and to the XOSF log. The hexadecimal character code value is automatically truncated. The high order byte is set to X'00'. The font conversion for that font then continues once the truncation is complete.

User action: There is no specific action required by the user. However, the user can recreate the centralized version of the font and set the high order byte of the specified character code point to X'00'.

XFC0317W CODE POINT X'*value***' EXCEEDS MAXIMUMS. HEIGHT=***xx***, WIDTH=***yy***

Explanation: The identified code point exceeds the maximum allowed height and/or width.

System response: The system substitutes a blank space for the character cell and processing continues.

User action: Call Xerox Technical Support.

XFC0318E *font* **IS A PROPRIETARY FONT AND CANNOT BE CONVERTED**

Explanation: An attempt was made to convert a licensed centralized font to a decentralized format.

System response: The font is not converted to a decentralized format.

User action: To use a licensed font on a decentralized printer, you need a licensed decentralized version of the font. Call Xerox Font Services or a third-party vendor to obtain licensed fonts.

XFC0319E IMPROPER *attribute* **FOR DSNAME** *dataset name***. REQUIRED** *attribute* **IS:** *value*

Explanation: The named dataset does not have the proper RECFM, DSORG, and/or LRECL.

System response: Font processing is terminated.

User action: Correct the dataset attribute as indicated in the message, and perform centralized-to-decentralized font conversion again.

XFC0324W CANNOT USE CURRENT XOAF LOG AS MESSAGE DATASET

Explanation: The message dataset you specified is the current XOAF log.

System response: Additional messages are suppressed; font conversion continues.

User action: Specify an alternative dataset. The dataset must be a sequential dataset with these file specifications:

RECFM=FBA
LRECL=133
BLKSIZE=3325

XFC0329W CHARID *charid* DROPPED FOR FONT *font name*. THAT CODE POINT IN THE SPECIFIED PLANE NUMBER IS ALREADY IN USE

Explanation: During centralized-to-decentralized font conversion, two character IDs were mapped to the same code point and plane number combination in a decentralized character mapping table.

System response: Font conversion continues.

User action: Modify the appropriate decentralized character mapping table so that the named character ID is assigned to a unique code point and plane number combination, and retry the conversion. For more information about font conversion, refer to *Section Three: Managing Resources with XPAF*.

XFC0330E FONT *font name* USES OLD CHARACTER DISPATCHER. CONTACT FONT SUPPLIER

Explanation: During centralized-to-decentralized font conversion, the named font does not contain a valid character dispatcher value.

System response: Font processing is terminated.

User action: Call either Xerox Font Services or a third-party vendor to obtain a new font with the new character dispatcher value.

XFC0332W PLANE NUMBER FOR CHARID *character id* WAS MOVED FROM PLANE *plane number* TO PLANE 1

Explanation: During centralized-to-decentralized font conversion, the character ID was assigned to an invalid plane number for converted decentralized fonts. The valid range is 01–08.

System response: All characters that were assigned to invalid plane numbers are automatically stored in plane 01. Font processing continues.

User action: Check the appropriate decentralized character mapping table to ensure that all the characters that are assigned to plane 01 are acceptable to you. For more information about adjusting plane numbers, refer to *Section Three: Managing Resources with XPAF*.

XFC0333E **FONT SIZE EXCEEDED IN PLANE** *plane number* **AT CODE POINT X'***position***' WHILE CONVERTING FONT** *font name*

Explanation: During centralized-to-decentralized font conversion, the named font exceeded the maximum font size of 64K. The named plane number is full.

System response: Font conversion is terminated.

User action: The named code point, and probably all remaining code points in the decentralized character mapping table, must be assigned the next available plane number. Then, retry the conversion. For more information about font conversion, refer to *Section Three: Managing Resources with XPAF*.

XFC0334E **REQUESTED CHARID** *character id* **NOT FOUND IN DCMV TABLE WHILE CONVERTING FONT** *font name*

Explanation: During centralized-to-decentralized font conversion, the named character ID was not found in the decentralized character mapping table of the named font.

System response: Font conversion continues.

User action: Add the missing entries to the appropriate decentralized character mapping table, and rerun the conversion. For more information about font conversion, refer to *Section Three: Managing Resources with XPAF*.

XFC0336E **ESCAPEMENT VALUE OF** *value* **FOR CODE POINT X'***value***' IN FONT** *font name* **EXCEEDS 255. SUBSTITUTING VALUE OF 255**

Explanation: During centralized-to-decentralized font conversion, the specified escapement value (character spacing) for the named code point exceeded the maximum value of 255.

System response: Font conversion continues. The escapement value for the named code point is stored as 255 in the converted decentralized font. When this font is used for printing on a decentralized printer, the characters may appear crowded because the escapement value is less than originally defined in the centralized font.

User action: Verify that the escapement value of 255 is acceptable for the named code point. If this escapement value causes unacceptable results, you should modify your application to use a font that does not exceed the maximum escapement value of 255. For more information about font conversion, refer to *Section Three: Managing Resources with XPAF*.

XFC0338W **FST REFERENCES INCOMPLETE RASTER FOR CENTRALIZED CODE POINT X'***code point id***' WHILE CONVERTING** *resource name***.**

Explanation: The FST entry for the identified centralized code point references raster data that is not fully within the centralized font file raster data area.

System response: Font processing continues with the missing raster data assumed to be zeros.

User action: Verify that the centralized font being converted is not corrupt.

XFC033FF FONT name IS A SHADING FONT AND HAS NOT BEEN CONVERTED'

Explanation: During the centralized to decentralized font conversion process, XFC has encountered a font that is a shading font. The unique nature of the shading font, typically FORMS$ and FORMSX, requires XPAF to handle these fonts as a special case and there is no need to convert these fonts to decentralized format.

System response: The font conversion fails.

User action: If the font named in the message is either FORMS$ or FORMSX, XPAF will handle these fonts correctly during printing. No action is required. Shading fonts with names other than FORMS$ or FORMSX are not supported by XPAF and the applications that reference these fonts should be changed to use either FORMSX or FORMS$.

XFC0500E COULD NOT *activity* **DSNAME** *dataset name***. EI RC=X'***return code***'**

Explanation: The indicated *activity* for the named dataset could not be performed.

System response: Font conversion is terminated.

User action: If the problem persists, call Xerox Technical Support.

XFC0501E COULD NOT *activity* **FOR MEMBER** *member name* **OF DSNAME** *dataset name***. EI RC=X'***return code***'**

Explanation: The indicated *activity* for the named dataset member could not be performed.

System response: Font conversion is terminated.

User action: If the problem persists, call Xerox Technical Support.

XFC1112E YOU MUST ENTER A MEMBER NAME FOR A PDS OR VSAM DATASET

Explanation: While using the XOAF option to convert a centralized font to a decentralized font, you left the ‘Member Name’ field blank.

System response: The cursor is positioned on the ‘Member Name’ field. No further processing is permitted until the error is corrected.

User action: Enter a valid member name, or enter an asterisk (*) to convert all fonts in the dataset.

XFC1706I UNABLE TO LOCATE MEMBER (*member name***)**

Explanation: When using the XOAF option to convert a centralized font to a decentralized font, an invalid member name was specified in the ‘Member Name’ field.

System response: The font cannot be converted. The cursor is positioned on the ‘Member Name’ field.

User action: Verify that the member name is located in the specified library, and that the member name is spelled correctly. Once any errors have been corrected, retry the option.

XFC3010F **COULD NOT GET X'***amount***' BYTES OF MEMORY FOR** *activity*

Explanation: This is an internal error.

System response: Processing continues.

User action: Specify a larger region size.

XFC3011E **COULD NOT RELEASE X'***amount of storage***' BYTES OF MEMORY FROM LOCATION X'***getmained area address***'** *activity*

Explanation: This is an internal error.

System response: Processing continues.

User action: None required. If the problem persists, call Xerox Technical Support.

XFC3015E **COULD NOT** *command* **LIBRARY** *native library library ddname***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named *command* on the specified library.

System response: XFC processing is terminated.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XFC3016E **COULD NOT** *command* **MEMBER** *member name* **OF LIBRARY** *native library library ddname***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named *command* on the specified member.

System response: Processing is terminated.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XFC3017E **COULD NOT** *command* **LCA** *activity***. LDM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

XFC3018E **COULD NOT ACQUIRE TCB** *activity***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

XFC3921E *module name* **MODULE CANNOT BE LOADED. CALL SYSTEM ADMINISTRATOR**

Explanation: The named required module could not be located in the XPAF load library.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

XFC6402E **COULD NOT** *command* **ITEM** *item name* **IN TABLE** *table name operation***. THM RC=X'***return code***'**

Explanation: The indicated item is not in the named table. This message is issued for diagnostic purposes. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Font loading is terminated.

User action: Call Xerox Technical Support.

XFS messages

XFS0100I **EXTENDED JCL** *action*

Explanation: XPAF extended JCL has been installed, reinstalled, or removed successfully.

System response: Processing continues.

User action: None required.

XFS0101E **UNABLE TO OPEN INPUT DDNAME XJDTLPA, LOAD FAILED. OPEN RC=X'***return code***'**

Explanation: While attempting to load a module into the MLPA, XOSF was unable to open the DD name XJDTLPA. The return code was passed back from the open.

System response: The request to load the module is terminated.

User action: Refer to the IBM publication that lists the return codes associated with the OPEN macro. Verify that the extended JCL proc stored in your system PROCLIB contains a DD statement with the name XJDTLPA and that it is pointing to a dataset that contains the Xerox module(s). If not, add or correct the DD statement. Otherwise, call Xerox Technical Support.

XFS0102E **MODULE** *module name* **WAS NOT FOUND IN THE XJDTLPA DDNAME CONCATENATION. MODULE NOT LOADED**

Explanation: While attempting to load the named module into the MLPA, XOSF was unable to find the module in the XJDTLPA DD name concatenation.

System response: The named module is not loaded. Processing continues.

User action: Verify that the module is actually in a dataset that is in the DDNAME=XJDTLPA concatenation. If the module is stored in the appropriate dataset, call Xerox Technical Support. Otherwise, place the module in the XJDTLPA DD name concatenation.

XFS0103E **SJF DEFINEJDVT ERROR. RC=X'***return code***'; REASON CODE=X'***reason code***',** *error description*

Explanation: While attempting to build a new JDVT, the request to install, redo, or remove the extended JCL failed.

System response: The request is terminated. Extended JCL is not installed, reinstalled, or removed.

User action: Call Xerox Technical Support.

XFS0104E UNABLE TO FIND JDVT NAME (*jdvt name*) IN THE SYSTEM

Explanation: While searching the JDVT chain, XOSF was unable to find the specified JDVT name.

System response: The request is terminated. Extended JCL is not installed, reinstalled, or removed.

User action: Call Xerox Technical Support.

XFS0105E UNABLE TO OBTAIN LOCAL WORKAREA STORAGE FOR REQUESTOR *module name*

Explanation: XOSF attempted to acquire local workarea storage for the named support module, but was unable to obtain the storage.

System response: The request is terminated. Extended JCL is not installed, reinstalled, or removed. Modules are not loaded or deleted.

User action: Increase the region size on the EXEC statement of the extended JCL proc. If the problem persists, call Xerox Technical Support.

XFS0106E MODULE *module name* **WAS FOUND IN THE MLPA, BUT THE ENTRY IS AN LPDE AND NOT A CDE.** *action taken*

Explanation: While attempting to load the named module into the MLPA or delete the named module from the MLPA, XOSF found that the entry representing the module is not a CDE as expected, but an LPDE.

System response: The request to load or delete the module is ignored.

User action: Call Xerox Technical Support.

XFS0107E MODULE *module name* **WAS ALREADY LOADED INTO THE MLPA ON** *date* **AT** *time***. LOAD FAILED**

Explanation: While attempting to load the named module into the MLPA, XOSF found that the module had already been loaded into the MLPA at the specified date and time.

System response: The request to load the module is ignored. Processing continues.

User action: None required.

XFS0108E CALLER IS NOT APF AUTHORIZED OR XFSJCL WAS NOT LINKED WITH AC(1)

Explanation: The extended JCL proc was started, but the XFSJCL load module was not linked with AC(1) or the STEPLIB was not APF-authorized.

System response: The request is terminated.

User action: Have your systems programmer verify that the load library is APF-authorized and that XFSJCL was linked with AC(1), then retry the request.

XFS0109E INVALID JDVT EYECATCHER FOUND AT A(*address*)

Explanation: The control block could not be used because the JDVT pointer at the specified address did not have a valid eyecatcher value.

System response: The request is terminated. Extended JCL is not installed, reinstalled, or removed.

User action: Call Xerox Technical Support.

XFS0110E SJF IS NOT AVAILABLE ON THIS SYSTEM

Explanation: The z/OS SJF support module anchor (located off the JESCT) did not contain a valid module address.

System response: The request is terminated. Extended JCL is not installed, reinstalled, or removed.

User action: Call Xerox Technical Support.

XFS0111W EXTENDED JCL HAS ALREADY BEEN INSTALLED

Explanation: When you started the extended JCL proc, XOSF found that the extended JCL was already installed.

System response: The request is terminated. Extended JCL is not installed.

User action: If the extended JCL is to be reinstalled, specify the REDO option on the extended JCL proc. If the extended JCL is to be removed, specify the REMOVE option on the proc.

XFS0112E INVALID PARAMETER(S) PASSED TO MODULE *module name*

Explanation: The input parameters passed to the specified module were found to be invalid.

System response: The request is terminated. Extended JCL is not installed, reinstalled, or removed. Modules are not loaded or deleted.

User action: If the module name is XFSJCL, you specified invalid parameters on the PARM statement. Correct any invalid parameters or subparameters.

If the module name is not XFSJCL, call Xerox Technical Support.

XFS0113E EXTENDED JCL NOT *action*

Explanation: You specified the REMOVE, REDO, or INSTALL option on the extended JCL proc, but there was an error preceding this message.

System response: The request is terminated. Extended JCL is not installed, reinstalled, or removed.

User action: If you specified the REMOVE option on the extended JCL proc, no action is required. If you specified another option, review the preceding message to determine the cause of the extended JCL failure.

XFS0114E **MODULE** *module name* **IS IN THE MLPA, BUT THE EXTENT LIST OR MODULE INFO ADDRESS IS ZERO**

Explanation: While attempting to load the named module to the MLPA or delete the named module from the MLPA, XOSF found the extent list or module information pointer to be zero.

System response: The request to load or delete the named module is ignored.

User action: Call Xerox Technical Support.

XFS0114I **EXTENDED JCL MODULE** *module name* **IS IN INSTALLED**

Explanation: This message indicates the modules found in the JDT when running the DISPLAY option with the extended JCL proc.

System response: Processing continues.

User action: None required.

XFS0115E **UNABLE TO OBTAIN SP=(***subpool number,type of storage***) STORAGE TO LOAD MODULE=***module name***, LENGTH=X'***length of storage***'. RC=X'***return code***'**

Explanation: While attempting to load the named module into the MLPA, XOSF found that the required storage from the named subpool was not available.

System response: The request to load the module is ignored.

User action: Call Xerox Technical Support.

XFS0116E **UNABLE TO LOAD MODULES FROM A NON-APF AUTH LIBRARY/CONCATENATION, DDNAME=XJDTLPA**

Explanation: While attempting to load the module(s) into the MLPA, XOSF found that the DD name XJDTLPA contained one or more library datasets that were not APF-authorized. For security reasons, all datasets in the DDNAME=XJDTLPA concatenation must be APF-authorized.

System response: The request to load the module is ignored.

User action: Contact your systems programmer for assistance with APF authorizing the dataset.

XFS0117I **MODULE** *module name* **WAS** *action* **THE MLPA**

Explanation: You specified the LOAD or DELETE option on the extended JCL proc in order to load the named module to the MLPA or delete the named module from the MLPA. This message indicates the success of that request.

System response: Processing continues.

User action: None required.

XFS0118E *software level* **IS AN UNSUPPORTED z/OS LEVEL**

Explanation: The extended JCL proc was started, but the system running the proc is at a level of z/OS that is not yet supported.

System response: The request is terminated.

User action: Call Xerox Technical Support.

XFS0119E **MODULE** *module name* **WAS FOUND IN** *library name* **LIBRARY (***concatenation number***)**

Explanation: While attempting to perform a redo or install request, XOSF first found the named module in the specified dataset outside of the LPA. The concatenation number is relative to zero.

System response: The request is terminated. Extended JCL is not installed or reinstalled.

User action: The named module must be found first in the LPA. If the module is in the STEPLIB or LINKLIB, have the named module removed, then retry the request.

XFS0120E **MODULE** *module name* **WAS NOT FOUND IN THE SYSTEM**

Explanation: While attempting to perform a redo or install request, XOSF was unable to verify the location of the named module.

System response: The request is terminated. Extended JCL is not installed or reinstalled.

User action: The named module must be found first in the LPA. Have your systems programmer install the named module into the LPA using one of these methods:

- Specify the LOAD option on the extended JCL proc
- Perform an IPL with CLPA

XFS0121E **MODULE** *module name* **WAS NOT FOUND ON THE ACTIVE MLPA QUEUE. MODULE NOT DELETED**

Explanation: While attempting to perform a delete request, XOSF found the named module in the system, but not on the active MLPA queue. The module cannot be deleted.

System response: The request is terminated. The module is not deleted from the MLPA.

User action: To load the named module into the MLPA, specify the LOAD option on the extended JCL proc.

XFS0123E **MODULE** *module name* **IS CURRENTLY IN USE IN THE JDVT AND CANNOT BE DELETED. REMOVE THE MODULE FIRST**

Explanation: While attempting to perform a delete request, XOSF found the named module in the system, but not on the active MLPA queue. The module cannot be deleted.

System response: The request is terminated. The module is not deleted from the MLPA.

User action: Remove the old JDT module by specifying the REMOVE option on the extended JCL proc., then re-try the DELELE option.

XFS0122E **MODULE=***module name***, WAS LOADED INTO THE MLPA BY z/OS OR ANOTHER PRODUCT AND WILL NOT BE** *action*

Explanation: While attempting to perform a delete or load request, XOSF found the named module on the active MLPA queue; however, the module had been loaded by z/OS at IPL or had been dynamically loaded by another product.

System response: The request is terminated. The module is not deleted from or loaded to the MLPA.

User action: Delete the module from the MLPA using the same product with which it was loaded. Then, try the request again.

XFU messages

XFU0000E **000C ERROR READING FRM HEADER**

Explanation: The transform routine received a non-zero return code from an Environmental Envelope conversion input routine.

System response: Centralized-to-decentralized form conversion is terminated.

User action: This message is accompanied by an error message from the Environmental Envelope input routine. Refer to the user action for that message.

XFU0001E **000C FRM CONTAINS MORE THAN 16 FONTS**

Explanation: The maximum number of fonts allowed in a centralized form is 32. The maximum number allowed in a decentralized form is 16 (9 of which can be concurrently active). The decentralized version of the form was unable to use all the fonts named in the centralized form.

System response: Centralized-to-decentralized form conversion is terminated.

User action: Redesign the centralized form using less than 16 fonts, then resubmit the job.

XFU0002W **VERSION 1 FORM ENCOUNTERED, MARGINS SET TO MAXIMUM VALUES**

Explanation: XPAF attempted to print a version 1 form that was converted from centralized format to decentralized format. The form did not contain edge-marking values to define the margins. During conversion, XPAF set

the margins to the maximum supported paper size. During printing, XPAF used the paper size that was specified in either the initialization parameters, printer profile, or extended JCL.

System response: Processing continues.

User action: None required.

XFU0003E 000C FRM CONTAINS NO DATA EXCEPT HEADER

Explanation: While processing the centralized form header, the number of blocks in the form data was found to be zero.

System response: Centralized-to-decentralized form conversion is terminated.

User action: Check for form compilation errors. Correct any errors, then recompile the centralized form.

XFU0004E 000C NON-ZERO RETURN CODE FROM FONT CROSS-REFERENCE ROUTINE

Explanation: While building the internal font table, the Environmental Envelope's font look-up routine sent a non-zero return code, indicating that the system encountered a condition other than NOT FOUND.

System response: Centralized-to-decentralized form conversion is terminated.

User action: This message is accompanied by a message from the Environmental Envelope. Refer to the user action for that message.

XFU0005E 000C FRM CONTAINS UNSUPPORTED EXTENDED TEXT LINE INFORMATION

Explanation: The form header indicates that extended text line format was used. This conversion does not support extended line format.

System response: Centralized-to-decentralized form conversion is terminated.

User action: This message is accompanied by a message from the Environmental Envelope. Refer to the user action for that message.

XFU0006E 000C ERROR READING TL/DL BUFFER

Explanation: The Environmental Envelope's form input routine sent a non-zero return code, indicating the system encountered a condition other than LAST BLOCK.

System response: Centralized-to-decentralized form conversion is terminated.

User action: This message is accompanied by a message from the Environmental Envelope. Refer to the user action for that message.

XFU0007E 0008 PREVIOUS ERROR. TRANSFORM TERMINATED

Explanation: A previous error was detected on return to the main transformation processor.

System response: Centralized-to-decentralized form conversion is terminated.

User action: Refer to the user action for the previously displayed error message.

XFU0008E 0008 FRM DATA BLOCK COUNTS DISAGREE. EXPECTED=*count*, FOUND=*count*

Explanation: The number of blocks displayed in the form header differs from the number of blocks processed.

System response: Processing continues.

User action: This message is issued at the end of the conversion. Refer to the log for possible errors.

XFU0009E 000C UDK DISPOSITION ROUTINE ERROR

Explanation: The Environmental Envelope's XES disposition routine sent a non-zero return code.

System response: Centralized-to-decentralized form conversion is terminated.

User action: This message is accompanied by a message from the Environmental Envelope. Refer to the user action for that message.

XFU0010I 0004 FONT *font name* NOT FOUND IN FONT INFORMATION TABLE (XPAFXFI)

Explanation: The indicated font was not found in the XPAFXFI table.

System response: Processing continues.

User action: The font name found in the form is used. If the font does not exist on the target printer, an imaging error occurs. Make sure the correct font cross-reference table is named.

XFU0011E 000C PREMATURE EOF READING FRM HEADER

Explanation: The selected member did not contain a valid header record. Input may not be a valid form, or the record size of the input dataset may be incorrect.

System response: Centralized-to-decentralized form conversion is terminated.

User action: Verify that the input form is valid. If the problem persists, call Xerox Technical Support.

XFU0012E 000C DOUBLE BYTE FONTS NOT SUPPORTED

Explanation: While processing the form header, double-byte fonts (Kanji characters) were found in the form.

System response: Centralized-to-decentralized form conversion is terminated. This form cannot be converted.

User action: None required.

XFU0013E 000C UNABLE TO ACQUIRE MEMORY

Explanation: During the conversion of a centralized form to decentralized format, XPAF was unable to acquire storage required for LOGO processing.

System response: The forms conversion is terminated.

User action: If this happens while printing a document, verify the region requirements for the XOSF startup proc. If converting a form with XOAF, check the region specified on the TSO session of batch job. If you believe you are receiving this message in error, contact Xerox Technical Support.

XFU0014E 000C UNABLE TO RELEASE MEMORY

Explanation: During the conversion of a centralized form to decentralized format, XPAF was unable to release storage acquired for LOGO processing.

System response: The forms conversion is terminated.

User action: This message generally indicates a problem within XPAF. Gather all resources and data necessary to recreate the failing situation and contact Xerox Technical Support.

XFU0015W 0004 COLOR OUTPUT HAS BEEN DISCARDED

Explanation: The color centralized form being converted to a decentralized form contains color ink resources, which are not supported on decentralized printers.

System response: Processing continues, but output consists of .FNT and .IMG data only. Any data using INK resources is not printed.

User action: None required.

XIN messages

XIN0001E ERRORS DURING ENVIRONMENT INITIALIZATION

Explanation: One or more severe errors occurred while processing initialization parameters and/or loading XPAF-executable modules. This message is accompanied by one or more additional messages that may help identify the source of the problem.

System response: Initialization processing is terminated.

User action: Call your systems programmer or Xerox Technical Support.

XIN0002E INVALID z/OS START FOR FSS

Explanation: The XOSF FSS was started incorrectly with an z/OS START command entered from a system console.

System response: XOSF ends without establishing communication with the job entry subsystem (JES).

User action: Use the appropriate JES command to start the device.

XIN0003E TABLE HANDLING MANAGER FAILED TO INITIALIZE

Explanation: The initialization component received a non-zero return code from the THM initialization component (THMINIT), indicating that system utilities did not initialize properly. This message is accompanied by one or more additional messages that may help identify the source of the problem.

System response: Initialization processing is terminated.

User action: Call your systems programmer or Xerox Technical Support.

XIN0004E LIBRARY DATA MANAGER FAILED TO INITIALIZE

Explanation: The XPAF initialization component received a non-zero return code from the LDM initialization component (LDMINIT), indicating that System Utilities did not initialize properly. This message is accompanied by one or more additional messages that may help identify the source of the problem.

System response: Initialization processing is terminated.

User action: Call your systems programmer or Xerox Technical Support.

XIN0005E UNABLE TO LOAD TABLE *table name*

Explanation: The initialization component was unable to locate the required module load table identified in the message.

System response: Initialization processing is terminated.

User action: Call your systems programmer to verify the availability of the required tables.

XIN0006E **MODULE NOT FOUND ===>***module name*

Explanation: A module load table specified that the named module must be loaded and/or executed. However, the initialization component could not locate this module.

System response: Initialization processing is terminated.

User action: Call your systems programmer to verify the availability of the named module in an accessible load library.

XIN0007E **WARNING LEVEL ERROR IN** *module name*

Explanation: The initialization component received a return code from the named module that indicates a warning level error was encountered. This message is accompanied by one or more additional messages that may help identify the source of the problem.

System response: Initialization processing continues.

User action: Report the message to your systems programmer.

XIN0008E **MINOR ERROR IN** *module name* **PROCEED? (YY/NN)**

Explanation: The initialization component received a return code from the named module that indicates a minor level error was encountered. This message is accompanied by one or more additional messages that may help identify the source of the problem.

System response: Processing remains stopped until the operator enters a valid response.

User action: Investigate the problem. If necessary, call your systems programmer to determine whether to continue initialization. Enter **YY** to continue initialization. Enter **NN** to stop initialization.

XIN0009E **UNABLE TO OPEN PFILE ===>** *file name*

Explanation: You used the PFILE initialization parameter to name a supplementary parameter file. However, the XPAF initialization component could not open the named parameter file.

System response: The user-specified supplementary parameter list is ignored and initialization continues using:

- Default parameters specified in the default parameter list
- Installation-specific parameter list
- EXEC statement's PARM parameter

User action: This problem may have been caused by not specifying the PFILE DD name in the XPAF job stream. Report the problem to your systems programmer.

XIN0010E **ERROR LOADING PARM TABLE** *table name*

Explanation: The initialization component could not locate the named default table or the installation-specific parameter table.

System response: Initialization processing is terminated.

User action: Call your systems programmer to verify that the named table is in XINPARM.

XIN0011I **INVALID PARAMETER IGNORED** ===> *parameter*

Explanation: The initialization component encountered a parameter that it could not find in the valid initialization parameter list. The invalid parameter is named in the message.

System response: The invalid parameter is ignored, and XPAF initialization continues.

User action: Call your systems programmer to verify the validity of the named parameter.

XIN0012E **XINKEYS MODULE NOT AVAILABLE**

Explanation: The initialization component could not find the valid initialization parameter list.

System response: Initialization processing is terminated.

User action: Call your systems programmer to verify that the XINKEYS module is in an accessible load library.

XIN0013E **XOASUP01 MODULE NOT AVAILABLE**

Explanation: The initialization component could not find the XOASUP01 module.

System response: Initialization processing is terminated.

User action: Call your systems programmer to verify that the XOASUP01 module is in an accessible load library.

XIN0014E **NO PARAMETERS PROCESSED**

Explanation: The initialization component found all specified parameter tables and processed them but did not find any valid initialization parameters in the tables.

System response: Initialization processing is terminated.

User action: Call your systems programmer.

XIN0015I **XPAF V** *version* **R** *release* **INITIALIZATION COMPLETE**

Explanation: The initialization component has successfully initialized the XOSF region of XPAF. This message includes the version and release number of the version of XOSF that was started.

System response: Normal document processing operations can begin.

User action: None required.

XIN0016E *return code* **RETURN CODE FROM** *module name*

Explanation: The initialization component received a non-zero return code from an initialization subcomponent. This message is accompanied by other messages that may help identify the source of the problem.

System response: Initialization processing is terminated.

User action: Investigate the problem. If the answer is not obvious from other messages, call Xerox Technical Support.

XIN0017E **MESSAGE SERVICE FACILITY FAILED TO INITIALIZE**

Explanation: The initialization component could not initialize the MSF component. This message may be accompanied by other messages that may help identify the source of the problem.

System response: Initialization processing is terminated.

User action: Call Xerox Technical Support.

XIN0018E **XINMAIN WAS ENTERED NON-APF AUTHORIZED: CHECK AUTHORIZATION OF LOAD LIBRARY**

Explanation: An XPAF authorization check failed.

System response: Initialization processing is terminated.

XOSF must run from an APF-authorized load library. To verify that you have properly defined the XPAF load library, refer to the section on preparing the operating system in *Section Two: Installing and Customizing XPAF*.

User action: . Also verify that any local load libraries that have been added to the STEPLIB for XOSF are APF-authorized. Make any necessary changes and IPL the system to put these changes into effect. If the problem persists, call Xerox Technical Support.

XIN0019E **XINMAIN WAS ENTERED OTHER THAN KEY(1): CHECK SCHEDXX OF SYS1.PARMLIB**

Explanation: The XPAF FSS cannot communicate properly with JES.

System response: Initialization processing is terminated.

User action: Verify that the PPT entry of XINMAIN in the SCHED*xx* member of SYS1.PARMLIB exists and that the XINMAIN module is found in the library specified in the IEAAPF*xx* member of SYS1.PARMLIB. IPL the system as required to put into effect any SYS1.PARMLIB changes you have made. If the problem persists, call Xerox Technical Support.

XIN0020W INVALID DATA LENGTH *parameter*

Explanation: The length of the value assigned to the initialization parameter shown in the message text exceeds the maximum allowable length.

System response: The initialization process continues and uses the default value for the specified parameter.

User action: Correct the data length of the specified parameter.

XIN0021E UNEVEN QUOTES IN XINPARM DATA

Explanation: The initialization component encountered a parameter from the initialization parameter dataset that contained uneven quotes around the data.

System response: Initialization processing continues. The parameter is stored as coded.

User action: Check the parameter to verify it contains left and right quotes. Make any required changes. Bring down and restart the XPAF address space.

XIN0022I AN INVALID ROUTING CODE WAS SPECIFIED: *invalid routing code* **(***reason***)**

Explanation: An invalid routing code was specified because either:

- No value was entered.
- A non-numeric value was entered.
- The value entered was in the reserved range (a number between 29 and 40).
- The second value in the range was less than the first.
- The value exceeded the maximum value of 128.

System response: Processing continues. If one or more of the specified routing codes is valid, the invalid routing code is ignored and the valid values are used. If none of the values are valid, the default routing codes 2 and 11 are used.

User action: Specify a valid routing code (1 through 128, excluding 29 through 40) as defined in the appropriate IBM authorized assembler reference manual.

XIN0023I SAF STATUS REQUEST RETURNED R15=X'*return code***'**

Explanation: During XPAF system initialization, a RACSTAT macro returned a non-zero return code.

System response: XOSF processing continues.

User action: If USERLIB security authorization checking is required, ensure that a security package is installed and active at a supported release level. For IBM's RACF, XPAF requires a minimum release level of 1.6. Refer to the IBM publication *External Security Interface Macro Reference for z/OS and VM* for an explanation of the RACSTAT return codes.

XIN0024W *initialization parameter* **IS NOT SUPPORTED AT** *system* **RELEASE** *release level*

Explanation: During XPAF system initialization, an initialization parameter value was detected that is not supported at the system's current release level.

System response: The invalid parameter value is reset to the value specified in message XIN0025I. Initialization processing continues.

User action: Ensure that the initialization parameter value specified is valid at the system's current release level.

XIN0025I *initialization parameter* **INITIALIZATION PARAMETER RESET TO** *value*

Explanation: During XPAF system initialization, an initialization parameter value was detected that is not supported at the system's current release level.

System response: The invalid parameter value is reset to a valid default value. Initialization processing continues.

User action: Ensure that the initialization parameter value specified is valid at the system's current release level.

XIN0026I **INVALID YES/NO PARAMETER IGNORED** ===> *parameter*

Explanation: The initialization component encountered a parameter that requires a Y or N value, but the value specified was not Y or N. The invalid parameter is shown in the message.

System response: The invalid parameter is ignored. Initialization processing continues.

User action: Correct the specified parameter value to use a valid value of Y or N.

XIN0027I **INVALID NUMERICS OR VALUE TOO HIGH** ===> *parameter*

Explanation: The initialization component encountered a parameter that requires a numeric value, but the value specified was either not numeric or it exceeded the limit allowed. The invalid parameter is shown in the message.

System response: The invalid parameter is ignored. Initialization processing continues.

User action: Correct the specified parameter to use a valid numeric value.

XIN0028I **VALUE** *error type* **OF** *nnn* ===> *parameter*

Explanation: The initialization component encountered a parameter that requires a numeric value, but the value specified either exceeded the maximum limit or was below the minimum limit. The maximum or minimum value and the invalid parameter are shown in the message.

System response: The invalid parameter is ignored. Initialization processing continues.

User action: Correct the specified parameter to use a valid numeric value.

XIN0029I **INVALID INITIALIZATION SUBPARAMETER SPECIFIED FOR** *parameter*

OR

INVALID INITIALIZATION SUBPARAMETER *value* **SPECIFIED FOR** *parameter*

Explanation: Either the subparameter name you specified is invalid, or the subparameter value you specified is invalid.

System response: All user-specified subparameter entries for this parameter are ignored. XPAF uses the default values for the subparameters.

User action: Specify a valid subparameter name and value for the identified parameter.

XIN0030F **XPAF EXTENDED JCL IS NOT INSTALLED**

Explanation: During the initialization of the FSS, XOSF has detected that the XPAF extended JCL keywords have not been installed.

System response: Initialization terminates and the FSS shuts down.

User action: Run the XPAFJCL job to install the XPAF extended JCL keywords and then restart the printer(s) controlled by this FSS.

XIN0030W **XPAF EXTENDED JCL IS** NOT **INSTALLED**

Explanation: During the initialization of the FSS, XOSF has detected that the XPAF extended JCL keywords have not been installed.

System response: Initialization continues.

User action: If you intend to use the XPAF extended JCL keywords, shut down XOSF, install the keywords and restart the printer(s) controlled by this FSS.

XIN0031F **XPAF EXTENDED JCL IS** NOT **AT THE CORRECT LEVEL FOR THIS VERSION OF Z/OS/ CORRECT AND RETRY**

Explanation: XOSF has detected that it is running on a z/OS 2.1 system and that an old version of the XPAF extended JCL JDTs has been installed. XOSF is unable to resolve this inconsistency and, to avoid documents printing incorrectly, terminates

System response: XOSF terminates.

User action: IRemove the old XESJDT00 module and install the correct XZSJDT21 JDT module, by running the XPAFJCL Started Task with the P=REMOVE option, followed by the P=INSTALL option. Make sure that the XPAF JCL Started Task procedure has been updated to specify the XPAF libraries.

XIN3585W **nn DAYS LEFT IN GRACE PERIOD**

Explanation: The expiration date has passed for the product. A grace period has been entered and there are nn days left in the grace period before the product will cease to function.

System response: The product will continue to function normally.

User action: Contact Xerox for a new License String to extend the license period.

XIN3586E nn-DAY GRACE PERIOD HAS EXPIRED!

Explanation: The expiration date has passed for the product. The extended grace period has also expired.

System response: The product will cease to function.

User action: Contact Xerox for a new License String to extend the license period.

XIN3589W * WARNING *** WARNING *** WARNING *** WARNING ***

Explanation: This message is issued in conjunction with message XIN3591I (*** WARNING *** XPAF LICENSE WILL EXPIRE IN nn DAYS.)

System response: Processing continues.

User action: Contact Xerox in order to renew the license string.

XIN3590E XINSLSTR HAS INVALID *KEYWORD* OF *VALUE MESSAGE*

Explanation: While processing the License String member, XINSLSTR, an invalid *value* for the specified *keyword* was discovered. The *message* string at the end of the message describes the allowable values.

System response: System initialization will be terminated.

User action: Correct the keyword in the XINSLSTR member.

XIN3593E NO VALID LICENSE STRING FOUND FOR *PRODUCT*

Explanation: While processing the License String member, XINSLSTR, no license string was found for the *product*.

System response: Processing is terminated and the XOSF address space will be shut down.

User action: Contact Xerox in order to order the correct license string.

XIN3594E *PRODUCT* LICENSE HAS EXPIRED ON *DATE*

Explanation: While processing the License String member, XINSLSTR, it was determined that the expiration date of the *product* has expired.

System response: Processing is terminated and the XOSF address space will be shut down.

User action: Contact Xerox in order to renew the license string.

XIN3595I *PRODUCT* LICENSE WILL EXPIRE IN *NUMBER* DAYS ON *DATE*

Explanation: This informational message is displayed at XOSF startup.

System response: Processing continues.

User action: None required.

XIS messages

XIS1425E *input* **MEMBER** *member name* **OF DSNAME** *dataset name* **IS EMPTY**

Explanation: The named member in the named dataset does not contain any data.

System response: Command processing is terminated.

User action: Specify a member that contains the image to be processed.

XIS1701I *requested count resource* **PROCESSED.** *converted count resource* **CONVERTED. SEE LOG FOR DETAILS**

Explanation: This message lists the number of images processed and the number of images successfully converted.

System response: Processing continues.

User action: Check the XOAF log or system log for information about any unconverted images.

XIS1702E *image name* **IS NOT IN .IMG OR RES FORMAT**

Explanation: The named image was not in .IMG format.

System response: Image conversion is terminated. Processing continues.

User action: Make sure the dataset conforms to the .IMG format.

XIS1703I *image name* **RASTER TOTALS. RAW (***value***), LIN (***value***), ENC (***value***), HTN (***value***)**

Explanation: The named image was compressed using the four techniques listed, and the message summarizes these totals. XPAF displays this message for each image processed.

System response: Processing continues.

User action: None required.

XIS1704I **MEMBER NAME (***image name***) EXCEEDS 6 CHARACTER LENGTH, ENTRY BYPASSED**

Explanation: The specified image name was longer than six characters.

System response: This entry is skipped. Processing continues for the next member.

User action: Rename the image with a 1- to 6-character member name.

XIS1705I **(***image name***) DOES NOT BEGIN WITH ICC, SKIPPING TO LCC**

Explanation: The specified image did not have an ICC at the start of the compressed data. Characters were skipped until a valid LCC was found.

System response: Processing continues using the available data. This may produce a corrupted image.

User action: Check the image for possible corruption.

XIS1706I UNABLE TO LOCATE MEMBER (*member name*)

Explanation: When using the XOAF option to convert a centralized image to a decentralized image, an invalid member name was specified in the MEMBER NAME field.

System response: The image cannot be converted. The cursor is positioned on the MEMBER NAME field.

User action: Verify that the member name is located in the specified library, and that the member name is spelled correctly. If wildcards are being used, at least one member in the specified library must match the given member name. Once any errors have been corrected, retry the option.

XIS1707I CANNOT LOCATE VALID LCC IN (*image name*), CONVERSION ABORTED

Explanation: XPAF encountered the end of the file while trying to read data. The file size specified in the header is not correct.

System response: Processing continues using the available data.

User action: Check the file for truncation and/or the source of the image.

XIS3010F COULD NOT GET X'*bytes of memory*' BYTES OF MEMORY *activity*

Explanation: The specified amount of space was not available. This space is required whenever an image is to be rotated.

System response: Conversion is terminated, but processing continues.

User action: Increase the space parameter to run in a larger partition.

XIS3011E COULD NOT RELEASE X'*bytes of memory*' BYTES OF MEMORY FROM LOCATION X'*address*' *activity*

Explanation: The specified amount of memory could not be returned to the system. The amount and/or address has been corrupted.

System response: Conversion is terminated, but processing continues.

User action: Check the #DLS space, if available.

XIS3015E COULD NOT *operation* LIBRARY *dataset name activity*. LDM RC=X'*return code*'

Explanation: XPAF could not perform the named activity on the specified library.

System response: Processing from the library is terminated.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XIS3016E **COULD NOT** *operation* **MEMBER** *member name* **OF LIBRARY** *library name* **DURING INITIALIZATION. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named *operation* on the specified member.

System response: Processing of the member is terminated. Processing of other members continues.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XIS3017E **COULD NOT** *operation* **LCA** *activity***. LDM RC=X'***return code***'**

Explanation: The initialization/termination call to the primary I/O support routines failed. The LCA pointer may have been corrupted.

System response: Processing is terminated, but XOAF remains active.

User action: Use the return code as a guide to further action.

XIS6407E **NO DDNAME SPECIFIED** *activity*

Explanation: During the conversion of a centralized image to decentralized format, either the input dataset name or output dataset name was omitted.

System response: The conversion is terminated.

User action: Verify that the input and output dataset names were specified correctly, and rerun the conversion.

XIS6408E **PREMATURE EOF WHILE READING IMAGE LIBRARY**

Explanation: XPAF encountered the end of the file while trying to read data. The file size specified in the header was not satisfied.

System response: Processing continues using the available data.

User action: Check the file for truncation and/or the source of the image.

XIS6410I **IMAGE** *image name* **DOES NOT CONFORM TO STANDARD IN** *axis***-DIRECTION,** *value* **SUPPLIED BY HEADER**

Explanation: The X-direction or Y-direction was not a multiple of 8.

System response: The X-direction or Y-direction is padded with white space and processing continues.

User action: Check the source of the image. Padding may result in undesirable effects in some applications.

XIS6412I **RASTER COUNT (***count value***) DOES NOT AGREE WITH VALUE SUPPLIED BY HEADER (***supplied value***) FOR IMG** *image*

Explanation: The number of rasters read was not the same as the number expected. This message may result if message XIS6410I was issued.

System response: Check the source of the image for possible damage.

User action: By itself, this message suggests that the image file may be corrupted or beyond the ability of the decentralized printer.

XJC messages

XJC3010F **COULD NOT GET X'***amount***' BYTES OF MEMORY** *activity*

Explanation: This is an internal error.

System response: Document processing is terminated. The XOSF address space remains active.

User action: Call Xerox Technical Support.

XJC3701E **UNRECOGNIZED PAL COMMAND:** *command name*

Explanation: This is an internal error.

System response: Document processing is terminated. The XOSF address space remains active.

User action: Call Xerox Technical Support.

XJC4003E **FRAGMENT SIZE X'***value***' DOES NOT AGREE WITH EXPECTED SIZE X'***value***'** *activity*

Explanation: This is an internal error.

System response: Document processing is terminated. The XOSF address space remains active.

User action: Call Xerox Technical Support.

XJC4600I **NEITHER FORM** *form* **NOR SYSOUT CLASS** *class* **FOUND IN** *jdl* **XJCF SIMULATION TABLES. FORM** *form2* **USED**

Explanation: The form and class identified by *form* and *class* could not be found in the FORMS and CLASS tables within the XJCFSIM table for the JDL identified by *jdl*.

System response: Document processing continues using *form2*, which is the first form in the FORMS table for the identified JDL.

User action: Verify that the correct form and/or SYSOUT class was specified. If necessary, add the form or class to the XJCFSIM table, reassemble the table, link-edit it into your XPAF load library, then resubmit the job.

XJC4601E *table name* **TABLE NOT FOUND. XJCF SIMULATION NOT POSSIBLE**

Explanation: A document was sent to a printer that was designated to run in XJCF simulation mode, but the XJCFSIM table was not found in the XPAF load library.

System response: Document processing continues without XJCF simulation.

User action: Assemble the XJCFSIM table, link-edit it into your XPAF load library, then resubmit the job.

XJC4602E **SKIP VALUE** *skip value* **CONFLICTS WITH OFFSET VALUE** *offset value activity*

Explanation: This is an internal error.

System response: Document processing is terminated. The XOSF address space remains active.

User action: Call Xerox Technical Support.

XJC4604E **UNRECOGNIZED PRINTER TYPE SPECIFIED.** *printer name activity*

Explanation: This is an internal error.

System response: Document processing is terminated. The XOSF address space remains active.

User action: Call Xerox Technical Support.

XJC4606I *jdl* **JDL NOT FOUND IN XJCF SIMULATION TABLE.** *jdl2* **USED INSTEAD**

Explanation: The JDL named in the job being processed through XJCF simulation, *jdl*, was not found in the XJCFSIM table.

System response: Document processing continues using *jdl2*, which is the first JDL entry in the XJCFSIM table.

User action: Verify that the correct JDL was specified. If necessary, add the JDL to the XJCFSIM table, assemble it, link-edit it into your XPAF load library, then try the job again.

XJD messages

XJD0117W TASSIGN/TRESET RANGE INPUT SPECIFIER MISMATCH

Explanation: A range input specifier was indicated but is incomplete; the end range is missing.

System response: The system continues processing.

User action: Complete the range or remove the range delimiter (-) and recompile the JSL file.

XJD0118W LOWER RANGE VALUE IS GREATER THAN UPPER RANGE VALUE -- IGNORED

Explanation: The lower range value is greater then the upper range value.

System response: The system continues processing.

User action: Reduce the lower range or increase the upper range so that the upper range is greater than or equal to the lower range and recompile the JSL file.

XJD0119E BAD OR MISSING UNIT SPECIFICATION, STR = <UNIT>

Explanation: User-defined units were referenced but were not defined or were incorrectly defined.

System response: The system continues processing.

User action: Correct or add the required user-defined units or remove the reference to the user-defined units and recompile the JSL file.

XJD0120I WARNING: VALUE MAY BE TOO HIGH, STR = <VALUE>

Explanation: The value specified may be too high.

System response: The system continues processing.

User action: Make sure the value is within range as specified and recompile the JSL file.

XJD0121I WARNING: “STAPLE = YES” NOT ALLOWED WITH “NTO1 = NO”

Explanation: The value YES for parameter STAPLE cannot coexist with the value NO for the parameter NTO1.

System response: The system continues processing.

User action: Change YES to NO for STAPLE, or NO to YES for NTO1 (according to your needs) and recompile the JSL file.

XJD0122I WARNING: JOB WILL USE “STAPLE=YES,NTO1=YES”

Explanation: The system will use “STAPLE=YES,NTO1=YES” for the output JDL.

System response: The system continues processing.

User action: Make sure that “STAPLE=YES,NTO1=YES” is what you want for your JDL. Otherwise, correct your JSL according to the previous message and recompile the JSL file.

XJD0123I WARNING: “NTO1=NO,FACEUP=YES” SPECIFIED WITH “DUPLEX=YES”

Explanation: The specified combination of parameter options is inconsistent.

System response: The system continues processing.

User action: Change the parameters to be consistent for your JDL and recompile the JSL file.

XJS messages

XJS1115E INVALID VALUE OF '*value*' FOUND IN *statement type keyword*= STATEMENT

Explanation: The PDL processor found an invalid value in the named keyword.

System response: Processing continues. The statement is ignored.

User action: Correct the DJDE or PDL statement, and resubmit the job.

XJS1116W MORE THAN 64 LINE NUMBERS SPECIFIED FOR ASSIGN. EXTRAS ARE IGNORED

Explanation: The PDL or DJDE ASSIGN statement contains more than 64 line numbers.

System response: Processing continues. Excess line numbers are ignored.

User action: Correct the DJDE or PDL statement, and resubmit the job.

XJS1122E WHILE PROCESSING MEMBER ‘member-name’ IN PDLLIB

Explanation: This message supplies additional information for message XJS1115E. It describes the PDL member name being processed when the error occurred.

System response: Processing continues. The statement is ignored.

User action: Correct the PDL statement and resubmit the job.

XJS3010F COULD NOT GET X'*number of bytes*' BYTES OF MEMORY *activity*

Explanation: Could not acquire memory for the named activity.

System response: Processing is terminated.

User action: Increase the region size, and retry the activity. If the problem persists, call Xerox Technical Support.

XJS6103E PDL LIBRARY NOT DEFINED. PROCESSING INCOMPLETE

Explanation: The PDLLIB DD statement or dataset is not defined.

System response: Processing continues using only DJDE information.

User action: Define a native library using the PDLLIB initialization or printer profile parameter, and resubmit the job.

XJS6104E *member name* **NOT FOUND IN** *ddname* **PDL LIBRARY. PROCESSING INCOMPLETE**

Explanation: The named member could not be located in the native library associated with the DD name identified in the message.

System response: Processing continues without the missing member.

User action: Perform these steps:

- Verify that you specified the correct member name in the data stream and/or JCL for the job.
- Use the PDL loader to load the PDL into the library associated with the DD name identified in this message.

XJS6227I **ERROR PROCESSING THM** *command***. PROCESSING** *table*

Explanation: An error occurred while attempting to process internal tables. This message may be preceded by additional messages from THM that identify the exact cause of the problem.

System response: Processing is terminated.

User action: Correct the problem identified by any preceding THM messages. If there are no preceding THM messages call Xerox Technical Support.

XJS7101E *module name* **RECEIVED AN INVALID REQUEST OF** *request*

Explanation: An incorrect function request was made to the named module. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XLC messages

XLC0002I UNSEQUENTIAL LOGO FOUND:<LOGONAME>

Explanation: A logo was found with a character order that is not ABCDEF. I.E., it may be DEFABC.

System response: The logo conversion is continued but the proper character ordering is accomplished so the logo will print correctly. This is an informational message only.

User action: No action is required by the user.

XLC0303E FIRST RECORD OF *resource* **IS NOT A VALID HEADER RECORD**

Explanation: The format of the dataset's first record does not conform to the Xerox header record format.

System response: Logo conversion is terminated.

User action: Verify that the input dataset is a logo. If the problem persists, call Xerox Technical Support.

XLC0304E SECOND RECORD OF *resource* **IS NOT A VALID DESCRIPTION RECORD**

Explanation: The format of the second record in the dataset does not conform to the required Xerox description record format.

System response: Logo conversion is terminated.

User action: Verify that the input dataset contains a valid logo.

XLC0305E COULD NOT *activity* **TABLE** *table name operation***. THM RC=X'***return code***'**

Explanation: An attempt to process the indicated table failed. *Table name operation* identifies the type of processing that was being performed when the error occurred.

System response: Logo conversion is terminated.

User action: Verify that the table library is correctly specified to XPAF and available. If you believe that you are receiving this message in error, contact Xerox Technical Support.

XLC0306I *logo name* **FAILED TO CONVERT. SEE LOG FOR MORE INFORMATION**

Explanation: The identified logo could not be converted from a centralized logo to a decentralized font.

System response: Logo conversion is terminated. XOAF processing continues.

User action: Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XLC0308I *number resource* **PROCESSED.** *number* **WITH ERRORS**

Explanation: The identified number of logos has been converted.

System response: Processing continues.

User action: If no errors are indicated, no action is required. If errors occurred, review the XOAF log for more information.

XLC0309E **FONT SIZE EXCEEDED AT CODE POINT X'***position***' WHILE DOING FONT** *font name*

Explanation: The named font being built exceeded the maximum font size of 64K.

System response: Logo conversion is terminated, but XOAF processing continues.

User action: Call Xerox Technical Support.

XLC0316W **THE RESOURCE** *logo name* **HAS A CHARACTER CODE OF X'***value***' WHICH EXCEEDS X'00FF'. THIS VALUE HAS BEEN TRUNCATED TO X'***value***'**

Explanation: The source logo is corrupted.

System response: Processing continues with the truncated value.

User action: Call Xerox Technical Support.

XLC0317W **CODE POINT X'***value***' EXCEEDS MAXIMUMS. HEIGHT=***xx***, WIDTH=***yy***

Explanation: The identified code point exceeds the maximum allowed height and/or width.

System response: The system substitutes a blank space for the character cell and processing continues.

User action: Call Xerox Technical Support.

XLC0319E **IMPROPER** *attribute* **FOR DSNAME** *dataset name***. REQUIRED ATTRIBUTE IS:** *value*

Explanation: The specified dataset does not have the proper RECFM, DSORG, and/or LRECL.

System response: Processing is terminated.

User action: Correct the dataset as indicated in the message.

XLC0321I **LOGO** *logo name* **CONVERTED WITH** *number* **CHARACTERS**

Explanation: The converted logo contains the specified number of printable code points. See the message log for more details.

System response: Processing continues.

User action: None required.

XLC0322W CODE POINT X'*value*' WITH WIDTH OF *value* EXCEEDS MAXIMUM WIDTH OF 255. WIDTH FORCED TO 255

Explanation: The raster data for the given centralized code point exceeds the decentralized maximum.

System response: Processing continues with the diminished value.

User action: The logo in its current format may not be suitable for conversion.

XLC0323W CODE POINT X'*value*' WITH BYTE COUNT OF *value* EXCEEDS MAXIMUM VALUE OF 64. BYTE COUNT FORCED TO 64

Explanation: The raster data for the given centralized code point exceeds the decentralized maximum.

System response: Processing continues with the diminished value.

User action: The logo in its current format may not be suitable for conversion.

XLC0324W CANNOT USE CURRENT XOAF LOG AS MESSAGE DATASET

Explanation: The message dataset you specified is the current XOAF log.

System response: Additional messages are suppressed; font conversion continues.

User action: Specify an alternative dataset. The dataset must have these attributes:

DSORG=PS
RECFM=FBA
LRECL=133
BLKSIZE=3325

XLC0335W INPUT CODE POINT X'*position*' TREATED AS A METACODE CODE POINT. CODE POINT BYPASSED

Explanation: During the conversion of a centralized logo to a decentralized font, XPAF detected a Metacode entry with the FST that had an unexpected configuration. This may indicate a problem with the centralized resource being converted.

System response: Logo conversion continues, but the named code point is skipped. This action is taken for all Metacode values within a logo.

User action: Check the output of the conversion to verify that all valid characters from the logo are present in the converted font. No action is necessary if all characters are present. If there is a problem with the converted font, you may have an invalid logo. Verify that your centralized logo is valid.

XLC0338E **FST REFERENCES INCOMPLETE RASTER FOR CENTRALIZED CODE POINT X'***code point id***' WHILE CONVERTING** *resource name***.**

Explanation: The FST entry for the identified centralized code point references raster data that is not fully within the centralized logo file raster data area.

System response: Centralized-to-decentralized conversion for this logo is terminated. If other logos are being converted, processing of those logos continues.

User action: Recreate the centralized version of the logo and ensure that the FST entry references raster data that is fully contained within the centralized logo raster data area.

XLC0500E **COULD NOT** *activity* **DSNAME** *dataset name***. EI RC=X'***return code***'**

Explanation: The indicated *activity* for the named dataset could not be performed.

System response: Logo conversion is terminated.

User action: If the problem persists, call Xerox Technical Support.

XLC1112E **YOU MUST ENTER A MEMBER NAME FOR A PDS OR VSAM DATASET**

Explanation: While using the XOAF option to convert a centralized logo to a decentralized font, you left the ‘Member Name’ field blank.

System response: The cursor is positioned on the ‘Member Name’ field. No further processing is permitted until the error is corrected.

User action: Enter a valid member name, or enter an asterisk (*) to convert all the logos in the dataset.

XLC1706I **UNABLE TO LOCATE MEMBER (***member name***)**

Explanation: When using the XOAF option to convert a centralized image to a decentralized image, an invalid member name was specified in the MEMBER NAME field.

System response: The image cannot be converted. The cursor is positioned on the MEMBER NAME field.

User action: Verify that the member name is located in the specified library, and that the member name is spelled correctly. If wildcards are being used, at least one member in the specified library must match the given member name. Once any errors have been corrected, retry the option.

XLC3010F **COULD NOT GET X'***bytes of storage***' BYTES OF MEMORY** *activity*

Explanation: This is an internal error.

System response: Processing continues.

User action: Specify a larger region size.

XLC3011E **COULD NOT RELEASE X'***amount of storage***' BYTES OF MEMORY FROM LOCATION X'***getmained area address***' FOR** *activity*

Explanation: This is an internal error.

System response: XPAF processing continues.

User action: None required. If the problem persists, call Xerox Technical Support.

XLC3015E **COULD NOT** *command* **LIBRARY** *native library action***. LDM RC=X'***return code***'**

Explanation: During the conversion of a centralized logo to a decentralized font, an error was encountered accessing one of the required libraries. The action text provides details about where in the conversion process the error occurred.

System response: The conversion is terminated.

User action: Verify that all input and output libraries are specified correctly and available to XPAF. If you believe you are receiving this message in error, contact Xerox Technical Support.

XLC3016E **COULD NOT** *activity* **MEMBER** *member name* **OF LIBRARY** *native library action***. LDM RC=X'***return code***'**

Explanation: During the conversion of a centralized logo to a decentralized font, an error was encountered accessing one of the required libraries. The *action* text provides details about where in the conversion process the error occurred.

System response: The conversion is terminated.

User action: Verify that all input and output libraries are specified correctly and available to XPAF. If you believe you are receiving this message in error, contact Xerox Technical Support.

XLC3017E **COULD NOT** *command* **LCA** *action***. LDM RC=X'***return code***'**

Explanation: During the conversion of a centralized logo to a decentralized font, an attempt to acquire or release an LCA was unsuccessful. The *action* text provides details about where in the conversion process the error occurred.

System response: The conversion is terminated.

User action: Verify that all input and output libraries are specified correctly and available to XPAF. If you believe you are receiving this message in error, contact Xerox Technical Support.

XLD messages

XLD0700E AN ERROR HAS OCCURRED IN PROCESSING. SEE LOG FOR MORE INFORMATION

Explanation: An XLD processing error occurred.

System response: XLD processing is terminated.

User action: Refer to the message log for other messages that may help explain the problem.

XLD0701I *operation* **COMPLETED** *action*

Explanation: An XLD function completed as described in the message text. For example, the message “DELETE COMPLETED SUCCESSFULLY FOR member OF library BY userid” indicates that the member was deleted successfully from a native library by the user specified.

System response: None.

User action: None required.

XLD1301E LIST *list name* **NOT ACCESSIBLE.** *action*

Explanation: A list pointer passed to an internal XPAF service routine was zero. This is an internal logic error within XPAF.

System response: The current activity is terminated.

User action: Gather all materials related to the error and contact Xerox Technical Support.

XLD1302E DELETE LIST *list name* **REQUEST FAILED.** *reason*

Explanation: You entered a list name that either does not exist or is invalid. The delete request failed.

System response: XOAF processing is terminated.

User action: Verify that the list name exists and is valid and retry the option. If the option fails again, call Xerox Technical Support.

XLD1306E INVALID INTERNAL FUNCTION. *module name*

Explanation: This is an internal error.

System response: XLD processing is terminated.

User action: Call Xerox Technical Support.

XLD1307E COULD NOT ALLOCATE AND OPEN *dataset name***. RC=X'***return code***'**

Explanation: The indicated dataset name was allocated and opened, but did not successfully complete. Examine the return code to determine the cause of the error:

000C The library dataset or DASD volume is full. Provide more space for the library.

0016 A problem external to XPAF is preventing the library from being accessed.

0024 The region size is too small to hold the control block. Increase the region size.

For all other return codes, call Xerox Technical Support.

System response: XLD processing is terminated.

User action: Depending on the displayed return code, either correct the problem and rerun the job, or call Xerox Technical Support.

XLD4153E **MEMBER** *member name* **NOT FOUND IN LIBRARY** *library name*

Explanation: The named member was not found in the specified library.

System response: Processing continues.

User action: Ensure that the member name is correct and exists in the library. Correct any errors and try the function again.

XLW messages

XLW7101E *module name* **RECEIVED AN INVALID REQUEST OF** *function code*

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XLW7102I **I/O ERROR DURING** *operation* **OF** *printer name*

Explanation: An unrecoverable error occurred on the named printer. This can happen during CLOSE or deallocation of the printer.

System response: Processing continues.

User action: Determine the cause of the problem and correct it if possible.

XLW7103I *cuu* **HAS BEEN RELEASED FROM XOSF**

Explanation: The named printer was deallocated from XPAF and is available for other use.

System response: Processing continues.

User action: None required.

XLW7104I **DEVICE ALLOCATION FAILED FOR** *printer name***. CUU=***cuu***; RC=X'***return code***'; REASON CODE=X'***reason code***'**

Explanation: Dynamic allocation failed for the named printer. The printer may already be allocated to another task (XPAF or JES). Message XLW7124E may follow this message and provide more information.

System response: The printer task is terminated.

User action: If the problem persists, call Xerox Technical Support.

XLW7105E **DEVICE OPEN FAILED FOR** *printer name***, CUU=***cuu*

Explanation: An error occurred while opening the named printer. OPEN processing was not completed. The operating system displays more problem-related messages.

System response: The printer task is terminated.

User action: Call Xerox Technical Support.

XLW7106I **XNS CONNECTION FAILED FOR** *printer name*

Explanation: The printer could not connect to the HIP printer software.

System response: The printer task is terminated.

User action: The printer may not be in HIP mode, or it may have been left in an unknown state when it was last used. Unload and reload the HIP processor on the printer and start the printer again. If this fails, make sure the printer is running on the correct version of its operating system software.

XLW7107I **ALLOCATING** *cuu* **TO** *printer name*

Explanation: XPAF is allocating the named printer to the XOSF address space.

System response: The printer is allocated and opened.

User action: None required.

XLW7108I *cuu* **HAS BEEN ALLOCATED TO XOSF**

Explanation: The named printer was allocated to the XOSF address space.

System response: Processing continues.

User action: None required.

XLW7109I **OPENING** *printer name* **AT** *cuu ddname*

Explanation: XOSF is opening the named printer.

System response: Processing continues.

User action: None required.

XLW7110E **I/O ERROR ON** *printer name***. CUU=***cuu***, ECB=***xxxxxxxx*

Explanation: An unrecoverable I/O error occurred on the named printer. Message XLW7111I, which contains the IOB standard information, follows this message.

System response: The printer task is terminated.

User action: Determine the cause of the I/O error and correct it.

XLW7111I **IOBSTD=***value*

Explanation: This message follows message XLW7110E. It describes a printer I/O error.

System response: The printer task is terminated.

User action: Determine the cause of the I/O error and correct it.

XLW7112I *printer name*. **CUU=***cuu*, *status*

Explanation: This message displays the printer's status.

System response: Processing continues unless another message indicates otherwise.

User action: If the message indicates that printer operator intervention is necessary, the printer may be jammed or out of paper.

XLW7124E **REASON CODE=***text*

Explanation: A device allocation failed for a channel-attached printer. XLW7104I identifies the error. This message supplies additional information about the failure if the return code is a known code.

System response: The printer start-up is terminated.

User action: Correct the problem identified by message XLW7104I, then start the printer again.

XOA messages

XOA0001I **ERROR - PDS REFRESH NO LONGER REQUIRED OR SUPPORTED**

Explanation: This is an informational message that is issued in response to a REFRESH command being issued in a batch XOAF job. With the introduction of AUTOREV support, PDS libraries no longer require refreshing and the REFRESH command is no longer supported.

System response: Processing continues.

User action: No action required.

XOA3473E **GETMAIN FOR** *number* **BYTES FAILED FOR** *control block* **IN** *program name***. RC=X'***return code***'**

Explanation: The indicated program issued a GETMAIN request that could not be honored.

System response: The task is terminated.

User action: Increase the region size or decrease the number of printer tasks running in the XOSF address space and restart XOSF. If the error persists, call Xerox Technical Support.

XOA3530E *module* **ABENDED IN ROUTINE** *routine***. CC X'***completion code***'**

Explanation: An abend in XOAF processing was intercepted.

System response: The task is terminated.

User action: Call Xerox Technical Support with the module name, routine name, completion code, accompanying dump, and XOAF log.

XOA3899W **MEMBER** *member name* **OFFLOADED 0 DIRLEN TO DSNAME** *dataset name*

Explanation: While using the offload function of the XOAF Manage Libraries option to offload a member, the member was offloaded without user directory information.

System response: The message is issued to the XOAF screen and to the XOSF log. The offload function is now complete.

User action: Verify that the resource will function correctly without the user directory information. If unusable resources are produced, use the LDM batch offload/reload process as an alternative.

XOA3900I **MEMBER=***member name* **OFFLOADED TO DSNAME:** *dataset name*

Explanation: The specified member was offloaded to the named dataset.

System response: Processing continues.

User action: None required.

XOA3901E SECONDARY KEYWORD IS MISSING

Explanation: While parsing a TSO or batch command, a required secondary keyword was missing.

System response: Command processing is terminated.

User action: Correct the command syntax so it includes all required keywords. Enter the command again. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for the syntax of each command.

If the problem persists, call Xerox Technical Support.

XOA3902E ISPLINK ADDRESS IS NOT VALID. CALL XEROX TECHNICAL SUPPORT

Explanation: This is an internal error.

System response: XOAF remains active.

User action: Call Xerox Technical Support.

XOA3903E DATA ENTERED IN ISPF IS NOT VALID. CORRECT AND REENTER

Explanation: Invalid data was entered in ISPF.

System response: XOAF remains active.

User action: Correct the data and enter the command again.

XOA3904F XOAF FUNCTION ABENDED. RC=*return code***; COMPLETION CODE=***completion code*

Explanation: This is an internal error.

System response: Depending on the severity of the abend, XOAF may remain active.

User action: Call Xerox Technical Support.

XOA3905E MODULE *module name* **NOT FOUND IN XOAF LIBRARY**

Explanation: An XOAF function was requested, but the module was not found in the XOAF library.

System response: XOAF remains active.

User action: Ensure that the XPAF load library is allocated to the TSO session either in STEPLIB or ISPLLIB, and that the specified module is in the library. If the problem persists, call Xerox Technical Support.

XOA3906E LEFT PARENTHESIS MISSING AFTER KEYWORD. REENTER COMMAND

Explanation: The left parenthesis after a command keyword was missing.

System response: XOAF remains active.

User action: Correct the command syntax by inserting the opening parenthesis and enter the command again. If the problem persists, call Xerox Technical Support.

XOA3907E ERROR ENCOUNTERED WHILE PARSING *command*. CALL SYSTEM ADMINISTRATOR

Explanation: No keyword was found in the identified command.

System response: The command is ignored and the operator is prompted for the next command.

User action: Make sure the command is properly constructed and contains all of the required parameters.

XOA3908E *keyword* KEYWORD UNDEFINED OR WRONG LENGTH. CORRECT AND REENTER

Explanation: Either a keyword was misspelled or an invalid keyword was entered in a TSO or batch command.

System response: XOAF remains active, but the command is terminated.

User action: Correct any errors in the command syntax and enter the command again. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* to determine the syntax of each command.

XOA3909E THE REQUESTED XOAF FUNCTION HAS NOT BEEN FOUND IN THE INTERNAL FUNCTION TABLE

Explanation: An XOAF function was not found in the XOAF internal function table.

System response: XOAF remains active.

User action: Make sure the value entered for the function is valid for XOAF. If the value is not valid, correct it and try again. If the value is valid, call your system administrator or Xerox Technical Support.

XOA390AE *keyword* SPECIFIED IS INVALID. CORRECT AND REENTER

Explanation: The keyword value specified for the resource conversion is invalid.

- If the resource is a form, you must specify P (portrait) or L (landscape) for the orientation.
- If the resource is an image, you must specify 0, 90, 180, or 270 for the rotation.

System response: Command processing is terminated.

User action: Correct the keyword value and resubmit the job.

XOA3910E *module* IS UNABLE TO OBTAIN SUFFICIENT STORAGE TO COMPLETE THE REQUEST

Explanation: XOAF could not find enough storage to complete the requested function.

System response: XOAF remains active.

User action: Increase the region size and try again. If the problem persists, call Xerox Technical Support.

XOA3911E ONLY ONE SECONDARY KEYWORD ALLOWED PER PRIMARY COMMAND

Explanation: More than one secondary keyword was entered. Only one is allowed.

System response: XOAF remains active.

User action: Correct any errors in the command syntax and enter the command again.

XOA3912E DSNAME OR MEMBER NAME IS NOT VALID. CORRECT AND REENTER

Explanation: An invalid dataset name was entered for the dataset parameter in the command.

System response: XOAF remains active.

User action: Enter a valid dataset name. For the REFRESH command, if necessary, ask your system administrator for valid datasets and member names.

XOA3913E ERROR RETURNED FROM USER SECURITY. CALL SYSTEM ADMINISTRATOR

Explanation: The user security routine load failed during a call from a program.

System response: XOAF remains active.

User action: Contact your system administrator. Make sure the user security routine is correct and in place. If the problem persists, call Xerox Technical Support.

XOA3914E COMMAND CONTAINS INVALID PRIMARY KEYWORD. CORRECT AND REENTER

Explanation: An invalid XOAF command was entered. The primary keyword is either invalid or unrecognizable.

System response: XOAF remains active.

User action: Verify that the XOAIN record is in fixed format, then correct the command syntax and enter the command again.

XOA3915E NO COMMA IN START COMMAND. CORRECT AND REENTER

Explanation: A comma was missing in the command syntax for START.

System response: XOAF remains active.

User action: Correct the command syntax and enter the command again.

XOA3916E THE PROFILE FOR *command* COMMAND IS NOT VALID

Explanation: The requested profile's name was not valid.

System response: XOAF remains active, but the command is terminated.

User action: Refer to *Section Five: XPAF Parameter and Keyword Reference* for descriptions of valid profile entries. Correct the list and enter the command again.

XOA3917E INVALID PROFILE NAME ENCOUNTERED IN PROFILE LIST

Explanation: XOAF found an invalid profile name or incorrect entry while scanning the profile list.

System response: XOAF remains active, but command processing is terminated.

User action: Refer to *Section Five: XPAF Parameter and Keyword Reference* for descriptions of valid profile entries. Correct the list and enter the command again.

XOA3918E A PROFILE LIST OF MORE THAN 12 ENTRIES WAS ENCOUNTERED

Explanation: The operator entered more than the maximum of 12 entries in a profile list.

System response: XOAF remains active, but command processing is terminated.

User action: Enter no more than 12 entries in the profile list. If the problem persists, call Xerox Technical Support.

XOA3919E PARENTHESES NOT PAIRED IN DSNAME

Explanation: The dataset name was entered without a pair of parentheses.

System response: XOAF remains active.

User action: Correct the problem, then enter the list again.

XOA3921E *module name* **MODULE CANNOT BE LOADED. CALL SYSTEM ADMINISTRATOR**

Explanation: XOAF could not load the named program module.

System response: XOAF remains active, but the command is terminated.

User action: Verify that the indicated module is resident in XOAF's load library. If not, move the affected module into the load library. If it is in the load library, call Xerox Technical Support.

XOA3922E *keyword* **SECONDARY KEYWORD INVALID. CORRECT AND REENTER**

Explanation: An invalid secondary keyword was entered.

System response: XOAF remains active.

User action: Correct any errors in the syntax, then enter the command again.

XOA3923E *keyword* **KEYWORD NOT FOUND IN COMMAND. CORRECT AND REENTER**

Explanation: XOAF scanned the command line and did not find a required keyword.

System response: XOAF remains active.

User action: Correct any errors in the keywords and syntax and enter the command again.

XOA3924F LDM ENCOUNTERED AN ERROR TRYING TO *operation*

Explanation: The Library Data Manager (LDM) could not perform one of these tasks:

- Acquire enough storage to load the named module
- Read the dataset because it has been corrupted
- Read the dataset because it is not in a recognizable format

System response: The function is terminated, but XOAF remains active.

User action: Try the operation again after performing one of these tasks:

- Increase the region size.
- Correct the corrupted file. Corrupted files may need to be recreated, or restored from a backup source.
- Correct the spelling of the dataset name.

If the problem persists, call Xerox Technical Support.

XOA3926E THE *keyword* **VALUE IS INVALID**

Explanation: The value of the named keyword was outside the acceptable range.

System response: Command processing is terminated.

User action: Correct any invalid keyword values.

XOA3927E PARENTHESES NOT PAIRED IN DOCID LIST

Explanation: In a TSO/batch command, the opening and closing parentheses for a parameter were not used in a pair.

System response: Processing is terminated.

User action: Recode the TSO/batch command using the correct syntax and rerun the job.

XOA3928E CODE OR DSNAME REQUIRED FOR DISPLAY. REENTER COMMAND

Explanation: The operator pressed the ENTER key on a panel without entering the required code name or dataset name.

System response: XOAF remains active.

User action: Enter the required code name or dataset name. If the problem persists, call Xerox Technical Support.

XOA392AE MEMBER NAME NOT ALLOWED IN OUTPUT DATASET. CORRECT AND REENTER

Explanation: Resource conversion saw the input member name as the output member name. Either no output member name is allowed or the output member name is invalid.

System response: Resource conversion is terminated.

User action: Correct the output dataset entry and enter the command again.

XOA392BE MEMBER NAME MISSING. CORRECT AND REENTER

Explanation: The XOAF batch or TSO command contained a dataset name without a required member name.

System response: Document processing is terminated.

User action: Add the required member name to the command and submit the XOAF request again. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for information on member names required in commands.

XOA392CE DECENTRALIZED RESOURCE LOAD REQUIRES INPUT MEMBER. CORRECT AND REENTER

Explanation: The member name associated with the input dataset name was missing from the load command. Decentralized resources can only be loaded from a partitioned dataset, so you must specify a member name. The member name can be an asterisk (*).

System response: Resource loading is terminated.

User action: Add the required member name to the command and submit the XOAF request again.

XOA392DE MEMBER NAME MUST BE NO LONGER THAN *nn* CHARACTERS. CORRECT AND REENTER

Explanation: The member name was longer than the specified number of characters.

System response: Command processing is terminated.

User action: Correct the length of the member name, then retry the option.

XOA392EI *keyword* KEYWORD MISSING OR INVALID. DEFAULT VALUE OF *value* USED

Explanation: The secondary keyword was either missing or misspelled. The default value for this keyword was used.

System response: Processing continues using the default value.

User action: Verify that the default value for the keyword is the value you want to use. If not, correct the value, then resubmit the batch job. Refer to *Section Five: XPAF Parameter and Keyword Reference* for default value information.

XOA3930F DIRECTORY CONTAINS NO MEMBERS

Explanation: You attempted to access a directory that has no members.

System response: XOAF remains active.

User action: Enter a directory that contains members. If the problem persists, call Xerox Technical Support.

XOA3931F ENTERED LIBRARY DOES NOT EXIST OR IS ALLOCATED TO ANOTHER USER OR JOB

Explanation: XPAF attempted to gain access to a library that either does not exist on the system or is already in use.

NOTE: This message cannot be suppressed.

System response: XOAF remains active.

User action: Enter the library correctly and try again.

XOA3932F ENTERED LIBRARY NOT ACCESSIBLE. REASON CODE=*reason code*

Explanation: XPAF attempted to gain access to a library, but was denied for the reason indicated by the code.

System response: XOAF remains active.

User action: Call your system administrator or Xerox Technical Support.

XOA3933E ALLOCATE FOR BROWSE RETURNED *return code*

Explanation: While attempting to browse a dataset, a request for DASD storage failed. There was not enough space available on the DASD volume.

System response: XOAF remains active.

User action: Make sure there is enough disk storage space available to perform XOAF functions. Try browsing datasets using XOAF batch jobs.

XOA3934E DATASET OPEN FOR LIST MEMBER RETURNED *return code*

Explanation: XOAF was unable to OPEN a work dataset.

System response: XOAF remains active.

User action: Verify that there is sufficient disk storage space to perform XOAF functions. Also, line numbers may be present in VB format CLIST files in XPFCLIB. These line numbers must be removed by using the UNNUM command before converting from FB to VB format.

XOA3935E DATASET ALLOCATION FOR LIST MEMBER RETURNED *return code*

Explanation: Due to insufficient disk space, the dynamic allocation of storage to BROWSE a dataset failed.

System response: XOAF remains active.

User action: Make sure there is enough disk storage space available to perform XOAF functions. Try browsing datasets using XOAF batch jobs.

XOA3936F *program name* **ENCOUNTERED AN XOAF SUPERSTRUCTURE ERROR. RC=***return code*

Explanation: This is an internal error.

System response: XOAF processing is terminated.

User action: Call Xerox Technical Support.

XOA3937F **XOASUP20 UNABLE TO OPEN** *ddname* **FILE**

Explanation: This is an internal error.

System response: XOAF remains active.

User action: Call Xerox Technical Support.

XOA3938F **XOASUP20 FAILED TO WRITE A RECORD TO** *ddname*

Explanation: This is an internal error.

System response: XOAF remains active.

User action: Call Xerox Technical Support.

XOA3939I *message text*

Explanation: This message is created by the XOAF user security exit. Although it is logged as a service of XOAF, it is controlled by the user security exit code. The user exit can use the message to explain why an XOAF user was denied permission to perform a function. The maximum length of this message is 200 characters.

System response: None.

User action: The action depends on the message generated.

XOA393AE *keyword* **IS A DUPLICATE KEYWORD OR CONFLICTS WITH A PREVIOUS KEYWORD**

Explanation: Either a keyword was entered twice, or a conflicting set of keywords was entered for the REFRESH command.

System response: This command is ignored. The system prompts for a new command.

User action: Correct the keyword parameters and enter the command again.

XOA393BE **VALUE FOR '***keyword***' KEYWORD IS MISSING OR INVALID**

Explanation: The value for the indicated keyword was either missing or invalid.

System response: This command is ignored. The system prompts for a new command.

User action: Correct the keyword parameters and enter the command again.

XOA393CE INVALID OR INSUFFICIENT PARAMETERS FOR THE '*keyword*' COMMAND

Explanation: The combination of parameters was not valid.

System response: This command is ignored. The system prompts for a new command.

User action: Enter the correct parameters and enter the command again.

XOA393DI REFRESH REQUEST HAS BEEN SCHEDULED

Explanation: XOAF processing completed successfully for the REFRESH command.

System response: Processing continues.

User action: None required.

XOA393EE UNKNOWN RC X'*return code*' FROM *module name*

Explanation: XPAF found an unrecognizable internal return code.

System response: This command is ignored. The system prompts for a new command.

User action: Record all available information about the command, including this and any other messages. Give this information to your system administrator.

XOA393FF MEMBER NAME MUST NOT BE SPECIFIED FOR REFRESH

Explanation: When using the TSO batch command to refresh a dataset, a member name was specified for the dataset.

System response: The dataset is not refreshed.

User action: Remove the member name from the TSO/batch command, then resubmit the job. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for information on member names required in commands.

XOA3940E THE PRINTER OR JOB SPECIFIED IS NOT CURRENTLY ACTIVE

Explanation: The REFRESH command contained a printer name or XOSF parameter that is not currently active.

System response: This command is ignored. The system prompts for a new command.

User action: Find out if the printer or parameter named in the REFRESH command is active. Correct the problem and enter the command again.

XOA3941E 'TYPE' SPECIFIED WITHOUT 'PRINTER' OR 'XOSF'

Explanation: The attempted command was incomplete.

System response: This command is ignored. The system prompts for a new command.

User action: Call Xerox Technical Support.

XOA3942E PROTOCOL ERROR. SEE SYSTEM ADMINISTRATOR

Explanation: This is an internal error.

System response: This command is ignored. The system prompts for a new command.

User action: Call Xerox Technical Support.

XOA3943E XOSF ADDRESS SPACE DID NOT HAVE THE CORRECT REFRESH ENVIRONMENT

Explanation: The program was unable to schedule the REFRESH. A previously scheduled REFRESH may still be in progress, or there may be an error in XOSF.

System response: This command is ignored. The system prompts for a new command.

User action: Try the refresh again later. If no refresh is in progress, call Xerox Technical Support.

XOA3944E REFRESH REQUEST VIA 'DS' PARAMETER NOT YET FUNCTIONAL

Explanation: This function is not yet implemented.

System response: This command is ignored. The system prompts for a new command.

User action: Request the REFRESH command through TYPE and either PRINTER or XOSF.

XOA3945E NO PARAMETERS ENTERED FOR '*command*' COMMAND

Explanation: The REFRESH command was entered without parameters.

System response: This command is ignored. The system prompts for a new command.

User action: Specify the appropriate parameters, then enter the command again.

XOA3948E INVALID XOAF COMMAND '*command*'. CORRECT AND REENTER

Explanation: The entered command is invalid.

System response: The command is ignored. The system prompts for a new command.

User action: Reenter the command using the correct syntax. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for the correct TSO/batch syntax.

XOA3949F UNABLE TO ALLOCATE LIBRARY

Explanation: XOAF could not access a library. One of these problems occurred:

- You did not have security access to the dataset.
- The specified dataset does not exist.
- The dataset was allocated to another job.
- The dataset does not have the expected dataset organization (DSORG).

System response: The library is not displayed, but XOAF remains active.

User action: Enter the command again after performing these tasks:

- Verify that you have specified the correct dataset name, and that you have sufficient authority to access the dataset.
- If necessary, free the dataset from the other allocations.

XOA394AE UNABLE TO RELEASE STORAGE

Explanation: Module XOASPF01 was unable to release local storage.

System response: XOAF processing is terminated.

User action: Call Xerox Technical Support.

XOA3950E *type* **MEMBER NAME NOT ALLOWED WHEN** *function*

Explanation: When loading fonts, the output name is taken from the header, and therefore should not be specified.

System response: Command processing is terminated.

User action: Correct the command and reenter it.

XOA3951E INPUT FOR RESOURCE CONVERSION MUST BE A PARTITIONED DATASET

Explanation: The dataset specified as input is not a partitioned dataset (PDS). You must specify a PDS member.

System response: Processing is terminated.

User action: Check the input dataset name and ensure a PDS is specified.

XOA3952E UNABLE TO READ DSNAME '*dataset name***'. SEE LOG FOR DETAILS**

Explanation: The named dataset has an invalid record format or has been corrupted.

System response: XOAF processing is terminated.

User action: Check the XOAF log for previous messages that may describe the problem. Make sure the named dataset does not specify RECFM=U (Undefined Record Format).

XOA3953E A MEMBER NAME IS NOT VALID WITH THE LDM LIBRARY DIRECTORY COMMAND

Explanation: While using the TSO/batch option to display a directory of library members, you specified a member name with the dataset name.

System response: Command processing is terminated.

User action: Remove the member name from the command and resubmit the job. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for information on member names required in commands.

XOA3954E GRS GQSCAN FOR *queue name* **FAILED WITH RC=X'***return code***'**

Explanation: A Global Resource Serialization (GRS) error occurred while locating XOSF resources for an XOAF refresh request.

System response: The refresh request is not performed.

User action: For return code 12, which indicates a GRS error, retry the request one or more times. For all other return codes, call Xerox Technical Support.

XOA3955E INVALID '*parameter name***' PARAMETER SPECIFIED IN THE 'CONVERT** *resource type***' COMMAND**

Explanation: The value for the named parameter, specified with the CONVERT *resource type* TSO/batch command, is invalid or missing.

System response: Processing is terminated.

User action: Correct the syntax, and resubmit the command. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for the correct TSO/batch syntax.

XOA3990E USER NOT AUTHORIZED FOR XOAF. CALL SYSTEM ADMINISTRATOR

Explanation: The user attempted to access an XOAF function without authorization or with improper authorization.

System response: XOAF processing continues.

User action: Call Xerox Technical Support.

XOA3992E ISPF REQUEST FAILED TO ESTABLISH AN ESTAE ENVIRONMENT PRIOR TO INVOKING XOAFUSEC

Explanation: Authorization was denied for this XOAF function.

System response: XOAF remains active.

User action: Call Xerox Technical Support.

XOA3994W INVALID *range* **RANGE LIMIT. HEXADECIMAL VALUE MUST BE BETWEEN X'20' AND X'FF'. VALUE SET TO** *value*

Explanation: The lower or upper range limit, specified with the CONVERT XFONT TSO/batch command, was not a valid value. The specified value was substituted.

System response: Processing continues using the substituted value.

User action: If the substituted value is not acceptable, correct the lower or upper range limit, and resubmit the command.

XOA3995E NO LONGER VALID TO PRECONVERT *resource type*

Explanation: The TSO/batch command used to preconvert the specified resource type (forms or images) is no longer valid. XPAF will dynamically convert forms and images during job processing.

System response: Preconversion processing is terminated.

User action: Run the job and allow XPAF to dynamically convert forms and images.

For information on the TSO/batch commands supported by XPAF, refer to the *XPAF TSO/Batch Commands Quick Reference Card*.

XOA3996E WHEN USING THE WILD CARD, NO OUTPUT MEMBER NAME CAN BE SPECIFIED

Explanation: An attempt was made to execute an incorrect load command. The input member that was specified was an asterisk (*), which is a wildcard causing all members of the specified input dataset to be processed. Along with this, an output member for the output dataset was specified. No output member should be specified for the output dataset when the input member is the wildcard.

System response: The resource(s) are not loaded. This error message is issued to the XOAF and system logs. Processing is terminated.

User action: Correct the input load command and resubmit the load request via the batch execution job or the XOAF panel. If the input member name needs to be the wildcard, remove the output member name. If the output member name needs to be specified, use a specific input member name that does not utilize the wildcard.

XOA3997E INVALID CONVERT *resource type* **COMMAND. THE SAMPLE PARAMETER MUST BE SPECIFIED**

Explanation: An attempt was made to execute an incorrect CONVERT *resource type* TSO/batch command. The input command did not contain the required SAMPLE parameter.

System response: The conversion is not performed. This error message is issued to the XOAF and system logs. Processing is terminated.

User action: Correct the input command and resubmit the convert request via the batch execution job. Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for the correct TSO/batch syntax.

XOA3998E INVALID CONVERT *resource type* **COMMAND. THE LISTING PARAMETER MUST BE SPECIFIED WHEN THE SAMPLE PARAMETER VALUE IS 'Y' OR 'R'**

Explanation: An attempt was made to execute an incorrect CONVERT *resource type* TSO/batch command. The input command specified that a SAMPLE was required but did not contain the LISTING parameter.

System response: The conversion is not performed. This error message is issued to the XOAF and system logs. Processing is terminated.

User action: Correct the input command and resubmit the convert request via the batch execution job. The LISTING parameter must be specified when a SAMPLE is requested.

XOA3999E INVALID CONVERT XFONT COMMAND. THE *range* **RANGE LIMIT PARAMETER MUST BE SPECIFIED WHEN THE SAMPLE PARAMETER VALUE IS 'R'**

Explanation: An attempt was made to execute an incorrect XFONT command. The input command did not contain the indicated lower or upper range parameter.

System response: The conversion is not performed. This error message is issued to the XOAF and system logs. Processing terminate.

User action: Correct the input command and resubmit the convert request via the batch execution job. When the SAMPLE parameter has a value of R, both the LOWER and UPPER range parameters must be specified. Their valid values must be a hexadecimal number between X'20' and X'FF'.

XOAF messages

There are two versions of XOAF messages: a short version that appears on line one of a panel and a long version that appears on line three. The long version appears only if you enter HELP or press PF1 when a short message is displayed. Both versions of the message are provided in this chapter.

XOAF003E **INVALID REQUIRED ENTRY**
ENTER THE VALID *job card information* **IN THE REQUIRED FIELD.**

Explanation: You entered fewer than nine characters on the first job card field on the panel.

System response: The cursor is positioned on the command line. No further processing is permitted until the error is corrected.

User action: Complete the job card fields with valid information.

XOAF004E **WILDCARDS NOT ALLOWED**
WILDCARDS ARE NOT SUPPORTED FOR *member name* **WITH THIS FUNCTION.**

Explanation: You entered a member name containing one or more wildcard characters (* or ?) for an XOAF option that does not support wildcards.

System response: The cursor is positioned on the 'Member Name' field. No further processing is permitted until the error is corrected.

User action: Enter the specific member name without using any wildcard characters and retry the option.

XOAF005E *table name condition*
TABLE *table name condition* **IN** *dataset name***.**

Explanation: An attempt to create the named paper-related table failed.

System response: Paper table processing is terminated.

User action: If the table already exists, it must first be deleted before you create a new one with the same name, or you can update the existing table instead.

XOAF006E **XOAF ALREADY ACTIVE**
IF USING SPLIT SCREENS, ENTER "END" OR PRESS PF3 TO RETURN TO XOAF.

Explanation: While using split screens, you attempted to start multiple XOAF sessions. Only one active XOAF session at a time is allowed.

System response: The cursor is positioned on the command line. No further processing is permitted until the error is corrected.

User action: Enter **END** to return to the active XOAF session.

XOAF007W MEMBER NOT FOUND
MEMBER NAME ENTERED ON LOCATE OR FIND COMMAND IS NOT IN LIBRARY.

Explanation: You entered an ISPF locate or find command for a member that does not exist in the selected library.

System response: The cursor is positioned on the command line. No further processing is permitted until the error is corrected.

User action: Enter a valid member name, then reissue the locate or find command. Alternatively, you can use the ISPF scroll commands.

XOAF008E MISSING REQUIRED ENTRY
ENTER *entry* **AT THE CURSOR POSITION.**

Explanation: You left a required field blank.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter a valid value in the field.

XOAF009E DATASET NOT FOUND
DATASET *dataset name* **COULD NOT BE FOUND.**

Explanation: While creating or updating a resident resource list, XOAF was unable to locate the dataset name you entered on the panel.

System response: The cursor is positioned on the command line. No further processing is permitted until the error is corrected.

User action: Ensure that you entered the name of the native library containing all the resident resource lists. In the XOSF start-up proc, this is the dataset name in the DD statement specified by the LIBRARY printer profile parameter.

If you do not want XOAF to prefix the dataset name with your user ID, enter the fully qualified dataset name in quotes.

XOAF020E INVALID MEMBER NAME
THE MEMBER NAME MUST FOLLOW STANDARD z/OS NAMING CONVENTIONS.

Explanation: You entered an invalid name in the ‘Member Name’ or ‘List Name’ fields. The name must conform to z/OS naming conventions.

System response: The cursor is positioned on the invalid name. No further processing is permitted until the error is corrected.

User action: Correct the member name.

XOAF023E INSUFFICIENT STORAGE
THERE IS INSUFFICIENT VIRTUAL STORAGE TO COMPLETE THIS FUNCTION.

Explanation: XOAF could not allocate sufficient storage to perform a requested task.

System response: No further processing is permitted.

User action: Increase the XOAF region size and try the option again. If the problem persists, call Xerox Technical Support.

XOAF032E MAXIMUM VALUE EXCEEDED
THE *dimension* HAS BEEN ADJUSTED TO THE MAXIMUM ALLOWABLE VALUE.

Explanation: While creating or updating a paper name table, you entered a value that exceeds the maximum value for the named *dimension,* WIDTH or HEIGHT.

System response: The maximum value for the specified unit is substituted for the invalid value; for example, the maximum value for DOTS is 32767.

User action: If you do not want the maximum value substituted for WIDTH or HEIGHT, enter the desired value.

XOAF033E MAXIMUM SIZE EXCEEDED
THE LARGEST POINT SIZE ALLOWED IS 99.9.

Explanation: While updating the XPAFFFI table, you entered an invalid point size.

System response: The cursor is positioned on the ‘Point Size’ field. No further processing is permitted until the error is corrected.

User action: Correct the point size value.

XOAF034E *range* **RANGE LIMIT ERROR**
HEXADECIMAL VALUE MUST BE BETWEEN X'20' AND X'FF'.

Explanation: The lower or upper range limit you specified was not a valid value.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter a valid value in the field within the specified range.

XOAF050E MISSING REQUIRED ENTRY
ENTER FONT NAME(S) AT THE CURSOR POSITION.

Explanation: When installing custom replica fonts using version 6 encoding or above, you left blank or made an invalid entry in the ‘Centralized Font’ field.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter the name of the font(s) to be loaded. You can enter a specific font name in this field, or use a wildcard character to select all fonts or fonts beginning with a specified prefix.

XOAF051E INVALID SYNTAX
DO NOT ENTER QUOTES FOR DATASET PREFIX.

Explanation: You entered quotes, which are not allowed, on the dataset prefix.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter the high-level and mid-level qualifiers for your system load library without quotes.

XOAF052E CONFLICTING ENTRIES
YOU MUST SPECIFY INPUT FROM DISK OR FILE, BUT NOT BOTH.

Explanation: When installing custom replica fonts using version 6 encoding or above, both the 'INSTALL INPUT FROM DISK' and the 'INSTALL INPUT FROM file' sections were completed.

System response: No further processing is permitted until the error is corrected.

User action: Complete either the section for disk or file, but not both.

XOAF053E MISSING REQUIRED ENTRY
YOU MUST ENTER AN INPUT DISK DATASET OR FILE INPUT ENTRY.

Explanation: When installing custom replica fonts from disk using version 6 encoding or above, the 'Font Dataset Name', 'XPAFI2X Table Dataset Name', and 'Character Map Dataset Name' fields were not completed.

System response: No further processing is permitted until the error is corrected.

User action: Enter all required dataset names and retry the option.

XOAF054E MISSING REQUIRED ENTRY
ENTER FONT DATASET NAME AT THE CURSOR POSITION.

Explanation: You did not enter the dataset name for the input fonts.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter the name of the PDS or sequential dataset that contains the fonts to be loaded.

XOAF057E MISSING REQUIRED ENTRY
ENTER NATIVE FONT LIBRARY NAME AT THE CURSOR POSITION.

Explanation: You did not enter the native font library to which the fonts will be loaded.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter the name of the native centralized or decentralized font library to which the fonts will be loaded.

XOAF058E MISSING REQUIRED ENTRY
ENTER MESSAGE DATASET NAME AT THE CURSOR POSITION.

Explanation: You did not enter the dataset name to which messages will be written.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter the name of the sequential dataset to which you want messages related to custom font installation to be written.

XOAF059E MISSING REQUIRED ENTRY
ENTER IBM FONT LIBRARY NAME AT THE CURSOR POSITION.

Explanation: You did not enter the name of the library that contains the IBM fonts.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter the name of the library that contains the IBM fonts.

XOAF080E ITEM NO LONGER EXISTS
THE SELECTED ITEM WAS DELETED PREVIOUSLY FROM THE LIST.

Explanation: While updating a resident resource list, you typed D to the left of a resource name that has already been deleted during this session, or you entered D next to a blank name field.

System response: The cursor is positioned on the command line. **ERROR** is displayed to the right of the field in error.

User action: None required. Do not attempt to delete the same name twice within the same update session. To remove a deleted resource name from the list, you must exit the panel.

XOAF081E ITEM ALREADY EXISTS
THE ITEM THAT WAS TO BE ADDED ALREADY EXISTS IN THE LIST.

Explanation: While creating or updating a resident resource list, you attempted to add a name that is already present in the list.

System response: The cursor is positioned on the name in error. No further processing is permitted until the error is corrected.

User action: Delete the duplicate name, then continue creating or updating the list.

XOAF082E INVALID COMMAND ENTERED
value **IS AN INVALID VALUE FOR COMMAND.**

OR

INVALID UNITS ENTERED
value **IS AN INVALID VALUE FOR UNITS.**

Explanation: While creating or updating a paper name table, you either entered an invalid command to select an item in a paper name table or you entered an invalid value for the ‘Unit Measure’ field.

System response: The cursor is positioned on the command line or ‘Unit Measure’ field. No further processing is permitted until the error is corrected.

User action: Enter a valid value as stated on the corresponding help panel.

XOAF083E **INVALID COMMAND**
"D" (DELETE) IS THE ONLY VALID COMMAND.

Explanation: While updating a resident resource list, you entered an invalid command to the left of a resource name.

System response: The cursor is positioned on the command line.

User action: Enter **D** to the left of the resource name you want to delete.

XOAF084E **INVALID COMMAND**
"A" (ADD) IS THE ONLY VALID COMMAND.

Explanation: While updating a resident resource list, you entered an invalid command on the command line.

System response: The cursor is positioned on the command line.

User action: Enter **A** on the command line to add an item to the list.

XOAF085W *dimension* **ALTERED**
PRESS ENTER TO CONFIRM THE ADJUSTED *dimension***.**

Explanation: While creating or updating a paper name table, you entered a value for the 'Width' and/or 'Height' fields that cannot be converted into a whole number in DOTS.

System response: The page dimension is rounded up or down to the closest value which can be converted to a whole number in DOTS.

User action: Press **ENTER** to confirm the adjusted value(s).

XOAF086E **INVALID OUTPUT DATASET NAME ENTERED**
NO OUTPUT MEMBER CAN BE SPECIFIED WHEN USING A WILD CARD AS INPUT.

Explanation: In the XOAF execution of the load centralized logos command, an error was encountered. The input member name that was specified was the wildcard asterisk (*). The output member name that was specified was a specific resource name. When using the wildcard as input, the member name should not be specified.

System response: The short version of the message is displayed. If you enter the PF1 key, the long version of the message is displayed.

User action: If the input member name needs to be the wildcard, the output member should not be specified. If the output member name needs to be specified, a single input member name should be specified as well.

XOAF087I **NOTHING ADDED**
NO ITEMS WERE ENTERED IN THE INPUT PANEL.

Explanation: While updating a resident resource list, you pressed ENTER but did not make any entries on the Updating List panel.

System response: The system returns to the previous panel.

User action: None required.

XOAF500I TABLE OVERFLOW
TABLE OF XOSF ADDRESS SPACES HAS OVERFLOWED. INFORMATION IGNORED.

Explanation: A maximum of 255 printers can be displayed. That maximum limit has been exceeded.

System response: No processing occurs.

User action: Check the number of printers allocated to the system. If the number is greater than 255, call Xerox Technical Support.

XOAF501E SECURITY ERROR
CODE IS *message code***.**

Explanation: This is a security error.

System response: No processing occurs.

User action: Check your system log or operator console for messages from your security package and correct the access authorization. If the problem persists, call Xerox Technical Support.

XOAF502E AUTHORIZATION FAILED
ACCESS TO THE *code* **FUNCTION REFUSED BY INSTALLATION SECURITY.**

Explanation: This is a security error.

System response: No processing occurs.

User action: Check your system log or operator console for messages from your security package and correct the access authorization. If the problem persists, call Xerox Technical Support.

XOAF504E XOAF GETMAIN ERROR
INCREASE REGION SIZE.

Explanation: The region size is insufficient.

System response: No processing occurs.

User action: Increase the region size and retry the option. If the problem persists, call Xerox Technical Support.

XOAF505E ISPF SERVICE ERROR
THIS IS AN INTERNAL ERROR.

Explanation: XOAF encountered an ISPF internal error.

System response: No processing occurs.

User action: Contact your system administrator concerning possible problems with ISPLINK.

XOAF506E INVALID XSTCB ADDRESS
THIS IS AN INTERNAL ERROR.

Explanation: XOAF encountered an invalid address for the XSTCB control block.

System response: No processing occurs.

User action: Call Xerox Technical Support.

XOAF507E INVALID XOAWORK ADDRESS
THIS IS AN INTERNAL ERROR.

Explanation: XOAF encountered an invalid address for its work area.

System response: No processing occurs.

User action: Call Xerox Technical Support.

XOAF508E INVALID XOAPRMS ADDRESS
THIS IS AN INTERNAL ERROR.

Explanation: XOAF encountered an invalid address for the XOAPRMS control block.

System response: No processing occurs.

User action: Call Xerox Technical Support.

XOAF509E INVALID ISPLINK ADDRESS
THIS IS AN INTERNAL ERROR.

Explanation: XOAF encountered an invalid address for ISPLINK.

System response: No processing occurs.

User action: Call Xerox Technical Support.

XOAF511E MISSING REQUIRED ENTRY
YOU MUST ENTER A VALUE IN EITHER THE TYPE OR DATASET NAME FIELD.

Explanation: While completing the panel to initiate a PDS refresh request, you pressed ENTER but did not make an entry in either the ‘Type’ or ‘Dataset Name’ fields.

System response: The cursor is positioned on the ‘Type’ field. No further processing is permitted until the error is corrected.

User action: Enter either a valid resource type or the name of a dataset in which PDS directories to be refreshed are located.

XOAF512E INVALID TYPE
ENTER A VALID TYPE AT THE CURSOR POSITION.

Explanation: While completing the panel to initiate a PDS refresh request, you entered an invalid value in the 'Type' field.

System response: The cursor is positioned on the invalid type. No further processing is permitted until the error is corrected.

User action: Enter one of these values: FONT, FORMDEF, OVERLAY, PAGEDEF, PAGESEG, PAGEFORM, or ALL.

XOAF513E MISSING REQUIRED ENTRY
IF YOU ENTER A TYPE, YOU MUST ALSO ENTER A PRINTER OR JOB NAME.

Explanation: While completing the panel to initiate a PDS refresh request, you entered a valid resource type, but did not specify a printer or job name.

System response: The cursor is positioned on the 'XOSF Job Name' field. No further processing is permitted until the error is corrected.

User action: Enter the job name of the XOSF address space, or enter the name of the printer for which PDS directories are to be refreshed.

XOAF514E INVALID JOB NAME
THE JOB NAME MUST FOLLOW STANDARD z/OS NAMING CONVENTIONS.

Explanation: While completing the panel to initiate a PDS refresh request, you entered an invalid XOSF job name.

System response: The cursor is positioned on the 'XOSF Job Name' field. No further processing is permitted until the error is corrected.

User action: Enter a job name that conforms to z/OS naming conventions.

XOAF515E INVALID PRINTER NAME
THE PRINTER NAME MUST FOLLOW STANDARD z/OS NAMING CONVENTIONS.

Explanation: While completing the panel to initiate a PDS refresh request, you entered an invalid printer name.

System response: The cursor is positioned on the 'Printer Name' field. No further processing is permitted until the error is corrected.

User action: Enter a printer name that conforms to z/OS naming conventions.

XOAF516E CONFLICTING ENTRIES
IF YOU ENTER A PRINTER NAME, DO NOT ENTER A JOB NAME.

Explanation: While completing the panel to initiate a PDS refresh request, you entered a type, an XOSF job name, and a printer name.

System response: The cursor is positioned on the 'Printer Name' field. No further processing is permitted until the error is corrected.

User action: Delete either the XOSF job name or the printer name.

XOAF517E **CONFLICTING ENTRIES**
IF YOU ENTER A DATASET NAME, DO NOT ENTER A PRINTER OR JOB NAME.

Explanation: While completing the panel to initiate a PDS refresh request, you entered a dataset name and either an XOSF job name or a printer name.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: If you want to perform the refresh for a dataset, delete the XOSF job name and printer name. If you want to perform the refresh for a type of resource, delete the dataset name and enter a valid resource type.

XOAF518E **CONFLICTING ENTRIES**
IF YOU ENTER A TYPE, DO NOT ENTER A DATASET NAME.

Explanation: While completing the panel to initiate a PDS refresh request, you entered both a type and a dataset name.

System response: The cursor is positioned on the ‘Dataset Name’ field. No further processing is permitted until the error is corrected.

User action: If you want to perform the refresh for a dataset, delete the ‘Type’ field entry. If you want to perform the refresh for a type of resource, delete the dataset name.

XOAF519E **INVALID DATASET NAME**
THE DATASET NAME MUST FOLLOW STANDARD z/OS NAMING CONVENTIONS.

Explanation: While completing the panel to initiate a PDS refresh request, you entered a dataset name that does not conform to standard z/OS naming conventions.

System response: The cursor is positioned on the invalid dataset name. No further processing is permitted until the error is corrected.

User action: Correct the dataset name.

XOAF520I *number of requests refreshes* **SCHEDULED**
number of requests **REFRESH REQUESTS** *have/have not* **BEEN SCHEDULED IN XOSF.**

Explanation: The requested resource refresh was/was not requested in XOSF.

System response: Processing continues.

User action: None required.

XOAF521E **JOB NOT FOUND**
ONE OR MORE JOB NAMES EXPECTED BUT NOT FOUND. *number of requests* **SCHEDULED.**

Explanation: The expected job name was not found.

System response: The refresh requested for the job or printer was terminated.

User action: Correct the entry then try to schedule a refresh again.

XOAF522E **UNKNOWN RESOURCE TYPE**
DATASET ALLOCATED WITH UNKNOWN RESOURCE TYPE. *number of requests* **SCHEDULED.**

Explanation: The resource type could not be identified.

System response: A dataset with an unknown resource type has been allocated. Refresh has been scheduled.

User action: Check the resource type and dataset.

XOAF523E **REFRESH FAILURE**
ONE OR MORE REFRESHES FAILED. *number of requests* **REFRESHES SCHEDULED.**

Explanation: One or more refreshes failed.

System response: The refresh requests were completed with at least one failure.

User action: Check the log messages that relate to the refresh request. Make whatever corrections are needed.

XOAF524I **NOT A RESOURCE LIBRARY**
THE DATASET WAS NOT FOUND ALLOCATED TO ANY XOSF AS A RESOURCE PDS.

Explanation: The named dataset was not allocated to XOSF as a resource library.

System response: The requested function is not performed.

User action: Check the validity and the spelling of the dataset name. If the problem persists, call Xerox Technical Support.

XOAF525I **REFRESH FAILURE**
REFRESH WAS REQUESTED FOR AN INACTIVE JOB OR PRINTER.

Explanation: The refresh request called for either a job or a printer that could not be located.

System response: The request is terminated.

User action: Verify that the job name or printer name was entered correctly. If the printer or XOSF is not started, refresh is not necessary.

XOAF526E **INTERNAL ERROR**
XOAF PROTOCOL ERROR. TYPE FOUND WITHOUT XOSF OR PRINTER.

Explanation: This is an XOAF internal protocol error.

System response: The refresh is terminated.

User action: Call Xerox Technical Support.

XOAF527E PROTOCOL ERROR
THIS IS AN INTERNAL ERROR. THE ERROR CODE IS *error code***.**

Explanation: This is an internal protocol error.

System response: The refresh is terminated.

User action: Contact your system administrator with all related messages. If the problem persists, call Xerox Technical Support.

XOAF528I REFRESH IN PROGRESS
A REFRESH HAS ALREADY BEEN SCHEDULED. NO QUEUING IS PERMITTED.

Explanation: No queuing is allowed while a refresh is in progress.

System response: The already scheduled refresh continues.

User action: Wait until the current processing is complete before queuing another refresh.

XOAF529E XOSF BUSY REFRESHING
REFRESH IS ALREADY ACTIVE FOR A DIRECTORY. TRY AGAIN LATER.

Explanation: No display or refresh is allowed while an XOSF refresh is in progress. The REFRESH command is already active.

System response: The already scheduled refresh continues.

User action: Wait until the current refresh is finished before reissuing the request.

XOAF530E GQSCAN ERROR *error code*
error code **CODE FROM GQSCAN SERVICE.**

Explanation: This is an internal error.

System response: The request is terminated.

User action: Call Xerox Technical Support.

XOAF531I NO XOSF FSS ACTIVE
THERE ARE NO ACTIVE XOSF FUNCTIONAL SUBSYSTEMS TO DISPLAY.

Explanation: There are no active XOSF FSSs to display.

System response: The request is terminated.

User action: Contact your system administrator. If your system administrator indicates that an XOSF is active, call Xerox Technical Support.

XOAF900I JOB STEP GENERATED
MAKE ANY NECESSARY DSNAME PREFIX OR JOB CARD ENTRIES.

Explanation: This message identifies the information that XOAF requires to generate the JCL for a batch job.

System response: Processing continues.

User action: None required. However, if the panel is missing the necessary library prefixes and/or job card information, you will receive an error message when you attempt to continue.

XOAF904I JOB STEP GENERATED
IMAGE CONVERSION FROM *input dataset* **TO** *output dataset***.**

Explanation: All members of the input dataset will be converted from an IBM page segment to a Xerox image.

System response: Processing continues.

User action: None required.

XOAF916E DATASET NOT FOUND
THE INPUT DATASET COULD NOT BE FOUND.

Explanation: XOAF could not locate the dataset name you entered in the 'INPUT Dataset Name' field.

System response: No further processing is permitted until the error is corrected.

User action: Verify that you spelled the name correctly. If you do not want the dataset name to be prefixed with your user ID, enter the fully qualified dataset name in single quotes.

XOAF917E INVALID INPUT DATASET
THE INPUT DATASET ORGANIZATION MUST BE PO.

Explanation: You entered the name of a sequential dataset or native library in the 'INPUT Dataset Name' field. The input dataset must be a PDS.

System response: No further processing is permitted until the error is corrected.

User action: Enter the name of the PDS that contains the resource to be processed.

XOAF919E INTERNAL ISPF ERROR
RETURN CODE *return code* **FROM** *function* **DIALOG SERVICE.**

Explanation: This is an ISPF or XOAF internal error.

System response: The XOAF System Services menu is redisplayed.

User action: If you cannot resolve any XOAF problems, call Xerox Technical Support.

XOAF950I **FUNCTION CANCELED**
CREATION OF LIST *list name* **CANCELED AT USER'S REQUEST.**

Explanation: While creating a resident resource list, you entered CAN or CANCEL on the command line.

System response: The identified resource list is not created. The system returns to the previous panel.

User action: None required.

XOAF951E **INVALID DATASET NAME**
THE LOG DATASET NAME MUST BE A VALID NAME OR MUST BE LEFT BLANK.

Explanation: While completing the panel to convert page segments to .IMG format, you entered an invalid dataset name in the 'Message Dataset Name' field.

System response: The cursor is positioned on the invalid dataset name. No further processing is permitted until the error is corrected.

User action: If you want messages to be logged, enter the name of a valid message dataset. This can be the XOAF log dataset, or a sequential dataset with these file specifications:

RECFM=VB
LRECL=256
BLKSIZE=4096

If you do not want messages to be logged, leave the 'Message Dataset Name' field blank and delete the XPAFXLOG DD statement from the XRFBATCH generated JCL.

XOA001E **INVALID OPTION**
ENTER "B", "S", OR "D".

Explanation: You entered an invalid option for an XOAF directory list.

System response: The cursor is positioned on the invalid entry. No further processing is permitted until the error is corrected.

User action: Enter **B** or **S** to browse a member, or **D** to delete a member.

XOA002E **PF3/END IS NOT VALID**
ENTER "C" ON THE COMMAND LINE TO LEAVE THIS PANEL.

Explanation: Entering END or pressing PF3 is not a valid response for this panel.

System response: The cursor is positioned on the command line. No further processing is permitted until the error is corrected.

User action: Enter **C** on the command line to leave the panel.

XPA messages

XPA9009E *program* **- AN INVALID FUNCTION --** *command* **-- WAS REQUESTED**

Explanation: This is an internal error.

System response: After logging this message and returning it to the caller in XPRSMSGT, the parsing request stops with a return code of hexadecimal 20.

User action: Call Xerox Technical Support.

XPC messages

XPC0001I THE MAXIMUM NUMBER OF 16 HORIZONTAL TABS HAS BEEN EXCEEDED

Explanation: The number of horizontal tabs specified during XES-to-PCL conversion exceeds the maximum allowable number.

System response: Only the first 16 horizontal tabs are recognized. Document processing continues.

User action: Call Xerox Technical Support.

XPC0002I XPCL MODE SELECTED FOR - *jobname*

Explanation: This message provides supplemental information to assist in debugging. It is issued only if intensive logging is turned on.

System response: Document processing continues.

User action: None required.

XPC2124E ERROR READING LIBRARY *ddname dsname***. LDM RC=X'***return code***'; IC=X'***information code***'**

Explanation: A VSAM read error occurred while accessing the named library.

System response: Document processing is terminated.

User action: Make a note of the return codes. If the problem persists, call Xerox Technical Support.

XPC3010F COULD NOT GET X'*storage size***' BYTES OF MEMORY** *activity*

Explanation: Insufficient storage was available for the conversion routine to obtain the requested amount for the required data buffer.

System response: The resource cannot be converted. Document processing is terminated. The document remains in the output buffer.

User action: Increase the region size allocated to the XOSF start-up proc or drain the other printers, then retransmit the document. If the problem persists, call Xerox Technical Support.

XPC3011E COULD NOT RELEASE X'*storage size***' BYTES OF MEMORY FROM LOCATION X'***storage address***'** *activity*

Explanation: The storage used for transformation processing was not released, and the document may be incorrect. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XPC4142W XES INLINE FONT AREA EXCEEDED. INLINE FONT WILL BE IGNORED.

Explanation: An XES inline font was encountered that exceeded the allowable font size.

System response: The XES font is discarded. Processing continues.

User action: If this is an XES document, ensure that all fonts are separated by an <esc>+F or an <esc>+A, otherwise contact Xerox Technical Support.

XPC4143E XES INLINE FONT TABLE EXCEEDED. DOCUMENT WILL BE ABORTED.

Explanation: An XES inline resource was encountered that required more than 4MB of internal storage.

System response: The document is aborted.

User action: Contact Xerox Technical Support.

XPC414FE XPCLMAIN BUFFER CAPACITY EXCEEDED

Explanation: The maximum amount of data that can be contained within the XES-to-PCL conversion buffer has been exceeded. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XPC4144E RESOURCE FRAGMENT DETECTED, BUT NO RESOURCE LOAD IN PROGRESS.

Explanation: An internal processing error has occurred.

System response: The document is aborted.

User action: Contact Xerox Technical Support.

XPC6307E MINOR ERROR ENCOUNTERED BY *module name* **DURING** *command* **LDM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *command* **FILE DDNAME** *ddname***, FOR** *type* **RESOURCE NAMED** *member name*

Explanation: This is an internal error.

System response: The conversion of the Xerox resource to a PCL resource is not directly affected by this error. If *command* is FLCA, the preceding allocation failure may affect the final outcome of the document.

User action: Make a note of the return codes. If the problem persists, call Xerox Technical Support.

XPC6393W **WARNING MESSAGE ISSUED BY XPCLMAIN DURING XES-TO-PCL PROCESSING, DUE TO INVALID RETURN CODE FOR XES COMMAND** *escape sequence*

Explanation: During XES-to-PCL conversion, an invalid escape sequence has been detected.

System response: The invalid escape sequence is ignored, and document processing continues.

User action: Ensure that the escape sequence is valid and that the XES data stream has been created correctly. If the escape sequence appears to be valid, call Xerox Technical Support.

XPC7700E **MULTI LANGUAGE SUPPORT RETURNED AN ERROR, R15=***return code*

Explanation: An error was found in a sublevel function.

System response: Document processing is terminated, and the document is held on the output queue.

User action: Correct any problems identified by preceding messages. If the problem persists, call Xerox Technical Support.

XPC7701E *member name* **MEMBER IS NOT FOUND IN DDNAME** *ddname* **R15=***return code*

Explanation: An XES command called for a resource from the PCL libraries, but the resource was not found.

System response: Document processing is terminated, and the document is held on the output queue.

User action: If the named resource has been deleted, recreate the resource using the required transform. If you cannot determine the problem from this and previously issued error messages, call Xerox Technical Support.

XPC7702I **XES LICENSED FONT** *font name* **IS BEING CONVERTED TO TRANSIENT PCL FORMAT FOR JOB** *job name*

Explanation: During XES-to-PCL conversion, licensed fonts are converted into a PCL transient format to be used by the PCL transform.

System response: None.

User action: None

XPC7703E **DOCUMENT** *jobid* **CONTAINS DATA IN THE PCL NONPRINTABLE AREA. DATA HAS BEEN REPOSITIONED**

Explanation: During XES-to-PCL conversion, data was detected in the PCL nonprintable area.

System response: Processing continues. The beginning print position of this data has been adjusted. Data will now print offset.

User action: This is a PCL restriction. Some PCL-capable printers have a non-printable margin along each edge of the page of up to 75 dots. This margin varies depending on page size and orientation. For printers with this limitation, XPAF does not generate any data in this area and repositions the data into the printable area. The output will appear different than when printed on a decentralized printer. To resolve this problem, modify your application to place all data into the PCL printable area.

XPC7704E *error type* **ERROR DURING** *command* **LDM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *ddname* **FOR** *type* **RESOURCE NAMED** *member name*

Explanation: During XES-to-PCL conversion, the named resource could not be found.

System response: Document processing is terminated, and the document remains in the output queue.

User action: If *command* is either PUT or STOW, see if the named library is full. Other messages should precede this message and provide more information. If the problem persists, call Xerox Technical Support.

XPD messages

XPD1104E PDF FONT SUBSTITUTION ERROR: UNABLE TO OPEN SUBSTITUTION TABLE

Explanation: During XES-to-PDF conversion, XOSF was unable to open the PDF font substitution table.

System response: Font substitution is ignored, and document processing continues.

User action: Ensure that the table name has been specified correctly.

XPD3010F COULD NOT GET X'*STORAGE SIZE*' BYTES OF MEMORY *ACTIVITY*

Explanation: Insufficient storage was available for the conversion routine to obtain the requested amount for the required data buffer.

System response: The resource cannot be converted. Document processing is terminated. The document remains in the output buffer.

User action: Increase the region size allocated to the XOSF start-up proc or drain the other printers, then retransmit the document. If the problem persists, call Xerox Technical Support.

XPD3011E COULD NOT RELEASE X'*STORAGE SIZE*' BYTES OF MEMORY FROM LOCATION X'*STORAGE ADDRESS*' *ACTIVITY*

Explanation: The storage used for transformation processing was not released, and the document may be incorrect. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XPD6393W WARNING MESSAGE ISSUED BY XPDFMAIN DURING XES-TO-PDF PROCESSING, DUE TO INVALID RETURN CODE FOR XES COMMAND *ESCAPE SEQUENCE*

Explanation: During XES-to-PDF conversion, an invalid escape sequence has been detected.

System response: The invalid escape sequence is ignored, and document processing continues.

User action: Ensure that the escape sequence is valid and that the XES data stream has been created correctly. If the escape sequence appears to be valid, call Xerox Technical Support.

XPD0009I * MISSING CONFIGURATION FILE**

Explanation: XPDL cannot find the configuration file to set the default parameter for the compiler.

System response: The system stops processing.

User action: Insure that the invoking JCL has the correct DD for the configuration file (DD name = CON).

XPD0021W ******** JSL CONTAINS ERROR(S) **********

Explanation: XPDL detected error(s) in a JSL it compiled.

System response: The system continues processing.

User action: Examine the print report for previous error messages identifying the errors encountered and correct as necessary.

XPD0023W ******** FATAL ERROR -- COMPILATION ABORTED **********

Explanation: XPDL encountered a fatal error and could not continue compiling the JSL.

System response: The system stops processing.

User action: Correct the problem as suggested by XPDL and recompile the JSL. If the problem still exists, contact your Xerox Representative or your system administrator.

XPD0024W ******** INTERNAL ERROR IN XPDL **********

Explanation: XPDL detected a serious error with the program.

System response: The system stops processing.

User action: Report the problem to your Xerox representative or your system administrator.

XPD0025I COMPILATION COMPLETED

Explanation: XPDL completed the compilation.

System response: The system continues processing.

User action: No action required.

XPD0026W FILE LABEL GENERATION ERROR: <FILENAME> TOO LARGE

Explanation: The output object file is too large for Xerox file format.

System response: The system continues processing but the current file is not saved.

User action: Reduce the commands in the JSL or break it into multiple JSL files.

XPD0027F INTERNAL ERROR IN XPDL (AT CHECK POINT <NUMBER>)

Explanation: XPDL detected an internal error within the program.

System response: The system stops processing.

User action: Contact your Xerox representative or your system administrator with the check point number reported by XPDL.

XPD0028F INSUFFICIENT MEMORY

Explanation: XPDL cannot allocate enough memory for its operation.

System response: The system stops processing.

User action: Increase the REGION size and recompile the JSL. If the problem still exists report the problem to your Xerox representative or your system administrator.

XPD0029F INTERNAL BUFFER ERROR

Explanation: XPDL detected an internal error with its buffer management.

System response: The system stops processing.

User action: Report the problem to your Xerox representative or your system administrator.

XPD0030F CANNOT CREATE <FILENAME>

Explanation: XPDL cannot create the output file.

System response: The system continues processing.

User action: Report the problem to your Xerox representative or your system administrator.

XPD0051W INVALID OR INCOMPLETE STATEMENT, SKIP THE COMMAND

Explanation: XPDL detected that the statement it encountered was either invalid or incomplete. It will disregard (skip) parsing the command.

System response: The system continues processing and the statement in error is ignored.

User action: Examine the print report for previous error messages identifying the error encountered and correct your JSL as suggested and recompile it.

XPD0052W PDL SKIPPING...

Explanation: XPDL detected an error in the command and it will disregard (skip) that command.

System response: The system continues processing and looks for the next PDL statement.

User action: Examine the print report for previous error messages identifying the error encountered and correct your JSL as suggested and recompile it.

XPD0053W COMMAND NOT SUPPORTED IN THIS CONFIGURATION, STR = XXX

Explanation: XPDL detected that the command encountered in the JSL is not supported with the PDL version selected.

System response: The system continues processing and looks for the next PDL statement.

User action: Remove the command in the JSL or select the right PCLVER and recompile the JSL.

XPD0054W PARAMETER NOT SUPPORTED IN THIS CONFIGURATION, STR = <PARAMETER>

Explanation: XPDL detected that the parameter encountered in the JSL is not supported with the PDL version selected.

System response: The system continues processing.

User action: Remove the parameter in the JSL or select the right PCLVER and recompile the JSL.

XPD0055W OPTION NOT SUPPORTED IN THIS CONFIGURATION, STR = <OPTION>

Explanation: XPDL detected that the option encountered in the JSL is not supported with the PDL version selected.

System response: The system continues processing.

User action: Remove the option in the JSL or select the right PCLVER and recompile the JSL.

XPD0056W PREMATURE END OF JDL OR CATALOG COMMAND SET

Explanation: XPDL detected unexpected end of JSL or CATALOG.

System response: The system continues processing.

User action: Modify the JSL as suggested and recompile it.

XPD0057W LABEL TOO LONG -- TRUNCATED, STR = <LABEL-NAME>

Explanation: The label is too long and was truncated to 6 characters.

System response: The system continues processing.

User action: Reduce the label to 6-characters and recompile the JSL.

XPD0058E INVALID LABEL DELIMITER

Explanation: An invalid character was used as a label delimiter.

System response: The system continues processing.

User action: Replace the invalid character with a colon (‘:’).

XPD0059E BAD CHARACTER DETECTED, STR = <CHARACTER>

Explanation: XPDL encountered unexpected character, due to typographical error or corrupted file.

System response: The system continues processing.

User action: Remove or modify the character and recompile the JSL file.

XPD0060E INVALID COMMAND KEYWORD, STR = <KEYWORD>

Explanation: PDL encountered an invalid command keyword.

System response: The system continues processing.

User action: Remove or modify the invalid keyword and recompile the JSL file.

XPD0061E INVALID PARAMETER KEYWORD (LEFT PART), STR = <KEYWORD>

Explanation: XPDL encountered an invalid parameter keyword.

System response: The system continues processing.

User action: Remove or modify the invalid keyword and recompile the JSL file.

XPD0062W MISSING SEMICOLON IN JSL

Explanation: A semicolon is missing at the end of the command.

System response: The system continues processing.

User action: Insert the semicolon as suggested and recompile the JSL file.

XPD0063E NESTING OF OPTION TOO DEEP

Explanation: Explanation: An option was nested in parenthesis to a depth of more than 20.

System response: The system continues processing.

User action: Remove some of the redundant parenthesis and recompile the JSL file.

XPD0064W UNBALANCED PARENTHESES

Explanation: XPDL could not find the matching right parenthesis “)”.

System response: The system continues processing.

User action: Insert a right parenthesis ")" as suggested or remove the extra left parenthesis "(" and recompile the JSL file.

XPD0065E INVALID PARAMETER SEPARATOR

Explanation: An invalid character was used to separate a parameter from its options.

System response: The system continues processing.

User action: Correct the invalid delimiter and recompile the JSL. Valid parameter delimiters are: comment, new line, comma and space.

XPD0066E INVALID PARAMETER DELIMITER

Explanation: An invalid character was used to separate two parameters.

System response: The system continues processing.

User action: Correct the invalid delimiter and recompile the JSL. Valid parameter delimiters are: comment, new line, comma and space.

XPD0067E INVALID OPTION DELIMITER

Explanation: An invalid character was used to separate two options.

System response: The system continues processing.

User action: Correct the invalid delimiter and recompile the JSL. Valid parameter delimiters are: comment, new line, comma and space.

XPD0068E EQUAL SIGN OR LEFT PARENTHESIS IS REQUIRED BETWEEN PARAMETER AND OPTION

Explanation: XPDL detected that there is no equal sign "=" or left parenthesis "(" between the parameter and its option.

System response: The system continues processing.

User action: Insert an equal sign or a left parenthesis between the parameter and its option as suggested and recompile the JSL.

XPD0069W MISSING CLOSE QUOTE IN JSL

Explanation: XPDL could not find the matching close quote.

System response: The system continues processing.

User action: Insert a close quote at the appropriate location and recompile the JSL file.

XPD0070W CATALOG CONTAINS ERROR(S), STR = <CATALOG-NAME>

Explanation: XPDL detected an error(s) in a catalog.

System response: The system continues processing.

User action: Modify the catalog as suggested and recompile the JSL.

XPD0071E INVALID OPTION, STR = <OPTION>

Explanation: The option is not a valid one for the parameter.

System response: The system continues processing.

User action: Remove the invalid option or modify it so that it is a valid option for the parameter and recompile the JSL.

XPD0072E INVALID NULL OPTION

Explanation: The null option is not allowed for this parameter.

System response: The system continues processing.

User action: Insert a valid option for this parameter and recompile the JSL.

XPD0073E NEGATIVE VALUE NOT ALLOWED

Explanation: A negative value is not allowed for this parameter.

System response: The system continues processing.

User action: Modify the value so it becomes a positive number and recompile the JSL.

XPD0074W INCOMPLETE OR INVALID LEFT/RIGHT PART

Explanation: XPDL detected an incomplete or invalid left or right part of the parameter.

System response: The system continues processing.

User action: Modify JSL as suggested and recompile the JSL file.

XPD0075E TOO MANY OPTIONS, OPTION IGNORE, STR = <OPTION>

Explanation: XPDL detected that too many options are used for the parameter.

System response: The system continues processing.

User action: Remove the extra options and recompile the JSL file.

XPD0076E UNRECOGNIZED OPTION KEYWORD, STR = <OPTION>

Explanation: An invalid option keyword was encountered for the parameter.

System response: The system continues processing.

User action: Remove or modify the option and recompile the JSL file.

XPD0077E INVALID NULL STRING

Explanation: A null string is not allowed for this option.

System response: The system continues processing.

User action: Remove or modify the option and recompile the JSL file.

XPD0078W USER TABLE NOT DEFINED

Explanation: A reference was made to a user-defined PCC table, but the table was not defined in the JSL.

System response: The system continues processing.

User action: Remove the reference or define the PCC table and recompile the JSL file.

XPD0079W REQUIRED LABEL NOT FOUND

Explanation: The PDL command requires a label that was not specified.

System response: The system continues processing.

User action: Insert a label for the erroneous PDL command and recompile the JSL file.

XPD0080W DUPLICATE LABEL ENCOUNTERED, STR = <LABEL-NAME>

Explanation: XPDL encountered a duplicate label for the same command, such as two or more PDE commands having the same label.

System response: The system continues processing.

User action: Rename one or more of the labels and recompile the JSL file.

XPD0081I REFERENCED LABEL TOO LONG -- TRUNCATED, STR = <LABEL-NAME>

Explanation: The label referenced was too long; XPDL truncated it to a six-character name.

System response: The system continues processing.

User action: Verify the label is correct or modify it to only 6 characters and recompile the JSL file.

XPD0082E REFERENCED LABEL NOT FOUND, STR = <LABEL-NAME>

Explanation: The label referenced was not found in the JSL.

System response: The system continues processing.

User action: Modify the command to reference an existing label, or add a command with the specified label and recompile the JSL file.

XPD0083E INVALID LABEL, LABEL REQUIRED AT LEAST 1 ALPHA CHAR, STR = <LABEL-NAME>

Explanation: The label entered is invalid. The label needs to have at least one alpha character "a...zA...Z".

System response: The system continues processing.

User action: Modify the label to have at least one alpha character and recompile the JSL file.

XPD0084E DUPLICATE TABLE ENCOUNTERED, STR = <TABLE-NAME>

Explanation: XPDL detected that the JSL source contains two tables with the same name.

System response: The system continues processing.

User action: Rename one of the tables to a different name and recompile the JSL file.

XPD0085W DUPLICATE LABEL ENCOUNTERED, JOB STATEMENTS IGNORED, STR = <LABEL-NAME>

Explanation: XPDL detected that there were two JOB statements with the same name.

System response: The system continues processing.

User action: Rename one of the JOB statements and recompile the JSL file.

XPD0086W USER TABLE ALREADY EXISTS, STATEMENT IGNORED

Explanation: More than one table was defined without a label when only one unlabeled table is allowed.

System response: The system continues processing.

User action: Label all tables except the table functioning as the default and recompile the JSL file.

XPD0087E MAXIMUM STRING SIZE EXCEEDED

Explanation: The number of characters in the string exceeds the string size limit for the option.

System response: The system continues processing.

User action: Reduce the number of characters in the string and recompile the JSL file.

XPD0088E VALUE SPECIFIED IS OUT OF RANGE, STR = <VALUE>

Explanation: The value specified is out of range for the option.

System response: The system continues processing.

User action: Correct the value and recompile the JSL file.

XPD0089E VALUE SPECIFIED IS OUT OF RANGE

Explanation: The value specified is out of range for the option.

System response: The system continues processing.

User action: Correct the value and recompile the JSL file.

XPD0094W PREVIOUS ASSIGNMENTS LOST

Explanation: ASSIGN or TASSIGN specifications preceding the DEFAULT parameter are ignored.

System response: The system continues processing.

User action: If the ASSIGN or TASSIGN specifications are to be included in the table, recode the command with the ASSIGN or TASSIGN specifications following the DEFAULT parameter; otherwise, remove them and recompile the JSL file.

XPD0095E EXTRA BOFACT ENCOUNTERED. PREVIOUS BOFACT LOST

Explanation: A repeated Before-Print-Action PCC specification overwrites the previous specification.

System response: The system continues processing.

User action: Remove the unwanted Before-Print-Action PCC specification and recompile the JSL file.

XPD0096W IMPROPER BRACKETING OF ASSIGN STATEMENT

Explanation: The options for the PCC ASSIGN parameter do not conform to the syntax.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer for the correct syntax and recompile the JSL file.

XPD0097W STRING CONSTANT MUST BE OF SAME LENGTH

Explanation: Comparison strings in the TABLE CONSTANT parameter must all be of the same string length.

System response: The system continues processing.

User action: Correct the comparison strings in the TABLE CONSTANT parameter and recompile the JSL file.

XPD0098W CRITERIA CONSTANT OR CHANGE IS MISSING, INCOMPLETE STATEMENT -- IGNORED

Explanation: A CRITERIA command is missing a CONSTANT or CHANGE parameter.

System response: The system continues processing.

User action: Specify a CONSTANT or CHANGE parameter for the CRITERIA command and recompile the JSL file.

XPD0099W ANDED CRITERIA LINE RANGES DO NOT OVERLAP

Explanation: The two referenced CRITERIA commands with an AND condition do not have an overlap in their line range.

System response: The system continues processing.

User action: Either correct the line range of the referenced CRITERIA commands or change the logical operation and recompile the JSL file.

XPD0100W WARNING: PRINT OPTION IGNORED WITH DELIMITER=NO

Explanation: RSTACK DELIMITER=NO was specified so the PRINT parameter is ignored.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct combination of parameters required for your needs and recompile the JSL file.

XPD0101W MISSING CRITERIA

Explanation: A referenced CRITERIA command is missing.

System response: The system continues processing.

User action: Correct the CRITERIA reference or add a new CRITERIA command with the same name as the referenced one and recompile the JSL file.

XPD0102W CRITERIA FIELD AND TABLE CONSTANT LENGTHS DO NOT MATCH

Explanation: The lengths of the compare specified in the CRITERIA command and the TABLE CONSTANT do not match.

System response: The system continues processing.

User action: Correct the compare length in either the CRITERIA command or the TABLE CONSTANT and recompile the JSL file.

XPD0103E MAXIMUM ASSIGN VALUE EXCEEDED

Explanation: The MASK character is more than one character in length.

System response: The system continues processing.

User action: Correct the MASK character so that it is one character long and recompile the JSL file.

XPD0104W CRITERIA TABLE NOT GENERATED

Explanation: Due to previous error(s), the criteria table is not generated and may not be referenced.

System response: The system continues processing.

User action: Correct the previous error(s) as indicated in the listing file and recompile the JSL file.

XPD0105W DUPLICATE FONT LIST

Explanation: Multiple FONTS parameters were specified.

System response: The system continues processing.

User action: Remove the redundant FONTS parameters or merge the parameters into one and recompile the JSL file.

XPD0106W TOO MANY FONT SPECIFIED

Explanation: The number of fonts in the font list exceeds the maximum allowed.

System response: The system continues processing.

User action: Reduce the number of fonts used in the font list and recompile the JSL file.

XPD0107W BEGIN HORIZONTAL VALUE OUT OF RANGE

Explanation: The horizontal value for the BEGIN statement is out of range.

System response: The system continues processing.

User action: Modify the value according to the limits for each PDL version and recompile the JSL file.

XPD0108W BEGIN VERTICAL VALUE OUT OF RANGE

Explanation: The vertical value for the BEGIN statement is out of range.

System response: The system continues processing.

User action: Modify the value according to the limits for each PDL version and recompile the JSL file.

XPD0109W TOO MANY BEGIN SPECIFIED

Explanation: The number of BEGIN exceeds the limit allowed.

System response: The system continues processing.

User action: Reduce the number of BEGIN statements to be within the limits allowed and recompile the JSL file.

XPD0110W MISSING FONT -- PDE STATEMENT IGNORED

Explanation: The FONTS parameter is missing, or no fonts were specified.

System response: The system continues processing.

User action: Correct the FONTS parameter or add a FONTS parameter to the PDE command and recompile the JSL file.

XPD0111W BEGIN VALUES MUST BE IN PAIR

Explanation: An odd number of options were specified in the BEGIN parameter instead of the required two.

System response: The system continues processing.

User action: Correct the BEGIN parameter or remove the statement from the JSL and recompile the JSL file.

XPD0112E COPY RANGE ERROR, STR = <VALUE>

Explanation: The passno option specified for the ROUTE RTEXT parameter is invalid or out of range.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0113E LINE RANGE ERROR, STR = <VALUE>, RTEXT FIELD IGNORED

Explanation: The line option specified for the ROUTE RTEXT parameter is invalid or out of range.

System response: The system continues processing.

User action: Refer to the PDLIDJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0114W CHANNEL ASSIGNMENT IN LINE NUMBER EXCEEDS BOF

Explanation: The line number in the ASSIGN parameter exceeds the BOF.

System response: The system continues processing.

User action: Reduce the line number to be within the BOF value or increase the BOF to be greater than the line number assignment and recompile the JSL file.

XPD0115W MINLAB LENGTH MUST BE LESS THAN MAXLAB LENGTH

Explanation: The value of the MINLAB length is greater than the value of the MAXLAB length.

System response: The system continues processing.

User action: Reduce the value of the MIN LAB length or increase the value of the MAXLAB length so that the MAXLAB length is greater than the MINLAB length and recompile the JSL file.

XPD0116W WHEN TYPE SPEC IS SPECIFIED AS A SERIES OF CHARS, 0 IS NOT ALLOWED

Explanation: Specifying 0 is not allowed when TYPE SPEC is specified as a series of characters.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0124I WARNING: "NTO1=YES" NOT ALLOWED WITH "FACEUP=NO"

Explanation: The value YES for parameter NTO1 cannot coexist with the value NO for the parameter FACEUP.

System response: The system continues processing.

User action: Change YES to NO for NTO1, or NO to YES for FACEUP (according to your needs) and recompile the JSL file.

XPD0125I WARNING: JOB WILL USE "NTO1=YES,FACEUP=YES"

Explanation: The system will use "NTO1=YES,FACEUP=YES" for the output JDL.

System response: The system continues processing.

User action: Make sure that "NTO1=YES,FACEUP=YES" is what you want for your JDL. Otherwise correct your JSL according to the previous message and recompile the JSL file.

XPD0126I WARNING: "NTO1=YES" NOT ALLOWED WITH "COLLATE=NO"

Explanation: The value YES for parameter NTO1 cannot coexist with the value NO for the parameter COLLATE.

System response: The system continues processing.

User action: Change YES to NO for NTO1, or NO to YES for COLLATE (according to your needs) and recompile the JSL file.

XPD0127I WARNING: JOB WILL USE "NTO1=YES,COLLATE=YES"

Explanation: The system will use "NTO1=YES,COLLATE=YES" for the output JDL.

System response: The system continues processing.

User action: Make sure that "NTO1=YES,COLLATE=YES" is what you want for your JDL; otherwise, correct your JSL according to the previous message and recompile the JSL file.

XPD0128E PAPER SIZE OUT OF RANGE

Explanation: The paper size specified is out of range.

System response: The system continues processing.

User action: Correct the paper size according the value allowed for each PDL version and recompile the JSL file.

XPD0129W SCALE FACTOR ERROR

Explanation: The scale factor is erroneous.

System response: The system continues processing.

User action: Refer to the PDL/DIDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0130E STOCK NAME NOT SPECIFIED

Explanation: A stock name was not specified.

System response: The system continues processing.

User action: Refer to the PDL/DIDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0131E STOCK REFERENCE ALREADY ASSIGNED

Explanation: A stock reference specified has already been assigned.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0132E INIFEED STOCK IS UNDEFINED

Explanation: The INIFEED stock is not defined.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0133E SYSPAGE STOCK IS UNDEFINED

Explanation: The SYSPAGE stock is not defined.

System response: The system continues processing.

User action: Refer to the PDL/DIDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0134W WARNING: STOCK NAME CONTAINS INVALID CHARACTER(S), STR = <STOCKNAME>

Explanation: The stock-name contains invalid character(s).

System response: The system continues processing.

User action: Remove the invalid character(s) or substitute with valid character(s) and recompile the JSL file.

XPD0135W JOB-ID = <JDE-NAME>: IDE DOES NOT VERIFY

Explanation: A validation error occurred for the JDE.

System response: The system continues processing.

User action: Refer to the previous error messages, correct the JDE and recompile the JSL file.

XPD0136W JOB-ID = <JDE-NAME>:BLOCK SPACE NOT ALLOWED WITH SECURITY=YES

Explanation: The value YES for parameter SECURITY cannot coexist with the BLOCK command specified.

System response: The system continues processing.

User action: Change YES to NO for the SECURITY parameter or remove the BLOCK command and recompile the JSL file.

XPD0137W JOB-ID = <JDE-NAME>:DJDE SKIP VALUE EXCEEDS RECORD LENGTH

Explanation: The SKIP value to the DJDE must fall within the record length.

System response: The system continues processing.

User action: Correct the SKIP value or the record length, depending on your needs and recompile the JSL file.

XPD0138W JOB-ID = <JDE-NAME>:FIXED BLOCK LENGTH NOT A MULTIPLE OF RECORD LENGTH

Explanation: The block length specified for the IDE is not a multiple of the record length.

System response: The system continues processing.

User action: Correct the block or record lengths for the IDE depending on your needs and recompile the JSL file.

XPD0139W JOB-ID = <JDE-NAME>:INVALID HOST LABEL PAIR

Explanation: The specified input file label type is invalid for the specified host.

System response: The system continues processing.

User action: Correct the label type or host type depending on your needs and recompile the JSL file. Refer to the PDL/DIDE Reference for your printer, for the supported combinations.

XPD0140W JOB-ID = <JDE-NAME>:MASKED COMPARES REQUIRE A TCODE TABLE

Explanation: A TCODE table is required when masked compares are to be made.

System response: The system continues processing.

User action: Add a TCODE table or remove the masks from the compare table, depending on your needs and recompile the JSL file.

XPD0141W JOB-ID = <JDE-NAME>:OFFSET TO DJDE PREFIX + LENGTH EXCEEDS RECORD LENGTH

Explanation: The sum of the prefix and offset lengths must fall within the record length.

System response: The system continues processing.

User action: Correct the prefix and offset values or the record length, depending on your needs and recompile the JSL file.

XPD0142W JOB-ID = <JDE-NAME>:TOF EXCEEDS BOF

Explanation: The value of TOE exceeds the value of BOF.

System response: The system continues processing.

User action: Reduce the value of TOF or increase the value of BOF so that TOE is smaller or equal to BOF and recompile the JSL file.

XPD0143W JOB-ID = <JDE-NAME>:UNDEFINED BLOCKED RECORD WITH NO RECORD DELIMITER SPECIFIED

Explanation: A record delimiter constant must be specified for undefined blocked records.

System response: The system continues processing.

User action: Add a record delimiter constant specification or change the record structure, depending on your needs and recompile the JSL file.

XPD0144W JOB-ID = <JDE-NAME>:ZERO =YES REQUIRES A RECORD LENGTH FIELD SPECIFICATION

Explanation: The ZERO=YES specification requires an accompanying RECORD LENGTH specification.

System response: The system continues processing.

User action: Remove the ZERO = YES specification or add a RECORD LENGTH specification, depending on your needs and recompile the JSL file.

XPD0145W JOB-ID = <JDE-NAME>:OFFSET TO BLOCK LENGTH FIELD + LENGTH EXCEEDS BLOCK LENGTH

Explanation: The sum of the offset and the lthfld values must fall within the block length.

System response: The system continues processing.

User action: Correct the offset and lthfld values or the block length value, depending on your needs and recompile the JSL file.

XPD0146W JOB-ID = <JDE-NAME>:BLOCK LENGTH ADJUSTMENT EXCEEDS BLOCK LENGTH

Explanation: The block adjustment value must fall within the block length.

System response: The system continues processing.

User action: Correct the block adjustment or block length values, depending on your needs and recompile the JSL file.

XPD0147W JOB-ID = <JDE-NAME>:BLOCK PREAMBLE + POSTAMBLE EXCEEDS BLOCK LENGTH

Explanation: The sum of the preamble and postamble values must fall within the block length.

System response: The system continues processing.

User action: Correct the preamble and postamble values or the block length value, depending on your needs and recompile the JSL file.

XPD0148W JOB-ID = <JDE-NAME>:RECORD PREAMBLE + POSTAMBLE EXCEEDS RECORD LENGTH

Explanation: The sum of the preamble and postamble values must fall within the record length.

System response: The system continues processing.

User action: Correct the preamble and postamble values or the record length value, depending on your needs and recompile the JSL file.

XPD0149W JOB-ID = <JDE-NAME>:RECORD LENGTH EXCEEDS BLOCK LENGTH

Explanation: The block length must be less than or equal to, and a multiple of, the record length.

System response: The system continues processing.

User action: Correct the record and/or block length values, depending on your needs and recompile the JSL file.

XPD0150W JOB-ID = <JDE-NAME>:OFFSET TO PCC EXCEEDS RECORD LENGTH

Explanation: The offset to the PCC byte must fall within the record length.

System response: The system continues processing.

User action: Correct the PCC offset value or the record length value, depending on your needs and recompile the JSL file.

XPD0151W JOB-ID = <JDE-NAME>:VARIABLE RECORD WITH NO RECORD LENGTH FIELD SPECIFIED

Explanation: The record length is missing or incorrectly specified.

System response: The system continues processing.

User action: Specify or correct the record length and recompile the JSL file.

XPD0152W JOB-ID = <JDE-NAME>:OFFSET TO RECORD LENGTH FIELD + LENGTH EXCEEDS RECORD LENGTH

Explanation: The sum of the offset and the lthfld values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and lthfld values or the record length value, depending on your needs and recompile the JSL file.

XPD0153W JOB-ID = <JDE-NAME>:RECORD LENGTH ADJUSTMENT EXCEEDS RECORD LENGTH

Explanation: The record adjustment value must fall within the block length.

System response: The system continues processing.

User action: Correct the record adjustment or record length values, depending on your needs and recompile the JSL file.

XPD0154W JOB-ID = <JDE-NAME>:RECORD LENGTH INVALID

Explanation: The record length is missing or incorrectly specified.

System response: The system continues processing.

User action: Specify or correct the record length and recompile the JSL file.

XPD0155W JOB-ID = <JDE-NAME>:"VOLUME CODE=NONE" NOT ALLOWED WITH "LINE PCC=TRAN"

Explanation: An invalid combination of parameters was specified.

System response: The system continues processing.

User action: Specify no code translation to be done, or reference a code translation table and recompile the JSL file.

XPD0156W JOB-ID = <JDE-NAME>:RRESUME AND RSUSPEND SHOULD BOTH BE SPECIFIED

Explanation: The RSUSPEND and RRESUME commands must be specified together.

System response: The system continues processing.

User action: Remove the command or add its companion command and recompile the JSL file.

XPD0157W JOB-ID = <JDE-NAME>:RSTACK ACCTLNFO OFFSET + LENGTH EXCEEDS RECORD LENGTH

Explanation: The RSTACK offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0158W JOB-ID = <JDE-NAME>:OFFSET TO BLOCK SELECT FIELD + LENGTH EXCEEDS BLOCK LENGTH

Explanation: The BSELECT offset and length values must fall within the block length.

System response: The system continues processing.

User action: Correct the offset and length values or the block length value, depending on your needs and recompile the JSL file.

XPD0159W JOB-ID = <JDE-NAME>:OFFSET TO BLOCK DELETE FIELD + LENGTH EXCEEDS BLOCK LENGTH

Explanation: The BDELETE offset and length values must fall within the block length.

System response: The system continues processing.

User action: Correct the offset and length values or the block length value, depending on your needs and recompile the JSL file.

XPD0160W JOB-ID = <JDE-NAME>:OFFSET TO RECORD SELECT FIELD + LENGTH EXCEEDS -RECORD LENGTH

Explanation: The RSELECT offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0161W JOB-ID = <JDE-NAME>:OFFSET TO RECORD DELETE FIELD + LENGTH EXCEEDS RECORD LENGTH

Explanation: The RDELETE offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0162W JOB-ID = <JDE-NAME>:OFFSET TO RRESUME FIELD + LENGTH EXCEEDS RECORD LENGTH

Explanation: The RRESUME offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0163W JOB-ID <JDE-NAME>:OFFSET TO RSUSPEND FIELD + LENGTH EXCEEDS RECORD LENGTH

Explanation: The RSUSPEND offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0164W JOB-ID = <JDE-NAME>:OFFSET TO ROFFSET FIELD + LENGTH EXCEEDS RECORD LENGTH

Explanation: The ROFFSET offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0165W JOB-ID = <JDE-NAME>:OFFSET TO RPAGE FIELD + LENGTH EXCEEDS RECORD LENGTH

Explanation: The RPACE offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0166W JOB-ID = <JDE-NAME>:OFFSET TO RAUX FIELD + LENGTH EXCEEDS RECORD LENGTH

Explanation: The RAUX offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0167W JOB-ID = <JDE-NAME>:OFFSET TO RSTACK FIELD + LENGTH EXCEEDS RECORD LENGTH

Explanation: The RSTACK offset and length values must fall within the record length.

System response: The system continues processing.

User action: Correct the offset and length values or the record length value, depending on your needs and recompile the JSL file.

XPD0168W CME POS VALUE SMALLER THEN PREVIOUS ONE -- IGNORED

Explanation: A CME POS option is specified in incorrect sequence.

System response: The system continues processing.

User action: Correct the options to run in ascending order and recompile the JSL file.

XPD0169W CME LINE RANGE <VALUE> IS OUT OF RANGE

Explanation: A CME LINE option is out of range.

System response: The system continues processing.

User action: Correct the option to fall within the range [1, 255] and recompile the JSL file.

XPD0170W INCOMPLETE OR INVALID CME STATEMENT -- IGNORED

Explanation: The CME command is missing the required parameter(s) or is in error.

System response: The system continues processing.

User action: Correct the CME command and recompile the JSL file.

XPD0171E HEX OR OCTAL STRING HAS ODD NUMBER OF CHARACTERS

Explanation: A hexadecimal or octal string was specified with and odd number of characters.

System response: The system continues processing.

User action: Correct the hexadecimal or octal string and recompile the JSL file.

XPD0172E INVALID STRING

Explanation: The string specified is invalid.

System response: The system continues processing.

User action: Refer to the PDL/DIDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0173E TEXT TYPE ERROR

Explanation: The code representation type specified for the string option is invalid.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the supported code representation types and recompile the JSL file.

XPD0174E OCT STRING CODE VALUE <VALUE> NOT IN RANGE [0,07777]

Explanation: The octal string specified is out of range.

System response: The system continues processing.

User action: Correct the octal string to fit within the range [0, 07777] and recompile the JSL file.

XPD0175E HEX STRING CODE VALUE <VALUE> NOT IN RANGE [0,XFFFF]

Explanation: The hexadecimal string specified is out of range.

System response: The system continues processing.

User action: Correct the hexadecimal string to fit within the range [0, XFFFF] and recompile the JSL file.

XPD0177E REPEAT COUNT ERROR -- OUT OF RANGE, STR <VALUE>

Explanation: The repeat count specified for the option string is out of range.

System response: The system continues processing.

User action: Specify a repeat count within the range [0, 255] and recompile the JSL file.

XPD0178E MULTIPLE DECIMAL POINTS DETECTED

Explanation: Multiple decimal points were detected in the value specified.

System response: The system continues processing.

User action: Remove the redundant decimal point and recompile the JSL file.

XPD0179E TOO MANY DECIMAL PLACES -- TRUNCATED, STR = <VALUE>

Explanation: The option does not allow as many decimal places as specified.

System response: The system continues processing.

User action: Refer to the PDL/DIDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0180E INVALID NUMERIC DIGIT DETECTED

Explanation: An invalid character was used in a numeric option.

System response: The system continues processing.

User action: Correct the value to use only digits in a numeric option and recompile the JSL file.

XPD0181E AMBIGUOUS ABBREVIATION. FULL KEYWORD EXPECTED, STR = <NAME>

Explanation: A keyword that cannot be abbreviated was used in an abbreviated form.

System response: The system continues processing.

User action: Specify the full keyword and recompile the JSL file.

XPD0182W UNCLOSED COMMENT DETECTED AT END OF FILE

Explanation: XPDL could not find the matching end-of-comment string (*/) for the start-of-comment string it detected earlier in the JSL file.

System response: The system continues processing.

User action: Insert the end-of-comment string (*/) at the appropriate location and recompile the JSL file.

XPD0184W LINE RANGE ERROR, CME FIELD IGNORED, STR = <LINE>

Explanation: A CME LINE option is specified in incorrect sequence or overlaps.

System response: The system continues processing.

User action: Correct the options to run in a non-overlapping and ascending order and recompile the JSL file.

XPD0190I * INVALID OPTION, <OPTION> ***

Explanation: XPDL encountered an invalid option.

System response: The system continues processing.

User action: Remove or correct the invalid option and recompile the JSL file.

XPD0200W MAP STATEMENT MUST BE SPECIFIED WITHIN JDL CONTEXT

Explanation: A SEFFNT MAP parameter was specified outside a job.

System response: The system continues processing.

User action: Refer to the PDL/DIDE Reference for your printer, for the correct usage of the MAP statement and recompile the JSL file.

XPD0201W SEFMAP AND MAP STATEMENTS CAN'T CO-EXIST

Explanation: Both SEFMAP and MAP parameters were specified in the same job.

System response: The system continues processing.

User action: Remove one of the parameters and recompile the JSL file.

XPD0202W FONT NOT UNIQUELY DEFINED

Explanation: A font was mapped to more than one substitute font.

System response: The system continues processing.

User action: Correct the font mappings so that each font is mapped to only one font and recompile the JSL file.

XPD0203W COMPILATION TERMINATED

Explanation: Compilation of the JSL was terminated due to an error.

The system stops processing.

User action: Refer to previous error messages, correct the JDE and recompile the JSL file.

XPD0204E 1ST CRITERIA TABLE MISSING

Explanation: Two criteria tables were referenced but the first one is missing.

System response: The system continues processing.

User action: Check for misspelling or add a criteria table with the same name as the missing one and recompile the JSL file.

XPD0205E INVALID OPTION POSITION OR TYPE, STR = <STRING>

Explanation: The specified option does not conform to the position or type required by the command parameter.

System response: The system continues processing.

User action: Refer to the PDL/DIDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0206E NO VALID CLUSTER NAME OR REFERENCE WAS SPECIFIED

Explanation: An OSTK cluster name or reference is missing or incorrectly specified.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0221E INVALID PUNCTUATION, STR = <INKNAME>

Explanation: An inkname is specified incorrectly.

System response: The system continues processing.

User action: Refer to the PDL/DJDL Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0222E INVALID INK REFERENCING SYNTAX STRUCTURE

Explanation: The syntax of an ink reference is incorrect.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0223E REPEAT PARAMETER STATEMENT FOR NEW FORM NAME, STR = <FORM-NAME>

Explanation: The parameter must be repeated for each new form.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0224E TOO MANY OPTIONS. ALL INK REFERENCES IGNORED

Explanation: Too many ink references were specified.

System response: The system continues processing.

User action: Refer to the PDL/DJDE Reference for your printer, for the correct syntax and recompile the JSL file.

XPD0225E CATALOG NAME TOO LONG -- TRUNCATED, STR = <CATALOG-NAME>

Explanation: The specified catalog name is too long and was truncated.

System response: The system continues processing.

User action: Correct the catalog name for a maximum of 6 characters and recompile the JSL file.

XPD0226E PALETTE NAME TOO LONG -- TRUNCATED, STR = <PALETTE-NAME>

Explanation: The specified palette name is too long and was truncated.

System response: The system continues processing.

User action: Correct the palette name for a maximum of 31 characters and recompile the JSL file.

XPD0260W UNSUPPORTED FEATURE, STR = <FEATURE>

Explanation: A parameter or option is not supported for the PDL version selected.

System response: The system continues processing.

User action: Remove the unsupported feature and recompile the JSL file.

XPD0265E REQUIRED PARENTHESIS NOT FOUND

Explanation: The required parenthesis is missing.

System response: The system continues processing.

User action: Insert the parenthesis and recompile the JSL file.

XPD0266E NEGATIVE VALUE NOT ALLOWED, STR = <NUMBER>

Explanation: A negative value is not allowed for this parameter.

System response: The system continues processing.

User action: Modify the value so that it becomes a positive number and recompile the JSL file.

XPD0271F TOF EXCEEDS BOF

Explanation: The value of TOF exceeds the value of BOF.

System response: The system continues processing.

User action: Reduce the value of TOF or increase the value of BOF so that TOF is smaller than or equal to BOF and recompile the JSL file.

XPD4142W XES INLINE FONT AREA EXCEEDED. INLINE FONT WILL BE IGNORED.

Explanation: An XES inline font was encountered that exceeded the allowable font size.

System response: The XES font is discarded. Processing continues.

User action: If this is an XES document, ensure that all fonts are separated by an <esc>+F or an <esc>+A, otherwise contact Xerox Technical Support.

XPD4143E XES INLINE FONT TABLE EXCEEDED. DOCUMENT WILL BE ABORTED.

Explanation: An XES inline resource was encountered that required more than 4MB of internal storage.

System response: The document is aborted.

User action: Contact Xerox Technical Support.

XPD4144E RESOURCE FRAGMENT DETECTED, BUT NO RESOURCE LOAD IN PROGRESS.

Explanation: An internal processing error has occurred.

System response: The document is aborted.

User action: Contact Xerox Technical Support.

XPD4145E MORE THAN 64 IMAGES ON A PAGE ARE NOT CURRENTLY SUPPORTED

Explanation: When converting a document to PDF a was encountered that contained more than 64 images.

System response: The 65th and subsequent images are dropped from the page.

Contact Xerox Technical Support to request that the maximum number of images allowed on a page is increased.

XPFE messages

There are two versions of XPFE messages: a short version that appears on line one of a panel and a long version that appears on line three. The long version appears only if you enter HELP or press PF1 when a short message is displayed. Both versions of the message are provided in this chapter.

XPFE001E DUPLICATE MEMBER
DUPLICATE MEMBER NAME FOUND IN LIST. NAMES MUST BE UNIQUE.

Explanation: After adding a new line to the list of copy modifications or page layouts, you entered the name of an existing copy modification or page layout, then typed E to edit the duplicate entry.

System response: The cursor is positioned in the 'OPTION' column. The duplicate entry cannot be edited.

User action: Enter **D** to delete the duplicate entry, or overtype the duplicate name with a unique name.

XPFE002E ONE COPY MOD REQUIRED
AT LEAST ONE COPY MOD IS REQUIRED TO CREATE A PAGE FORMAT.

Explanation: You tried to delete the last copy modification from a page format.

System response: The cursor is positioned in the 'OPTION' column. The copy modification is not deleted.

User action: Leave at least one copy modification in the page format. If you no longer need the page format, delete it from the page format library.

XPFE003E ONE PAGE LAYOUT REQUIRED
AT LEAST ONE PAGE LAYOUT IS REQUIRED TO CREATE A PAGE FORMAT.

Explanation: You tried to delete the last page layout from a page format.

System response: The cursor is positioned in the 'OPTION' column. The page layout is not deleted.

User action: Leave at least one page layout in the page format. If you no longer need the page format, delete it from the page format library.

XPFE004E INVALID PAGE LAYOUT NAME
PAGE LAYOUT NAME CANNOT BE BLANK.

Explanation: After adding a new line to the list of page layouts, you typed E to edit the entry but left the 'PAGE LAYOUT NAME' column blank.

System response: The cursor is positioned in the 'PAGE LAYOUT NAME' column. The blank entry cannot be edited.

User action: Enter a unique name, or enter **D** in the 'OPTION' column to delete the blank entry.

XPFE005E **DEFAULT VALUES DISPLAYED**
THESE VALUES CANNOT BE DELETED.

Explanation: While editing line data specifications in a page layout, you tried to delete the last set of line parameters. You must have at least one set of parameters in each page layout.

System response: The cursor is positioned in the 'OPT' column. The line parameters are not deleted.

User action: Continue editing the page format.

XPFE006E **MEMBER NOT FOUND**
page format **NOT IN** *library***.**

Explanation: While attempting to generate (compile) the named page format, the page format editor was not able to find a list of page layouts in the FLIST library for this page format.

System response: The page format is not generated.

User action: Verify that you used the correct dataset name prefix and page format name. Edit the page format and verify that you defined at least one valid copy modification and page layout. Regenerate the page format.

XPFE010E **NO OPTION SELECTED**
ENTER ONE OF THE OPTIONS LISTED ON THIS PANEL.

Explanation: While editing a copy modification or page layout, you either entered an invalid option or left the 'OPTION' column blank.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter one of the options displayed on the panel.

XPFE011I **UPDATE SUCCESSFUL**
THE CHANGES HAVE BEEN INCORPORATED SUCCESSFULLY.

Explanation: The changes you made to the copy modification or page layout were incorporated successfully.

System response: Processing continues.

User action: None required.

XPFE012I **PREFIX** *prefix name*
prefix name **IS THE ACTIVE PREFIX FOR THIS EDITING SESSION.**

Explanation: *Prefix name* is the dataset name prefix allocated for this editing session. This message is displayed each time you access the Maintain Page Formats panel.

System response: Processing continues.

User action: None required.

XPFE013E GENERATE PROCESS FAILED
ILAND ORIENTATION REQUIRES A FONT. THERE IS NO DEFAULT.

Explanation: While editing a page layout, you selected an inverse landscape orientation for the page layout, but did not specify a font. There is no default font for inverse landscape orientations.

System response: The page format is not generated.

User action: In the line data specifications or field format for the page layout, enter the name of an inverse landscape font.

XPFE014E INVALID ORIENTATION
ENTER ONE OF THESE VALUES: PORT, LAND, IPORT, OR ILAND.

Explanation: While editing a page layout, you entered an invalid value in the 'ORIENTATION' column, then typed E to edit the page layout.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter one of these values:

PORT
LAND
IPORT
ILAND

XPFE016E GENERATE PROCESS FAILED
NO VALID PRINT DIRECTION WAS FOUND.

Explanation: This is an internal processing error.

System response: The page format is not generated.

User action: Call Xerox Technical Support.

XPFE018E INVALID FIELD
ENTER A NUMERIC VALUE IN THE INDICATED FIELD.

Explanation: While setting configuration options, you either entered a nonnumeric value or left the indicated field blank.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter a numeric value.

XPFE019E INVALID NAME
THIS NAME CAN CONTAIN ONLY ALPHANUMERIC CHARACTERS AND @, #, OR $.

Explanation: You entered an invalid name in the indicated field.

System response: The cursor is positioned on the name in error. No further processing is permitted until the error is corrected.

User action: Correct the name. Valid names can include alphanumeric characters and @, #, or $.

XPFE020E INVALID COUNT
THIS VALUE MUST NOT BE BLANK. ENTER A WHOLE NUMBER.

Explanation: While editing line data specifications in a page layout, you entered an invalid value in the 'COUNT' column.

System response: The cursor is positioned in the 'COUNT' column. No further processing is permitted until the error is corrected.

User action: Enter an integer value. Do not enter a decimal value or leave this field blank.

XPFE021E INVALID POSITION ACROSS
line **POSITION ACROSS MUST BE A NUMERIC ENTRY OR** *margin***.**

Explanation: While editing line data specifications in a page layout, you entered an invalid value in the 'POSITION ACROSS' column.

System response: The cursor is positioned in the 'POSITION ACROSS' column. No further processing is permitted until the error is corrected.

User action: Enter a numeric value or **MARGIN**.

XPFE022E INVALID POSITION DOWN
line **POSITION DOWN MUST BE A NUMERIC ENTRY, TOP, OR NEXT.**

Explanation: While editing line data specifications in a page layout, you entered an invalid value in the 'POSITION DOWN' column.

System response: The cursor is positioned in the 'POSITION DOWN' column. No further processing is permitted until the error is corrected.

User action: Enter a numeric value, **TOP**, or **NEXT**.

XPFE023E INVALID FIELD
THE INDICATED FIELD MUST CONTAIN A VALID DECIMAL NUMBER.

Explanation: While editing a page layout, you entered an invalid value in the indicated field.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter a decimal number within the range permitted for this field.

XPFE024E INVALID PAGE FORMAT NAME
THE PAGE FORMAT NAME MUST BE A VALID IBM DATASET MEMBER NAME.

Explanation: On the Maintain Page Formats panel, you entered an invalid name in the 'Page Format Name' field.

System response: The cursor is positioned on the 'Page Format Name' field. No further processing is permitted until the error is corrected.

User action: Enter a valid IBM dataset member name up to eight characters in length. This name must begin with an alphabetic character (A-Z), @, #, or $. The remaining characters can be alphanumeric, @, #, or $.

XPFE025E INVALID FIELD FORMAT
THE FIELD FORMAT NAME MUST BE A VALID IBM DATASET MEMBER NAME.

Explanation: While editing line data specifications in a page layout, you entered an invalid name in the 'FIELD FORMAT' column.

System response: The cursor is positioned in the 'FIELD FORMAT' column. No further processing is permitted until the error is corrected.

User action: Enter a valid IBM dataset member name up to eight characters in length. This name must begin with an alphabetic character (A-Z), @, #, or $. The remaining characters can be alphanumeric, @, #, or $.

XPFE026E INVALID CHANNEL
ENTER A NUMBER BETWEEN 1 AND 12.

Explanation: While editing line data specifications in a page layout, you entered an invalid value in the 'CHAN' column.

System response: The cursor is positioned in the 'CHAN' column. No further processing is permitted until the error is corrected.

User action: Enter an integer value between 1 and 12.

XPFE027E INVALID UNITS
ENTER ONE OF THESE VALUES: IN, CM, MM, OR DOT.

Explanation: While editing a copy modification or global specifications in a page layout, you entered an invalid value in the 'Unit Measure' field.

System response: The cursor is positioned on the 'Unit Measure' field. No further processing is permitted until the error is corrected.

User action: Enter **IN**, **CM**, **MM**, or **DOT**.

XPFE028E INVALID FIELD FORMAT
WHEN USING OPTION E, THIS FIELD MUST CONTAIN A FIELD FORMAT.

Explanation: While editing line data specifications in a page layout, you entered E in the 'OPT' column but did not specify a field format name.

System response: The cursor is positioned in the 'FIELD FORMAT' column. No further processing is permitted until the error is corrected.

User action: If you want to edit a field format, enter a name in the 'FIELD FORMAT' column and **E** in the 'OPT' column. Otherwise, enter a different value in the 'OPT' column.

XPFE030E DATASET NOT FOUND
dataset name **COULD NOT BE FOUND.**

Explanation: While attempting to generate a page format, the page format editor was unable to find the named dataset.

System response: The page format is not generated.

User action: Verify that you entered the name of the PDS that has been allocated to store the generated page format. If the name is invalid, correct it. If the name is valid, reenter it and try again.

XPFE031I *page format name* **GENERATED**
page format name **PAGE FORMAT GENERATED IN LIBRARY** *library name***.**

Explanation: The named page format was generated successfully and stored in the named library.

System response: Processing continues.

User action: None required.

XPFE032E **INVALID COND**
ENTER YES OR NO.

Explanation: While editing line specifications in a page layout, you entered an invalid value in the 'COND' column or left the column blank.

System response: The cursor is positioned in the 'COND' column. No further processing is permitted until the error is corrected.

User action: Enter **YES** if conditional formatting is active for this line group. Enter **NO** if conditional formatting is not active.

XPFE033E **INVALID** *name*
CONDITION ID NAME MUST FOLLOW STANDARD IBM NAMING CONVENTIONS.

Explanation: While editing conditional formatting parameters in a page layout, you entered an invalid name in the 'CONDITION ID' column.

System response: The cursor is positioned in the 'CONDITION ID' column. No further processing is permitted until the error is corrected.

User action: Correct the name. This name may be up to eight characters in length, and must begin with an alphabetic character (A-Z), @, #, or $. The remaining characters can be alphanumeric, @, #, $.

XPFE034E **INVALID COPIES**
ENTER A NUMBER BETWEEN 1 AND 255.

Explanation: While editing a copy modification, you entered an invalid value in the 'Number of Copies' field.

System response: The cursor is positioned on the 'Number of Copies' field. No further processing is permitted until the error is corrected.

User action: Enter an integer value between 1 and 255.

XPFE036I **NO MEMBERS FOUND**
VERIFY THAT THE PATTERN IS VALID AND THAT THE LIBRARY IS NOT EMPTY.

Explanation: No members were found in the page format library that match the pattern of characters you entered.

System response: The cursor is positioned on the OPTION line. No further processing is permitted until the error is corrected.

User action: Examine the character pattern you entered. If it is incorrect, change it. If it is correct, the library may be empty.

XPFE037E **UNEXPECTED ERROR**
AN UNEXPECTED ERROR OCCURRED DURING MEMBER FIND. RC=*return code***.**

Explanation: An unexpected error occurred while trying to find a member. This message is generated by ISPF.

System response: Processing is terminated.

User action: Examine the member name to determine whether it is valid. Examine the appropriate library to determine whether it is corrupt.

XPFE038I **NO MEMBERS SELECTED**
NO MEMBERS WERE SELECTED FOR PROCESSING.

Explanation: You entered the END command (PF3) on the member selection list without selecting a member.

System response: The system returns to the previous panel.

User action: None required.

XPFE039E **INVALID COMMAND**
command **IS NOT A VALID MEMBER SELECTION COMMAND.**

Explanation: The command you entered on the member selection panel is invalid.

System response: The cursor is positioned on the invalid command. No further processing is permitted until the error is corrected.

User action: Enter **S** to select a member.

XPFE040E **INVALID ORIGIN ACROSS**
ENTER A VALID DECIMAL NUMBER.

Explanation: While editing a copy modification, you entered a nonnumeric value in the ‘Page Origin Across’ field.

System response: The cursor is positioned on the ‘Page Origin Across’ field. No further processing is permitted until the error is corrected.

User action: Enter a decimal value within the valid range for this field.

XPFE041E **INVALID ORIGIN DOWN**
ENTER A VALID DECIMAL NUMBER.

Explanation: While editing a copy modification, you entered a nonnumeric value in the ‘Page Origin Down’ field.

System response: The cursor is positioned on the ‘Page Origin Down’ field. No further processing is permitted until the error is corrected.

User action: Enter a decimal value within the valid range for this field.

XPFE042E INVALID REPORT STACKING
ENTER YES OR NO.

Explanation: While editing a copy modification, you entered an invalid value in the 'Report Stacking' field.

System response: The cursor is positioned on the 'Report Stacking' field. No further processing is permitted until the error is corrected.

User action: Enter **YES** if you want the output for this set of copies to be offset from the preceding set. Enter **NO** if you do not want the output for this set of copies to be offset from the preceding set.

XPFE043E INVALID TRAY NUMBER.
ENTER A NUMBER FROM 1 TO 9.

Explanation: While editing a copy modification, an invalid value was specified for the 'Tray Number' field.

System response: The panel is redisplayed so that a valid value may be entered. No further processing is permitted until the error is corrected.

User action: Enter a whole number value from 1 to 9.

XPFE044E INVALID DUPLEX MODE
ENTER YES OR NO.

Explanation: While editing a copy modification, you entered an invalid value in the 'Duplex Mode' field.

System response: The cursor is positioned on the 'Duplex Mode' field. No further processing is permitted until the error is corrected.

User action: Enter **YES** to print in duplex mode. Enter **NO** to print in simplex mode.

XPFE045E GENERATE PROCESS FAILED
THE LINE POSITION IS OUTSIDE THE DEFINED LOGICAL PAGE.

Explanation: While attempting to generate (compile) a page format, the page format editor encountered a line in a page layout that is positioned outside the logical page.

System response: The page format is not generated.

User action: Either change the logical page dimensions in the page layout global specifications to accommodate the line or reposition the line in the line data specifications. Regenerate the page format.

XPFE046E *resource* **WRITE ERROR**
AN ERROR OCCURRED WRITING *resource***. CHECK** *name dataset***.**

Explanation: An error occurred while trying to store the named resource in the identified dataset. The dataset may not have any available directory space.

System response: The requested function is not performed.

User action: Do not cancel from the panel or your newly entered information will be lost. Instead, swap out of the XOAF session and delete or copy some members from the named dataset, compress the dataset, and swap back into the page format editor. Press **PF3** to save your changes.

XPFE047E **INVALID PAGE WIDTH**
ENTER A VALID DECIMAL NUMBER.

Explanation: While editing global specifications in a page layout, you entered a nonnumeric value in the 'Width' field.

System response: The cursor is positioned on the 'Width' field. No further processing is permitted until the error is corrected.

User action: Enter a decimal value within the valid range for this field.

XPFE048E **INVALID PAGE HEIGHT**
ENTER A VALID DECIMAL NUMBER.

Explanation: While editing global specifications in a page layout, you entered a nonnumeric value in the 'Height' field.

System response: The cursor is positioned on the 'Height' field. No further processing is permitted until the error is corrected.

User action: Enter a decimal value within the valid range for this field.

XPFE049E **INVALID MARGIN**
ENTER A VALID DECIMAL NUMBER.

Explanation: While editing global specifications in a page layout, you entered a nonnumeric value in the 'Margin' field.

System response: The cursor is positioned on the 'Margin' field. No further processing is permitted until the error is corrected.

User action: Enter a decimal value within the valid range for this field.

XPFE050E **INVALID B/A**
ENTER "B" FOR BEFORE OR "A" FOR AFTER.

Explanation: While editing a condition ID in a page layout, you entered an invalid value in the 'B/A' column.

System response: The cursor is positioned in the 'B/A' column. No further processing is permitted until the error is corrected.

User action: Enter **B** if the action resulting from the condition test should take place before the line or line group. Enter **A** if the action should take place after the line or line group.

XPFE051E INVALID L/G
ENTER "L" FOR LINE OR "G" FOR LINE GROUP.

Explanation: While editing a condition ID in a page layout, you entered an invalid value in the 'L/G' column.

System response: The cursor is positioned on the 'L/G' column. No further processing is permitted until the error is corrected.

User action: Enter **L** if processing should occur before or after the current line. Enter **G** if processing should occur before or after the line group identified by the 'END GROUP' column.

XPFE052E INVALID COLOR
ENTER ONE OF THESE VALUES: DEF,BLU,RED,PNK,GRN,TRQ,YLW,BLK,BRW.

Explanation: While editing line data specifications or a field format in a page layout, you entered an invalid color.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter one of these values:

DEF	(default)
BLU	(blue)
RED	
PNK	(pink)
GRN	(green)
TRQ	(turquoise)
YLW	(yellow)
BLK	(black)
BRW	(brown)

XPFE053E INVALID CONSTANT
ENTER YES OR NO.

Explanation: While editing a field format in a page layout, you entered an invalid value in the 'CONSTANT' column.

System response: The cursor is positioned in the 'CONSTANT' column. No further processing is permitted until the error is corrected.

User action: Enter **YES** if the field is associated with a constant string. Enter **NO** if the field is associated with a field in an input data stream.

XPFE054E INVALID INPUT START
ENTER A VALID INTEGER.

Explanation: While editing a field format in a page layout, you entered a decimal or alphabetic value in the 'INPUT START' column.

System response: The cursor is positioned in the 'INPUT START' column. No further processing is permitted until the error is corrected.

User action: Enter the field's starting column in the input data stream as an integer value. Do not include any spaces or alphabetic characters.

XPFE055E **INVALID INPUT LENGTH**
ENTER A VALID INTEGER.

Explanation: While editing a field format in a page layout, you entered a non-integer or alphanumeric value in the 'INPUT LENGTH' column.

System response: The cursor is positioned in the 'INPUT LENGTH' column. No further processing is permitted until the error is corrected.

User action: Enter the field's length in the input data stream as an integer value. Do not include any spaces or alphabetic characters.

XPFE056E *page layout name* **MUST BE EDITED**
page layout name **MUST BE EDITED BEFORE YOU CAN SAVE THE MEMBER.**

Explanation: The page layout you have added to the page format must be edited before you can save the page format.

System response: The cursor is positioned in the 'OPTION' column. No further processing is permitted until the error is corrected.

User action: Enter **E** in the 'OPTION' column and edit the page layout.

XPFE057E *field format name* **MUST BE EDITED**
field format name **MUST BE EDITED BEFORE YOU CAN SAVE THE MEMBER.**

Explanation: The field format you have added to the page format must be edited before you can save the page format.

System response: The cursor is positioned in the 'OPT' column. No further processing is permitted until the error is corrected.

User action: Enter **E** in the 'OPT' column for the line group to which you have added a field format and edit the field format.

XPFE058E *copy modification name* **MUST BE EDITED**
copy modification name **MUST BE EDITED BEFORE YOU CAN SAVE THE MEMBER.**

Explanation: The copy modification you have added to the page format must be edited before you can save the page format.

System response: The cursor is positioned in the 'OPTION' column. No further processing is permitted until the error is corrected.

User action: Enter **E** in the 'OPTION' column and edit the copy modification.

XPFE059E **INVALID CLUSTER NAME**
ENTER UP TO 6 ALPHANUMERIC CHARACTERS (1ST MUST BE ALPHABETIC).

Explanation: While editing a copy modification, you entered an invalid cluster name.

System response: The cursor is positioned on the 'Cluster Name' field. No further processing is permitted until the error is corrected.

User action: Enter a 1- to 6-character cluster name that begins with an alphabetic character.

XPFE060E **INVALID FONT INDEX**
ENTER A UNIQUE NUMBER BETWEEN 0 AND 126.

Explanation: While editing a font list in a page layout, you entered an invalid value in the 'FONT INDEX' column.

System response: The cursor is positioned in the 'FONT INDEX' column. No further processing is permitted until the error is corrected.

User action: Enter a value between 0 and 126. Do not enter the same value more than once in the list.

XPFE061E **INVALID** *field name*
ENTER YES OR NO.

Explanation: Your entry in the identified field was something other than YES or NO.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter **YES** or **NO** only.

XPFE062E **MISSING FONT ID**
ENTER THE NAME OF A XEROX FONT OR DELETE THIS LINE BEFORE SAVING.

Explanation: While editing a font list in a page layout, you attempted to exit the panel without entering a font name in the 'FONT' column.

System response: The cursor is positioned in the 'FONT' column. No further processing is permitted until the error is corrected.

User action: Enter a font name in the 'FONT' column, or delete the line from the table.

XPFE063E **GENERATE PROCESS FAILED**
UNABLE TO READ FLIST LIBRARY.

Explanation: While attempting to generate (compile) a page format, the page format editor was unable to read the FLIST library.

System response: The page format is not generated.

User action: Verify that the FLIST library has not been deleted or renamed. Ensure that the library is not corrupted. If the problem persists, call Xerox Technical Support.

XPFE064E **GENERATE PROCESS FAILED**
UNABLE TO READ CPMOD LIBRARY.

Explanation: While attempting to generate (compile) a page format, the page format editor was unable to read the CPMOD library.

System response: The page format is not generated.

User action: Verify that the CPMOD library has not been deleted or renamed. Ensure that the library is not corrupted. If the problem persists, call Xerox Technical Support.

XPFE065E **GENERATE PROCESS FAILED**
FIELD DEFINITION NOT FOUND IN FIELDD LIBRARY.

Explanation: While attempting to generate (compile) a page format, the page format editor was unable to locate one of the field definitions in the FIELDD library.

System response: The page format is not generated.

User action: Examine the page format to make sure the field definition names are valid. If the field definition has been deleted from the FIELDD library, delete the name from the page format. If a field definition has been inadvertently deleted from the FIELDD library, recreate it, then regenerate the page format.

XPFE066E **GENERATE PROCESS FAILED**
A COPY MOD SPECIFIED IN THE PAGE FORMAT WAS NOT FOUND.

Explanation: While attempting to generate (compile) a page format, the page format editor was unable to locate one of the named copy modifications in the CPMOD library.

System response: The page format is not generated.

User action: Examine the page format to make sure the copy modification names are valid. If the copy modification has been deleted from the CPMOD library, delete the name from the page format. If a copy modification has been inadvertently deleted from the CPMOD library, recreate it, then regenerate the page format.

XPFE067E *condition id* **NOT DEFINED**
condition id **MUST BE EDITED BEFORE YOU CAN EXIT THIS TABLE.**

Explanation: While editing conditional formatting parameters in a page layout, you added a condition ID to the list, then attempted to exit the panel without editing the condition ID.

System response: The cursor is positioned in the ‘OPT’ column. No further processing is permitted until the error is corrected.

User action: Enter **E** in the ‘OPT’ column and define the conditional formatting parameters for this condition ID.

XPFE068E **INVALID COND**
THIS VALUE MUST NOT BE BLANK. ENTER YES OR NO.

Explanation: While editing line specifications in a page layout, you entered an invalid value in the ‘COND’ column or left the column blank.

System response: The cursor is positioned in the ‘COND’ column. No further processing is permitted until the error is corrected.

User action: Enter **YES** if conditional formatting is active for this line group. Enter **NO** if conditional formatting is not active.

XPFE069E INVALID TYPE
ENTER ONE OF THESE VALUES: EQ, NE, LT, LE, GT, GE, CH, OT.

Explanation: While editing conditional formatting parameters in a page layout, you entered an invalid value in the 'TYPE' column.

System response: The cursor is positioned in the 'TYPE' column. No further processing is permitted until the error is corrected.

User action: Enter a valid type of comparison to be performed. Enter one of these values:

EQ
NE
LT
LE
GT
GE
CH
OT

XPFE070E INVALID COPY MOD NAME
ENTER A VALID NAME, CURRENT, NULL, =, OR /.

Explanation: While editing conditional formatting parameters in a page layout, you entered an invalid value in the 'COPY MODIFICATION NAME' column.

System response: The cursor is positioned at the COMMAND line. No further processing is permitted until the error is corrected.

User action: Enter a valid copy modification name, **CURRENT**, **NULL**, **=**, or **/**.

XPFE071E INVALID PAGE LAYOUT
ENTER A VALID NAME, CURRENT, NULL, =, OR /.

Explanation: While editing conditional formatting parameters in a page layout, you entered an invalid value in the 'PAGE LAYOUT NAME' column.

System response: The cursor is positioned at the COMMAND line. No further processing is permitted until the error is corrected.

User action: Enter a valid page layout name, **CURRENT**, **NULL**, **=**, or **/**.

XPFE072E INVALID STRING LENGTH
HEX CONSTANT STRINGS MUST CONTAIN AN EVEN NUMBER OF DIGITS.

Explanation: While editing a constant string for a field format, you entered an odd number of characters in the string. Because each EBCDIC character is composed of two hexadecimal digits, you must enter an even number of characters in this field if your string is hexadecimal.

System response: The cursor is positioned on the 'String' field. No further processing is permitted until the error is corrected.

User action: Ensure your entry has an even number of characters.

XPFE073E INVALID BLANKS IN STRING
EMBEDDED BLANKS ARE NOT ALLOWED IN A HEX CONSTANT STRINGS.

Explanation: While editing a constant string for a field format, you entered a hexadecimal constant string containing embedded blanks. Embedded blanks are invalid for hexadecimal constant strings.

System response: The cursor is positioned on the 'String' field. No further processing is permitted until the error is corrected.

User action: Delete the embedded blanks.

XPFE074E INVALID CHAR IN STRING
HEX CONSTANT STRINGS CAN CONTAIN THESE CHARACTERS: 0-9 AND A-F.

Explanation: While editing a constant string for a field format, you entered an invalid character in the string. In hexadecimal constant strings, you can use only the digits 0 through 9 and the characters A through F.

System response: The cursor is positioned on the 'String' field. No further processing is permitted until the error is corrected.

User action: Delete the invalid characters.

XPFE075E INVALID HEX VALUE
HEX 00 IS NOT ALLOWED IN A CONSTANT STRING.

Explanation: While editing a constant string for a field format, you entered 00 in a hexadecimal character string. This is an invalid character combination.

System response: The cursor is positioned on the 'String' field. No further processing is permitted until the error is corrected.

User action: Delete the character combination 00.

XPFE076E INVALID STRING TYPE
ENTER "C" FOR CHARACTER OR "X" FOR HEXADECIMAL CHARACTER.

Explanation: While editing a constant string for a field format, you entered an invalid string type.

System response: The cursor is positioned on the 'Type' field. No further processing is permitted until the error is corrected.

User action: Enter **C** (character) or **X** (hexadecimal).

XPFE077E GENERATE PROCESS FAILED
UNABLE TO OPEN OR READ COND LIBRARY.

Explanation: While attempting to generate (compile) a page format, the page format editor was unable to open or read a condition ID member in the COND library.

System response: The page format is not generated.

User action: Verify that the condition IDs are valid. If a condition ID has been deleted from the COND library, you must enter a different condition ID in the page format. If a condition ID has been inadvertently deleted from the COND library, recreate it, then regenerate the page format.

XPFE078E GENERATE PROCESS FAILED
UNABLE TO OPEN OR READ PLIST LIBRARY.

Explanation: While attempting to generate (compile) a page format, the page format editor was unable to open or read a member in the PLIST library.

System response: The page format is not generated.

User action: Verify that the PLIST library has not been deleted or renamed. Ensure that the library is not corrupted. If the problem persists, call Xerox Technical Support.

XPFE079E GENERATE PROCESS FAILED
UNABLE TO OPEN OR READ LINED LIBRARY.

Explanation: While attempting to generate (compile) a page format, the page format editor was unable to open or read a member in the LINED library.

System response: The page format is not generated.

User action: Verify that the LINED library has not been deleted or renamed. Ensure that the library is not corrupted. If the problem persists, call Xerox Technical Support.

XPFE080E FIELD WRITE ERROR
UNABLE TO WRITE FIELD MEMBER TO FIELDD LIBRARY.

Explanation: The page format editor encountered an error while trying to store a field format in the FIELDD library. The library may not have any available directory space.

System response: The requested function cannot be completed.

User action: Do not cancel from the panel or your newly entered information will be lost. Instead swap out of the XOAF session and delete or copy some members from the named dataset, compress the dataset, and swap back into the page format editor. Press **PF3** to save your changes.

XPFE081E TOO MANY CONSTANTS
THE COMBINED LENGTH OF ALL CONSTANT STRINGS CANNOT EXCEED 8100.

Explanation: A single page layout cannot contain more than 8100 characters of constant text. Only the constant text entered within field formats is counted against this total. The comparison text within conditional formatting parameters is not counted against this total.

System response: The page format is not generated.

User action: Reduce the amount of constant text within your page layouts and regenerate the page format.

XPFE083E INVALID TRAY NUMBER
ENTER A WHOLE NUMBER FROM 1 TO 9.

Explanation: While editing a copy modification, you entered an invalid value in the 'Tray Number' field.

System response: The cursor is positioned on the 'Tray Number' field. No further processing is permitted until the error is corrected.

User action: Enter a value from 1 to 9.

XPFE085E CONFIGURATION REQUIRED
RUN INITIAL CONFIGURATION TO ALLOCATE REQUIRED DATASETS.

Explanation: You tried to select option 2, Maintain Page Formats, without first setting up your configuration.

System response: The cursor is positioned on the OPTION line. No further processing is permitted until the error is corrected.

User action: Select option 1, Allocate Page Format Datasets, to allocate the required datasets.

XPFE086E INVALID SELECTION
YOU MUST SELECT FROM THE AVAILABLE OPTIONS.

Explanation: The option you selected is invalid for this menu.

System response: The cursor is positioned on the OPTION line. No further processing is permitted until the error is corrected.

User action: Select one of the available menu options.

XPFE087E INVALID CONSTANT
CONSTANT FIELD VALUE MUST BE YES FOR EDIT OPTION.

Explanation: While editing a field format in a page layout, you entered E in the 'OPTION' column, but NO in the 'CONSTANT' column.

System response: The cursor is positioned in the 'CONSTANT' column. No further processing is permitted until the error is corrected.

User action: To edit a constant string, you must enter **E** in the 'OPTION' column and **YES** in the 'CONSTANT' column.

XPFE088E INVALID OUTPUT DATASET
OUTPUT DATASET ORGANIZATION MUST BE PO.

Explanation: The page format dataset you specified to receive the generated page format is not a PDS.

System response: The page format is not generated.

User action: Allocate a PDS to be used as your page format library. The PDS must have a dataset organization of PO.

XPFE089E INVALID OUTPUT DATASET
OUTPUT DATASET MUST BE LRECL 8205.

Explanation: The attributes of the page format dataset you specified to receive the generated page format are invalid.

System response: The page format is not generated.

User action: Delete the invalid dataset. Allocate a new PDS to be used as your page format library. The PDS must have a logical record length of 8205.

XPFE090E INVALID DIRECTION
ENTER ONE OF THESE VALUES: A, D, B, OR U.

Explanation: While editing a field format in a page layout, you entered an invalid print direction for this field relative to the upper left corner of the logical page.

System response: The cursor is positioned in the 'PRINT DIR' column. No further processing is permitted until the error is corrected.

User action: Enter one of these values:

A (across)
D (down)
B (back)
U (up)

XPFE091E INVALID DSNAME PREFIX
ENTER ALL HIGH-LEVEL QUALIFIERS WITHOUT QUOTES.

Explanation: The dataset name you entered is invalid. You must enter a fully-qualified dataset name prefix without any quotes. The system does not add your user ID to the dataset name.

System response: The datasets are not allocated.

User action: Correct the dataset name prefix, specifying a high-level qualifier and any mid-level qualifiers you need. Do not enter quotes.

XPFE092E CANNOT ALLOCATE DSNAME
CANNOT ALLOCATE *dataset name***.**

Explanation: The page format editor could not allocate the datasets with the prefix you specified. This message is accompanied by system messages which provide additional information. This situation can occur for many reasons, such as the user not being authorized for the datasets identified by the prefix, insufficient space, or trying to compile a page format to the dataset while another user is browsing the dataset.

System response: The datasets are not allocated.

User action: Enter a different dataset prefix and try again.

XPFE093E **INVALID COPY MOD**
COPY MOD NAME CANNOT BE BLANK.

Explanation: You added a new line to the list of copy modifications, but left the 'COPY MODIFICATION NAME' column blank.

System response: The cursor is positioned in the 'OPTION' column. No further processing is permitted until the error is corrected.

User action: Enter a unique name in the 'COPY MODIFICATION NAME' column, or delete the blank line.

XPFE094E **FIELD MUST BE BLANK**
START AND LENGTH FIELDS MUST BE BLANK FOR CONSTANT OPTION.

Explanation: While editing a field format in a page layout, you entered a start and/or length value for a field that is specified as a constant string. If you are setting up a field as a constant string, you must leave the 'INPUT START' and 'INPUT LENGTH' columns blank.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Delete the entries from the 'INPUT START' and 'INPUT LENGTH' columns.

XPFE095E **FIELD MUST BE BLANK**
WHEN DUPLEX IS NO, A FORM CANNOT BE SPECIFIED FOR BACK PAGE.

Explanation: While editing a copy modification, you entered NO in the 'Duplex Mode' field and entered a form name in the 'Form Name for Back' field. If you are printing simplex, you must leave the 'Form Name for Back' field blank.

System response: The cursor is positioned on the 'Form Name for Back' field. No further processing is permitted until the error is corrected.

User action: If you want to print duplex, change the value of the 'Duplex Mode' field to **YES**. If you want to print simplex, delete the entry in the 'Form Name for Back' field.

XPFE096E *field* **MUST BE POSITIVE**
A NEGATIVE *field* **VALUE IS INVALID.**

Explanation: You entered a negative value in one of these fields: 'Width', 'Height', 'Margin', or 'LPI'. The value in these fields must be positive.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter a positive value in the identified field.

XPFE097E **DUPLICATE FONT INDEX**
FONT INDEX *#index number* **DUPLICATED IN LIST. NUMBERS MUST BE UNIQUE.**

Explanation: While editing a font list, you entered a font index value that is already present in the list. Font index values must be unique.

System response: The cursor is positioned on the 'OPTION' column. No further processing is permitted until the error is corrected.

User action: Enter a unique value between 0 and 126, or delete the duplicate line from the list.

XPFE098E **UNKNOWN COMMAND**
THE VALUE ON THE COMMAND LINE IS NOT KNOWN TO THIS EDITOR.

Explanation: The value you entered on the COMMAND line is not supported by the page format editor.

System response: The requested function is not performed.

User action: Enter a valid value on the COMMAND line.

XPFE099E **GENERATE PROCESS FAILED**
FIELD POSITION IS OUTSIDE THE DEFINED PAGE.

Explanation: While attempting to generate (compile) a page format, the page format editor encountered a field in a field format that is positioned outside the logical page.

System response: The page format is not generated.

User action: Either change the logical page dimensions in the page layout global specifications to accommodate the field, or reposition the field in the field format. Regenerate the page format.

XPFE100E **MAX 25 MEMBERS EXCEEDED**
THE MAXIMUM NUMBER OF 25 CONDITIONAL MEMBERS HAS BEEN EXCEEDED.

Explanation: You tried to create more than 25 separate conditional checks for one circumstance.

System response: Member creation stops after the 25th circumstance.

User action: Reduce the number of conditional members, or create a new line group (which allows 25 more members).

XPFE101I **MEMBER COPIED**
THE REQUESTED MEMBER WAS COPIED.

Explanation: The member you requested has been copied to the output dataset you named.

System response: Processing continues.

User action: None required.

XPFE102E **DATASET NOT FOUND**
THE INPUT DATASET WAS NOT FOUND.

Explanation: The page format editor could not locate the input dataset you specified.

System response: The member you specified was not copied.

User action: Enter a valid input dataset name and try again.

XPFE103E **DATASET NOT FOUND**
THE OUTPUT DATASET WAS NOT FOUND.

Explanation: The page format editor could not locate the output dataset you specified.

System response: The member you specified was not copied.

User action: Enter a valid output dataset name and try again.

XPFE104E **COPY FAILED**
UNABLE TO ACQUIRE LCA CONTROL BLOCK.

Explanation: This is an internal error.

System response: The copy operation failed.

User action: Call Xerox Technical Support.

XPFE105E **COPY FAILED**
UNABLE TO *operation* **DATASET** *dataset name***.**

Explanation: This is an internal error.

System response: The copy operation failed.

User action: Call Xerox Technical Support.

XPFE106E **COPY FAILED**
UNABLE TO FREE LCA CONTROL BLOCK.

Explanation: This is an internal error.

System response: The copy operation failed.

User action: Call Xerox Technical Support.

XPFE107E **COPY FAILED**
MEMBER *member name* **WAS NOT FOUND.**

Explanation: The page format editor could not locate the named member.

System response: The copy operation failed.

User action: Enter the correct member name and try again.

XPFE108E **INVALID BLOCK SIZE**
BLOCK SIZE *block size* **IS NOT A MULTIPLE OF RECORD LENGTH** *record length value***.**

Explanation: The block size must be a multiple of the named record length value.

System response: Dataset allocation failed.

User action: Enter a correct block size value and try again.

XPFE109E **INVALID BLOCK SIZE**
BLOCK SIZE *block size* **MUST BE AT LEAST 4 BYTES LARGER THAN** *record length value***.**

Explanation: The named block size must be at least four bytes larger than the named record length value.

System response: Dataset allocation failed.

User action: Enter a correct block size value and try again.

XPFE110E **DUPLICATE FORM ENTRIES**
DO NOT SPECIFY FORM NAME FOR BACK AND BFORM SIMULTANEOUSLY.

Explanation: While editing a copy modification, you specified a value in both the ‘Form Name for Back’ and ‘BFORM Name’ fields. Only one name can be specified.

System response: The cursor is positioned on the ‘BFORM Name’ field. No further processing is permitted until the error is corrected.

User action: Delete the form name from either the ‘BFORM Name’ field or the ‘Form Name for Back’ field.

XPFE111E **INVALID FRONT SHIFT**
ENTER A VALUE FROM -75 TO 75 DOTS.

Explanation: While editing a copy modification, you specified a front shift value outside the valid range.

System response: The cursor is positioned on the ‘Front Shift Value’ field. No further processing is permitted until the error is corrected.

User action: Either specify a value within the given range or delete the shift value completely.

XPFE112E **INVALID BACK SHIFT**
ENTER A VALUE FROM -75 TO 75 DOTS.

Explanation: While editing a copy modification, you specified a back shift value outside the valid range.

System response: The cursor is positioned on the ‘Back Shift Value’ field. No further processing is permitted until the error is corrected.

User action: Either specify a value within the given range or delete the shift value completely.

XPFE113E INVALID SPLIT REPORT
ENTER YES OR NO.

Explanation: While editing a copy modification, you entered an invalid value in the 'Split Report' field.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter **YES** or **NO**.

XPFE114E INVALID SF1 VALUE
ENTER YES OR NO.

Explanation: While editing a copy modification, you entered an invalid value in the 'Signal Function 1' field.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter **YES** or **NO**.

XPFE115E INVALID SF2 VALUE
ENTER YES OR NO.

Explanation: While editing a copy modification, you entered an invalid value in the 'Signal Function 2' field.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter **YES** or **NO**.

XPFE116E INVALID SEPARATOR PAGE
ENTER YES OR NO.

Explanation: While editing a copy modification, you entered an invalid value in the 'Separator Page First' field.

System response: The cursor is positioned on the field in error. No further processing is permitted until the error is corrected.

User action: Enter **YES** or **NO**.

XPL messages

XPL3702I INSUFFICIENT STORAGE FOR ABEND WORK AREA. ESTAE NOT ESTABLISHED

Explanation: When entered from the Executor, the pipeline attempted to establish an ESTAE routine to handle pipeline processor abends. However, insufficient storage was available for the required work area.

System response: Document processing continues without ESTAE protection. This message may be repeated for the document.

User action: Free one or more of the printers active in the address space to relieve storage constraints. If the problem persists, terminate the XOSF address space and restart it with more memory.

XPL3703I UNABLE TO ESTABLISH PIPELINE ABEND ROUTINE. RC=X'*return code***'**

Explanation: When entered from the Executor, the pipeline attempted to establish an ESTAE routine to handle pipeline processor abends. However, XOSF was unable to establish the routine.

System response: Document processing continues without ESTAE protection. This message may be repeated for the document.

User action: If the problem persists, call Xerox Technical Support.

XPL3704I PIPELINE PROCESSOR *module name* **INSUFFICIENT STORAGE FOR WORK AREA**

Explanation: When processing a document, the pipeline acquires a dynamic work area for each processor required. However, insufficient storage was available for the work area required by the named module.

System response: Document processing is terminated.

User action: Wait until another XPAF printer is drained, then resubmit the document. At the earliest opportunity, terminate the address space and increase the region size.

XPL3705I EXCEPTIONAL CONDITIONS LIST HAS EXCEEDED THE 128 MAXIMUM

Explanation: The pipeline has sufficient storage for 128 exception conditions (return codes) to be reported. This number has been exceeded.

System response: Document processing is terminated.

User action: If the problem persists, call Xerox Technical Support.

XPL3707I **PIPELINE PROCESSOR** *module name* **WAS REMOVED FROM THE PAL BECAUSE OF AN ABEND**

Explanation: The pipeline ESTAE routine was invoked because of a programming error in the named processor. This message is preceded by a series of messages from the ESTAE processor indicating the error.

System response: Document processing is terminated.

User action: If the problem persists, call Xerox Technical Support.

XPL6402E **COULD NOT** *command* **ITEM** *item name* **IN TABLE** *table name activity***. THM RC=X'***return code***'**

Explanation: The RGB values provided in the XES assign ink command did not have matching CMY values in the RGB-CMY-Color-Conv table.

System response: Document processing continues. The referenced color is set to black.

User action: Add the new RGB and CMY values to the COLR4700 entries in the RGB-CMY-Color-Conv table and rebuild the color conversion tables.

XPL9990E **PIPELINE PROCESSOR -** *module name* **- TERMINATED ABNORMALLY - SYSTEM CODE** *abend code***, USER CODE** *user code*

Explanation: This is an internal error.

System response: The XPAF FSS is terminated.

User action: Call Xerox Technical Support.

XRC messages

XRC0106F *module name* **LOAD OF** *translation table load module name* **FAILED**

Explanation: An image could not be converted to Xerox format because the named load module could not be loaded. The load module may be missing from the load library, or storage may have been corrupted. This message is followed by message XRC6267F, which provides the member name of the unconverted image.

System response: Whether XPAF recovers from this error and/or performs further processing is determined at a higher level.

User action: Make sure that the load module name is valid and that the load module is in or is concatenated to the correct XPAF load library. If the problem persists, call Xerox Technical Support.

XRC3010F **COULD NOT GET X'***storage size***' BYTES OF MEMORY** *activity*

Explanation: Insufficient storage was available for a particular image conversion function. *Storage size* identifies the amount of memory requested. *Activity* names the particular data structure, control block, or data storage buffer for which the memory allocation request failed.

System response: The input image cannot be converted to Xerox format. Document processing is terminated, and the document remains in the output queue.

User action: Increase the region size for the printer proc or rerun the job. If the problem persists, call Xerox Technical Support.

XRC3011E **COULD NOT RELEASE X'***storage size***' BYTES OF MEMORY FROM LOCATION X'***storage address***'** *activity*

Explanation: Storage could not be freed for a particular image conversion function. *Storage size* identifies the amount of memory involved. *Storage address* identifies the location of that memory. *Activity* names the particular data structure, control block, or data storage buffer for which the memory release request failed.

System response: The input image conversion to Xerox format is not directly affected by this error. However, if additional errors occur, document processing may be terminated, in which case the document remains in the output queue.

User action: Reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRC3014E UNSUPPORTED IMAGE RESOLUTION OF XXX X YYY FOUND. NO IMAGE RE-SIZING WILL BE DONE.

Explanation: While processing an AFP data stream, an image was encountered with a resolution other than 240 or 300 Spots Per Inch.

System response: Processing continues, but the image will not be resized to 300 Spots Per Inch. XPAF supports images at 240 SPI or 300 SPI only. 300 SPI images are printed as-is. 240 SPI images are translated to 300 SPI. Any other resolution encountered will have no translation applied, but will still be printed. This may cause the image to print smaller than expected.

User action: Change the application to generate only 240 or 300 SPI images.

XRC4004F *module name* **DETECTED AN INVALID** *control block name* **CONTROL BLOCK AT LOCATION X'***storage address***'**

Explanation: The named module determined that the named control block required for image conversion was not valid.

System response: The input image cannot be converted to Xerox format. Document processing is terminated, and the document remains in the output queue.

User action: A critical portion of the XPAF code is back-leveled, or recent program maintenance has been installed incorrectly. Call Xerox Technical Support.

XRC6233F FATAL ERROR ENCOUNTERED BY *module name* **DURING IMAGE VALIDATION PROCESSING IN** *module name***. ERROR DUE TO MORE IMAGE/CELL DATA PRESENTED (IRD) THAN DEFINED (IIP/ICP)**

Explanation: While processing an image resource, an IRD structured field was found to contain an excessive amount of raster data. The raster data was more than was specified in the preceding type of structured field. The IRD SF may apply to either the entire image (simple image) or at least one image cell (complex image). The preceding structured field, which specified the amount of raster data, was either an IID (simple image) or an ICP (complex image).

System response: The image cannot be converted to .IMG format. This message is followed by message number XRC6267F, which provides more information.

User action: Rebuild the image block of structured fields, specifying the correct amount of raster data. If the problem persists, call Xerox Technical support.

XRC6254E INVALID DATA OR END OF DATA FOR *resource member name* **ENCOUNTERED BEFORE** *eps structured field*

Explanation: While processing an AFP overlay or page segment resource, an invalid non-SF record was detected, or an end-of-data condition occurred before the end of resource structured field was found.

System response: Document processing is terminated. The document remains in the output queue.

User action: Make sure that the named AFP overlay or page segment resource contains valid structured fields, including BMO/BPS and EMO/EPS structured fields and the start and end of the specified resource member. If not, recreate the AFP resource member correctly.

XRC6255F FATAL ERROR ENCOUNTERED BY *module name*. *data type* **NOT SUPPORTED**

Explanation: XPAF's current IOCA support does not include support for Band Image Data, Numbered Image Data, the named data compression algorithm, Bits Per Pixel (BBP) greater than 1, or image orientations other than (0, 90).

System response: XPAF rejects IOCA images that contain Band Image Data, Numbered Image Data, the named data compression algorithm, Bits Per Pixel (BBP) greater than 1, or image orientations other than (0, 90). Document processing terminates. This message is followed by message XRC6267F, which provides the image name. Whether XPAF recovers from this error or performs further processing is determined at a higher level.

User action: Identify IOCA images that include Band Image Data (banded images), Numbered Image Data (tiled images), the named data compression algorithm, Bits Per Pixel (BBP) greater than 1, or image orientations other than (0, 90). Then choose one of these alternatives:

- Remove the images from the document data stream.
- Regenerate the images in a form supported by XPAF.

For information about XPAF-supported IOCA images, refer to *Section Four: Printing Documents with XPAF*.

After removing or regenerating the IOCA images in question, rerun the print job. If the problem persists, call Xerox Technical Support.

XRC6261E SEVERE ERROR ENCOUNTERED BY *module name* **DURING** *command* **LDM PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *image library ddname*

Explanation: If the error occurs during command LIBA, the native image library specified by *image library ddname* in the XOSF start-up proc could not be allocated. For all other commands (GLCA, LSTL, OPNO, PUT, STOW), this is an internal error. This message is followed by message XRC6268E, which provides more information.

System response: Image conversion to .IMG format is not directly affected by this error. However, the converted image cannot be written to the image library.

User action: Verify that the native image library specified in the XOSF start-up proc exists. If the problem persists, call Xerox Technical Support.

XRC6262W MINOR ERROR ENCOUNTERED BY *module name* **DURING** *command* **LDM PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *image library ddname*

Explanation: This is an internal error.

System response: Image conversion to .IMG format is not directly affected by this error. Unless a more severe error occurs, this message is followed by message XRC6266I which provides more information.

User action: Call Xerox Technical Support.

XRC6263F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *command* **BUFFER STORAGE MANAGEMENT PROCESSING** *activity* **DATA RECORDS. RC=X'***return code***'; IC=X'***information code***'**

Explanation: This is an internal error.

System response: The image cannot be converted to .IMG format. This message is followed by message XRC6267F, which provides more information.

User action: Call Xerox Technical Support.

XRC6264E **MINOR ERROR ENCOUNTERED BY** *calling module name* **DURING IMAGE** *activity* **PROCESSING IN** *called module name***. RC=X'***return code***'; IC=X'***information code***'**

Explanation: A minor error was experienced by the named called module, resulting in a return code greater than 4 being returned to the named calling module during image processing of the identified *activity*.

System response: Processing continues, unless a more severe error occurs. This message is followed by messages XRC6266I, XRC6267F, or XRC6268E, which identify the offending image and indicate the final outcome. Unless message XRC6266I is issued, the input image cannot be converted to Xerox format, in which case document processing is terminated, and the document remains in the output queue.

User action: Refer to the user actions for any associated messages. Then reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRC6265F **FATAL ERROR ENCOUNTERED BY** *calling module name* **DURING IMAGE** *activity* **PROCESSING IN** *called module name***. RC=X'***return code***'; IC=X'***information code'*

Explanation: A fatal error was experienced by the named called module, resulting in a return code greater than 4 being returned to the named calling module during image processing of the identified *activity*.

System response: The input image cannot be converted to Xerox format. This message is followed by messages XRC6267F or XRC6268E which identify the offending image. Document processing is terminated, and the document remains in the output queue.

User action: Refer to the user actions for any associated messages. Then reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRC6266I **IMAGE NAMED** *image member name* **CONVERTED SUCCESSFULLY TO RES/.IMG FORMAT**

Explanation: The image was converted despite prior errors.

System response: Processing continues normally.

User action: Correct any problems identified by preceding messages for this image. If the problem persists, call Xerox Technical Support.

XRC6267F **IMAGE NAMED** *image member name* **NOT CONVERTED TO RES/.IMG FORMAT**

Explanation: The image was not converted to .IMG format.

System response: Error recovery and/or further processing by XPAF is determined at a higher level.

User action: Correct any problems identified by the preceding messages and process the document again. If the problem persists, call Xerox Technical Support.

XRC6268E **IMAGE NAMED** *image member name* **CONVERTED SUCCESSFULLY TO RES/.IMG FORMAT, BUT THE MEMBER COULD NOT BE WRITTEN CORRECTLY TO THE OUTPUT LIBRARY**

Explanation: Despite prior errors, the image was converted to .IMG format. However, because of a serious failure by the LDM component, the converted image could not be stored permanently in the native image library that was specified.

System response: Further XPAF processing is determined at a higher level.

User action: Correct any problems identified by preceding messages for this image. If the problem persists, call Xerox Technical Support.

XRC6281F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **BUILD PROCESSING. MAXIMUM NUMBER OF** *image maximum number* **ENTRIES EXCEEDED, FOR** *type* **RESOURCE NAMED** *member name (transform type)***. IC=X'***information code***'**

Explanation: This is an internal error. *Type* is one of these items: page segment, overlay, or image page. For module name XRCIRAW, this message is followed by message number XRC6267F, which provides more information.

System response: Raw images are not consolidated, and the image is not converted to .IMG format.

User action: For centralized printers, the IMAGEMAXO, IMAGEMAXP, and IMAGEMAXS printer profile parameters can be used to specify a greater maximum number of overlays, image pages, and page segments, respectively, correcting this problem.

XRC6300I **INFORMATION MESSAGE ISSUED BY** *module name* **DURING** *image library member* **PROCESSING. DUE TO THE PRECEDING** *severity* **ERROR,** *action***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This message is issued to clarify the recovery action being taken as a result of the preceding error. An attempted course of action failed and is being substituted with a new course of action. The error and recovery actions are:

- A native image library member could not be opened by LDM; therefore, conversion of the original IBM overlay must be performed.
- A Metacode record could not be stored by the buffer manager; therefore, conversion of the original IBM overlay must be performed.
- A native image library member record could not be read by LDM; therefore, conversion of the original IBM overlay must be performed.

System response: The conversion to Xerox format is not directly affected by this error. *Type* is one of these items: overlay, page segment, or form. *Severity* for this error is minor.

User action: None required.

XRC6301W **WARNING MESSAGE ISSUED BY** *module name* **DURING** *item* **PROCESSING. DUE TO THE PRECEDING** *severity* **ERROR,** *action* **FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This message is issued to clarify the recovery action being taken as a result of the preceding error. An attempted course of action failed and is being substituted with a new course of action. The error results from one of these conditions:

- An IBM overlay library member was not found by LDM; therefore, conversion or revision of the original IBM overlay cannot be performed. *Severity* for this error is severe.
- A revision list item could not be retrieved by THM for some reason other than not found; therefore, conversion or revision of the original IBM overlay cannot be determined or performed. *Severity* for this error is minor.
- An IBM page segment library member was not found by LDM; therefore conversion or revision of the original IBM page segment cannot be performed. *Severity* for this error is severe.

System response: The conversion to Xerox format is not directly affected by this error; however, any requested revisions will not be performed.

User action: If necessary, call Xerox Technical Support.

XRC6307E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *library ddname***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The conversion to Xerox format was not directly affected by this error. However, a preceding allocation failure may affect the final processing outcome. *Type* is one of these items: overlay, form, or page segment.

User action: Call Xerox Technical Support.

XRC6308E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *library ddname***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: If *type* is overlay or form, revision of an overlay was requested, but the equivalent original IBM overlay required for the conversion was not found in the IBM overlay library. If *type* is page segment, this is an internal error.

System response: If *type* is overlay, conversion to Xerox format was not directly affected by this error, except that the requested revision attempt will not be performed. Consequently, this may affect the final appearance of the printed document.

If *type* is form, processing of the Xerox native form was not directly affected by this error.

If *type* is page segment, conversion of the page segment to Xerox format cannot be performed. Processing continues, since this error may have occurred for images of the page segment having a different orientation that the original. If the error occurred for the original orientation, this message is followed by message XRC6301W, which provides more information.

User action: If *type* is overlay or form and if the revision is required, check that the overlay is correctly identified as being a revision. Ensure that the equivalent IBM member exists in the appropriate IBM overlay library, as specified by the XOSF start-up proc, and is available for use by the transform type. If *type* is page segment, call Xerox Technical Support.

XRC6309F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *library ddname***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is usually an XPAF internal error. If there was an allocation error, the library specified by *library ddname* in the XOSF start-up proc could not be allocated using LDM.

System response: The *type* could not be converted to Xerox format. Document processing stops, and the document remains in the output queue. *Type* is one of these items: overlay, form, or page segment.

User action: If there was an allocation error, verify that the library specified in the XOSF start-up proc exists. If the problem persists, call Xerox Technical Support.

XRC6312E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING THM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FOR** *type* **TYPE RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The *type* conversion to Xerox format is not directly affected by this error. However, if a revision attempt is requested, the revision will not be done. *Type* is one of these items: overlay, form, or page segment.

User action: Call Xerox Technical Support.

XRC6314F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING THM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity description***, FOR OVERLAY TYPE RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The *type* cannot be converted to Xerox format. *Type* is one of these items: overlay, form, or page segment. Document processing stops. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRC6317E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **BUFFER STORAGE MANAGEMENT PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **DATA BUFFER, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The conversion to Xerox format (if *type* is overlay or page segment) or processing of native form (if *type* is form) is not directly affected by this error.

User action: Call Xerox Technical Support.

XRC6318E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **BUFFER STORAGE MANAGEMENT PROCESSING. RC=X'***return code***'; IC=X'***buffer control block address***'. UNABLE TO** *activity* **DATA BUFFER, FOR** *type* **RESOURCE NAMED** *ibm member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The page segment cannot be converted to Xerox format. Processing continues since this error may have occurred for images of the page segment with a different orientation than the original. The printed document may not be directly affected by this error. If the error occurred for the original orientation, this message is followed by message XRC6301W, which provides more information.

User action: Call Xerox Technical Support.

XRC6319F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **BUFFER STORAGE MANAGEMENT PROCESSING. RC=X'***return code***'; IC=X'***buffer control block address***'. UNABLE TO** *activity* **DATA BUFFER, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The *type* cannot be converted to Xerox format (if *type* is overlay or page segment) or processing of the Xerox native form cannot be done (if *type* is form). Document processing stops. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRC6320I **INFORMATION MESSAGE ISSUED BY** *module name* **DURING** *activity* **LDM** *command description* **PROCESSING.** *action* **MEMBER NAMED** *member name from* **FILE DDNAME** *library ddname***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This message is issued when a redundant library member is successfully deleted. It provides an audit trail.

System response: The conversion to Xerox format (if *type* is overlay or page segment) or processing of the native form (if *type* is form) is not directly affected by this message.

User action: None required.

XRC6321W **WARNING MESSAGE ISSUED BY** *module name* **DURING** *activity* **LDM** *command description* **PROCESSING.** *action* **MEMBER NAMED** *member name from* **FILE DDNAME** *library ddname***, FOR** *page segment* **RESOURCE NAMED** *ibm member name* **(***transform type***)**

Explanation: This message is issued when an invalid library member is successfully deleted. It provides an audit trail.

System response: The page segment conversion to Xerox format is not directly affected by this message.

User action: None required.

XRC6325I **INFORMATION MESSAGE ISSUED BY** *module name* **DURING THM** *thm command description* **PROCESSING.** *activity with* **ITEM KEY** *thm insert item key***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This message is issued when a new item is successfully added to the list of required revisions. It provides an audit trail.

System response: The conversion to Xerox format (if *type* is overlay or page segment) or processing of the native form (if *type* is form) is not directly affected by this message.

User action: None required.

XRC6352E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **PROCESSING BY** *component*. **RC=X'***return code***'; IC=X'***current image address***'.** *action* **FOR** *type* **RESOURCE NAMED** *ibm member name* **(***transform type***)**

Explanation: The image resource conversion processor encountered a minor problem while converting an IBM page segment into Xerox format (for the XRCIRAW component) or while consolidating or modifying the composite images of an IBM page segment into Xerox format (for the XRCIMAGE component).

System response: The page segment conversion to Xerox format is not directly affected by this error.

User action: Investigate any messages logged by XRCIRAW or XRCIMAGE to diagnose and resolve the problem. If the problem continues, call Xerox Technical Support.

XRC6353E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **PROCESSING BY** *component*. **RC=X'***return code***'; IC=X'***current image address***'.** *action* **FOR** *type* **RESOURCE NAMED** *ibm member name* **(***transform type***)**

Explanation: The image resource conversion processor encountered a severe problem while converting an IBM page segment into Xerox format (for component XRCIRAW) or while consolidating or modifying the composite images of an IBM page segment into Xerox format (for the XRCIMAGE component).

System response: The page segment conversion to Xerox format cannot be performed. Processing continues since this error may have occurred for images of the page segment with a different orientation than the original. The printed document may not be directly affected by this error. If the error occurred for the original orientation, this message is followed by message XRC6301W, which provides more information.

User action: Investigate any messages logged by XRCIRAW or XRCIMAGE to diagnose and resolve the problem. If the problem continues, call Xerox Technical Support.

XRC6354F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **PROCESSING BY** *conversion program*. **RC='***return code***'; IC=X'***address***'.** *action/reason***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: For XRCOVLAY, the specified conversion encountered a fatal error while attempting to convert an IBM overlay to the specified format. For XRCMERGE and XRCIRAW, this is an internal error.

System response: For XRCOVLAY, the overlay cannot be converted to Xerox format. Document processing is terminated. The document remains in the output queue.

For XRCMERGE and XRCIRAW, raw images are not consolidated, and the image is not converted to .IMG format. If the issuing module is XRCIRAW, this message is followed by message XRC6267F, which provides the image name.

User action: To help diagnose and resolve the problem, follow these guidelines:

- For XRCOVLAY, investigate any messages logged by XAM modules or any other messages issued by XRCOVLAY, XRCIMAGE, or XRCPSEG. If the problem persists, call Xerox Technical Support.
- For XRCMERGE and XRCIRAW, call Xerox Technical Support.

XRC6356I **INFORMATION MESSAGE ISSUED BY** *module name* **DURING CREATION PROCESSING. FORMAT=***xerox image format***; #COLORS=***image number of colors***; COLOR=***image primary color***; NAME=***image member name*

Explanation: This message identifies and describes the resulting format of a Xerox .IMG or RES .IMG file that XPAF has successfully converted from an IBM AFP image. The variable definitions are:

- *Xerox image format* is either IMG or RES.
- *Image number of colors* is either 0, 1, or 2. For a .IMG file, the number of colors is always 0.
- *Image primary color* is either BLACK for a .IMG file or the determined color for a RES .IMG file. For images with two colors, the second color is always BLACK.
- *Image member name* is either the Xerox file member name or INLINE IMAGE PAGE for those images that are in line graphics.

System response: Processing continues normally.

User action: None required. You may review the output from XPAF for illustrations of the converted images.

XRC6390F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *type of* **PROCESSING, DUE TO** *reason***, FOR** *type* **TYPE RESOURCE NAMED** *form member name* **(***transform type***)**

Explanation: For native mode processing, the document requested a native centralized form that is not supported for decentralized printers. For category determination processing, this is an internal error. For resource conversion processing, the input IBM overlay contained no valid data that is recognized by XPAF.

System response: Conversion cannot be performed. Document processing stops, and the document remains in the output queue.

User action: For native mode processing, correct the data stream to either print on a centralized printer or to use the correct decentralized form. For resource conversion processing, correct the data stream to use a valid overlay or form, or to not reference the invalid IBM overlay. For category determination processing, call Xerox Technical Support.

XRC6391F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *type of* **PROCESSING. RESOURCE NAME PREFIX IS** *member name prefix***, NOT OM NOR OU.** *status***, FOR** *type* **TYPE RESOURCE NAMED** *form member name*

Explanation: This is an internal error.

System response: Conversion of the overlay to Xerox format cannot be performed. Document processing stops, and the document remains in the output queue.

User action: Call Xerox Technical Support.

XRC6392W **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *type of* **PROCESSING. IC=X'***reason code***'. TRANSFORM CONVERSION CONTINUES, FOR** *type* **TYPE RESOURCE NAMED** *form member name* **(***transform type***)**

Explanation: This message is issued when an inconsistency between member names in the form and image libraries occurs.

System response: Conversion of the overlay is not directly affected by this error.

User action: None required.

XRC6393W **WARNING MESSAGE ISSUED BY** *module name* **DURING** *type of* **PROCESSING, DUE TO** *reason***.** *result*

Explanation: This message is issued as a result of one of these conditions:

- The data stream contains images that have different resolutions within the same resource.
- A begin image/end image sequence is detected but no image raster data is found.

System response: For images having different resolutions, image processing continues. The resolution of the first image encountered within the resource is used for all other images in that resource.

For begin image/end image sequences, images are ignored and processing continues.

User action: For images having different resolutions, change the individual images in the resource to the same resolution and resubmit the job.

For begin image/end image sequences, verify that the resource specified is correct and resubmit the job.

XRC6394W **WARNING MESSAGE ISSUED BY** *module name* **DURING** *activity* **PROCESSING.** *action***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: The consolidated image could not be positioned correctly on the physical page.

System response: The image may be mispositioned, or it may be missing completely from the page.

User action: Change the position and/or size of the images so they can fit on the physical page.

XRC6395F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *parameter* **VALIDATION PROCESSING, (***problem description***)**

Explanation: If *module name* is XRCBATCH, the JCL parameter field contains one or more keywords that either have an incorrect name length or are not valid keywords. If *module name* is XRCRES12, one or more of the input parameters is invalid. In all cases, *problem description* identifies the invalid keyword or parameter.

System response: The input image cannot be converted to Xerox format. Either document processing is terminated and the document remains in the output queue, or two-color RES .IMG file member separation is terminated.

User action: Correct the keyword or parameter error. Then reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRC6396E **MINOR ERROR ENCOUNTERED BY XRCBATCH DURING** *activity* **PROCESSING, (***failure explanation***). REFER TO ANY PREVIOUS MESSAGES FOR MORE INFORMATION**

Explanation: This is an internal error.

System response: Storage corruption may have occurred. This error does not directly affect separation of the two-color RES .IMG file member(s). Image processing is already complete.

User action: Preceding messages may help explain the cause of the problem. If the problem persists, call Xerox Technical Support.

XRC6397F **FATAL ERROR ENCOUNTERED BY XRCBATCH DURING** *activity* **PROCESSING, (***failure explanation***). REFER TO ANY PREVIOUS MESSAGES FOR MORE INFORMATION**

Explanation: This is an internal error.

System response: The two-color RES .IMG file member(s) cannot be separated. Image processing is terminated.

User action: Preceding messages may help explain the cause of the problem. If the problem persists, call Xerox Technical Support.

XRC6398I **THE VALUE OF KEYWORD** *keyword* **IS:** *data value***. IF INCORRECT, CHECK THE JCL PARM= STATEMENT**

Explanation: This message identifies the named keyword and corresponding parameter value being used for this execution of XRCBATCH.

System response: None.

User action: If *data value* for the named keyword is correct, no action is needed. If *data value* for the named keyword is unexpected or incorrect, check the syntax and validity of the named parameter value. Correct any errors, and then reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRC6399E **SEVERE ERROR ENCOUNTERED BY XRCBATCH DURING** *activity description* **PROCESSING OF** *type of resource* **RESOURCE NAMED** *resource name***. RC=X'***return code***'; IC=X'***information code***'**

Explanation: This message is issued as a result of a non-zero return code from XRFIMGDC, XRCRES12, XRFCOMPS, or XRFCOMPT. Preceding messages may explain the cause of the problem.

System response: The two-color RES .IMG file member identified by *resource name* cannot be separated. Processing of other resources continues.

User action: Examine the log for additional information about the error, and take any action indicated. Reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRC6417F **RESOURCE** *resource member name***, TYPE** *resource type* **FAILED EXIT 6 AUTHORIZATION**

Explanation: The current user exit 06 has instructed XPAF not to allow the user to access this particular resource.

System response: The current print job is aborted.

User action: Contact your systems programmer for information on the operation of user exit 06 at your site.

XRC6500I **XEROX TWO-COLOR RES FILE** *image member name* **CONVERTED TO** *resource type* **FILE** *image member name*

Explanation: This message identifies the Xerox two-color RES .IMG file member that has been successfully converted to a single Xerox monochrome file or divided into two Xerox monochrome separations via XRCBATCH.

System response: Processing continues.

User action: None required. You may review the output from XRCBATCH for a list of all converted two-color RES .IMG files.

XRD messages

XRD0106F *module name* **LOAD OF** *translation table load module name* **FAILED**

Explanation: An image could not be converted to Xerox format because the named load module could not be loaded. The load module may be missing from the load library, or storage may have been corrupted. This message is followed by message XRD6267F, which provides the member name of the unconverted image.

System response: Whether XPAF recovers from this error and/or performs further processing is determined at a higher level.

User action: Make sure the load module name is valid and that the load module is in or is concatenated to the correct XPAF load library. If the problem persists, call Xerox Technical Support.

XRD3010F **COULD NOT GET X'***storage size***' BYTES OF MEMORY** *activity*

Explanation: Insufficient storage was available for a particular image conversion function. *Storage size* identifies the amount of memory requested. *Activity* names the particular data structure, control block, or data storage buffer for which the memory allocation request failed.

System response: The input image cannot be converted to Xerox format. Document processing is terminated, and the document remains in the output queue.

User action: Increase the region size for the printer proc or rerun the job. If the problem persists, call Xerox Technical Support.

XRD3011E **COULD NOT RELEASE X'***storage size***' BYTES OF MEMORY FROM LOCATION X'***storage address***'** *activity*

Explanation: Storage could not be freed for a particular image conversion function. *Storage size* identifies the amount of memory involved. *Storage address* identifies the location of that memory. *Activity* names the particular data structure, control block, or data storage buffer for which the memory release request failed.

System response: The input image conversion to Xerox format is not directly affected by this error. However, if additional errors occur, document processing may be terminated, in which case the document remains in the output queue.

User action: Reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRD3014E UNSUPPORTED IMAGE RESOLUTION OF XXX X YYY FOUND. NO IMAGE RE-SIZING WILL BE DONE.

Explanation: While processing an AFP data stream, an image was encountered with a resolution other than 240 or 300 Spots Per Inch.

System response: Processing continues, but the image will not be resized to 300 Spots Per Inch. XPAF supports images at 240 SPI or 300 SPI only. 300 SPI images are printed as-is. 240 SPI images are translated to 300 SPI. Any other resolution encountered will have no translation applied, but will still be printed. This may cause the image to print smaller than expected.

User action: Change the application to generate only 240 or 300 SPI images.

XRD3015E COULD NOT *command* **LIBRARY** *library ddname activity***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named *activity* on the specified library.

System response: Document processing is terminated. The document remains in the output queue.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XRD3016E COULD NOT *command* **MEMBER** *member name* **OF LIBRARY** *library ddname resource type library***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named *command* on the specified member.

System response: Document processing is terminated. The document remains in the output queue.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XRD3017E COULD NOT *command* **LCA FOR FORMDEF LIBRARY. LDM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRC4004F *module name* **DETECTED AN INVALID** *control block name* **CONTROL BLOCK AT LOCATION X'***storage address***'**

Explanation: The named module determined that the named control block required for image conversion was not valid.

System response: The input image cannot be converted to Xerox format. Document processing is terminated, and the document remains in the output queue.

User action: A critical portion of the XPAF code is back-leveled, or recent program maintenance has been installed incorrectly. Call Xerox Technical Support.

XRD4005E **THM ERROR DURING** *command* **FOR** *table type***, ITEM KEY** *item key***. THM IC=X'***information code***'; RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRD4022E **ERROR DELETING** *image member name* **FROM** *printer proc* **IMAGE LIBRARY** *image library ddname*

Explanation: This is an internal error.

System response: Document processing continues normally. This error does not affect overlay conversion or revision.

User action: Call Xerox Technical Support.

XRD4326E **ERROR** *activity* **DATA BUFFER**

Explanation: This is an internal error.

System response: Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRD4327I **ERROR CONVERTING** *member name* **IN LIBRARY** *library ddname library dsname*

Explanation: This is an internal error.

System response: Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRD6233F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING IMAGE VALIDATION PROCESSING IN** *module name***. ERROR DUE TO MORE IMAGE/CELL DATA PRESENTED (IRD) THAN DEFINED (IID/ICP)**

Explanation: While processing an image resource, an IRD structured field was found to contain an excessive amount of raster data. The raster data was more than was specified in the preceding type of structured field. The IRD SF

may apply to either the entire image (simple image) or at least one image cell (complex image). The preceding structured field, which specified the amount of raster data, was either an IID (simple image) or an ICP (complex image).

System response: The image cannot be converted to .IMG format. This message is followed by message number XRD6267F, which provides more information.

User action: Rebuild the image block of structured fields, specifying the correct amount of raster data. If the problem persists, call Xerox Technical support.

XRD6254E INVALID DATA OR END OF DATA FOR *resource member name* **ENCOUNTERED BEFORE** *eps structured field*

Explanation: While processing an AFP overlay or page segment resource, an invalid non-SF record was detected, or an end-of-data condition occurred before the end of resource structured field was found.

System response: Document processing is terminated. The document remains in the output queue.

User action: Make sure that the named AFP overlay or page segment resource contains valid structured fields, including BMO/BPS and EMO/EPS structured fields and the start and end of the specified resource member. If not, recreate the AFP resource member correctly.

XRD6255F FATAL ERROR ENCOUNTERED BY *module name***.** *data type* **NOT SUPPORTED**

Explanation: XPAF's current IOCA support does not include support for Band Image Data, Numbered Image Data, the named data compression algorithm, Bits Per Pixel (BBP) greater than 1, or image orientations other than (0, 90).

System response: XPAF rejects IOCA images that contain Band Image Data, Numbered Image Data, the named data compression algorithm, Bits Per Pixel (BBP) greater than 1, or image orientations other than (0, 90). Document processing terminates. This message is followed by message XRD6267F, which provides the image name. Whether XPAF recovers from this error or performs further processing is determined at a higher level.

User action: Identify IOCA images that include Band Image Data (banded images), Numbered Image Data (tiled images), the named data compression algorithm, Bits Per Pixel (BBP) greater than 1, or image orientations other than (0, 90). Then choose one of these alternatives:

- Remove the images from the document data stream.
- Regenerate the images in a form supported by XPAF.

For information about XPAF-supported IOCA images, refer to *Section Four: Printing Documents with XPAF*.

After removing or regenerating the IOCA images in question, rerun the print job. If the problem persists, call Xerox Technical Support.

XRD6261E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *image library ddname*

Explanation: If the error occurs during command LIBA, the native image library specified by *image library ddname* in the XOSF start-up proc could not be allocated. For all other commands (GLCA, LSTL, OPNO, PUT, STOW), this is an internal error. This message is followed by message XRD6268E, which provides more information.

System response: Image conversion to .IMG format is not directly affected by this error. However, the converted image cannot be written to the image library.

User action: Verify that the native image library specified in the XOSF start-up proc exists. If the problem persists, call Xerox Technical Support.

XRD6262E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *image library ddname*

Explanation: This is an internal error.

System response: Image conversion to .IMG format is not directly affected by this error. Unless a more severe error occurs, this message is followed by message XRD6266I which provides more information.

User action: Call Xerox Technical Support.

XRD6263F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *command* **BUFFER STORAGE MANAGEMENT PROCESSING** *activity* **DATA RECORDS. RC=X'***return code***'; IC=X'***information code***'**

Explanation: This is an internal error.

System response: The image cannot be converted to .IMG format. This message is followed by message XRD6267F, which provides more information.

User action: Call Xerox Technical Support.

XRD6264E **MINOR ERROR ENCOUNTERED BY** *calling module name* **DURING IMAGE** *activity* **PROCESSING IN** *called module name***. RC=X'***return code***'; IC=X'***information code***'**

Explanation: A minor error was experienced by the named called module, resulting in a return code greater than 4 being returned to the named calling module during image processing of the identified *activity*.

System response: Processing continues, unless a more severe error occurs. This message is followed by messages XRC6266I, XRC6267F, or XRC6268E, which identify the offending image and indicate the final outcome. Unless message XRC6266I is issued, the input image cannot be converted to Xerox format, in which case document processing is terminated, and the document remains in the output queue.

User action: Refer to the user actions for any associated messages. Then reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRD6265F **FATAL ERROR ENCOUNTERED BY** *calling module name* **DURING IMAGE** *activity* **PROCESSING IN** *called module name***. RC=X'***return code***'; IC=X'***information code***'**

Explanation: A fatal error was experienced by the named called module, resulting in a return code greater than 4 being returned to the named calling module during image processing of the identified *activity*.

System response: The input image cannot be converted to Xerox format. This message is followed by messages XRC6267F or XRC6268E which identify the offending image. Document processing is terminated, and the document remains in the output queue.

User action: Refer to the user actions for any associated messages. Then reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRD6266I **IMAGE NAMED** *image member name* **CONVERTED SUCCESSFULLY TO RES/.IMG FORMAT**

Explanation: The image was converted despite prior errors.

System response: Processing continues normally.

User action: Correct any problems identified by preceding messages for this image. If the problem persists, call Xerox Technical Support.

XRD6267F **IMAGE NAMED** *image member name* **NOT CONVERTED TO RES/.IMG FORMAT**

Explanation: The image was not converted to .IMG format.

System response: Error recovery and/or further processing by XPAF is determined at a higher level.

User action: Correct any problems identified by the preceding messages and process the document again. If the problem persists, call Xerox Technical Support.

XRD6268E **IMAGE NAMED** *image member name* **CONVERTED SUCCESSFULLY TO RES/.IMG FORMAT, BUT THE MEMBER COULD NOT BE WRITTEN CORRECTLY TO THE OUTPUT LIBRARY**

Explanation: Despite prior errors, the image was converted to .IMG format. However, because of a serious failure by the LDM component, the converted image could not be stored permanently in the Xerox output native image library that was specified.

System response: Further XPAF processing is determined at a higher level.

User action: Correct any problems identified by preceding messages for this image. If the problem persists, call Xerox Technical Support.

XRD6300I **INFORMATION MESSAGE ISSUED BY** *module name* **DURING** *item* **PROCESSING. DUE TO THE PRECEDING** *severity* **ERROR,** *action***, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This message is issued to clarify the recovery action being taken as a result of the preceding error. An attempted course of action failed and is being substituted with a new course of action. The error and recovery actions are:

- A native image library member could not be opened by LDM; therefore, conversion of the original IBM overlay must be performed.
- A Metacode record could not be stored by the buffer manager; therefore, conversion of the original IBM overlay must be performed.
- A native image library member record could not be read by LDM; therefore, conversion of the original IBM overlay must be performed.

System response: The conversion to Xerox format is not directly affected by this error.

User action: None required.

XRD6301W **WARNING MESSAGE ISSUED BY** *module name* **DURING** *item* **PROCESSING. DUE TO THE PRECEDING** *severity* **ERROR,** *action***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This message is issued to clarify the recovery action being taken as a result of the preceding error. An attempted course of action failed and is being substituted with a new course of action. The error results from one of these conditions:

- An IBM overlay library member was not found by LDM; therefore, conversion or revision of the original IBM overlay cannot be performed. *Severity* for this error is severe.
- A revision list item could not be retrieved by THM for some reason other than not found; therefore, conversion or revision of the original IBM overlay cannot be determined or performed. *Severity* for this error is minor.
- An IBM page segment library member was not found by LDM; therefore conversion or revision of the original IBM page segment cannot be performed. *Severity* for this error is severe.

System response: The conversion to Xerox format is not directly affected by this error; however, any requested revisions will not be performed.

User action: If necessary, call Xerox Technical Support.

XRD6307E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *library ddname***, FOR** *type* **RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The conversion to Xerox format was not directly affected by this error. However, a preceding allocation failure may affect the final processing outcome.

User action: If a resource revision is being done, ensure that you have performed a library refresh.

XRD6308E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *library ddname***, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: Revision of an overlay was requested, but the equivalent, original IBM overlay required for the conversion was not found in the IBM overlay library.

System response: Conversion to Xerox format was not directly affected by this error, except that the requested revision attempt will not be performed. Consequently, this may affect the final appearance of the printed document.

This message is followed by message XRD6301W, which provides more information.

User action: If the revision is required, check that the overlay is correctly identified as a revision. Make sure the equivalent IBM member exists in the appropriate IBM overlay library (as specified by the XOSF start-up proc) and is available for use by the transform type.

XRD6309F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *command* **LDM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **FILE DDNAME** *library ddname***, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is usually an internal error. If there was an allocation error, the library specified by *library ddname* in the XOSF start-up proc could not be allocated using LDM.

System response: The overlay could not be converted to Xerox format. Document processing is terminated, and the document remains in the output queue.

User action: If there was an allocation error, verify that the library specified in the XOSF start-up proc exists. If the problem persists, call Xerox Technical Support.

XRD6313E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING THM** *command description* **PROCESSING. RC='***return code***'; IC=X'***information code***'. UNABLE TO** *activity thm insert item key***, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The conversion to Xerox format is not directly affected by this error. However, if a revision attempt is requested, the revision will not be performed.

User action: Call Xerox Technical Support.

XRD6314F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING THM** *command description* **PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity thm insert item key***, FOR OVERLAY TYPE RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The overlay cannot be converted to Xerox format. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRD6317E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **BUFFER STORAGE MANAGEMENT PROCESSING. RC=X'***return code***'; IC=X'***information code***'. UNABLE TO** *activity* **DATA BUFFER, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The overlay conversion to Xerox format is not directly affected by this error.

User action: Call Xerox Technical Support.

XRD6319F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **BUFFER STORAGE MANAGEMENT PROCESSING. RC=X'***return code***'; IC=X'***buffer control block address***'. UNABLE TO** *activity* **DATA BUFFER, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The overlay cannot be converted to Xerox format. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRD6320I **INFORMATION MESSAGE ISSUED BY** *module name* **DURING** *action* **LDM** *command description* **PROCESSING.** *status activity* **MEMBER NAMED** *member name* **FROM FILE DDNAME** *library ddname*, **FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This message is issued when an invalid or redundant library member is successfully deleted. It provides an audit trail.

System response: The overlay conversion to Xerox format is not directly affected by this message.

User action: None required.

XRD6325I **INFORMATION MESSAGE ISSUED BY** *module name* **DURING THM** *command description* **PROCESSING.** *activity with* **ITEM KEY** *thm insert item key*, **FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This message is issued when a new item is successfully added to the list of required revisions. It provides an audit trail.

System response: The overlay conversion to Xerox format is not directly affected by this message.

User action: None required.

XRD6329F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING THM** *command description* **PROCESSING.** *thm insert* **ITEM KEY, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The overlay cannot be converted to Xerox format. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support

XRD6331W **WARNING MESSAGE ISSUED BY** *module name* **DURING** *resource library member* **PROCESSING. TEXT MEMBER NAME** *text sequence number* **NOT** *value***.** *action*, **FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The conversion to Xerox format is not directly affected by this error.

User action: None required.

XRD6334F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *resource library member* **PROCESSING. TEXT MEMBER NAME** *member name* **NOT** *value***.** *action*, **FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The overlay cannot be converted to Xerox format. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRD6336W **WARNING MESSAGE ISSUED BY** *module name* **DURING** *resource library member* **PROCESSING.** *expected item* **BUT** *actual item* **FOUND.** *activity***, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The conversion to Xerox format is not directly affected by this error.

User action: None required.

XRD6339F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *resource library member* **PROCESSING.** *expected item* **BUT** *actual item* **FOUND.** *activity***, FOR OVERLAY RESOURCE NAMED** *resource member name* **(***transform type***)**

Explanation: This is an internal error.

System response: The overlay cannot be converted to Xerox format. Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRD6354F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **PROCESSING BY** *conversion program***. RC=X'***return code***'; IC=X'***return code***'.** *action/reason***, FOR** *type* **RESOURCE NAMED** *resource name* **(***transform type***)**

Explanation: For XRDOVLAY, the specified conversion program encountered a fatal problem while attempting to convert an IBM overlay to the specified format. For XRDIMG, this is an internal error related to the processing of shading information within an image.

System response: Document processing is terminated. The document remains in the output queue.

User action: To help diagnose and resolve the problem, the guidelines are:

- For XRDOVLAY, investigate any messages logged by XAM or XAU modules or any other messages issued by XRDOVLAY, XRDIMG, or XRDPSEG. If the problem persists, call Xerox Technical Support.
- For XRDIMG, call Xerox Technical Support.

XRD6393W **WARNING MESSAGE ISSUED BY** *module name* **DURING** *type of* **PROCESSING, DUE TO** *reason***.** *result*

Explanation: This message is issued as a result of one of these conditions:

- The data stream contains images that have different resolutions within the same resource.
- A begin image/end image sequence is detected but no image raster data is found.

System response: For images having different resolutions, image processing continues. The resolution of the first image encountered within the resource is used for all other images in that resource.

For begin image/end image sequences, images are ignored and processing continues.

User action: For images having different resolutions, change the individual images in the resource to the same resolution and resubmit the job.

For begin image/end image sequences, verify that the resource specified is correct and resubmit the job.

XRD6417F **RESOURCE** *resource member name***, TYPE** *resource type* **FAILED EXIT 6 AUTHORIZATION**

Explanation: The current user exit 06 has instructed XPAF not to allow the user to access this particular resource.

System response: The current print job is aborted.

User action: Contact your systems programmer for information on the operation of user exit 06 at your site.

XRF messages

XRF0106F **XRFCONVF LOAD OF** *load module* **FAILED**

Explanation: The image cannot be converted from 240 dpi to 300 dpi. *Load module* can be either XRFTAB01, XRFAB02, XRFTAB03, or XRFTABED.

System response: Error recovery and/or further processing by XPAF is determined at a higher level.

User action: Call Xerox Technical Support.

XRF0305E **COULD NOT** *activity* **TABLE** *table name operation***. THM RC=X'***return code***'**

Explanation: An attempt to process the named table failed. *Operation* identifies that the type of processing that was being performed when the error occurred.

System response: Processing continues.

User action: Examine your font table library to determine if the named table is in error. Verify that the job output is valid. If not, resubmit the job.

XRF0724E **LDM ENCOUNTERED AN ERROR TRYING TO** *operation*

Explanation: This is an internal error.

System response: Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRF2124E **ERROR** *reading* **LIBRARY** *library ddname library dataset name***. LDM RC=X'***return code***'; IC=X'***information code***'**

Explanation: You may have AFP resource libraries with different block sizes concatenated in the XOSF start-up proc.

System response: Document processing is terminated. The document remains in the output queue.

User action: Complete these steps:

- Ensure that all DCB attributes of all datasets named on the DD statement for the AFP resource library are compatible. If necessary, copy the required AFP resource(s) into a library with the correct DCB attributes.
- Ensure that the dataset concatenation follows the rules for concatenation of datasets within your JES system.

If the problem persists, call Xerox Technical Support.

XRF2125W *program name* **ENCOUNTERED** *image type image name* **THAT OVERRAN ITS ASSIGNED RUN LENGTH ARRAY**

Explanation: When processing IOCA images or when using the IMAGEPROC=2 printer profile parameter setting, the image storage was exceeded. Because of the complexity of the named image, the run length array size was overrun.

System response: Document processing continues. Only the portion of the image that is in the array is printed.

User action: Review the output for the named image to determine if it is acceptable.

XRF2133E **INVALID STRUCTURED FIELD ID X'***structured field hex identifier***' FOUND. PROCESSING** *structured field*

Explanation: A document or PAGEDEF resource contained an invalid structured field (SF). The invalid SF was in a place where the program expected to process a map coded font or page descriptor type of a structured field within the current active environmental group block.

System response: The invalid SF is ignored, but document or PAGEDEF processing continues.

User action: Check the type and sequence of SFs within the active environmental group block. If the problem persists, call Xerox Technical Support.

XRF3010F **COULD NOT GET X'***storage size***' BYTES OF MEMORY** *activity*

Explanation: Insufficient storage was available for a particular image conversion function. *Storage size* identifies the amount of memory requested. *Activity* names the particular data structure, control block, or data storage buffer for which the memory allocation request failed.

System response: The input image cannot be converted to Xerox format. Document processing is terminated, and the document remains in the output queue.

User action: Increase the region size for the printer proc or rerun the job. If the problem persists, call Xerox Technical Support.

XRF3011E **COULD NOT RELEASE X'***storage size***' BYTES OF MEMORY FROM LOCATION X'***storage address***'** *activity*

Explanation: Storage could not be freed for a particular image conversion function. *Storage size* identifies the amount of memory involved. *Storage address* identifies the location of that memory. *Activity* names the particular data structure, control block, or data storage buffer for which the memory release request failed.

System response: The input image conversion to Xerox format is not directly affected by this error. However, if additional errors occur, document processing may be terminated, in which case the document remains in the output queue.

User action: Reprint the document or resubmit the batch job. If the problem persists, call Xerox Technical Support.

XRF3015E **COULD NOT** *command* **LIBRARY** *library dsname activity*. **LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified library.

System response: Document processing is terminated. The document remains in the output queue.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XRF3016E **COULD NOT** *command* **MEMBER** *member name* **OF LIBRARY** *library ddname resource type library*. **LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named command on the specified member.

System response: Document processing is terminated. The document remains in the output queue.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XRF3017E **COULD NOT** *command* **LCA FOR** *type library*. **LDM RC=X'***return code'*

Explanation: This is an internal error.

System response: Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRF3018E **COULD NOT ACQUIRE TCB** *activity*. **THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRF4002E *module name* **DETECTED AN INVALID LINE CONTROL CODE X'***value***' AT IMAGE OFFSET X'***value***'**

Explanation: During image decompression, an invalid compression mode was detected. Each scan line of an image begins with a line control code (LCC) that designates which compression mode will be used. The following compression modes are the only valid values that can be used: RAW=X'00', LIN=X'01', ENC=X'02', or HTN=X'03'.

System response: Image decompression is terminated. This message is followed by another message which provides more information.

User action: Refer to the user action of the message that follows this one for more information.

XRF4004F *module name* **DETECTED AN INVALID** *control block name* **CONTROL BLOCK AT LOCATION X'***storage address***'**

Explanation: The named module determined that the named control block required for image conversion was not valid.

System response: The input image cannot be converted to Xerox format. Document processing is terminated, and the document remains in the output queue.

User action: A critical portion of the XPAF code is back-leveled, or recent program maintenance has been installed incorrectly. Call Xerox Technical Support.

XRF4005E **THM ERROR DURING** *command* **FOR** *table type***, ITEM KEY** *item key***. THM IC=X'***information code***'; RC=X'***return code***'**

Explanation: While processing a page-formatted document that uses Xerox fonts, XOSF was unable to find the necessary entries in either the XPAFE2A or XPAFEFW table.

System response: Document processing is terminated. The document remains in the output queue.

User action: Use the XOAF Update Xerox Font Characteristics Information option on the Xerox Page Format Editor menu or the CONVERT FONT TSO/batch command to generate the necessary font table entries. For information about using these options, refer to *Section Eight: Xerox Page Format Editor User Guide*.

XRF4006E **COULD NOT FIND** *type* **TABLE. THM IC=X'***information code***'; RC=X'***return code***'**

Explanation: While processing an MCF structured field within an active environmental group, a required table containing important font information could not be found in the appropriate library.

System response: Document processing is terminated. The document remains in the output queue.

User action: Verify that the specified font table exists in the font table library defined in the XOSF start-up proc. If the problem persists, call Xerox Technical Support.

XRF4008E **NO XEROX REPLICA FONTS FOUND FOR IBM CHARACTER SET** *character set name*

Explanation: The document contains a request for an IBM character set that XPAF does not support.

System response: Document processing is terminated. The document remains in the output queue.

User action: Make sure the specified IBM character set name is valid. If the problem persists, call Xerox Technical Support.

XRF4328F ERROR DETECTED PROCESSING FORMDEF *formdef name* **IN** *document part*

Explanation: The resource processor detected an error in the input data stream while trying to convert an IBM FORMDEF resource. The FORMDEF member name is displayed without its F1 prefix. The *document part* is either DOCUMENT, AFPJOBHDR, AFPJOBTLR, AFPMSGDS, or AFPDSHDR, referring to either the document itself or one of the AFP banner types.

System response: Document processing is terminated.

User action: Verify the named FORMDEF and correct any errors present. Refresh the FDEFLIB PDS in XPAF and rerun the job. If the problem persists, call Xerox Technical Support.

XRF6209E INVALID FUNCTION *function type* **PASSED TO BUFFER MANAGER**

Explanation: This is an internal error.

System response: Document processing is terminated. The document remains in the output queue.

User action: Call Xerox Technical Support.

XRF6228E PROCESSING *document processing* **GROUP BUT NO STORAGE ALLOCATED**

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XRF6234E GET REQUESTED FOR EMPTY BUFFER

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XRF6235E GET REQUESTED BEYOND END OF BUFFER

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XRF623AE **UNABLE TO CREATE** *type font widths* **FOR CODE PAGE** *code page name* **CHARACTER SET** *character set name*

Explanation: While processing an MCF structured field within an active environmental group, an IBM font was referenced. However, no entry for that font exists in the appropriate font widths table, and an entry in the specified table could not be built.

System response: Document processing is terminated. The document remains in the output queue.

User action: Verify that the specified font code page name and character set name exist in the correct font library defined in the XOSF start-up proc. If the problem persists, call Xerox Technical Support.

XRF623BE **COULD NOT FIND CODED FONT** *coded font name* **IN IBM FONT LIBRARY**

Explanation: XPAF could not find the specified coded font name in the IBM font library.

System response: Document processing is terminated.

User action: Make sure the specified coded font is contained in the IBM font library named on the IBMFONT DD statement in the XOSF start-up proc.

Correct the font problem and rerun the job. If the problem persists, call Xerox Technical Support.

XRF623DE **FONT** *name* **NOT IN FONT INFORMATION TABLE. UNABLE TO PROCESS DOCUMENT**

Explanation: The named font was specified in a page format; however, the font was not found in the XPAFXFI table.

System response: Document processing is terminated.

User action: Add an entry for the font in the XPAFXFI table, then resubmit the document.

XRF6255F FATAL ERROR ENCOUNTERED BY *module name***.** *data type* **NOT SUPPORTED**

Explanation: XPAF's current IOCA support does not include support for Band Image Data, Numbered Image Data, the named data compression algorithm, or image orientations other than (0, 90).

System response: XPAF rejects IOCA images that contain Band Image Data, Numbered Image Data, the named data compression algorithm, or image orientations other than (0, 90). Document processing terminates. Whether XPAF recovers from this error or performs further processing is determined at a higher level.

User action: Identify IOCA images that include Band Image Data (banded images), Numbered Image Data (tiled images), the named data compression algorithm, or image orientations other than (0, 90). Then choose one of these alternatives:

- Remove the images from the document data stream.
- Regenerate the images in a form supported by XPAF. For information about XPAF-supported IOCA images, refer to *Section Four: Printing Documents with XPAF*.

After removing or regenerating the IOCA images in question, rerun the print job. If the problem persists, call Xerox Technical Support.

XRF6256E SEVERE ERROR ENCOUNTERED BY *module***.** *reason*

Explanation: This is an internal error.

Module is one of these items:

- XRFCCITT
- XRFMMR

Reason is one of these conditions:

- Invalid decompression code
- Negative run length

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XRF6263F FATAL ERROR ENCOUNTERED BY *module name* **DURING** *command* **BUFFER STORAGE MANAGEMENT PROCESSING** *activity* **DATA RECORDS. RC=X'***return code***'; IC=X'***information code***'**

Explanation: This is an internal error.

System response: The image cannot be converted to .IMG format.

User action: Call Xerox Technical Support.

XRF6269E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING COMPRESSION PROCESSING OF IMAGE NAMED** *image member name*. **REMAINDER OF IMAGE ROW NUMBER X'***image row number***' ASSUMED TO BE WHITE SPACE**

Explanation: This is an internal error.

System response: The image conversion to .IMG format is not adversely affected by this error, unless this error occurs throughout the image. Further XPAF processing is determined at a higher level.

User action: Call Xerox Technical Support.

XRF6354F **FATAL ERROR ENCOUNTERED BY XRFILAFP DURING IMAGE FAST PATH CREATION PROCESSING BY XRFILAFP. RC=X'***return code***'; IC=X'***information code***'. DUE TO AN INEXPLICABLE INTERNAL LOGIC FAILURE, FOR IMAGE PAGE RESOURCE NAMED INLINE (M)**

Explanation: An error was detected within the internal control block structure of XPAF during AFP image processing.

System response: The current image cannot be converted to Xerox format and processing is terminated for the current document.

User action: Gather all materials related to the error and call Xerox Technical Support.

XRF6355E **INVALID BUFFER CONTROL BLOCK**

Explanation: This is an internal error.

System response: XPAF stops printing the current document and returns the document to JES to hold. Printing continues with the next document.

User action: Check the previous messages to determine the cause of this error and take the action specified for the first error message. If no other messages are present or if the condition persists, call Xerox Technical Support.

XRF6395F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *parameter validation* **PROCESSING, (***problem description***)**

Explanation: The JCL parameter field contains one or more keywords that either have an incorrect name length or are not valid keywords.

System response: The IBM library cannot be preconverted to .IMG format. Overlay and page segment processing is terminated.

User action: Correct the JCL parameter keyword error and then resubmit the job. If the problem persists, call Xerox Technical Support.

XRF6396E **MINOR ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **PROCESSING, (***failure explanation***). REFER TO ANY PREVIOUS MESSAGES FOR MORE INFORMATION**

Explanation: This is an internal error.

System response: This error does not directly affect preconversion of the IBM library to .IMG format. Overlay and page segment processing is already complete. Storage corruption may have occurred.

User action: Preceding messages may help explain the cause of the problem. Call Xerox Technical Support.

XRF6397F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **PROCESSING, (***failure explanation***). REFER TO ANY PREVIOUS MESSAGES FOR MORE INFORMATION**

Explanation: This is an internal error.

System response: The IBM library cannot be preconverted to .IMG format. Overlay and page segment processing is terminated.

User action: Preceding messages may help explain the cause of the problem. Call Xerox Technical Support.

XRF6398I **THE VALUE OF KEYWORD** *keyword* **IS:** *data value***; IF INCORRECT, CHECK THE JCL PARM=STATEMENT**

Explanation: This message identifies the named keyword parameter value being used for this execution of XRFBATCH.

System response: None.

User action: If the *data value* for the named keyword is correct, no action is needed. If the *data value* for the named keyword is unexpected or incorrect, check the syntax and validity of the named parameter value. Correct any errors and resubmit the job. If the problem persists, call Xerox Technical Support.

XRF6399E **SEVERE ERROR ENCOUNTERED BY** *module name* **DURING** *activity* **PROCESSING OF** *type* **RESOURCE NAMED** *resource name***. RC=X'***return code***'; IC=X'***information code***'**

Explanation: This message is issued as a result of a non-zero return code from XRFPSEG or XRFOVLAY. Preceding messages may explain the cause of the problem.

System response: The page segment or overlay identified by *resource name* cannot be converted. Processing of other resources continues.

User action: Examine the log for additional information about the error, and take any action indicated. Resubmit the job. If the problem persists, call Xerox Technical Support.

XRF6400I **IBM** *image type* **RESOURCE NAMED** *ibm resource name* **CONVERTED SUCCESSFULLY TO A XEROX RESOURCE FILE**

Explanation: This message identifies the IBM resource that has been successfully converted to a Xerox resource file through XRFBATCH.

System response: Processing continues.

User action: None required. You may review the output from XRFBATCH for a list of all converted page segments.

XRF6411I **IBM AFP RESOURCE MEMBER NAMED** *resource member name* **NOT CONVERTED TO A XEROX RESOURCE DUE TO** *reason***.**

Explanation: The resource was determined not to be a page segment, the member started with the letter O, or you attempted to convert a page segment to a decentralized native image which is not supported.

System response: The named resource is not converted. XPAF issues this message for each member in the partitioned dataset that is not converted. Processing of other resources continues.

User action: If the named resource is a page segment, rename it so that it does not start with the letter O. Then, resubmit the job. If you attempted to convert a page segment to a native decentralized image see XRFBATCH discussion in *Section Three: Managing Resources with XPAF*.

XRF6415F **FATAL ERROR ENCOUNTERED BY** *module name* **DURING** *activity description* **PROCESSING (***problem description***)**

Explanation: A single member was specified in the INFILE DD statement. XRFBATCH supports PDS and VSAM processing, but not sequential processing.

System response: The IBM library cannot be preconverted to .IMG format. Overlay and page segment processing is terminated.

User action: Put the single member in a PDS, specify that PDS in the INFILE DD statement, and rerun the job.

XRF6417F **RESOURCE** *resource member name* **TYPE** *resource type* **FAILED EXIT 6 AUTHORIZATION**

Explanation: The current user exit 06 has instructed XPAF not to allow the user to access this particular resource.

System response: The current print job is aborted.

User action: Contact your systems programmer for information on the operation of user exit 06 at your site.

XRF6418E **CODE PAGE** *code page name* **IS NOT ASSOCIATED WITH ANY KNOWN FONT FAMILY COMPLEMENT VALUE. CHARACTER SET** *character set name* **CANNOT BE ADJUSTED**

Explanation: The job sent to the printer contained an MCF-2 structured field record that specified a global resource identifier (GRID) value. The specified code page value in the GRID was not found in the internal XPAF font family complement table; this complement value is required to complete the name of the character set. Since XPAF cannot determine the exact name of the character set from the values specified in the GRID, the font structure cannot be built.

System response: Document processing is terminated, and the document remains held in the output queue.

User action: Either recreate the input data and generate another GRID value that will call for a code page name that coordinates with a valid font family complement identifier value. Or, update the CPGID table for the GRID value specified in the data stream. Then resubmit the job.The new entry must associate the GRID value with a code page name that coordinates with a valid font family complement identifier value.

XRF6419E **UNABLE TO FIND** *resource type* **ENTRY IN THE** *resource type* **TABLE FOR THE GRID VALUE** *global resource identifier value*

Explanation: During the processing of an MCF-2 structured field, the font global identifier or the code page global identifier value could not be found in the appropriate table for the specified global resource identifier (GRID) value.

System response: Document processing is terminated, and the document remains held in the output queue.

User action: Update the CPGID or FGID table to contain an entry for the specified GRID value and resubmit the job.

XRF6420E **UNDEFINED TRIPLET ID FOUND. UNABLE TO PROCESS TRIPLET ID** *triplet id*

Explanation: During the processing of an MCF-2 structured field, an invalid triplet identifier was found.

System response: Document processing is terminated, and the document remains held in the output queue.

User action: Recreate the input data, ensuring that the MCF-2 structured field contains only valid triplets and resubmit the job.

XRF6423I **DYNAMIC FONT WIDTHS BUILT**

Explanation: A font has been requested for which no IBM font width entry was found. A temporary entry has been created

System response: The system dynamically creates an entry, printer processing continues.

User action: The IBM font library convert batch utility should be run to create a permanent IFW table entry.

XRF6424W **MCF TRIPLET ID** *id number* **FOR CODE PAGE** *code page* **CHARACTER SET** *character set* **BYPASSED**

Explanation: A map coded font, font resolution metric triplet, was encountered. Mixed font resolution positioning is not supported by XPAF.

System response: Printing continues if the font exists for the current document font resolution.

User action: Verify that the output is correct. If not, the fonts with this triplet must be replaced. Message XRF6425W has been added.

XRF6425W **DATAMAP** *datamapname* **UNSUPPORTED TRIPLET ID** *idname* **BYPASSED.**

Explanation: An unsupported triplet id was detected for the data map when line descriptors were processed.

System response: Processing continues and the triplet is ignored.

User action: Verify that the output is correct, or remove the triplets from the data map.

XSJ messages

XSJ0090E *level* **z/OS LEVEL UNSUPPORTED**

Explanation: XOSF detected a level of z/OS that does not have a corresponding support module.

System response: XOSF processing continues, but XPAF extended JCL keywords are ignored.

User action: Call Xerox Technical Support with the z/OS level from the message. For the minimum z/OS/JES levels currently supported by XPAF, refer to *Section Two: Installing and Customizing XPAF*.

XSJ7202E **COULD NOT GET SUFFICIENT MEMORY** *action*

Explanation: There was insufficient virtual storage available to hold all the XPAF extended JCL keywords.

System response: XOSF processing continues, but XPAF extended JCL keywords are ignored.

User action: Stop XOSF. Perform one of these options:

- Increase the region parameter on the XOSF start-up proc.
- Increase the XCORE initialization parameter value.

Restart XOSF.

XSJ7205E **INTERNAL TABLE OVERFLOW FOR SJF LIST; XJCL WILL NOT BE HONORED**

Explanation: An internal table overflow condition occurred during XOSF initialization.

System response: XOSF processing continues, but XPAF extended JCL keywords are ignored.

User action: Call Xerox Technical Support.

XSL messages

XSL0001I *message text*

Explanation: This message provides supplemental information to assist in debugging. It is issued only if intensive logging is turned on.

System response: Processing continues.

User action: None required.

XSL0002I *message text*

Explanation: This message provides supplemental information to assist in debugging. It is issued only if intensive logging is turned on.

System response: Processing continues.

User action: None required.

XSL0203E **THM ERROR IN MODULE** *module name*. **CMD=***command*; **IC=X'***thm-information code*'; **RC=X'***thm-return code*'

Explanation: While attempting to process an XPAF VSAM dataset, an unexpected error was encountered. Other messages are usually issued along with this message to further identify the operation that failed.

System response: The current operation is terminated.

User action: Verify that all of the required XPAF libraries are present and not corrupted. If you believe you are receiving this message in error, call Xerox Technical Support.

XSL3413E **OPEN FOR DSNAME** *dataset name* **FAILED**

Explanation: Using the FCB and/or UCS initialization or printer profile parameters, you requested that XOSF download FCBs and/or UCSs to a centralized printer. However, open processing on behalf of that request failed. XOSF was unable to allocate SYS1.IMAGELIB.

System response: Document processing continues. The FCB and/or UCS download request is ignored.

User action: Verify that SYS1.IMAGELIB is available on your z/OS system, then resubmit the job.

XSL3441W *fcb name* **FCB TYPE NOT SUPPORTED**

Explanation: The FCB you specified using the FCB and FCBPREF initialization parameters resulted in a non-3211 type FCB being loaded from SYS1.IMAGELIB.

System response: The system defaults to FCB2STD2 and continues processing. If the printer JSL specifies FCB=PROCESS, SMF accounting will be based on the default FCB.

User action: Create a 3211-type FCB in SYS1.IMAGELIB, then resubmit the job.

XSL3585W **nn DAYS LEFT IN GRACE PERIOD**

Explanation: The expiration date has passed for the product. A grace period has been entered and there are nn days left in the grace period before the product will cease to function. This message will be displayed at the start of every print job.

System response: The product will continue to function normally.

User action: Contact Xerox for a new License String to extend the license period.

XSL3586E **nn-DAY GRACE PERIOD HAS EXPIRED!**

Explanation: The expiration date has passed for the product. The extended grace period has also expired.

System response: The product will cease to function.

User action: Contact Xerox for a new License String to extend the license period.

XSL3589W ***** WARNING *** WARNING *** WARNING *** WARNING *****

Explanation: This message is issued in conjunction with message XSL3591I (*** WARNING *** XPAF LICENSE WILL EXPIRE IN nn DAYS.)

System response: Processing continues.

User action: Contact Xerox in order to renew the license string.

XSL3591I ***** WARNING ***** ***product*** **LICENSE WILL EXPIRE IN** ***number*** **DAYS! *****

Explanation: While processing a print document, it was determined that the *product* expiration date is within sixty days of the current date. This message is an informational message only.

System response: Processing continues.

User action: Contact Xerox in order to renew the license string.

XSL3592E ****** *product* LICENSE HAS EXPIRED! ******

Explanation: While processing a print document, it was determined that the expiration date of the *product* has expired.

System response: Processing is terminated and the XOSF address space will be shut down.

User action: Contact Xerox in order to renew the license string.

XSL4000E **VIPP DOCUMENT TYPE MUST BE NM FOR A VIPP DEVICE**

Explanation: The document is being sent to a VIPP-enabled device, or PRMODE=VIPP has been specified in the document, and the document is not a native mode (line-mode) document. VIPP documents must be line-mode data streams that have VIPP commands inserted at the beginning of the application.

System response: XPAF issues a secondary message (XSL4001I) showing the current document type being processed. The document is then aborted and requeued to JES.

User action: Redirect the document to an XPAF printer that supports the document type indicated in message XSL4001I.

XSL4001I **CURRENT DOCUMENT TYPE=** *document type*, **PRMODE=** *prmode*, **DEVICE=** *device type*

Explanation: This is an informational message that displays the current document processing options. It is displayed following message XSL4000E.

System response: The document is aborted and requeued to JES.

User action: Redirect the document to an XPAF printer that supports the named document type.

XSL7201E **ESTAE FAILURE ON ENTRY TO** *module name*. **RC=X'***return code***'; IC=X'***information code***'**

Explanation: This is an internal error.

System response: The printer task is terminated.

User action: Call Xerox Technical Support.

XSL7202E **COULD NOT GET SUFFICIENT MEMORY** *activity*

Explanation: A get memory request failed.

System response: Document processing is terminated.

User action: Increase the region size.

XSL7203E **MODULE** *module name* **HAS AN ANCHOR ADDRESS OF ZERO (IS NOT LOADED IN MEMORY)**

Explanation: The named module was not loaded into memory.

System response: The printer task is terminated.

User action: Verify that the named module is in the XPAF load library. If it is present and the problem persists, call Xerox Technical Support.

XSL7204E *parameter* **IGNORED. IMAGE** *image name* **NOT FOUND IN SYS1.IMAGELIB**

Explanation: During FCB or UCS processing, the named FCB or UCS image (FCB2*xxxx* or UCS2*xxxx*) was not found in SYS1.IMAGELIB.

System response: Processing continues. The FCB or UCS is not downloaded to the printer.

User action: Correct the FCB or UCS parameter in the job or create the named FCB or UCS in SYS1.IMAGELIB. Then resubmit the job.

XSL7206E **PPD INITIALIZATION FAILED. RC=X'***return code***'**

Explanation: The PPD was unable to initialize the printer. Additional messages issued from the PPD indicate the exact cause of the error. The printer may be allocated to another user, or the printer profile may be incorrect.

System response: The printer task is terminated.

User action: Correct the error and try again.

XSL7209I *component* **PIPELINE ERROR:** *description*

Explanation: An error in the named component yielded one or more non-zero return codes.

System response: System response depends on the most severe return code encountered, which is the code displayed in this message. Message XSL720BI describes the result of the pipeline error.

User action: If possible, correct the error and rerun the job. If you cannot correct the error, call Xerox Technical Support.

XSL720AE **UNEXPECTED RC OF X'***return code***' FROM MODULE** *module name activity*

Explanation: This is an internal error.

System response: The document or printer task is terminated.

User action: Call Xerox Technical Support.

XSL720BI **PIPELINE ERROR RESULTED IN:** *description*

Explanation: A call to the process control module returned one or more non-zero return codes. The most severe return code is displayed in message XSL7209I and yields the result described in this message.

System response: The *description* portion of the message explains the result of the pipeline error and corresponds to the return code *displayed* in message XSL7209I. For example, the *description* may be “ABORT DOCUMENT IMMEDIATELY.”

User action: If possible, correct the error and rerun the job. If you cannot correct the error, call Xerox Technical Support.

XSL720CI **MODULE** *module name* **RETURNED NON-ZERO RC=X'***return code***'**

Explanation: This is an internal error.

System response: The printer task is terminated.

User action: Call Xerox Technical Support.

XSL720DE **MODULE** *module name* **CALLED WITHOUT A PRIOR INITIALIZATION CALL**

Explanation: This is an internal error.

System response: The printer task is terminated.

User action: Call Xerox Technical Support.

XSL720EI *job number job name* **PRINTING** *activity*

Explanation: One of two conditions exists:

- The operator entered a JES command (RESTART, INTERRUPT, CANCEL, FORWARD SPACE, or BACKSPACE).
- XPAF encountered a condition that does not allow it to continue document processing. Document processing is terminated.

Activity can be one of these conditions:

- Restarted by operator
- Interrupted by operator
- Canceled by operator
- Aborted by XPAF
- Forward spaced by operator
- Backspaced by operator

System response: One of six conditions exists (corresponding to the six *activity* types):

- The document is restarted at the beginning of the restarted dataset.
- The document is placed on the active printer class and restarts at the last known JES checkpoint taken upon reselection.
- The document is purged from the JES spool; XPAF cancels document printing.
- The document printing process is terminated by XOSF.
- The document is forward spaced a specified number of pages.
- The document is backspaced a specified number of pages.

User action: None required.

XSL720FI *printer name* **WAITING FOR WORK**

Explanation: No more datasets are available for printing. XOSF has caught up with all available work for the printer.

System response: The printer task remains active and available for further processing.

User action: None required.

XSV messages

XSV9801E INVALID PARAMETER SPECIFIED FOR XSVCUPDT

Explanation: The parameter supplied to the batch SVC table update utility is not valid.

System response: Processing is terminated.

User action: Check the format of the parameter, the SVC number, and the operation requested. Then retry the operation.

XSV9802E SVC MODULE *module name* **NOT FOUND IN LINK PACK AREA**

Explanation: While trying to add an SVC table entry, the named module was not found in the link pack area.

System response: Processing is terminated.

User action: Add the SVC module to the link pack area and retry the operation.

XSV9803I SVC TABLE *operation* **SUCCESSFUL FOR SVC** *entry*

Explanation: The named SVC table entry was successfully replaced in or deleted from the SVC table.

System response: None.

User action: None.

XSV9804E SVC TABLE *operation* **FAILED FOR SVC** *entry*

Explanation: The named SVC table entry was not successfully replaced in or deleted from the SVC table.

System response: Processing is terminated.

User action: Call Xerox Technical Support.

XTB messages

XTB0001I **NO PPT PRESENT. CANNOT INIT/TERM TABLES**

Explanation: This is an internal error.

System response: The printer task is terminated.

User action: Call Xerox Technical Support.

XTB0221E *option* **FAILED. TABLE** *table name* **NOT FOUND IN DDNAME** *table library ddname*

Explanation: The failed option was attempted for the specified table, but the table name could not be found in the dataset associated with the specified ddname.

System response: Document processing is terminated. The document is requeued to hold status.

User action: Correct the table name or the ddname, then resubmit the job.

XTB3614E *printer*: **INVALID PPT VALUE (***value***) FOR** *parameter***.** *action*

Explanation: An invalid value was entered for the specified parameter in the named printer profile.

System response: The *action* indicates whether the printer profile is built. Most invalid values are ignored; however, some result in a “Cannot build PPT” action.

User action: All errors must be corrected. Edit the printer profile and correct the invalid value.

XTB6227I **ERROR PROCESSING** *thm command***. PROCESSING** *table*

OR

ERROR PROCESSING *ldm command***. PROCESSING** *ddname*

Explanation: An error occurred while attempting to initialize printer tables or libraries. The error occurred while processing the identified command on the specified table or DD name. This message will be preceded by additional messages from THM or LDM that identify the exact cause of the problem.

System response: Printer initialization is terminated. The printer cannot be started.

User action: Correct the problem identified by the THM or LDM messages, then restart the printer.

XTB7202E **COULD NOT GET SUFFICIENT MEMORY** *activity*

Explanation: A get memory request failed.

System response: Document processing is terminated.

User action: Increase the region size.

XTB7501E *ppd directory* **ERROR. EC=X'***error code***'**

Explanation: An error occurred while attempting to retrieve the directory lists from a printer running under HIP (the printer profile specifies XNS=YES). EC is the return code returned from the printer during the directory retrieval. This error usually results from an incorrect software level on the printer.

System response: Printer initialization is terminated. The printer cannot be started.

User action: Correct the problem at the printer or run without HIP (specify XNS=NO in the printer profile). Once the problem is corrected, restart the printer.

XTC messages

XTC0001I *message text*

Explanation: *Message text* consists of a message produced by another component. Refer to the chapter of the specified component for an explanation of this message.

System response: Refer to the documentation for the specified component.

User action: Refer to the documentation for the specified component.

XTC2116E **UNABLE TO ALLOCATE DSNAME** *native library*. **DYNAMIC ALLOCATION RC=X'***return code***'**

Explanation: The XPAF TCP/IP interface failed to dynamically allocate the dataset.

System response: Processing is terminated.

User action: Check the return code in the appropriate z/OS publication on system macros and facilities.

XTC4021E **RECORD IS TOO BIG FOR THE TCP BUFFER. INCREASE TCPBUFSIZE TO AT LEAST n**

Explanation: An attempt was made to send a record via the TCPIP interface that is longer than the TCPIP buffer size specified by TCPBUFSIZE. The record would not fit into the buffer.

System response: The document is aborted and held in the output queue.

User action: Increase the value specified in the printer profile for TCPBUFSIZE to at least the value specified by 'n' in the message.

XTC4153E **MEMBER** *member name* **NOT FOUND IN LIBRARY** *library name*

Explanation: Your document has been processed and saved to a dataset. However, the batch job that sends the dataset to a printer using the TCP/LPR or TCP/IP protocols was not submitted because the named member was not found in the named library.

System response: Processing of the document has completed, but the batch job could not be submitted. The document is not requeued.

User action: Verify that the required JCL member exists in the named library and is correctly specified in the LPRJCL printer profile parameter to ensure that the batch job will run the next time you print your document.

Refer to *Section Two: Installing and Customizing XPAF* for instructions on how to set up your system for TCP batch printing. Refer to *Section Five: XPAF Parameter and Keyword Reference* for more information about TCP-related printer profile parameters.

XTC7750I LPR JCL CREATED USING MEMBER *member name* **FROM** *library name*

Explanation: The named member in the named library has been processed, and the batch job that sends your document to a printer using the TCP/LPR or TCP/IP protocols was submitted.

System response: XPAF processing has completed for this document.

User action: Refer to the displayed LPR messages to ensure your document has been sent to the printer.

XTC7751W MANUAL LPR IS REQUIRED FOR *dataset name*

Explanation: Your document has been processed and saved to the named dataset. However, the batch job that sends the dataset to a printer using the TCP/LPR or TCP/IP protocols was not submitted.

System response: Processing of the document has completed, but the batch job could not be submitted. The document is not requeued.

User action: Refer to the user action of the accompanying XPAF message for instructions on how to ensure that the batch job will run the next time you send the document to the printer.

To print the document now, manually issue the LPR command, specifying the named dataset. For example, if you are using IBM TCP/LPR, you could issue this LPR command:

LPR '*dataset-name(member-name)*' AT *ip-address* PRINTER *queue-name* FILTER L BINARY

Refer to IBM's *TCP/IP for z/OS: User's Guide* for more information about the syntax of this command. If you are using another vendor's TCP software, refer to their documentation for valid command syntax.

XTC7752E LPR TRANSMISSION FAILED

Explanation: Your document has been processed and saved to a dataset. However, it was not transmitted to the printer because an error condition was received from either TCP/LPR or TCP/IP. This error and a suggested solution has been printed to the SYSPRINT SYSOUT dataset from the XTCPCHKR step of the TCP JCL.

System response: If you have specified PARM='PROMPT' in the XTCPCHKR step, the job has stopped processing and is waiting for an operator response. If you have specified PARM='NOPROMPT', processing of the document has completed, but dataset transmission has failed and the document is not requeued.

User action: Review the output to determine what caused the TCP transmission error to occur. If you have specified PARM='PROMPT' in the XTCPCHKR step, the operator must respond to the prompt to acknowledge the message. No specific response text is required.

To print your document, manually issue the LPR command, specifying the named dataset. For example, if you are using IBM TCP/LPR, you could issue this LPR command:

LPR '*dataset-name*(*member-name*)' AT i*p-address* PRINTER *queue-name* FILTER L BINARY

Refer to IBM's *TCP/IP for z/OS: User's Guide* for more information about the syntax of this command. If you are using another vendor's TCP software, refer to their documentation for valid command syntax.

XTC7753I XPAF IS ATTEMPTING TO CONNECT TO TCP/IP INTERFACE

Explanation: The XPAF functional subsystem is trying to connect to the TCP/IP address space that will be handling the TCP/IP communication from the OS/390 environment.

System response: None.

User action: None.

XTC7754I XPAF TCP/IP INTERFACE CONNECTED

Explanation: The XPAF functional subsystem has connected to the TCP/IP address space that will be handling the TCP/IP communication from the OS/390 environment.

System response: None.

User action: None.

XTC7755I XPAF TCP/IP INTERFACE IS NOT CONNECTED

Explanation: The XPAF functional subsystem has not connected to the TCP/IP address space that will be handling the TCP/IP communication from the OS/390 environment.

System response: The TCP/IP address space has issued a bad return code when trying to establish connection. XPAF continues processing allowing the other types of printers (e.g., VTAM or channel attached) to print.

User action: If TCP/IP is required by this functional subsystem, verify that the TCP/IP address space is up and running successfully. Then, verify that the TCPIPJOB initialization parameter set in the XINPARM dataset has the same TCPIPJOB name as the IBM TCP/IP parmlib member for the data component. If both of these conditions are met, close down your TCP/IP address space and restart it. Then, try restarting this functional subsystem.

XTC7756I CONNECTING TO IP *ip address* **TCP PORT=***port id***, QUEUE NAME=***printer name*

Explanation: The XPAF TCP/IP interface is attempting to connect to the specified IP address for the queue name on the remote port number displayed.

System response: None.

User action: None.

XTC7757E CONNECTION TO IP *ip address* **TCP PORT=***port id***, QUEUE NAME=***printer name* **FAILED**

Explanation: The XPAF TCP/IP interface has tried to connect to the specified IP address for the queue name on the remote port number displayed and the connection could not be established.

System response: XPAF's actions depend on the TCPRETRY printer profile parameter. It will either stop the printer thread, abort the print document, or requeue the print document.

XPAF will also issue message XTC7765E, which will display the IBM connection failure error code and give the XPAF TCP/IP connection command causing the problem.

User action: Use the TCP/IP PING command to help diagnose the connection problem. Issue the PING command from the OS/390 TSO command prompt ensuring that the IP address is available from your OS/390 environment not just your local LAN.

XTC7758I CONNECTION TO IP *ip address* **HAS BEEN ESTABLISHED**

Explanation: The XPAF TCP/IP interface has established a connection to the specified IP address.

System response: None.

User action: None.

XTC7759I CONNECTION TO IP *ip address* **HAS BEEN RELEASED**

Explanation: The XPAF TCP/IP interface has released the specified IP address.

System response: None.

User action: None.

XTC7760E LPD SERVER AT IP *ip address* **HAS REFUSED THE SPECIFIED QUEUE NAME=***printer name*

Explanation: The XPAF TCP/IP interface has received a bad acknowledgment from the LPD server indicating that the queue name is invalid on it's server environment.

System response: XPAF's actions depend on the TCPRETRY printer profile parameter. It will either stop the printer thread, abort the print document, or requeue the print document.

User action: Correct the queue name to a a valid queue name for that IP address.

XTC7761E **LPD SERVER AT IP** *ip address* **HAS RETURNED A BAD ACK AFTER A SEND DATA REQUEST. QUEUE NAME=***printer name*

Explanation: The XPAF TCP/IP interface has received a bad acknowledgment from the LPD server indicating that the sending of data frames has been rejected or lost.

System response: XPAF's actions depend on the TCPRETRY printer profile parameter. It will either stop the printer thread, abort the print document, or requeue the print document.

User action: Ensure that the receiving LPD server is not in a wait state or has not been recycled during this time period. This could cause a loss of the LPD service at that IP address. If neither of these has occurred, it could be the physical network at the time being serviced.

When LPD service availability has been verified, restart the print job. If an error condition still exists, recycle the LPD server machine (i.e., power it on and off) to ensure that connectivity to the local area network is reestablished.

XTC7762E **LPD SERVER AT IP** *ip address* **HAS RETURNED A BAD ACK AFTER RECEIVE DATA FILE REQUEST. QUEUE NAME=***printer name*

Explanation: The XPAF TCP/IP interface has received a bad acknowledgment from the LPD server indicating that after sending the receive control data block, the LPD service has rejected the request.

System response: XPAF's actions depend on the TCPRETRY printer profile parameter. It will either stop the printer thread, abort the print document, or requeue the print document.

User action: Ensure that the receiving LPD server is not in a wait state or has not been recycled during this time period. This could cause a loss of the LPD service at that IP address. If neither of these has occurred, it could be the physical network at the time being serviced.

When LPD service availability has been verified, restart the print job. If an error condition still exists, recycle the LPD server machine (i.e. power it on and off) to ensure that connectivity to the local area network is reestablished.

XTC7763E **LPD SERVER AT IP** *ip address* **HAS RETURNED A BAD ACK AFTER RECEIVE CONTROL FILE REQUEST. QUEUE NAME=***printer name*

Explanation: The XPAF TCP/IP interface has received a bad acknowledgment from the LPD server indicating that after sending the receive control file control block, the LPD service has rejected the request.

System response: XPAF's actions depend on the TCPRETRY printer profile parameter. It will either stop the printer thread, abort the print document, or requeue the print document.

User action: Ensure that the receiving LPD server is not in a wait state or has not been recycled during this time period. This could cause a loss of the LPD service at that IP address. If neither of these has occurred, it could be the physical network at the time being serviced.

When LPD service availability has been verified, restart the print job. If an error condition still exists, recycle the LPD server machine (i.e. power it

on and off) to ensure that connectivity to the local area network is reestablished.

XTC7764E **LPD SERVER AT IP** *ip address* **HAS RETURNED A BAD ACK AFTER RECEIVE COMPLETE CONTROL FILE REQUEST. QUEUE NAME=***printer name*

Explanation: The XPAF TCP/IP interface has received a bad acknowledgment from the LPD server indicating that after sending the receive complete control file control block, the LPD service has rejected the request.

System response: XPAF's actions depend on the TCPRETRY printer profile parameter. It will either stop the printer thread, abort the print document, or requeue the print document.

User action: Ensure that the receiving LPD server is not in a wait state or has not been recycled during this time period. This could cause a loss of the LPD service at that IP address. If neither of these has occurred, it could be the physical network at the time being serviced.

When LPD service availability has been verified, restart the print job. If an error condition still exists, recycle the LPD server machine (i.e., power it on and off) to ensure that connectivity to the local area network is reestablished.

XTC7765E **TCP/IP RC=***return code***; FUNCTION=***function*

Explanation: The XPAF TCP/IP interface has received a bad return code from the IBM TCP/IP address space indicating a failure of a TCP/IP command.

System response: XPAF's actions depend on the TCPRETRY printer profile parameter. It will either stop the printer thread, abort the print document, or requeue the print document.

User action: The return code displayed in this message is the IBM TCP/IP socket return code. An explanation of these can be found in the IBM TCP/IP *API Reference Manual*, appendix D, "Return codes."

Common return code 60 indicates an IP address is not accessible from the OS/390 system (i.e., may be powered off). Common return code 61 indicates that the IP address is in use on the network and could not be acquired in a timely manner.

Ensure that the receiving LPD server is not in a wait state or has not been recycled during this time period. This could cause a loss of the LPD service at that IP address. If neither of these has occurred, it could be the physical network at the time being serviced.

When LPD service availability has been verified, restart the print job. If an error condition still exists, recycle the LPD server machine (i.e., power it on and off) to ensure that connectivity to the local area network is reestablished.

XTC7766E *domain name* **DOMAIN NAME IS NOT KNOWN BY THE DOMAIN NAME SERVICE**

Explanation: You entered a domain name that is not recognized by the domain name service.

System response: XPAF will act depending on the printer profile TCPRETRY; either the printer thread will be stopped, the print job will be aborted, or the print document will be requeued. XPAF will not try to reconnect to the given domain name.

User action: Ensure that the IPADDRESS specified in the XPAF printer profile member matches the DNS server from your host environment. If you do not have an active DNS environment, XPAF will look in the HOST.SITE file created by the IBM sockets MAKESITE command. Check in the HOST.SITE file for a valid domain name. MAKESITE only allows names of up to 24 characters.

XTC7767I ALL LOCAL PORT ADDRESSES IN USE OR IN TIME-WAIT STATE - RETRYING LOCAL ACQUISITION

Explanation: All ports specified by the TCPBIND printer parameter are busy.

System response: XPAF will continue to try all ports defined by the TCPBIND parameter until a port can be acquired. When all ports have been tried and none are available, XPAF will wait for 20 seconds and try again. No JES commands will be honored by XPAF during the 20 second wait.

User action: Verify that the receiving IPADDRESS will accept TCP/IP communications from any other ports.

Recent versions of Novell LPD servers allow connection to any port numbered between 1 and 1024. As an example, if TCPBIND=(900,125) is set on your system, message XTC7767 will not appear unless you have more than 125 active printers printing to the Novell server from your mainframe.

Older versions of Novell LPD servers only allow connections through ports 721 to 731, when using one of these servers set TCPBIND=(721,11).

Servers requiring the TCPBIND=(721,11) setting are rare. Systems with Xerox TCP/IP Network Interface cards, and Windows and Unix systems never need the TCPBIND setting as print jobs can be sent from any local port with an assigned IBM socket.

Local ports in TIME-WAIT status can be displayed by the IBM NETSTAT command. If you have a number of ports in this status you need to acquire a PTF from IBM (i.e., PN88789).

XTC7768I ABOVE ERROR CAUSED BY RETURN CODE 90 FROM TCP/IP

Explanation: The TCP/IP interface has returned an error as described in the preceding message. The error was indicated by a return code of 90.

System response: The system response is as documented in the preceding message.

User action: The TCP/IP error could be due to one of these reasons:

- You may have the wrong LPR queue name for the receiving LPD service.
- The receiving device may need to have the mainframe IP address in its host's name table.
- The receiving device may have the default gateway defined incorrectly.
- The receiving device may not have started the LPD service
- The TCPPORT number is specified incorrectly in this printer definition. LPR/LPD service uses port 515.
- The IP address you are going to may be in use elsewhere. Turn off the device then PING the IP address. If the PING is successful, the IP address is assigned to another device.

XTC7769E COULD NOT *function* **INPUT LPR DATASET** *dsn* **RC=X'***rc***'**

Explanation: The temporary dataset containing the file to be sent to the printer via TCP/IP LPR protocol either could not be allocated or it could not be opened.

System response: The current print job is aborted and re-queued.

User action: This is an internal error. Contact Xerox technical support.

XTC7770W UNABLE TO PROCESS PARAMETER=MEMBER BECAUSE LPRDSN= HAS NOT BEEN SPECIFIED IN THE PRINTER PROFILE TABLE

Explanation: The user has specified a PDS member parameter (i.e. XTCPJNAM=) in the printer profile, but has omitted the LPRDSN= parameter to specify which PDS to retrieve the member from.

System response: The print job will continue to print without processing of the member.

User action: Specify a PDS library via the LPRDSN= parameter or remove the member parameter from the printer profile.

XTC7771E E-MAIL ATTACHMENT SIZE OF SIZE BYTES EXCEEDS THE MAXIMUM ALLOWABLE OF MAX BYTES

Explanation: The file that is to be sent as an e-mail attachment exceeds the size specified by the EMAILMAX parameter specified in the printer profile.

System response: The document will not be sent via e-mail. The document will be aborted and re-queued.

User action: Either increase the value specified on the EMAILMAX printer profile parameter or reduce the size of the document to be sent.

XTC7772I CONNECTING TO MAIL SERVER: mailserver PORT: port

Explanation: This is an informational message indicating that XOSF is attempting to connect to the SMTP mail server: *mailserver* via port: *port*.

System response: Processing continues.

User action: None.

XTC7773E USERID userid WAS NOT FOUND IN THE EMAILADDRESS TABLE table. THE EMAIL COULD NOT BE SENT

Explanation: When attempting to send a document via e-mail, XOSF was unable to find a USER entry for the userid specified. The e-mail could not be sent.

System response: The document is aborted.

User action: Add a USER entry in the e-mail address table for the userid specified in the message.

XTC7775E INVALID IPV6 ADDRESS: ipaddress

Explanation: The IP address, ipaddress, is not a valid IPv6 address.

System response: The document is aborted.

User action: Correct the IP address.

XTC7776I CONNECTING TO IPV6 ADDRESS ipaddress TCP PORT=port QUEUENAME=portqueue

Explanation: The XPAF TCP/IP interface is attempting to connect to the specified IP version 6 address for the specified queue name and port.

System response: TProcessing continues.

User action: None.

XTD messages

XTD0303E **FIRST RECORD OF** *member name* **IS NOT A VALID HEADER RECORD**

Explanation: The font header could not be recognized. The format of the dataset or member's first record does not conform to the Xerox header record format. If the input is a sequential dataset, the word INPUT is substituted for *member name* in the message text.

System response: Custom font installation is terminated.

User action: Verify that the input is a valid Xerox custom font.

XTD0304E **SECOND RECORD OF** *member name* **IS NOT A VALID DESCRIPTION RECORD**

Explanation: The format of the second record in the dataset does not conform to the Xerox description record format. The font cannot be validated.

System response: Custom font installation is terminated.

User action: Verify that the input is a valid Xerox custom font.

XTD0305E **COULD NOT** *activity* **TABLE** *table name operation***. THM RC=X'***return code***'**

Explanation: An attempt to process the indicated table failed. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Command processing is terminated.

User action: Call Xerox Technical Support.

XTD0308I *number resource type* **PROCESSED,** *number* **WITH ERRORS**

Explanation: The identified number of the resource type indicated has been installed.

System response: Processing continues.

User action: If no errors are indicated, no action is required. If errors occurred, review the XOAF log for more information.

XTD0316W **THE RESOURCE** *resource name* **HAS A CHARACTER CODE OF X'***value***' WHICH EXCEEDS X'00FF'. THIS VALUE HAS BEEN TRUNCATED TO X'***value***'**

Explanation: The named resource is corrupted.

System response: Processing continues with a truncated value.

User action: Replace the font.

XTD0319E **IMPROPER** *attribute* **FOR DSNAME** *dataset name*. **REQUIRED** *attribute* **IS:** *value*

Explanation: The specified dataset does not have the proper RECFM, DSORG, and/or LRECL.

System response: The dataset is bypassed and processing continues with the next dataset.

User action: Correct the dataset as indicated in the message and retry the option.

XTD0320I **FONT** *font name* **INSTALLED**

Explanation: The named font has been loaded, and the necessary font table entries have been generated.

System response: Custom font installation continues.

User action: None required.

XTD0324W **CANNOT USE CURRENT XOAF LOG AS MESSAGE DATASET**

Explanation: The message dataset you specified is the current XOAF log dataset.

System response: Additional messages are suppressed; custom font installation continues.

User action: Specify an alternate dataset with these attributes:

RECFM=FB
DSORG=PS
LRECL=133
BLKSIZE=3325

XTD0326I **OLD ENTRY:** *value1*; **NEW ENTRY:** *value2*; *action*

Explanation: *Value1* identifies an existing entry in the IPSTND table; *value2* identifies the corresponding value provided in CD#FILE on the font file distributed by Xerox Font Services. *Action* indicates whether the existing entry in the IPSTND table has been replaced.

System response: Custom font installation continues.

User action: None required.

XTD0327I **PROCESSING COMPLETED**

Explanation: Custom font installation is completed.

System response: None.

User action: None required.

XTD0328I *entry* **ENTRY FOR KEY=***key* **INSTALLED**

Explanation: The identified XPAFA2A table entry has been created or replaced.

System response: Custom font installation continues.

User action: None required.

XTD0331I *entry* **ENTRY FOR FONT** *font* **INSTALLED**

Explanation: The identified table entry has been created or replaced for the named font. This message is issued for the XPAFAFW and XPAFI2X tables.

System response: Custom font installation continues.

User action: None required.

XTD0500E **COULD NOT** *activity* **DSNAME** *dataset name***. EI RC=X'***return code***'**

Explanation: The indicated *activity* for the named dataset could not be performed.

System response: Custom font installation is terminated.

User action: If the problem persists, call Xerox Technical Support.

XTD0501E **COULD NOT** *activity* **FOR MEMBER** *member name* **OF DSNAME** *dataset name***. EI RC=X'***return code***'**

Explanation: The indicated operation for the named dataset member could not be performed.

System response: The font load termination is terminated.

User action: If the problem persists, call Xerox Technical Support.

XTD1706I **NO ENTRIES SATISFY INPUT SELECTION CRITERIA. (***input member name***)GIVEN**

Explanation: The *input member name* specified wildcards. However, either no member in the supplied library matched the wildcard specification, or the input member was not found.

System response: Custom font installation is terminated.

User action: Examine the member list for the library and verify that a match can be made.

XTD3010F **COULD NOT GET X'***bytes of storage***' BYTES OF MEMORY** *activity*

Explanation: This is an internal error.

System response: Processing continues.

User action: If you are running a batch job, cancel the job and specify a larger region size before running the job again.

XTD3011E **COULD NOT RELEASE X'***amount of storage***' BYTES OF MEMORY FROM LOCATION X'***getmained area address***'** *activity*

Explanation: This is an internal error.

System response: Processing may or may not continue. If you are installing a large number of custom fonts, your system may run out of available memory.

User action: Call Xerox Technical Support.

XTD3015E **COULD NOT** *command* **LIBRARY** *library ddname activity***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified library.

System response: Custom font installation is terminated.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XTD3016E **COULD NOT** *command* **MEMBER** *member name* **OF LIBRARY** *library ddname activity***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified member.

System response: Custom font installation is terminated.

User action: Ensure the member exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XTD3017E **COULD NOT** *command* **LCA** *activity***. LDM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Custom font installation is terminated.

User action: Call Xerox Technical Support.

XTD3018E **COULD NOT ACQUIRE TCB** *activity***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Custom font installation is terminated.

User action: Call Xerox Technical Support.

XTD6402E **COULD NOT** *command* **ITEM** *item name* **IN TABLE** *table name activity***. THM RC=X'***return code***'**

Explanation: The indicated item is not in the named table.

System response: Custom font installation is terminated.

User action: Call Xerox Technical Support.

User action:

XTW messages

XTW0001I *message text*

Explanation: This message supplements message XTW1502E, and identifies the cause of the allocation/deallocation error.

System response: None.

User action: If possible, correct the problem. Otherwise, call Xerox Technical Support.

XTW0002I *message text*

Explanation: This message supplements message XTW1504I, and identifies the name of the dataset being written to disk.

System response: None.

User action: None required.

XTW1501E **ESTAE FAILURE ON ENTRY TO XTWMAIN. RC=***return code***; IC=***information code*

Explanation: This is an internal error.

System response: Output-to-file processing is terminated.

User action: Identify the cause of the error, correct it, and try again. If the problem persists, call Xerox Technical Support.

XTW1502E *allocation type* **ERROR. RC=X'***return code***'; EC=X'***error code***'; IC=X'***information code***'**

Explanation: The error occurred while allocating or deallocating the output dataset.

System response: Output-to-file processing is terminated.

User action: A following message should explain the cause of the problem. Correct the problem and try again. If there are no other messages, call Xerox Technical Support.

XTW1503E *media type* **OPEN ERROR**

Explanation: A non-zero return was received in response to an OPEN request. *Media type* is either DASD if output is being directed to a DASD dataset, or file if output is being directed to file.

System response: Output-to-file processing is terminated.

User action: Determine the cause of the error, correct it, and try again. If the problem persists, call Xerox Technical Support.

XTW1504I *action* **OUTPUT TO** *media type*. **UNIT=***unit address*; **VOLSER=***volume serial number*

Explanation: This message indicates where printer output data is or has been written. The VOLSER identifies the correct volume.

System response: Printer output-to-file/disk processing continues.

User action: None required.

XTW1509E RECORD(S) TOO LONG FOR FILE/DISK OUTPUT, TRUNCATED TO 256 BYTES

Explanation: While generating output to file or disk, XOSF encountered an input record longer than the maximum output record length (256 bytes).

System response: Output-to-file and/or disk processing continues; however, the output record is truncated to 256 bytes. This message is issued only once, although many records may be truncated.

User action: When the dataset is printed, some print lines may have lost data. If data is missing, the input dataset should not be used as input for output-to-file and/or disk processing.

XTW1510I ATTEMPTING ALLOCATION OF FILE FOR OUTPUT DATASET

Explanation: Dynamic allocation of a file drive is being attempted for a printer output dataset.

System response: Output-to-file processing continues.

User action: None required.

XTW1512E SMS REASON CODE=X'*reason code***'**

Explanation: An error occurred while allocating the output dataset to disk. The allocation request failed. The error was detected by System Managed Storage (SMS).

System response: Output-to-disk processing is terminated.

User action: The SMS reason code describes the reason that the request failed. For more information, refer to SMS reason code in the “Requesting Dynamic Allocation Functions: Setting Up the Request Block Extension“ section of the *z/OS Systems Programming Authorized Assembler Services Guide*.

XTW1513E *abend code* **-** *reason code* **ABEND DETECTED DURING FILE/DISK OUTPUT**

Explanation: A system abend occurred during file/disk output writer processing.

System response: Output-to-file/disk processing is terminated.

User action: The abend code and reason code describe the reason that the abend occurred. For more information, refer to *z/OS Systems Programming System Codes*.

XTW4020E RECORD IS TOO BIG FOR OUTPUT FILE. INCREASE OPDLRECL TO AT LEAST n

Explanation: An attempt was made to write a record to the disk output file that is longer than the LRECL defined by OPDLRECL. The record would not fit into this file.

System response: The document is aborted and held in the output queue.

User action: Increase the value specified in XINSXOSF for OPDLRECL to at least the value specified by 'n' in the message.

XTW4157W THE RENAME DATASET NAME IS BLANK. THE DATASET WILL NOT BE RENAMED.

Explanation: For a TCPMODE=RENAME printer, The XODBMFNM field is blank

System response: The dataset is not renamed.

User action: Check that the XODBMFNM field specifies a valid dataset or file name. The XODBMFNM can be populated by the MAILFILE= IBM JCL keyword, LCDS document splitting, the enhanced DJDE command XFILENAME or via XOSF USer Exit 02.

XTW4158W THE RENAME DATASET *name1* **COULD NOT BE ALLOCATED. THE DATASET** *name2* **WILL NOT BE RENAMED.**

Explanation: For a TCPMODE=RENAME printer, XOSF was unable to allocate the dataset, name1

System response: The temporary dataset *name2* is not renamed.

User action: Check that the XODBMFNM field specifies a valid dataset or file name. The XODBMFNM can be populated by the MAILFILE= IBM JCL keyword, LCDS document splitting, the enhanced DJDE command XFILENAME or via XOSF USer Exit 02.

XTW4180I OUTPUT COPIED TO: *name*

Explanation: The temporary dataset has been successfully copied to the new dataset/file *name*

System response: None.

User action: None.

XTW4181E COULD NOT *action* **RENAME DATASET** *name*, **RC=X'***return code***'.**

Explanation: When attempting to perform the action indicated on the dataset, *name*, and error was encountered

System response: The temporary dataset was not renamed.

User action: Check for additional error messages, resolve the problem and retry the job.

XUC messages

XUC0001I *message text*

Explanation: *Message text* consists of a message produced by the forms conversion utility; it begins with a message number prefixed by XFU. Refer to "XFU messages" for an explanation of this message.

System response: Refer to the documentation for the XFU message.

User action: Refer to the documentation for the XFU message.

XUC0305E **COULD NOT** *activity* **TABLE** *table name operation***. THM RC=X'***return code***'**

Explanation: An attempt to process the named table failed. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Font conversion is terminated.

User action: Call Xerox Technical Support.

XUC3010F **COULD NOT GET X'***amount***' BYTES OF MEMORY** *activity*

Explanation: This is an internal error. The specified amount of memory needed for image rotation was not available.

System response: Font conversion is terminated, but processing continues.

User action: Increase the memory space parameter to run in a larger partition, then rerun the request. If this fails, call Xerox Technical Support.

XUC3011E **COULD NOT RELEASE X'***amount***' BYTES OF MEMORY FROM LOCATION X'***address***'** *activity*

Explanation: This is an internal error. The specified amount of memory could not be returned to the system.

System response: Conversion is terminated, but processing continues.

User action: Call Xerox Technical Support.

XUC3015E **COULD NOT** *command* **LIBRARY** *dataset name activity***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified library.

System response: Processing continues.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XUC3016E **COULD NOT** *command* **MEMBER** *member name* **OF LIBRARY** *dataset name activity***. LDM RC=X'***return code***'**

Explanation: XPAF could not perform the named activity on the specified member.

System response: Document processing continues.

User action: Ensure the library exists and is available to XPAF. Review the system log for additional messages that identify the cause of the problem, and take the appropriate action. If the problem persists, call Xerox Technical Support.

XUC3017E **COULD NOT** *command* **LCA** *activity***. LDM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Processing is terminated, but XOSF remains active.

User action: Call Xerox Technical Support.

XUC3018E **COULD NOT ACQUIRE TCB** *activity***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated. The XPAF address space remains active.

User action: Call Xerox Technical Support.

XUC3020E **COULD NOT** *operation* **MEMBER** *member name* **IN PRIMARY OR SECONDARY FORM LIBRARY**

Explanation: The document called for a form that XPAF could not obtain from either the primary (DFORMLIB) or secondary (CFORMLIB) form library.

System response: Processing continues, but the form is not downloaded.

User action: Load the named form into one of the form libraries that is specified in the XOSF start-up proc.

XUC3701E **UNRECOGNIZED PAL COMMAND;** *command name*

Explanation: This is an internal error.

System response: Document processing is terminated, but XOSF remains active.

User action: Call Xerox Technical Support.

XUC3708W **PRINTER DOES NOT SUPPORT IMAGES IN FORMS. IMAGE DELETED**

Explanation: The dynamic conversion of images contained within a centralized .FRM to decentralized format is only supported on certain printers. This feature is not available on the 3700 or 4045 printers.

System response: The image is deleted from the converted form.

User action: Route your print job to a printer that supports images within forms.

XUC3921E *module name* **MODULE CANNOT BE LOADED. CALL SYSTEM ADMINISTRATOR**

Explanation: The named load module could not be located in the XPAF load library.

System response: Processing is terminated.

User action: This message indicates a problem with the installation or setup of the XPAF product. Contact your local person responsible for product installation and maintenance. If you believe you are receiving this message in error, call Xerox Technical Support.

XUC4203E **FAILURE DURING TABLE FETCH. THM EC=***error code*

Explanation: This is an internal error.

System response: Form conversion is terminated, but processing continues.

User action: Call Xerox Technical Support.

XUC6402E **COULD NOT** *command* **ITEM** *item name* **IN TABLE** *table name operation.* **THM RC=X'***return code***'**

Explanation: The named item was not found in the named table. This message is issued for diagnostic purposes. *Operation* identifies the type of processing that was being performed when the error occurred.

System response: Conversion is terminated, but processing continues.

User action: Validate the CODE DJDE assignment with the selected font. If the problem persists, call Xerox Technical Support.

XUC6403E **RECORD EXCEEDS 256 BYTES. DATA LOSS DUE TO TRUNCATION**

Explanation: This is an internal error.

System response: Record length is truncated to 256 bytes. Data may be lost, but processing continues.

User action: Call Xerox Technical Support.

XUC6404E **RECORD EXCEEDS FRAGMENT SIZE. DATA LOSS IS EXPECTED**

Explanation: This is an internal error.

System response: The record is discarded and processing continues.

User action: Call Xerox Technical Support.

XUC6405E **INVALID FONT HEADER RECORD IN DATA STREAM**

Explanation: An inline font did not have a recognized font ID.

System response: Font downloading stops, and the records are sent as data.

User action: Examine the font resource for proper font format.

XUC6407E NO DDNAME SPECIFIED *activity*

Explanation: The font, form, or image library was not named. Spaces were found instead of the DD name.

System response: Resource loading is terminated, but processing continues.

User action: Check the printer profile for the correct library name.

XUC6408E PREMATURE EOF WHILE READING IMAGE LIBRARY

Explanation: End-of-file was encountered while trying to read data. The byte count specified in the image header was not satisfied, but an EOF was read.

System response: Processing continues with the available data, although the image may be truncated.

User action: Verify the integrity of the library member.

XUC6409E INVALID IMAGE HEADER RECORD. GRAPHIC WINDOW COMMAND IS SYNTACTICALLY INCORRECT

Explanation: This is an internal error.

System response: Image loading is terminated but processing continues.

User action: Call Xerox Technical Support.

XUC6410I IMAGE *image name* **DOES NOT CONFORM TO STANDARD IN** *axis***-DIRECTION,** *value* **SUPPLIED BY HEADER**

Explanation: The X- and Y-directions are not multiples of 8.

System response: X- and Y-directions are padded with white space and processing continues.

User action: Check the source of the .IMG file to determine how it was made. Padding may result in undesirable effects in some applications.

XUC6412I RASTER COUNT (*count value***) DOES NOT AGREE WITH VALUE SUPPLIED BY HEADER (***supplied value***) FOR IMG** *image name*

Explanation: The number of raster lines differed from what was encountered during image decompression.

System response: Excess lines are discarded; extra blank lines are added to satisfy the header requirements. Processing continues.

User action: Check the source of the image for possible errors.

XUC6413E IMAGE *image name* **CANNOT BE ACCESSED IN SUPPLIED LIBRARIES**

Explanation: The indicated image could not be found in either the primary or secondary library.

System response: The requested image is ignored and processing continues.

User action: Supply the image in the correct library as named in the printer profile.

XUC6414W **FORM** *form name* **MAY BE TOO COMPLEX FOR PRINTER.** *number* **LINES USED**

Explanation: The named form uses more than 1200 absolute position commands. This form may be too complex to print. In addition, the message “PAGE TOO COMPLEX” may appear on the printer console.

System response: Processing continues.

User action: Simplify or split the form.

XUC6417F **RESOURCE** *resource member name*, **TYPE** *resource type* **FAILED EXIT 6 AUTHORIZATION**

Explanation: The current user exit 06 has instructed XPAF not to allow the user to access this particular resource.

System response: The current print job is aborted.

User action: Contact your systems programmer for information on the operation of user exit 06 at your site.

XUC6422I *printer name activity* **TO PAGE** *page number*

Explanation: The printer has performed the specified *activity*. *Activity* indicates a JES command to forward space or backspace to a specified *page number*.

System response: Processing continues.

User action: None required.

XUC9440E **ABEND IN** *module name* **SNAP DUMP ID=***dump id*

Explanation: This is an internal error.

System response: Document processing is terminated, but the XOSF address space remains active.

User action: Call Xerox Technical Support.

XUC9441E **ABEND CODE: SYSTEM=***system code*, **USER=***user code*

Explanation: This is an internal error.

System response: Processing continues.

User action: Call Xerox Technical Support.

XUC9442E **REGISTERS** *registers xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx*

Explanation: This message accompanies XUC9441E to provide additional diagnostic information.

System response: Processing continues.

User action: Call Xerox Technical Support.

XUC9443E NEXT INSTRUCTION IS: *instruction*

Explanation: This message accompanies XUC9441E to provide additional diagnostic information.

System response: Processing continues.

User action: Call Xerox Technical Support.

XUX messages

XUX2624W **USER EXIT NUMBER** *user exit number*, *load module name*, **ABENDED WITH CODE X'***abend code***' IN TASK** *name* **FROM REQUESTOR** *requestor*

Explanation: The specified user exit abended in the indicated FSA subtask or program.

System response: If you specified ESTAE=Y in the initialization parameters, a dump is produced to the SYSUDUMP DD statement. For document processing, the document is requeued on hold, and the printer thread is drained. For non-document processing, the requested function is bypassed.

If you specified ESTAE=N, z/OS may produce a dump to SYSUDUMP. Processing in the subtask halts. Depending on which subtask the abend occurred in, some functions may continue to run.

User action: Refer to *Section Two: Installing and Customizing XPAF* for help in diagnosing and debugging the user exit. Refer to your system codes manual for an explanation of the abend code. Either correct the error in the user exit, or turn off the user exit in the initialization parameters. Restart XOSF.

XUX2626I *user-generated message text*

Explanation: In any of the user exits, you requested that XOSF issue a message at the end of user exit processing.

System response: Processing continues.

User action: The action is user-defined.

XUX2627W **UNABLE TO INITIALIZE USER EXIT.** *name* **AREA GETMAIN FAILED FOR** *number of bytes* **BYTES WITH RC=X'***return code***'**

Explanation: XOSF was calling a user exit but was unable to get the amount of storage needed.

System response: XOSF processing continues as if the exit ended with a zero return code. The exit is not called.

User action: If the message is for the work area, modify the user exits to need less work area and specify a smaller work area size in the USRXITWA initialization parameter. Restart XOSF.

If the message is for the parm area, call Xerox Technical Support.

This may be an error in the size of the parameters that are input to the user exit, or it may be due to some other function causing an unusually large consumption of private region storage.

Ensure that you specified a reasonable exit work area size in the USRXITWA initialization parameter.

XUX2628W **UNABLE TO INVOKE USER EXIT NUMBER** *user exit number* **FOR TASK** *printer task name* **BECAUSE USER EXIT NUMBER** *user exit number* **IS CURRENTLY ACTIVE**

Explanation: XPAF does not support nested user exits within the same printer task because all user exits for the same printer task share a common work area and enqueue lock. The user exit cannot be invoked because another user exit is already being executed for the named printer task.

System response: The user exit that is attempting to be invoked is disabled until the executing user exit has completed processing. Document processing continues.

User action: None required. However, this warning message may be suppressed in the standard way or you can amend the executing user exit to temporarily disable the other user exit until the executing user exit completes processing.

The following assembler statement disables a specific user exit:

XC UXITXACT,=A(#EXIT*nn*) Where *nn* represents the 2-digit user exit number

The following assembler statement enables a specific user exit:

OC UXITXACT,=A(#EXIT*nn*) Where *nn* represents the 2-digit user exit number

For additional information, call Xerox Technical Support.

XV2S messages

XV2S0000(I OR E) - PRINTER XXXXXXXX - YYYYYYYYYYYYYYYYYY

Explanation: This is a XV2S generalized self-explanatory message.

System response: None.

User action: Review the message text. These messages are for informational purposes.

XV2S0001E VTAM ERROR ON XXXX RTNCD/FDBK =X'NNNN' SENSE =X'NNNN'

Explanation: A VTAM error occurred during processing which is shown in the message.

System response: None

User action: Use the return code, Feedback and sense code to diagnose the issue.

XV2S0002E UNSUPPORTED FUNCTION REQUESTED IS CCCCC

Explanation: VTAM Function is not supported.

System response: None

User action: Verify Function availability on your z/OS level and if not available contact XPAF support.

XV2S0003E DYNAMIC ALLOCATION ERROR = NNNNN

Explanation: Explanation The allocation of the SYSOUT data set that streams the VTAM data to JES SPOOL could not be allocated.

System response: None

User action: Ensure that there is no error messages on the z/OS SYSLOG showing the reason for the allocation failure. Verify that the XV2S logical printer parameters are correct. This includes ensuring that the OUTPUT descriptor used in the printer definition is actually in t XV2S JCL procedure otherwise the failure will occur.

XV2S0003I VERIFY OUTPUT DESCRIPTOR IS DEFINED IN TH E XV2S STARTED TASK JCL

Explanation: NONE

System response: The above error has occurred and this is a secondary message to help diagnose quickly what may have happened.

User action: Verify z/OS SYSLOG for failure messages at the allocation time and verify printer definition in the XV2S control file.

XV2S0004E UNABLE TO ACQUIRE 0100 BYTES OF STORAGE

Explanation: Memory acquisition by the executing program code cannot be satisfied.

System response: None.

User action: Try raising the REGION size on the XV2S JCL procedure.

XV2S0005E UNABLE TO GENERATE VTAM « TYPE »

Explanation: Unable to generate VTAM control block shown in message « TYPE ».

System response: None

User action: Look on z/OS SYSLOG to see any additional error messages to help diagnose the failure.

XV2S0006I XXXXXXXX IS AN INVALID KEYWORD FOR PRINTER

Explanation: XV2S control member has an invalid keyword in for the printer.

System response: None.

User action: Change the printer keyword that is invalid and try to start the logical printer again.

XV2S0007E ACB OPEN FAILURE FOR ACB XXXXXXXX ERROR CODE = NN

Explanation: Trying to start a XV2S logical printer has caused the OPEN for an ACB which has failed.

System response: None

User action: Verify that the ACB is defined correctly in the VTAMLST data set and check the z/OS SYSLOG for additional diagnostic messages. The Error code can also be used for diagnosis if need be.

XV2S0008I INVALID OPERATOR COMMAND ENTERED = XXXXXXXXXX

Explanation: An XV2S operator command has been given that is invalid.

System response: None.

User action: Change the invalid command and try again.

XV2S0009I INVALID PRINTER NAME IN COMMAND =

Explanation: An operator command specified an invalid printer name.

System response: None.

User action: Change the operator command to contain a valid printer name.

XV2S0051I - OPNSEC BIND SUCCESSFUL FOR PRINTER

Explanation: VTAM connection has successfully bound to the SLU from the receiver.

System response: None.

User action: None.

XV2S0052E - OPNSEC BIND FAILED FOR PRINTER

Explanation: An successful bind has occurred and requires investigation.

System response: None.

User action: There is usually z/OS SYSLOG messages showing what has caused the BIND failure; use this information to diagnose the connection issues. Additional XV2S messages will also be displayed.

XV2S0053E - SESSIONC REJECT FOR PRINTER

Explanation: A VTAM start session request has been rejected by VTAM.

System response: None

User action: There is usually z/OS SYSLOG messages showing what has caused the reject failure; use this information to diagnose the connection issues. Additional XV2S messages will also be displayed.

XV2S0054I - SESSIONC START DATA TRAFFIC FOR PRINTER

Explanation: VTAM starting process for data streaming via the logical XV2S printer.

System response: None

User action: None.

XV2S0055E - SESSIONC START DATA TRAFFIC FAILED FOR PRINTED

Explanation: VTAM streaming from the SLU was not able to start.

System response: None

User action: There is usually z/OS SYSLOG messages showing what has caused the reject failure; use this information to diagnose the connection issues. Additional XV2S messages will also be displayed.

XV2S0009I - INVALID PRINTER NAME IN COMMAND =

Explanation: An operator command specified an invalid printer name.

System response: None

User action: Change the operator command to contain a valid printer name.

XV2S1000E - NO PRINTERS TO DISPLAY

User action: XV2S control member has no valid printers started in the executing XV2S address space.

System response: None

User action: Change the printer keywords so that a printer can be started successfully in the XV2S address space.

XV2S0100I CHECKING LICENSE FOR CPUID: *cpuid*

Explanation: XV2S is checking the license string file to ensure it is valid to run on the cpuid specified.

System response: Processing continues.

User action: None. This message is for informational purposes only.

XV2S0101F INVALID CPUID: *cpuid*

Explanation: The cpuid specified in the license string is in an invalid format.

System response: XV2S Initialization fails. XV2S terminates.

User action: Correct the license string in the XV2S license string member and make sure it is the correct license string for this system.

XV2S0102F DATE NOT IN DD-MMM-YYYY FORMAT: *date*

Explanation: The date specified in the license string is in an invalid format.

System response: XV2S Initialization fails. XV2S terminates.

User action: Correct the license string in the XV2S license string member and make sure the date is in the correct format.

XV2S0103F DATE HAS INVALID MONTH: *date*

Explanation: The date specified in the license string is in an invalid format.

System response: XV2S Initialization fails. XV2S terminates.

User action: Correct the license string in the XV2S license string member and make sure the date is in the correct format.

XV2S0104F LICENSE STRING NOT IN HEX FORMAT: *licensestring*

Explanation: The license string specified in the license string is in an invalid format.

System response: XV2S Initialization fails. XV2S terminates.

User action: Correct the license string in the XV2S license string member and make sure the string is in the correct format, 28 Hexadecimal characters

XV2S0105F INVALID FEATURE: *feature*

Explanation: The feature specified in the license string is incorrect for XV2S.

System response: XV2S Initialization fails. XV2S terminates.

User action: Correct the feature in the XV2S license string member and make sure the string is in the correct format, XPAF_V2S.

XV2S0106F INVALID LICENSE STRING MEMBER.

Explanation: The license string member does not contain a recognizable license string,

System response: XV2S Initialization fails. XV2S terminates.

User action: Verify that the XV2S license string member, pointed to by the LICENSE DD card in the XV2S started task procedure, contains a valid license string. If so, contact Xerox technical support.

XV2S0107F LICENSE STRING CPUID DOES NOT MATCH: *cpuid*

Explanation: The cpuid specified in the license string does not match the CPUID of the current system.

System response: XV2S Initialization fails. XV2S terminates.

User action: Correct the license string in the XV2S license string member and make sure it is the correct license string for this system.

XV2S0110F INPUT LICENSE FILE OPEN FAILURE

Explanation: XV2S was unable to open the license file dataset,

System response: XV2S Initialization fails. XV2S terminates.

User action: Verify that the XV2S license string member, pointed to by the LICENSE DD card in the XV2S started task procedure, contains a valid license string. If so, contact Xerox technical support.

XV2S0111F CORRECT JCL TO POINT TO LICENSE MEMBER

Explanation: XV2S was unable to open the license file dataset,

System response: XV2S Initialization fails. XV2S terminates.

User action: Verify that the XV2S license string member, pointed to by the LICENSE DD card in the XV2S started task procedure, contains a valid license string. If so, contact Xerox technical support.

XV2S0112F CSRSI - FAILED TO LOAD MODULE CSRSI

Explanation: XV2S was unable to load IBM module CSRSI in order to obtain the CPUID of the current system.

System response: XV2S Initialization fails. XV2S terminates.

User action: Contact Xerox Technical Support.

XV2S0113F MEMORY ACQUISITION FAILURE

Explanation: XV2S was unable to acquire storage for an internal work area.

System response: XV2S Initialization fails. XV2S terminates.

User action: Increase the region size available to the started task.

XV2S0114F CORRECT JCL TO ENLARGE REGION SIZE

Explanation: XV2S was unable to acquire storage for an internal work area.

System response: XV2S Initialization fails. XV2S terminates.

User action: Increase the region size available to the started task.

XV2S0191F INVALID LICENSE: *licensestring*

Explanation: The license string in the license string member is incorrect.

System response: XV2S Initialization fails. XV2S terminates.

User action: Check the license string in the XV2S license string member and make sure it is the correct license string for this system.

XV2S0192W WARNING: LICENSE EXPIRED ON *date. nn* **DAYS LEFT IN GRACE PERIOD**

Explanation: The license string in the license string member has expired and the system is running in a 30 day grace period. XV2S will cease to work in nn days time

System response: Processing continues.

User action: Contact Xerox Technical support and make sure you have a new license before the grace period expires.

XV2S0193F EMERGENCY LICENSE EXPIRED ON *date*

Explanation: The emergency license string in the license string member has expired.

System response: XV2S Initialization fails. XV2S terminates.

User action: Contact Xerox Technical support to obtain a new license string.

XV2S0194F LICENSE EXPIRED ON *date.* **GRACE PERIOD HAS EXPIRED**

Explanation: The license string in the license string member expired more than 30 days ago.

System response: XV2S Initialization fails. XV2S terminates.

User action: Contact Xerox Technical support to obtain a new license.

XV2S0195W WARNING: LICENSE WILL EXPIRE ON *date. nn* **DAYS REMAINING**

Explanation: The license string in the license string member is about to expire. It will expire in nn days time on date

System response: Processing continues.

User action: Contact Xerox Technical support and make sure you have a new license before the current license expires

XV2S0196I LICENSE WILL EXPIRE ON *date*

Explanation: A valid license string has been found that will expire on the supplied date

System response: Processing continues.

User action: None

XVW messages

XVW0724E LDM ENCOUNTERED AN ERROR TRYING TO *activity*

Explanation: The VTAM writer attempted to access the RMTTBL member in XINPARM, but encountered an error from LDM.

System response: VTAM writer initialization fails. The printer is drained.

User action: Refer to the preceding LDM error messages for more detailed information about the problem. Correct the error, then restart the printer.

XVW3010F COULD NOT GET X'*storage size***' BYTES OF MEMORY** *control block*

Explanation: The VTAM writer could not allocate storage for the identified control block. Control block is one of these items:

- VTAM writer common area
- RJE session control blocks
- RJE remote table entry
- RJE device chain entry

System response: VTAM writer initialization fails. The printer is drained.

User action: Specify a larger value for the REGION parameter in the XOSF start-up proc, then restart the printer.

XVW4004F *module name* **DETECTED AN INVALID** *control block name* **CONTROL BLOCK AT LOCATION X'***address***'**

Explanation: The VTAM writer determined that the named control block at the identified location was not valid or had been corrupted.

System response: Document processing is terminated. The printer is drained.

User action: Call Xerox Technical Support.

XVW4153E MEMBER *member name* **NOT FOUND IN LIBRARY** *library name*

Explanation: The VTAM writer attempted to access the member specified by the RMTTBL initialization parameter, but the member was not found.

System response: VTAM writer initialization fails. The printer is drained.

User action: Ensure that the member specified by the RMTTBL initialization parameter exists in XINPARM and contains the appropriate RJE definition statements. Restart the printer.

XVW7009F *module name* **RECEIVED AN INVALID FUNCTION REQUEST CODE. FUNCTION=C'***command***' OR X'***command***'**

Explanation: This is an internal error. This message may indicate incompatible communications specifications.

System response: Document processing is terminated. The printer is drained.

User action: If you are using either the 871 CM or BARR/SNA RJE to remotely attach a centralized printer to the host, ensure that the printer's profile specifies XNS=NO. In the printer's profile, the default is XNS=YES because centralized printers are normally channel-attached.

XVW7301F **CANNOT FIND DSC CONTROL TABLE** *table name*

Explanation: The load module containing the VTAM writer data stream integrity tables could not be located.

System response: VTAM writer initialization fails. The printer is drained.

User action: Call Xerox Technical Support.

XVW7302F **COULD NOT INITIALIZE VTAM EXITS. RC=X'***return code***'**

Explanation: The load module containing the VTAM exit routines could not be located.

System response: VTAM writer initialization fails. The printer is drained.

User action: Call Xerox Technical Support.

XVW7303A **INTERVENTION REQUIRED ON PRINTER** *printer name*

Explanation: The named printer returned an I/R response to a SEND function.

System response: The VTAM writer waits for a signal from the printer indicating that the I/R condition has been cleared. When the condition has been cleared, sending resumes.

User action: Resolve the I/R condition at the printer.

XVW7304F **CANNOT INITIALIZE PRINTER** *printer name* **BECAUSE VTAM IS NOT INITIALIZED**

Explanation: The named printer could not be initialized because the XOSF VTAM interface was not activated, possibly because an ACB name was not specified in the initialization parameters.

System response: The printer is drained.

User action: Ensure a VTAM ACB has been defined for XOSF and specified in the ACB initialization parameter in the XINSXOSF member of XINPARM. Restart the printer.

XVW7305F #WAKEUP COULD NOT BE PERFORMED FOR SHARED DEVICE. RC=X'*return code***'**

Explanation: The VTAM writer attempted to start a session with a printer that was already in session. A failure occurred when the VTAM writer attempted to set a timer to retry session start-up.

System response: Document processing is terminated. The printer is drained.

User action: Call Xerox Technical Support.

XVW7306F VTAM *function* **ERROR OCCURRED** *activity device-class device-name*

Explanation: The indicated VTAM function ended in error. *Function* is one of these requests to VTAM:

- SIMLOGON
- OPNDST
- CLSDST
- SEND
- RECEIVE

Activity, which identifies what XOSF was attempting to do with the VTAM function, is one of these actions:

- while creating session (SIMLOGON)
- while binding session (OPNDST)
- while ending session (CLSDST
- while sending data (SEND)
- while receiving data (RECEIVE)

Device-class is either PRINTER or REMOTE.

Device-name is the printer name or remote name.

System response: If *device-class* is PRINTER, the indicated printer is drained. If *device-class* is REMOTE, the operation in progress at that remote is terminated. Message XVW7311F, which follows, provides more information about the failing VTAM function.

User action: Retry the operation that caused the failure. If the failure persists, take the course of action appropriate to the return codes and sense codes presented in message XVW7311F.

XVW7307F NO SUPPORT FOR PRINTER COMMAND LANGUAGE *pcl type* **THROUGH CONVERTER** *converter type* **IN** *lu type* **MODE**

Explanation: The VTAM writer attempted to initialize a remotely-attached printer, but the printer's profile specified an unsupported combination of PCL, converter, and LU type.

Or, you have attempted to send a document type through a converter/LU type combination that cannot support the specified type of printer command language.

System response: The printer is drained.

User action: Ensure the printer is defined with the appropriate printer command language for the configuration you are using, then restart the printer.

XVW7308F **COULD NOT** *activity* **ACB** *name*, **ERROR=X'***error code***'**

Explanation: During ACB OPEN/CLOSE processing, the indicated error was received by the VTAM writer.

System response: VTAM writer initialization fails. The printer is drained.

User action: If you have an OPEN error, look up the error code in the *VTAM Messages and Codes*. Check the ACB and XPSMAPPL initialization parameters to ensure they are defined, and match the VTAM definition.

XVW7309F **COULD NOT GENERATE** *resource* **CONTROL BLOCK. RC=X'***vtam return code***'; IC=X'***information code***'**

Explanation: The VTAM GENCB macro returned an error while attempting to generate the named control block. *Resource* is either RPL or NIB.

System response: Document processing is terminated. The printer is drained.

User action: Return code errors are documented by IBM in the *VTAM Messages and Codes*. Look up the specified return code and take the necessary corrective action. Restart the printer.

XVW7310F **COULD NOT LOCATE FSA GLOBAL DATA AREA FOR PRINTER** *printer name*

Explanation: This error occurs for printers participating in device sharing. For the named printer, the ECB used to retry device allocation could not be found.

System response: The printer is drained.

User action: Call Xerox Technical Support.

XVW7311F **SLU=***slu name*, **RTNCD-FDBK2=X'***rtncd-fdbk2***' (***rtncd-fdbk2 meaning***), SENSE=X'***sense***' (***sense meaning***)**

Explanation: This message may accompany message XVW7306F. It provides more information about the failing function.

System response: Document processing is terminated. The printer is drained.

User action: RTNCD-FDBK2 return code errors and sense codes are documented by IBM in the *VTAM Messages and Codes*. Look up the codes specified in the message and take the necessary corrective action. Restart the printer.

XVW7312F **ERROR RECEIVED FROM SETLOGON FOR ACB** *acb name*. **RTNCD-FDBK2=X'***rtncd-fdbk2***', SENSE=X'***sense***'**

Explanation: The VTAM writer could not enable the indicated ACB for logons.

System response: VTAM writer initialization fails. The printer is drained.

User action: RTNCD-FDBK2 return code errors are documented by IBM in the *VTAM Messages and Codes*. Sense codes are documented in *SNA Formats*. Look up the codes specified in the message and take the necessary corrective action. Restart the printer.

XVW7313F **PRINTER** *printer name* **IS PROFILED TO SUPPORT AN RJE PRINTER, BUT NO REMOTE ASSOCIATION EXISTS**

Explanation: The VTAM writer attempted to initialize the named printer. The printer profile for this printer indicates that it operates under extended BARR/SNA RJE support; however, the RMTTBL member in XINPARM does not contain an association to this printer.

System response: The printer is drained.

User action: Use the SELECT keyword in the JES2 initialization statements within the RMTTBL member to supply the correct association from the RMTTBL to this FSA printer. Restart the printer.

XVW7314F **PRINTER** *printer name* **IS PROFILED TO SUPPORT AN RJE PRINTER ON REMOTE** *remote name* **BUT** *remote name* **IS NOT ACTIVE**

Explanation: The VTAM writer attempted to initialize the named printer. A RMTTBL association was found for this printer, but the remote workstation was not active.

System response: The printer is drained.

User action: Ensure that the XOSF address space is active. To do so, verify that at least one XOSF-controlled printer has been started. The started printer does not have to be a BARR/SNA RJE-attached printer. The next time the BARR/SNA RJE workstation attempts to log on to XOSF, all printers defined in the RMTTBL member in XINPARM will be started.

Do not start and stop FSA printers defined for extended BARR/SNA RJE support. These printers are started and stopped automatically when the workstation logs on and logs off.

XVW7315I **REMOTE** *remote name status product*

Explanation: The named remote workstation system is either logging on to or logging off from XOSF.

System response: If the remote workstation is logging on to XOSF, associated FSA printers are started. If the remote is logging off from XOSF, active associated FSA printers are drained.

User action: None required.

XVW7316E **COULD NOT ALLOCATE SESSION FOR RJE PRINTER** *printer name*

Explanation: XOSF attempted to perform document initialization for the named FSA printer, whose profile indicates it supports extended BARR/SNA RJE. The associated remote workstation was active, but no sessions were available for transmitting the current document.

System response: Document processing is terminated, and the document is held on the JES spool.

User action: XOSF creates control blocks for the number of supported sessions based on the NUMPRT and NUMRDR parameter values specified in the JES2 initialization statements in the RMTTBL member in XINPARM. Ensure that the number of sessions supporting this remote workstation is adequate.

XVW7317E LOGON FROM REMOTE *remote name* **IS REJECTED DUE TO** *reason*

Explanation: An error occurred processing a remote logon. If *reason* is “UNKNOWN RMT,” the remote name defined in the RMTTBL did not match the remote name from the logon. If *reason* is “INVALID PASSWORD,” the password defined in the RMTTBL for the named remote did not match the password from the logon.

System response: The remote session is terminated.

User action: Ensure that the remote name or password specified in the RMTTBL member in XINPARM matches the remote name or password specified in the RJE Description in the BARR/SNA RJE software.

XVW7318E PRINTER *printer name* **DRAINED DUE TO LOST VTAM SESSION**

Explanation: The named printer was drained because its supporting VTAM session was terminated or lost.

System response: Processing for any document that was in transit to the printer is terminated. The document is requeued, and the printer is drained.

User action: Determine the cause of the lost VTAM session and take whatever action is needed to reestablish the session. Restart the printer to reestablish the session.

XVW7319I PRINTER *printer name* **IS BUSY**

Explanation: A document could not be sent to the named printer because the printer was busy processing another request.

System response: When the printer becomes available, the document will be transmitted.

User action: None required.

XWR messages

XWR0203E **THM ERROR IN MODULE** *module name*. **CMD=***command*; **IC=X'***thm-information code*'; **RC=X'***thm-return code*'

Explanation: While attempting to process an XPAF VSAM dataset, an unexpected error was encountered. Other messages are usually issued along with this message to further identify the operation that failed.

System response: The current operation is terminated.

User action: Verify that all of the required XPAF libraries are present and not corrupted. If you believe you are receiving this message in error, call Xerox Technical Support.

XWR1505E *abend code* **ABEND. PSW=***pswdata*; **ILC=***instruction length code*; **INTC=***interrupt code*

Explanation: ESTAE processing has trapped an abend. Messages XWR1506E, XWR1507E, and XWR1508E further describe the abend.

System response: Document processing is terminated.

User action: Record all available information, including this and any other messages, and call Xerox Technical Support.

XWR1506E **ACTIVE LOAD MODULE=***module name*, **ADDRESS=***address*, **OFFSET=***offset*

Explanation: ESTAE processing has trapped an abend. This message identifies the load module, its load point, and the offset from the load point of the abending instruction.

System response: Document processing is terminated.

User action: Record all available information, including this and any other messages, and call Xerox Technical Support.

XWR1507E **DATA AT PSW ADDRESS,** *pswdata pswdata pswdata*

Explanation: ESTAE processing has trapped an abend. This message identifies the data at the abending instruction.

System response: Document processing is terminated.

User action: Record all available information, including this and any other messages, and call Xerox Technical Support.

XWR1508E *gpr register number, register number contents contents contents contents*

Explanation: ESTAE processing has trapped an abend. This message identifies the contents of the general purpose registers at the time of the abend.

System response: Document processing is terminated.

User action: Record all available information, including this and any other messages, and call Xerox Technical Support.

XWR1601E *module name* **RECEIVED AN INVALID PIPELINE CALL TYPE OF** *request*

Explanation: A pipeline processor passed a request through the pipeline that should have been made as a direct call. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR3018E **COULD NOT ACQUIRE TCB** *activity***. THM RC=X'***return code***'**

Explanation: This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR4354E **CHECKPOINT (#CKPT) FAILED IN MODULE** *module name*

Explanation: Checkpoint processing failed for the document.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7101E *module name* **RECEIVED AN INVALID REQUEST OF** *invalid request*

Explanation: An incorrect function request was made to the named module. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7113E **DEVICE DOES NOT USE XNS. REQUEST=***request*

Explanation: XOSF attempted to send an XNS document to a printer that is not running in XNS mode.

System response: Document processing is terminated.

User action: Restart the printer in XNS mode. If the problem persists, call Xerox Technical Support.

XWR7114E **NO OUTPUT DEVICE DEFINED FOR DOCUMENT. REQUEST=***request*

Explanation: No physical device is available for this document. In the printer's profile, either no value was specified for the WRITER parameter for a centralized printer or WRITER=(REMOTE,ONLY) was specified for a decentralized printer.

System response: Document processing is terminated.

User action: Verify that the WRITER printer profile parameter specifies either a valid printer name or the file or DISK option. Or, add the OPWRITER parameter to the JCL of the failing job.

XWR7115E PREVIOUS FILING REQUEST NOT COMPLETE. REQUEST=*request*

Explanation: The XNS filing request was not completed before another XNS request was made. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7116E XFDB ADDRESS IS ZERO FOR REQUEST=*request*

Explanation: A pipeline processor made a PUT request without supplying the address of the XFDB. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7117E XNS IS OFF FOR THIS DOCUMENT. REQUEST=*request*

Explanation: An XNS filing request was made for a document that is not using XNS. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7118E OUTPUT TO FILE/DISK ERROR. REQUEST=*request*

Explanation: An error occurred while trying to write to a file or disk dataset. To determine the exact cause of the error, see the explanation for the XTW message(s) issued along with this message.

System response: Document processing is terminated.

User action: See the user action for the accompanying XTW message(s).

XWR7119E INVALID XPPDRQ REQUEST BLOCK

Explanation: A pipeline component made a direct call to XWR with an invalid request control block. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7120E GETFILE INPUT AREA TOO SMALL FOR XNS FILE TRANSFER

Explanation: A pipeline component made a direct call to XWR for a file transfer but did not supply a large enough input area.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7121E LISTFILE INPUT AREA TOO SMALL FOR XNS RETRIEVAL

Explanation: A pipeline component made a direct call to XWR for a file directory list but did not supply a large enough input area. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7122E PUTFILE AREA NOT GIVEN FOR XNS FILE TRANSFER

Explanation: A pipeline component made a direct call to XWR for a file transfer but did not supply an output file area address. This is an internal error.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7123E DDNAME=*ddname***, LIST=***list name*

Explanation: A THM error has occurred. This message supplies additional information about the file being processed when the error occurred. The actual error is identified in message XWR7403E.

System response: Document processing is terminated.

User action: If possible, correct the problem. If the problem persists, call Xerox Technical Support.

XWR7202E COULD NOT GET SUFFICIENT MEMORY *activity*

Explanation: A get memory request failed.

System response: Document processing is terminated.

User action: Call Xerox Technical Support.

XWR7402E ERROR CREATING XNS PROTOCOL TO *activity file name* **FILE**

Explanation: An error occurred while initializing the printer. The correct file handle was not available.

System response: Document processing is terminated.

User action: Drain and restart the printer. The file handles are established during printer initialization.

XWR7403E RESPONSE FROM DEVICE = *response***. REASON CODE=***reason code activity*

Explanation: The printer responded to an XNS procedure with an unexpected response.

System response: Document processing is terminated.

User action: Determine the problem (usually at the printer) from the text of the message.

XWR7404E FILE=*file***, DIR=***directory*

Explanation: An XNS filing request was terminated by the printer. This message supplies additional information about the file being processed when the error occurred. The actual error is identified by XWR7403E.

System response: Document processing is terminated.

User action: If possible, correct the problem. If the problem persists, call Xerox Technical Support.

XXQ messages

XXQ3010E COULD NOT GET *number of bytes* **BYTES OF MEMORY WHILE BUILDING PAL**

Explanation: XOSF could not acquire the necessary bytes of memory while building the PAL. There is a shortage of storage in the XPAF address space.

System response: Document processing is terminated, and the document is requeued on the JES spool.

User action: Shut down XPAF, then rerun it with a larger REGION size.

XXQ3011E COULD NOT RELEASE *number of bytes* **BYTES OF MEMORY FROM LOCATION X'***address***' WHILE BUILDING PAL**

Explanation: After processing a document, XOSF attempted to release storage that it acquired for the PAL. However, XOSF encountered an error when trying to return the storage to the Free Storage Segment Block.

System response: Document processing is terminated, and the document is requeued on the JES spool.

User action: Call Xerox Technical Support.

XXQ3610E PAL PROCESSOR *processor name* **IS UNDEFINED. PAL BUILDING ABORTED**

Explanation: XOSF could not construct the PAL for this document or device type because a PAL processor called by the PAL#XPAF table is not defined in the processor table (XOSFXPAF) that was loaded by system initialization.

System response: Document processing is terminated, and the document is requeued on the JES spool.

User action: Call Xerox Technical Support.

XXQ3611E PAL PROCESSOR *processor name* **IS MISSING. PAL BUILDING ABORTED**

Explanation: XOSF could not construct the PAL for this document or device type. A PAL processor that was called by the PAL#XPAF table is defined in the processor table (XOSFXPAF) but was not loaded during system initialization.

System response: Document processing is terminated, and the document is requeued on the JES spool.

User action: Ensure no errors occurred during system initialization, then call Xerox Technical Support.

XXQ3612E CANNOT FIND SUPPORTING PAL FOR DOCUMENT TYPE *document type* **AND PRINTER COMMAND LANGUAGE** *pcl type*

Explanation: The *document type* and *pcl type* combination does not have a corresponding entry in the PAL. One of these conditions exists:

- The printer does not support the type of document. For example, you cannot send an XES document to a 9700 printer.
- The printer supports multiple command languages, but the document being printed is not valid for the PCL printer profile parameter setting.

Document type can be one of the following:

- AFPX(Page-formatted to Metacode)
- AFPA(AFP to Metacode)
- DJDE(Dynamic Job Descriptor Entry)
- JCL(XPAF extended JCL)
- NM(Line-mode)
- XES(Xerox Escape Sequence)

pcl type can be one of the following:

- DJDE
- META
- PCL
- XES

System response: Document processing is terminated, and the document is requeued on the JES spool.

User action: Verify that the printer can support the document type you are trying to print. If the printer supports multiple command languages, make sure the PCL printer profile parameter is set correctly for the printer and the type of documents you are trying to print.

Section Seven: XPAF Operator Guide

This section describes the JES2, JES3, XPAF-exclusive, and XDS-exclusive operator commands that host console operators are likely to use when printing with XPAF. Read this section if you are a console operator, system administrator, systems programmer, or anyone else who uses XPAF operator commands.

Before you begin to use XPAF's operator commands, verify that XPAF has been installed and that the installation verification procedures (IVPs) can be run successfully.

As a user of XPAF's operator commands, ensure that printers have been set up correctly and are using the proper switch settings.

46. JES2 printer commands

XPAF recognizes most standard IBM JES2 commands and their uses. You can enter JES2 commands from the operator console to perform many functions, including:

- Starting a printer
- Halting a printer
- Stopping or draining a printer
- Restarting a printer
- Interrupting a printer
- Displaying a printer's status
- Setting printer characteristics
- Retransmitting a document
- Releasing a print job from the JES queue
- Canceling a document being transmitted from JES

Only printer-related JES2 commands that are supported by XPAF are described in this chapter. When you enter these commands, *nnnn* refers to the printer ID number unless otherwise specified. For information about other JES2 commands not listed in this chapter, refer to the appropriate IBM z/OS JES2 commands publication.

When working in a TCP environment, you must issue an LPR command instead of certain printer commands, like CANCEL and RESTART. Refer to your vendor's TCP documentation for valid command syntax.

Starting a printer

If XOSF is not currently active, this command starts XOSF from a cataloged procedure.

Syntax $S PRT*nnnn*

Example $S PRT1900

Message issued The console displays a message similar to this:

```
XDI3423I     (PRT1900) FSA CONNECTED TO JES
```

Related information For centralized printers, JES issues the $HASP190 SETUP message if you specify SETUP=Y in the initialization parameters and/or printer profile parameters under either of these circumstances:

- In response to the $S PRT*nnnn* command
- When a FORMS change is encountered in the JCL

The JES message looks similar to this:

```
$HASP190    XPAFJOB   SETUP - PRT01  - F = STD
```

To continue, issue the $S PRT*nnnn* command.

Halting a printer

After you issue this command, no other transmission is scheduled for this printer.

Syntax $Z PRT*nnnn*

Example $Z PRT1900

NOTE: If you issue a start printer command ($S PRT*nnnn*), transmission resumes at the point where the document was halted.

Messages issued The console displays standard JES messages.

Stopping or draining a printer

This command stops the printer after JES finishes transmitting the current document. However, this command does not affect other printers and does not stop XOSF processing.

Syntax $P PRT*nnnn*

Example $P PRT1900

Messages issued The console displays messages similar to these:

XDI3449I FSA HAS BEEN REQUESTED TO TERMINATE FOR (PRT1900)

XDI3435I FSA DISCONNECTING FOR DEVICE (PRT1900)

Restarting a printer

The point at which a document resumes printing when a printer is restarted is dependent on the document and printer type. XPAF supports a checkpoint restart for DJDE, page-formatted, and AFP documents directed to centralized, decentralized, and PCL-capable printers. Processing resumes from the most recent checkpoint as specified by the CKPTPAGE IBM JCL keyword. For more information on checkpoint restart processing, refer to *Section Four: Printing Documents with XPAF*.

XPAF only supports the CKPTPAGE option for checkpoint restart. Review the CKPTPAGE JES printer definition parameter and/or the CKPTPAGE IBM JCL keyword for the checkpoint interval setting for your printer and/or document. For more information on the CKPTPAGE IBM JCL keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Syntax $S PRT*nnnn*

Example $S PRT1900

Message issued The console displays a message similar to this:

XDI3423I (PRT1900) FSA CONNECTED TO JES

Displaying a printer's status

The operands available for this command are described in the appropriate IBM z/OS JES2 commands publication.

Syntax $DU,PRT*nnnn*

Example $DU,PRT1900

Messages issued The console displays standard JES messages.

Setting printer characteristics

JES2 accepts this command and makes the appropriate changes to the printer's setting. The new setting remains in effect until the printer is restarted or the characteristics are changed again. The various operands available for this command are described in the appropriate IBM z/OS JES2 commands publication.

Syntax $T PRT*nnnn*,*operand(s)*

Example $T PRT1900,F=STD1

Messages issued The console displays standard JES messages.

Related information When entering the setting printer characteristics command for printers in XPSC-compatibility mode, the following operands apply:

Operand	Result
F=*forms*	This value is passed to the XPSM server.
MODE=FSS	This value must be FSS.
PLIM={ *m* | *m-n* | *m-** }	This value is not used by XPAF, but does have an effect on JES2 job scheduling.
Q=*c*1[...*c*15]	This value is the number of copies, and is passed to the server.
SEP={ YES | NO }	This value is used to generate banner pages between jobs.
SEPDS={ YES | NO }	This value is used to generate banner pages between datasets.

NOTE: Using other operands when in XPSC-compatibility mode may cause unpredictable results. These operands are described in the appropriate z/OS JES2 commands publication.

Interrupting a document

This command stops current printing and requeues the untransmitted portion of the document to the JES spool.

Syntax $I PRT*nnnn*

Example $I PRT1900

Messages issued The console displays messages similar to these:

XDI3419I PRT1900 JOB2613 SYSUT2 IMPRESSIONS=1 PAGES=1 ETIME=.4

XDI3484E JOB JOBAA99999 JOB25932 STEP GO DDNAME SYSUT2 ON PRT1900 INCOMPLETE AND REQUEUED

XSL720EI JOB25941 JOBCA3965 PRINTING INTERRUPTED BY OPERATOR

Restarting a document

This command restarts the printer from the beginning of the document.

Syntax $E PRT*nnnn*

Example $E PRT1900

Messages issued The console displays messages similar to these:

XDI3419I PRT1900 JOB2613 SYSUT2 IMPRESSIONS=1 PAGES=1 ETIME=.4

XSL720EI JOB25941 JOBCA3965 PRINTING RESTARTED BY OPERATOR

Backspacing a document

This command backspaces a document the number of pages specified.

Syntax $B PRT*nnnn*,*pages*

where

nnnn is the printer ID number.
pages is the number of pages to backspace a document.

Example $B PRT1900,16

Messages issued The console displays standard JES messages.

XSL720EI JOB25941 JOBCA3965 PRINTING BACKSPACED BY OPERATOR

XCC6422I PRT1900 BACKSPACED TO PAGE 20

Forward spacing a document

This command forward spaces a document the number of pages specified.

Syntax $F PRT*nnnn*,*pages*

where

nnnn is the printer ID number.

pages is the number of pages to forward space a document.

Example $F PRT1900,16

Messages issued The console displays standard JES messages.

XSL720EI JOB25941 JOBCA3965 PRINTING FORWARD SPACED BY OPERATOR

XCC6422 PRT1900 FORWARD SPACED TO PAGE 20

Retransmitting a document

This command signals JES to retransmit the document from the JES spool, starting with page one, when the current copy is printed.

Wait until the initial copy of the document has begun printing before issuing this command.

Syntax $N PRT*nnnn*

Example $N PRT1900

Messages issued The console displays standard JES messages.

Releasing a print job from the JES queue

After you issue this command, a job can be rescheduled for printing.

Syntax $O J*nnnnn*

where

nnnnn is the job number.

Example $O J51422

Messages issued The console displays standard JES messages.

Canceling a document being transmitted from JES

This command cancels the document being transmitted from JES.

NOTE: With buffered devices, it may be difficult to determine the point of cancellation.

Syntax $C PRT*nnnn*

Example $C PRT1900

Message issued The console displays a message similar to this:

XSL720EI JOB25941 JOBRK54486 PRINTING CANCELED BY OPERATOR

47. JES3 printer commands

XPAF recognizes most standard IBM JES3 commands and their uses. You can enter JES3 commands from the operator console to perform many functions, including:

- Starting an XPAF FSS for JES3
- Starting a printer
- Terminating a printer
- Interrupting and retransmitting a document
- Canceling output
- Querying JES3 for job information

Only the printer-related JES3 commands that are supported by XPAF are described in this chapter. For information about other JES3 commands not listed in this chapter, refer to the appropriate IBM z/OS JES3 commands publication.

When you enter these commands, *device-name* is the printer designated in the initialization stream. For XPAF, always assign a printer as the device.

When working in a TCP environment, you must issue an LPR command instead of certain printer commands, like CANCEL and RESTART. Refer to your vendor's TCP documentation for valid command syntax.

Starting an XPAF FSS for JES3

These commands cause JES3 to call an output writer. This output writer controls the XPAF FSS, which in turn controls the specified printer.

An XPAF printer should be run as a JES3 hot writer.

Syntax

*CALL,WTR,OUT=*device-name*,NAV=R

or

*X,WTR,OUT=*device-name*,NAV=R

Example

*CALL,WTR,OUT=PRT1900,NAV=R

Messages issued

The console displays standard JES messages.

Starting a printer

This command starts a printer associated with the XPAF FSS.

Syntax *VARY,*device-name*,ONLINE

Example *V,PRT1900,ON

Messages issued The console displays messages similar to these:

XIN0015I XPAF V3R0 INITIALIZATION COMPLETE

XDI3402I XP59 XOSF FSS CONNECTED TO JES3

XDI3423I PRT1900 FSA CONNECTED TO JES3

Terminating a printer

Any of these commands terminates the printer and the specified FSS after the current activity is finished.

Syntax *CALL,WTR,OUT=*device-name*,T

*X,WTR,OUT=*device-name*,T

*START,*device-name*,T

*RESTART,*device-name*,T

*CANCEL,*device-name*,T

Example *S,PRT1900,T

Messages issued The console displays messages similar to these:

XDI3435I FSA DISCONNECTING FOR DEVICE (PRT1900)

XDI3405I XP59 XOSF ADDRESS SPACE ENDING

Interrupting and retransmitting a document

You can use any of several JES3 *RESTART command options to stop and restart document transmission to a specified printer. XPAF supports a checkpoint restart for DJDE, page-formatted, and AFP documents directed to centralized, decentralized, PCL-capable printers and when converting to PDF. Processing resumes from the most recent checkpoint as specified by the CKPTPAGE IBM JCL keyword. For more information on checkpoint restart processing, refer to *Section Four: Printing Documents with XPAF*.

XPAF only supports the CHKPTPAGE option for checkpoint restart. Review the CKPTPAGE JES printer definition parameter and/or the CKPTPAGE IBM JCL keyword for the checkpoint interval setting for your printer and/or document. For more information on the CKPTPAGE IBM JCL keyword, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Syntax

.

*RESTART,*device-name*,{ N | C | J }

where

N Halts the current document transmission and requeues it for subsequent transmission.

C Halts the current transmission and restarts printing the document from the last checkpoint.

J Halts the current transmission and requeues all completed datasets to JES3 for rescheduling.

Example

*R,PRT1900,N

Messages issued

The console displays messages similar to these:

XDI3419I PRT1900 JOB2613 SYSUT2 IMPRESSIONS=1 PAGES=1 ETIME=.4

XDI3484E JOB JOBAA99999 JOB25932 STEP GO DDNAME SYSUT2 ON PRT1900 INCOMPLETE AND REQUEUED

XSL720EI JOB25941 JOBCA3965 PRINTING INTERRUPTED BY OPERATOR

Backspacing or forward spacing a document

These commands backspace and forward space a document the number of pages specified.

Syntax

*RESTART,*device-name*,R={ *-nnnn*P | *nnnn*P }

where

device-name	The printer designated in the initialization stream.
*-nnnn*P	Backspaces a document the number of pages specified.
*nnnn*P	Forward spaces a document the number of pages specified.

Example

*R,PRT1900,R=-16P

Messages issued

The console displays messages similar to these:

XSL720EI JOB25941 JOBCA3965 PRINTING BACKSPACED BY OPERATOR

XCC6422I PRT1900 BACKSPACED TO PAGE 20

Canceling output

When this command is issued, the document which is being transmitted is canceled, not the document which is currently printing.

Syntax

*CANCEL,*device-name*

Example

*C,PRT1900

Message issued

The console displays a message similar to this:

XSL720EI JOB25941 JOBCA3965 PRINTING CANCELED BY OPERATOR

Querying JES3 for job information

These commands display information about jobs in the output service writer queue.

Syntax

- To display information about output datasets, enter this command:

  *INQUIRY,U,Q=WTR,*parms*

- To display job status information, enter this command:

  *INQUIRY,J={ *job-name* | *job-number* }

- To display device status information, enter this command:

  *INQUIRY,D,D=*device-name*

Example

*I,D,D=PRT1900

Messages issued

The console displays standard JES messages.

48. XPAF-exclusive operator commands

In addition to the standard IBM JES2 and JES3 commands, you also can use a set of unique XPAF operator commands to control printer-related functions. These XPAF-exclusive commands operate as options of the z/OS MODIFY command.

From the operator console, you can enter XPAF-exclusive commands to perform many functions, including:

- Displaying the subsystem name for an XOSF started task
- Displaying the status of active print jobs
- Displaying the status of active tasks
- Terminating an individual task on the printer
- Terminating the XPAF FSS
- Forcing the XOSF address space to terminate
- Turning SMF recording on and off
- Turning z/OS system logging on and off
- Turning XOSF logging on and off
- Refreshing the XLOG dataset
- Switching the XLOG to an alternate dataset
- Displaying the active XLOG
- Turning intensive logging on and off
- Enabling/Suppressing messages

The functions and their related operator commands are discussed in this chapter.

Displaying the subsystem name for an XOSF started task

This command displays the subsystem name for a task started by XOSF.

Syntax MODIFY *xosf-jobname*,DISPLAY { SUBSYS | SID }

Example F XP59,DIS SUBSYS

Message issued When you execute either of these commands, the console displays a message similar to this:

```
XDI3499I     XPAF5 SUBSYSTEM NAME: XPF5
```

where

XPAF5 is the procedure name of the started task, and XPF5 is the subsystem name specified for XOSF in the SUBSYS initialization parameter. Each active XOSF is assigned a unique name. For more information about the SUBSYS initialization parameter, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Displaying the status of active print jobs

This command displays the status of an XOSF print job from the operator console.

Syntax MODIFY *xosf-jobname*,DISPLAY ACTIVE JOBS

Example F XP59,DIS ACT JOB

Messages issued The console produces a display similar to this:

```
XDI3460I TASK-ID  DOCUMENT-ID     TOT-REC PR-REC T-PAGE P-PAGE
XDI3460I PRT15    JOB 2258LINEMODE    120     97      0      2
XDI3460I PRT16    *INACTIVE*
XDI3460I PRT17    JOB 2260AFPMODE       0    141      9      7
XDI3460I DISPLAY ACTIVE JOBS COMMAND COMPLETED
```

where

TASK-ID The name of the printer to which the job was sent.

DOCUMENT-ID The 16-character document identifier that consists of the job number and the job name. If no document is being processed, this field indicates that the printer is inactive.

TOT-REC The total number of records as reported by JES. Table 48-1 describes the contents of this field for line-mode and page-formatted jobs processed in JES2 and JES3 environments.

PR-REC The number of records sent to the printer.

T-PAGE The total number of pages as reported by JES. Table 48-1 describes the contents of this field for line-mode and page-formatted jobs processed in JES2 and JES3 environments.

P-PAGE The number of pages sent to the printer.

Table 48-1. TOT-REC and T-PAGE values reported by JES

Subsystem	Job mode	Message field	
		TOT-REC	T-PAGE
JES2	Line-mode	Actual number of records	Always 0
	Page-formatted	Actual number of records	The number of BEGIN PAGE structured fields (D3A8AF)
JES3	Line-mode	Always 0	Always 0
	Page-formatted	Always 0	The number of BEGIN PAGE structured fields (D3A8AF)

Displaying the status of active tasks

This command displays the status of an XOSF task from the operator console.

Syntax MODIFY *xosf-jobname*,DISPLAY ACTIVE TASKS

Example F XP59,DIS ACT TASK

Messages issued The console produces a display similar to this:

```
XDI3460I TASK-# TASK-ID  TYPE CUU/SLU  DOCUMENT-ID      STATUS
XDI3460I 000003 *SYSTEM*                               WAIT
XDI3460I 000004 *SYSTEM*                               WAIT
XDI3460I 000005 *SYSTEM*                               WAIT
XDI3460I 000006 *SYSTEM*                               WAIT
XDI3460I 000007 PRT1051  4850 O25T2A01 *INACTIVE*      WAIT
XDI3460I 000008 PRT1451  4850 O25T2A02 JOB16101USERJOB1 WAIT
XDI3460I 000009 PRT3351  XPSM O25T2A03 JOB16101USERJOB1 WAIT
XDI3460I 000010 PRT2051  4850          *INACTIVE*      WAIT
XDI3460I 000011 PRT2451  4850 0E23     *INACTIVE*      WAIT
XDI3460I DISPLAY ACTIVE TASK COMMAND COMPLETED
```

where

TASK-# The internal number assigned to this task.

TASK-ID The name of the task that is running.

TYPE The type of printer.

CUU/SLU CUU is the channel address of a centralized printer. SLU identifies the network name of the printer. If you are printing to file or to a centralized disk printer, this field remains blank.

When entering the display active task command, the console may show the SLU for all XPSM-attached centralized printers, as well as the CUU for all locally-attached centralized printers.

DOCUMENT-ID The 16-character document identifier which consists of the job number and the job name. If a system task is displayed, this space is blank. If no document is being processed, this field indicates that the printer is inactive.

STATUS Indicates the processing status of the listed task.

XOSF operates in a multitasking environment. This can put heavy demands on available resources. The STATUS indicator shows the status of the task with regard to available resources:

- WAIT indicates that the task is waiting for an event or resource.
- LOCK indicates that the task is currently controlling a resource.
- WAIT — LOCK indicates the task is waiting for a resource that is currently being used by another task.

A task that remains in a WAIT or LOCK state for several minutes may indicate an internal problem. First check the printer and ensure it is in working order. If nothing is printing, terminate the individual task and call Xerox Technical Support.

Terminating an individual task on the printer

This command terminates an individual task.

Syntax MODIFY *xosf-jobname*,TERMINATE TASK *taskid*

where

taskid is the number assigned to the task as indicated in the active tasks display. This command immediately terminates the specified task.

Example F XP59,TERM TASK 63

Message issued The console displays a message similar to this:

XDI3516I XOSF TERMINATE TASK REQUEST COMPLETED

CAUTION: Using this command is a drastic measure. It immediately halts the thread that is processing the documents being sent to the printer and stops the printer.

After this command has been issued, XPAF will be in an unstable state. You should shut down the FSS as soon as possible after the TERM TASK command is issued.

NOTE: When you try to restart a decentralized or PCL-capable printer, a series of VTAM-related error messages may be displayed. Issue the VTAM TERM command to terminate the session that is still active. If this does not work, refer to the appropriate VTAM operation manual for more information on restarting the printer.

Terminating the XPAF FSS

This command shuts down the system and terminates all tasks in progress.

Syntax

MODIFY *xosf-jobname*,SYSTEM SHUTDOWN

You can also use the standard z/OS STOP command:

STOP *xosfid*

Example

F XP59,SYS SHUTDOWN

Messages issued

The console displays messages similar to these:

```
XDI3501I    XOSF SHUTTING DOWN

XDI3405I    XP59 XOSF ADDRESS SPACE ENDING
```

If you use this command, active printers are displayed, and this message asks you to confirm shutdown:

```
XDI3504A    CONTINUE WITH XOSF SHUTDOWN?   REPLY Y OR N
```

The system does not process further print requests until you reactivate the FSS by issuing a JES start printer command ($S PRT*nnnn*) from the operator console.

Related information

If you are running z/OS version 4.3.0 or higher, the IEF352I Address Space Unavailable message may be issued for informational purposes when XPAF is shut down. For information about this message, refer to IBM publication *z/OS System Messages, Vol. 4 (IEC-IFD)*.

To circumvent the problem indicated by the IEF352I message, change the values for the parameters MAXUSER, RSVSTRT, and RSVNONR in SYS1.PARMLIB(IEASYS*xx*). For more information, refer to *Section Two: Installing and Customizing XPAF*.

Forcing the XOSF address space to terminate

This command terminates all FSAs. There are no message responses from the system; use this command only in error situations.

Syntax

MODIFY *xosf-jobname*,FORCE

CAUTION: Using this command is a drastic measure. It immediately halts the address space and any threads from that address space.

Example

F XP59,FORCE

Related information

If you are running z/OS version 4.3.0 or higher, the IEF352I Address Space Unavailable message is issued for informational purposes every time XPAF is terminated. If one or more of the following situations applies, you must either bring down JES or IPL the system to free the unavailable address space slots in the z/OS address space vector table:

- No new started tasks can be started.
- No new batch initiators can be started.
- No additional users can use their TSO logons.

To avoid this problem, change the values for the parameters MAXUSER, RSVSTRT, and RSVNONR in SYS1.PARMLIB(IEASYS*xx*). For more information, refer to *Section Two: Installing and Customizing XPAF*.

Turning SMF recording on and off

XPAF fully supports IBM's SMF recording capability. The information in SMF records can be used to analyze workloads or profile system resource use. By keeping historical SMF data and studying its trends, you can evaluate changes in the configuration, workload, or scheduling at your installation.

This command also enables or disables SMF recording if you are running XPAF in XPSC-compatibility mode or XPAF full-client mode. For further information on SMF recording for XPSM, refer to the XPSM user documentation.

For TCP printing, you may see differences in your SMF statistics because your SMF records will reflect job creation information about the TCP dataset instead of actual printing information. For example, the SMF record will be updated even if the job did not print. Refer to *Section Two: Installing and Customizing XPAF* for more information about TCP printing in XPAF.

Syntax

MODIFY *xosf-jobname*,SET SMF RECORDING { ON | OFF }

NOTE: If you specified SMF=Y in the initialization parameters, XPAF automatically generates SMF records. If you specified XPSMBRS=Y and/or XPSMSRS=Y in the initialization parameters, XPAF automatically generates XPAF and/or XPSM SMF records.

Example

F XP59,SET SMF REC ON

Messages issued

The console displays messages similar to these:

XDI3514I XOSF SYSTEM SMF RECORDING TURNED ON

XDI3514I XOSF SYSTEM SMF RECORDING TURNED OFF

Turning z/OS system logging on and off

XPAF can write its messages to the z/OS system log. You can include both XOAF and XOSF messages in the log if you specify it in the initialization parameters or the XOSF start-up proc. Otherwise, only essential XPAF messages are written to the system log. For information on setting up your logging, refer to *Section Two: Installing and Customizing XPAF*.

Syntax

MODIFY *xosf-jobname*,SET SYSTEM LOGGING { ON | OFF }

Example

F XP59,SET SYS LOG ON

Messages issued

The console displays messages similar to these:

XDI3500I XOSF SYSTEM LOGGING TURNED ON

XDI3500I XOSF SYSTEM LOGGING TURNED OFF

Turning XOSF logging on and off

XPAF writes XOSF messages to an XLOG file. Because some of the same information is collected by both XLOG and the SYSLOG functions, select the method that works best for your installation. To separate XOSF system information from the main system log, enable XOSF logging.

Syntax MODIFY *xosf-jobname*,SET XOSF LOGGING { ON | OFF }

NOTE: Logging cannot be enabled unless a log dataset has been allocated and printed to by the XLOGDSN initialization parameter.

Example F XP59,SET XOSF LOG ON

Messages issued The console displays messages similar to these:

XDI3480I LOGGING HAS BEEN ENABLED TO MJONES.XPAF30.XLOG

XDI3481I LOGGING HAS BEEN DISABLED TO MJONES.XPAF30.XLOG

For information on setting up and managing logs, refer to *Section Two: Installing and Customizing XPAF*.

Refreshing the XLOG dataset

This command forces any messages that have been issued by XOSF to be written to the XOSF log dataset, so that you can browse the XOSF log dataset while XOSF is active and without setting logging off. It ensures that you are browsing the most current XOSF log.

Syntax MODIFY *xosf-jobname*,REFRESH XLOG

Example F XP59,REF XLOG

Message issued The console displays a message similar to this:

XDI3461I XOSF XLOG=RBLACK.XPAF30.XLOG HAS BEEN REFRESHED

Switching the XLOG to an alternate dataset

This command switches logging from the primary XLOG dataset to an alternate dataset. To use an alternate dataset, you must include its name in the ALOGDSN initialization parameter. The alternate dataset must be empty or contain only one record. This requirement prevents you from switching to a dataset that is not archived and/or cleared.

If XPAF issues messages indicating that either the primary or alternate log dataset is full, you must clear the dataset. If you want to keep a record of the messages, print or archive the dataset before clearing it.

For information about setting and clearing log files, refer to *Section Two: Installing and Customizing XPAF*.

Syntax MODIFY *xosf-jobname*,SWITCH XLOG

Example F XP59,SWI LOG

Message issued The console displays a message similar to this:

XDI3549I THE LOG DSNAME WAS SWITCHED FROM XPAF30.XOSFLOG TO XPAF30.XOSFLOG2

Displaying the active XLOG

This command displays the names of the primary and alternate XOSF log datasets.

Syntax MODIFY *xosf-jobname*,DISPLAY ACTIVE XLOG

Example F XP59,DIS ACT LOG

Messages issued The console displays messages similar to these:

XDI3470I CURRENT XLOG DSNAME=RBLACK.XPAF30.XLOG

XDI3471I ALTERNATE XLOG DSNAME=RBLACK.XPAF30.XLOG2

XDI3467I LOGGING IS ACTIVE TO XPAF30.XLOG

Turning intensive logging on and off

As a diagnostic aid, you can turn the intensive logging indicator on or off:

- When the indicator is turned on, debugging messages or additional information messages are written to the XOSF log dataset. For this reason, you may want to turn on intensive logging when debugging a problem.
- When the indicator is turned off, additional messages are not written to the XOSF log dataset.

Syntax MODIFY *xosf-jobname*,SET INTENSIVE LOGGING { ON | OFF }

Example F XP59,SET INT LOG ON

Messages issued The console displays messages similar to these:

MSF8011I INTENSIVE LOGGING INDICATOR SET ON

MSF8012I INTENSIVE LOGGING INDICATOR SET OFF

Enabling messages

This command enables writing messages to the console.

Syntax MODIFY *xosf-jobname*,ENABLE,*nnnn*[,...*nnnn*],*t*[,...*t*]

where

each *nnnn* is a message number, and each *t* is a message type. Enabling by message number writes that particular message. Enabling by message type writes all messages coded with that message type. You can specify one or more numbers and message types in a single command, and include them in any order.

Example F XP59,ENA,3430,0001,E

Messages issued In response, this message is displayed at the console:

MSF8009I MESSAGE ENABLEMENT PROCESSING COMPLETE

If the designated message has been coded as non-suppressible, the console displays the following message in response to both the enable and the suppress commands:

MSF8038W MSF UNABLE TO SUPPRESS OR ENABLE NON-SUPPRESSIBLE MSG ID='3430'

Suppressing messages

This command suppresses writing messages to the console.

Syntax

MODIFY *xosf-jobname*,SUPPRESS,*nnnn*,*nnnn*,*t*,*t*

where each *nnnn* is a message number, and each *t* is a message type. Suppression by message number suppresses that particular message. Suppression by message type prevents all messages coded with that message type from being written to the console. You can specify any number of message numbers and message types in a single command and include them in any order.

Example

F XP59,SUP,3430,0001

Messages issued

The console displays this message:

```
MSF8008I    MESSAGE SUPPRESSION PROCESSING COMPLETE
```

If the designated message has been coded as non-suppressible, the console displays the following message in response to both the enable and the suppress commands:

```
MSF8038W    MSF UNABLE TO SUPPRESS OR ENABLE
            NON-SUPPRESSIBLE MSG ID='6309'
```

where

nnnn is the number of the message.

Related information

Using the MSFSUPPMEM initialization parameter, you can specify the name of a member that contains the suppression text (message number/message type) used to suppress message numbers or message types at start-up time. For more information on the MSFSUPPMEM initialization parameter, refer to *Section Five: XPAF Parameter and Keyword Reference*. You can enable these messages later using the ENABLE command.

49. XDS-exclusive operator commands

XDS supplies operator commands that work as operands of the z/OS MODIFY operator command. From the operator console, you can enter XDS-exclusive commands to perform many functions, including:

- Defining an optional subsystem command character
- Displaying XDS control blocks in use
- Interrupting a printer
- Restarting a printer
- Terminating XDS with XOSF

Each command is described in this chapter.

NOTE: The space shown between command words is required, unlike JES commands for which you can omit the space.

When you enter these commands, *nnnn* is the printer ID number.

Defining an optional subsystem command character

You can define a command character to abbreviate commands for both the XDS subsystem and the XOSF functional subsystem associated with it. The command character replaces this portion of the MODIFY z/OS operator command:

MODIFY *xds-name*,

The command character is defined in the XDSSTART proc. If you do not define a command character, you must use the MODIFY z/OS command to communicate with XDS and XOSF.

Restrictions

The subsystem command character you define for XDS:

- Must not be the command character defined for any other subsystem.
- Can be any valid EBCDIC displayable special character appearing on the operator console keyboard. To reduce the number of keystrokes required, give preference to those characters that do not require the shift key for entry.
- Can be used when entering all XOSF-exclusive and XDS-exclusive operator commands.

Example

This example shows the unabbreviated version of the INTERUPT command:

MODIFY XP82,INTERUPT PRT1900

If, at setup, you defined the character "¢" as the command character for XDS, you could abbreviate the previous command as:

¢INTERUPT PRT1900

or

¢I PRT1900

NOTE: When using the command character to enter a command, do not type a space, comma, or other character between the command character and the command.

Displaying XDS control blocks in use

This command displays all major XDS control blocks in use.

Syntax MODIFY *xds-name*,DISPLAY XDS

Example F XP82,DIS XDS

Messages issued The console displays messages similar to these:

```
XDS1098I SSCVT
XDS1099I 00CCF2A8 E2E2C3E3 00CCF280 E7D7F8F2 00000000 *SSCT..2.XP82....*
XDS1099I 00CCF2B8 00CE8130 00000021 00CCF140 00CBB018 *..A.......1.....*
XDS1099I 00CCF2C8 00000000 00000000 00000000 00000000 *................*
XDS1098I SSVT       ...
```

Interrupting a printer

This command interrupts an XDS-controlled XOSF printer.

Syntax MODIFY *xds-name*,INTERUPT PRT*nnnn*

Example F XP82,I PRT1900

Message issued The console displays a message similar to this:

XSL720EI JOB00100 RK5689 PRINTING ABORTED BY XPAF

Related information After you enter this command, XOSF prints the current record and releases the printer. The print application running as an XDS batch job or started task, which also specifies the XDS-controlled printer, is terminated with an S001 abend.

Restarting a printer

XDS supports forms set up as defined by the SETUP initialization or printer profile parameter. After you load the requested forms on the printer, enter this command to restart the printer. For more information on the SETUP parameters, refer to *Section Five: XPAF Parameter and Keyword Reference*.

Syntax MODIFY *xds-name*,START PRT*nnnn*

Example F XP82,S PRT1900

In this example, PRT1900 is the printer name specified in the XDS setup message.

Message issued When XDS encounters the forms setup, it issues this message:

XDS1031A SET UP PRT1900 WITH FRM1 FORMS FOR JOB 5612

Terminating XDS with XOSF

Using this command, XDS terminates with XOSF.

Syntax MODIFY *xds-name*,SYS SHUTDOWN

or

STOP *xds-name*

Example F XP82,SYS SHUTDOWN

Messages issued The console displays messages similar to these:

XDI3501I XOSF SHUTTING DOWN

XDS1001I SUBSYSTEM INACTIVE

XDI3405I XP82 XOSF ADDRESS SPACE ENDING

50. XV2S-exclusive operator commands

XV2S supplies operator commands that work as operands of the z/OS MODIFY operator command. From the operator console, you can enter XV2S-exclusive commands to perform many functions, including:

-
- Displaying XV2S printers
- Modifying XV2S printer characteristics
- Stopping and Restarting a printer
- Terminating XV2S

Each command is described in this chapter.

NOTE: The space shown between command words is required, unlike JES commands for which you can omit the space.

When you enter these commands, *nnnn* is the printer ID number.

Example

This example shows the unabbreviated version of the INTERUPT command:

MODIFY XP82,DISPLAY XV2S02

Listing XV2S Printers

This command is used to display the attributes of all XV2S printers, or a single printer.

Syntax MODIFY *xv2s-name*,LIST

Example F XV2S,LIST

Messages issued The console displays messages similar to these:

```
F XV2S,LIST
+XV2S0000I - PRINTER XV2S01/ACB=AT01 (INACTIVE)
+XV2S0000I+CLASS=1 FORM=    A   WRITER=PRT4     DEST=LOCAL
OUTDES=XEROX
+XV2S0000I+RECFM=FBA LRECL=133
+XV2S0000I - PRINTER XWTS02/ACB=AT02 (INACTIVE)
+XV2S0000I+CLASS=1 FORM=STD1A   WRITER=PRT4     DEST=
OUTDES=
+XV2S0000I+RECFM=FBA LRECL=133
```

Dynamically modifying an XV2S printer

This command will modify the characteristics of an XV2S printer.

Syntax MODIFY *xv2-name*,MODIFY,*printer-name,attribute=value*

Example F XV2S,MOD,XV2S01,DEST=RMT7

Message issued The console displays messages similar to these:

```
F XV2S,MODIFY,XV2S01,DEST=RMT7
+XV2S0000I - PRINTER XV2S01/ACB=AT01 (INACTIVE)
+XV2S0000I+CLASS=1 FORM=    A   WRITER=PRT4     DEST=RMT7
OUTDES=XEROX
+XV2S0000I+RECFM=FBA LRECL=133
```

Related information After modifying the printer attributes, you must stop and restart the printer to pick up the change.

You can change the following attributes:

ACB
DEST
DOCHDR
FORM
LRECL
OUTDES
RECFM
SYSOUT
WRITER

Starting a printer

To start an XV2S printer, issue the start command

Syntax MODIFY *xds-name*,STAR PRT*nnnn*

Example F XV2S,START PRT1900

Message issued The console displays messages similar to these:

```
F XV2S,START XV2S01
+XV2S0000I - PRINTER XV2S01  STARTED
```

Stopping a printer

To stop an active XV2S printer, issue the stop command.

Syntax MODIFY *xds-name*,STOP PRT*nnnn*

Example F XV2S,START PRT1900

Message issued The console displays messages similar to these:

```
F XV2S,STOP XV2S01
+XV2S0000I - PRINTER XV2S01  STOPPED
```

Terminating XV2S

Using this command, XV2S terminates.

Syntax P *xds-name*

Example P XV2S

Messages issued The console displays messages similar to these:

```
P XV2S
+XV2S0000I - XV2S TERMINATING
+XV2S0000I - PRINTER XV2S01   TERMINATED
+XV2S0000I - PRINTER XWTS02   TERMINATED
+XV2S0005I - CLOSING LOG FILE = NFORB.XV2S.LOGA
XV2S    .STARTING.XV2S    (   1).XV2SMAIN  Ended   Code=   0
IEF404I XV2S - ENDED - TIME=08.08.52
```

Section Eight: Xerox Page Format Editor User Guide

This section explains how to use the Xerox page format editor.

Before you begin to use the page format editor, verify that XPAF has been installed and that the installation verification procedures (IVPs) can be run successfully.

As a user of the page format editor, you should be familiar with IBM z/OS data administration, including allocating, loading, and deallocating sequential and partitioned datasets.

51. Page format overview

This chapter provides an overview of page formats and their use, and instructions for using the page format editor to create and maintain page formats.

What is a page format?

A page format is a set of parameters used to format line-mode data streams that are printed through XPAF. Page formats cannot be used for printing other types of data streams (such as DJDE, XES, or AFP).

A page format must contain these types of formatting instructions:

- Copy modification parameters (for example, copy count, duplexing mode, report stacking, tray selection, and shift) that are unique to a set of copies
- Page layout parameters (for example, orientation, margin, logical page dimensions, and number of lines printed per inch) that describe the logical page
- Line layout parameters (for example, number of lines, first line origin, and font and color selection) that describe how lines or groups of lines are positioned on the page

A page format may also contain these types of optional formatting instructions:

- Field layout parameters (for example, position on page, font and color selection, position of data in input data stream, and constant text to be printed) that describe how individual fields within a line are positioned on the page
- Conditional formatting parameters (for example, conditions to be tested, action to be applied, location of action) that control document formatting based on conditions encountered in the input data stream

Concepts and terms

Before you use the page format editor, you should be familiar with these terms:

- Physical page — The sheet of paper or medium on which you are printing.
- Logical page — The area of the physical page within which data can be printed.

You also should be familiar with how the concepts of physical page origin, logical page origin, logical page dimensions, and line group operate within the Xerox page formatting environment.

Physical page origin

The physical page origin is a reference point from which the logical page's position is determined.

Logical page origin

The logical page origin is the starting position of the logical page on the physical page. The logical page origin is specified in the copy modification parameters. The logical page origin is defined by measurements across and down from the physical page origin.

Both the physical and logical page origins are affected by the page's orientation. For example, a landscape orientation rotates the physical and logical page origins 90 degrees clockwise.

Figure 51-1 shows the physical and logical page origins for a portrait page. Figure 51-2 illustrates how the physical and logical page origins are shifted for inverse portrait, landscape, and inverse landscape orientations.

Regardless of the orientation, the origin for positioning data within the logical page is always the top left corner. As figure 51-3 shows, all text positioning values (both line and field) are calculated from this point.

Figure 51-1. Physical and logical page origins (portrait)

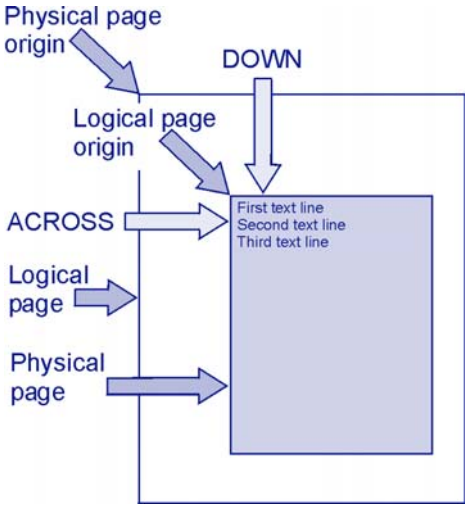


Figure 51-2. Effect of orientation on physical and logical page origins

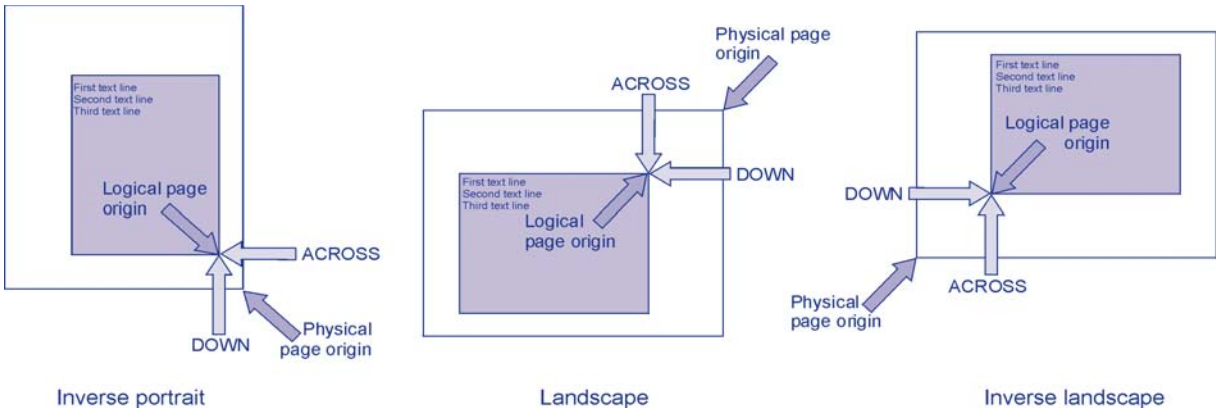
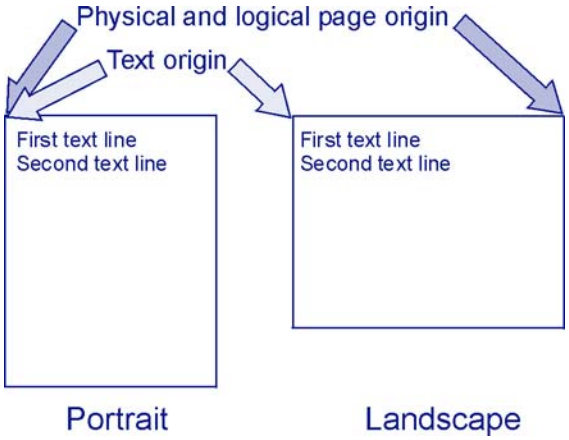


Figure 51-3. Text origins (portrait and landscape)



The final positioning of data on the physical page is determined by the page orientation and logical page origin and can be affected by other page formatting parameters. If you change the orientation of a page format, review these copy modification parameters to ensure that your printed document is formatted correctly:

- Page Origin Across
- Page Origin Down

In addition, review these page layout parameters:

- Width
- Height
- Count
- Line and field positions ‘ACROSS’ and ‘DOWN’

The following examples illustrate how orientation affects text placement when all other parameters are unchanged.

Assume you want to format a telephone expense report that lists phone call charges by department and within department by extension. The report will be printed on 8.5 by 11 inch paper. Create a page format using these values in the page layout global specifications:

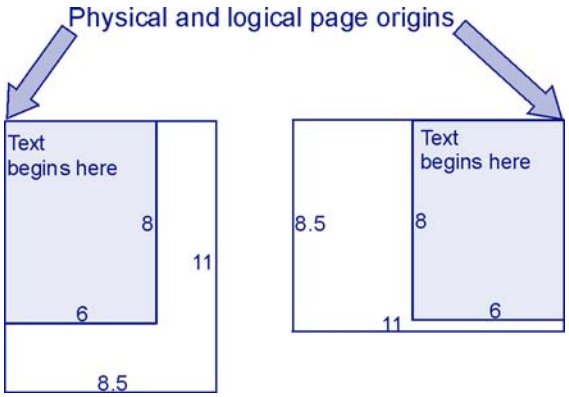
Width: 6
Height: 8
Margin: 0.5

and these values in the copy modification:

Page Origin Across: 0
Page Origin Down: 0

Figure 51-4 shows the position of the first printed text line in both portrait and landscape orientations.

Figure 51-4. Changing orientations without changing page format parameters

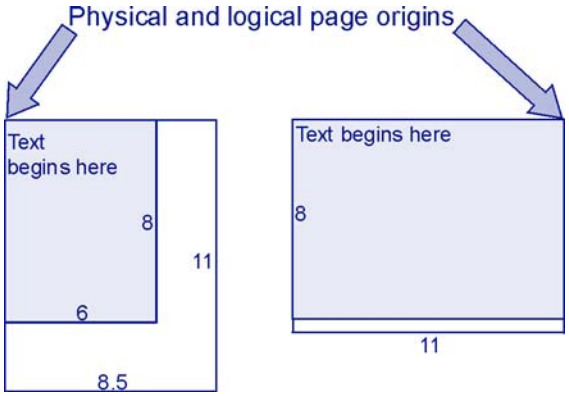


To begin the first line of text 0.5 inch from the left side of the physical page shown in figure 51-5, make these changes to the page format for the landscape orientation:

Page Origin Across: 0
Page Origin Down: 0
Width: 11
Height: 8
Margin: 0.5

The parameters for the portrait orientation remain unchanged.

Figure 51-5. Changing page format parameters to match a change in orientation



Logical page dimensions

The logical page dimensions are the dimensions of the logical page as defined by page width and height. Logical page dimensions are set in the page layout. The logical page cannot be larger than the physical page. When setting the logical page dimensions, you must consider the logical page origin as a factor.

For example, assume you are using a page whose physical dimensions are 8.5 by 11 inches, and the logical page origin is 0.5 across and 1.0 down. The maximum width available for the logical page is 8 inches (8.5 minus 0.5). The maximum height available is 10 inches (11 minus 1).

In this example, the unit of measure is inches; however, the page format editor also supports centimeters, millimeters, and dots.

You also can define a margin within the logical page and specify the number of lines to be printed per inch. In figure 51-6, the margin is shown on the left of the page; the line spacing is set at six lines per inch.

Line group

A line group is a single line or a group of lines that are printed using the same formatting parameters. A logical page may contain:

- A single line group indicating all lines on the page are formatted using the same parameters
- Multiple line groups where each line group is formatted with different parameters

Figure 51-6 shows three line groups. For a line group, you can specify values for these parameters:

- Number of lines in the group.
- Origin of the line group. This is illustrated for line groups 1 and 3 in figure 51-7.
- Number of lines per inch.
- Channel skip code.
- Xerox font.
- Whether the lines are formatted as single lines or a series of fields. Line groups 1 and 3 in figure 51-7 illustrate line formatting, where each line in the group is represented by a solid line. Line group 2 in figure 51-7 illustrates field formatting, where each field is represented by the word FIELD and a number.
- Color.
- Whether conditional formatting is performed for this line group. Chapter 56, "Using page layout options" discusses conditional formatting.

You set up line groups in the page layout.

Page format uses

A page format allows you to lay out a document according to your needs. This list identifies the key capabilities:

- Specify formatting instructions independently of the input data stream, allowing you to change from one page format to another without changing the data stream
- Format line-mode data streams into paginated documents
- Print one-up or multiple-up formats
- Merge variable data with electronic forms
- Highlight specific information using color
- Print constant data that is not contained in your input data stream
- Change formatting parameters based on predefined conditions that are encountered in your input data stream

Refer to chapter 60, "Page format examples" for practical illustrations of how these features can be applied.

Figure 51-6. Physical page, logical page, and line groups

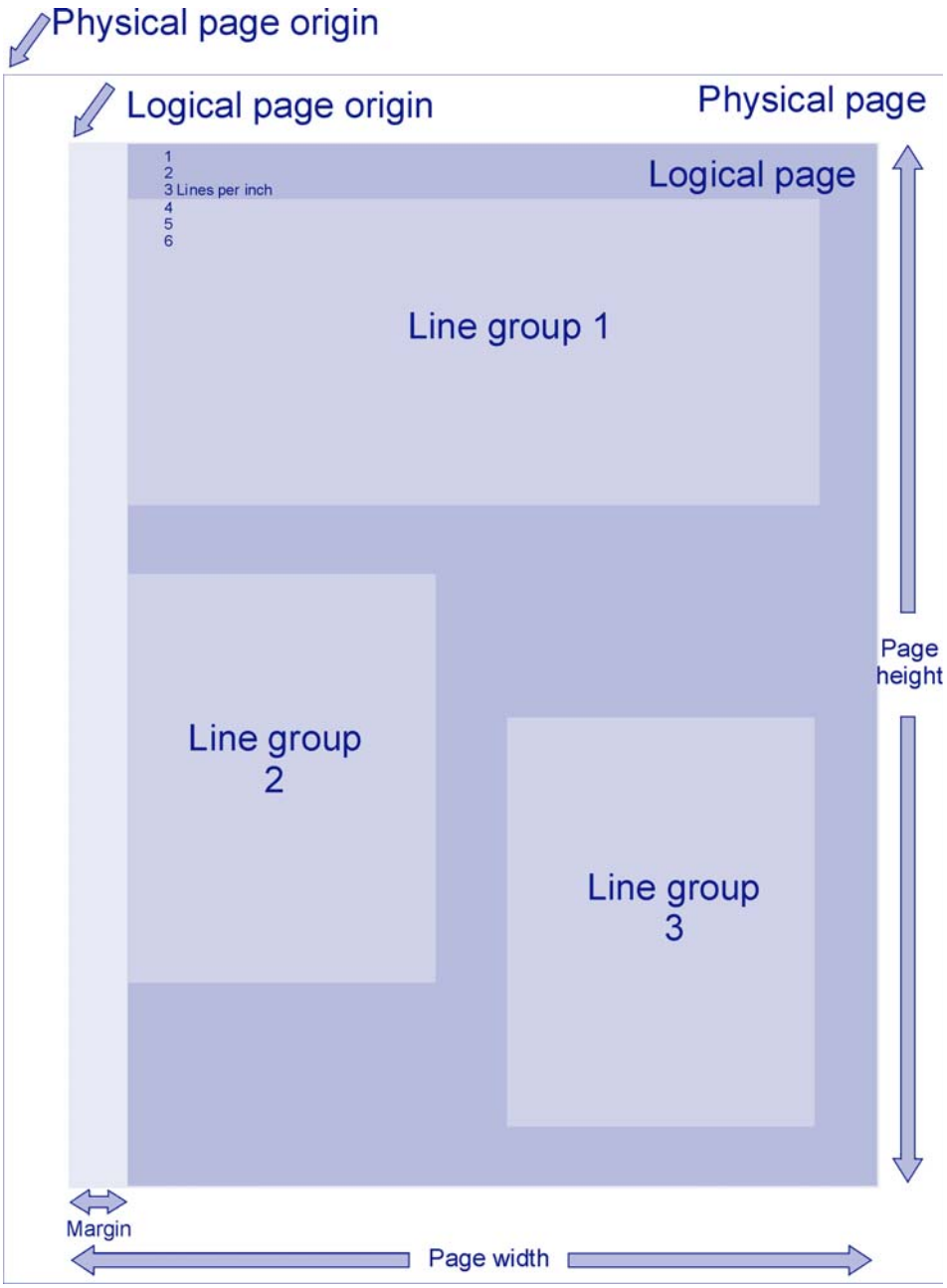
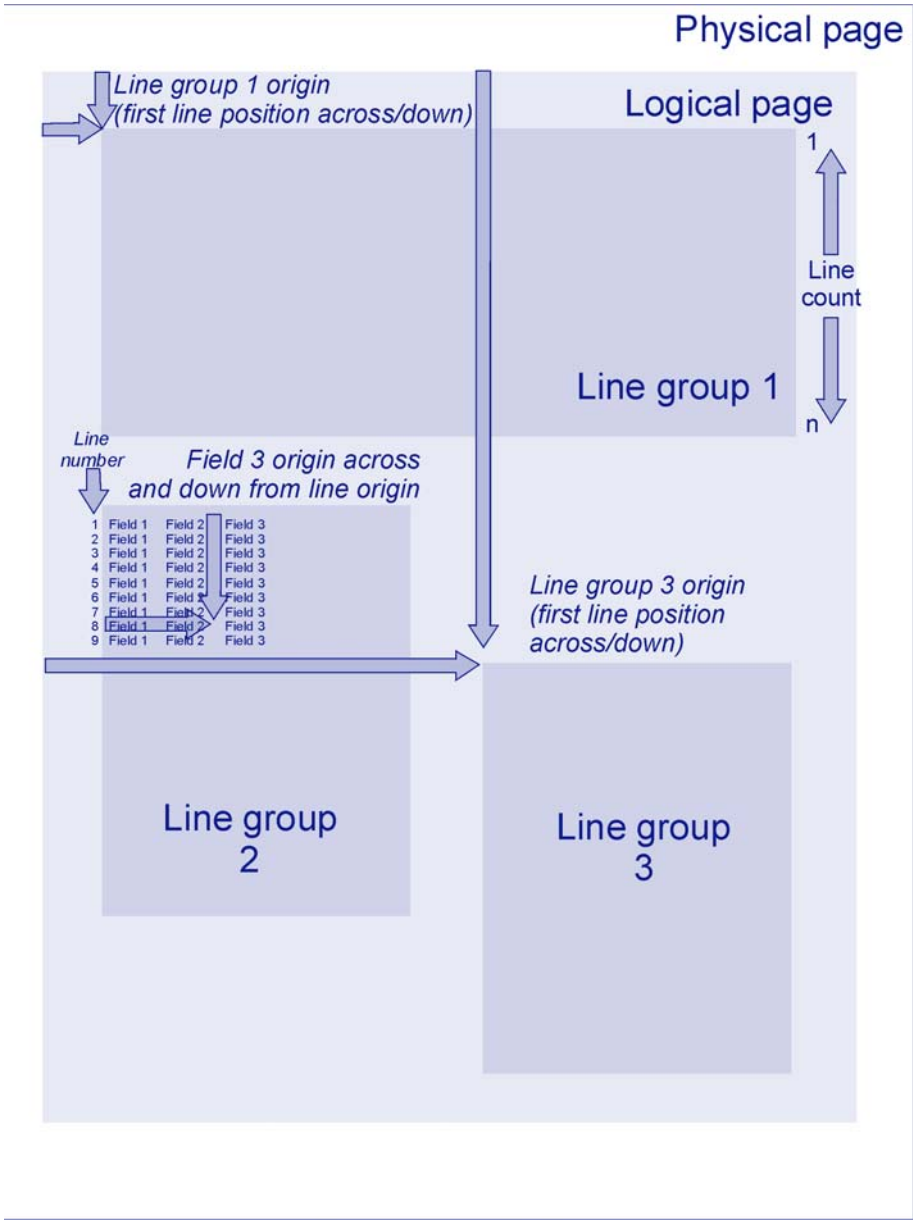


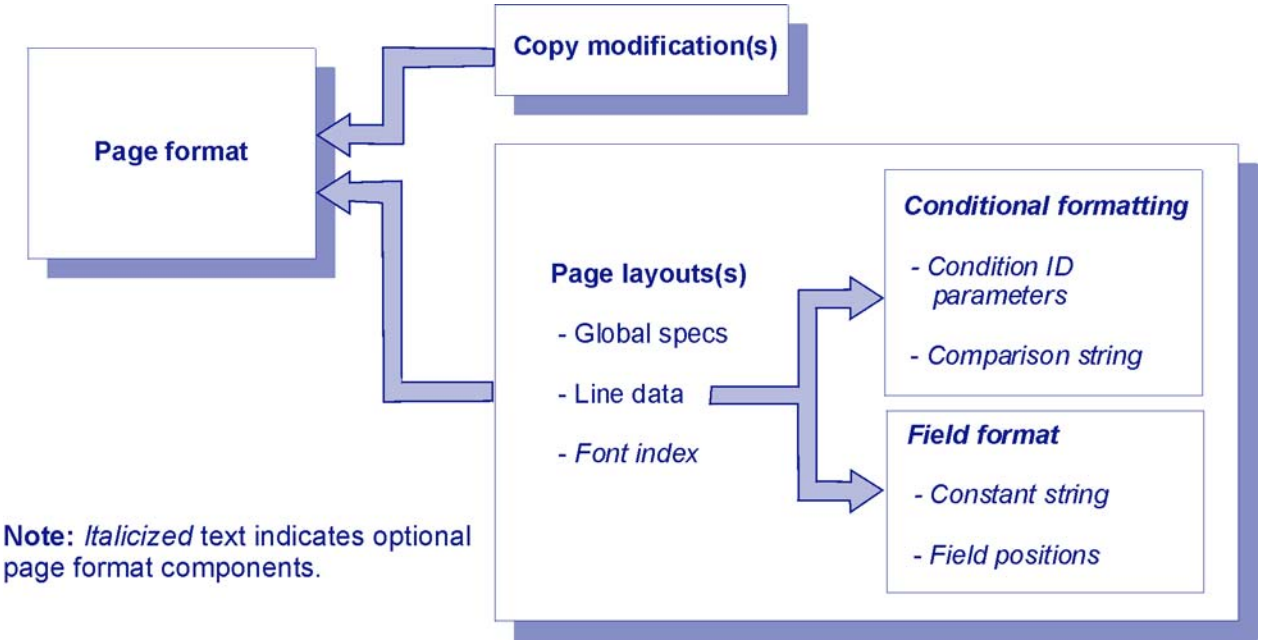
Figure 51-7. Line and field formatting



Components of a page format

The major components of a page format are shown in figure 51-8. A page format consists of one or more copy modifications and one or more page layouts.

Figure 51-8. Page format components



Copy modification

A copy modification consists of parameters that define how formatting changes from one set of copies to the next. You can establish any number of copy modifications within a page format, but each page format must have at least one copy modification defined.

By default, the first copy modification in your page format is used to format any data stream that calls the page format. To select a different copy modification, you must set up a conditional formatting statement. Refer to "Conditional formatting" later in this chapter for more information about conditional formats.

Page layout

A page layout consists of parameters (such as orientation and dimensions) that define the logical page and how data is positioned on it. You can establish any number of page layouts within a page format, but each page format must have at least one page layout defined. By default, the first page layout in your page format is used to format any data stream that calls the page format.

To select a different page layout, you must set up a conditional formatting statement. Refer to "Conditional formatting" later in this chapter.

A page layout is composed of these elements:

- Global parameters, such as the logical page dimensions.
- Line group parameters, which define the positioning and appearance of lines of data on the printed page. Optionally, the line group may specify these types of formatting:
  - Conditional formatting, which permits changes in formatting based on conditions detected in the input data stream.
  - Field formatting, which allows you to format each line as a series of individual fields and apply different formatting to each field. Within a field format, you can specify whether the output field is associated with a constant string or information in the input data stream.
- A font list, which enables you to select Xerox fonts based on a font index entry in your input data stream. A font list is a list of fonts and their associated font index values. You can use font indexing in your input data stream as an alternative to specifying the font in the line group or field format. Only Xerox fonts can be used with the page format editor.

Conditional formatting

Conditional formatting allows you to:

- Set up a condition (for example, ‘greater than’) to test against an input data stream
- Specify the copy modification and page layout to be used when the condition is met
- Specify where the change in formatting occurs

Each string in your input data stream that you want to test with conditional formatting requires a separate conditional formatting statement. You can test for a maximum of 25 conditions per line group.

Within a conditional formatting statement, you can test for multiple conditions on the same string, but only the first condition satisfied is acted upon. When a valid condition is encountered, all subsequent conditions within the active conditional formatting statement and all other conditional formatting statements are ignored.

The conditions can call for the same action or for a different action to be taken if the condition is true. When a condition is found to be true, XPAF changes the document formatting according to the action you have defined in the conditional formatting statement. The action affects the copy modification and/or page layout that you are using to format the data stream.

You control the location at which the action described by the conditional formatting statement occurs. The change to the copy modification or page layout used can occur at one of these locations:

- Before processing the current line or current line group
- After processing the current line or current line group

‘Before’ action processing

If you are using ‘before current line’ or ‘before current line group’ processing which selects a different copy modification and/or page layout, the system processes the data associated with the current line or line group twice. The data is processed the first time using the current copy modification and page layout, then reprocessed using the copy modification and page layout specified by the conditional formatting statement. The data is not printed twice; only the formatting of the data changes.

Because you can set up multiple conditions for a line group, there is the potential for an infinite processing loop if multiple conditions specify the action to occur before a line or line group. However, page format processing has been designed to prevent looping. After a condition is met, XPAF processes the current line or line group; any subsequent conditions for this line or line group are ignored.

‘After’ action processing

If you are using ‘after current line’ or ‘after current line group’ processing which selects a different copy modification and/or page layout, the new parameters do not take effect until the current line or line group has been processed.

Field format

A field format is a set of formatting parameters specific to individual fields on a line. Field formatting is suited to laying out tables and merging variable data with electronic forms.

You can specify values for these field format parameters:

- The location of the field in the line in the input data stream
- The position and print direction of the field on the line in the printed output
- Xerox font
- Color

You also can specify whether the data for this field is taken from the input data stream or a constant string. A constant string allows you to print text that is not contained in the input data stream in your document; that is, the data you print is independent of your input data stream.

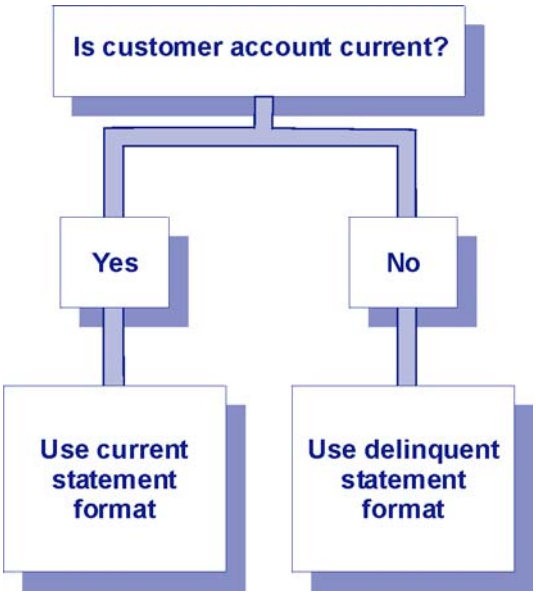
A constant string also may be the only thing printed on the line. If the constant string is the only element to be printed, the corresponding line in your input data stream must be blank.

A constant string is processed only if there is a corresponding line in the input data stream, and only if that line is processed. For example, a constant string is not printed if a channel skip results in the line not being processed.

Example

Assume you are printing monthly billing statements for your customers. As shown in figure 51-9, customers whose accounts are current receive statements in one format, while customers whose accounts are delinquent receive statements in a different format. Each statement format is defined by a separate form.

Figure 51-9. Customer statement processing flow



Assume your application generates an input data stream to XPAF that contains data for both current and delinquent accounts. The following illustration is a sample of what the input data stream might look like for the customer statement example. Columns 2 through 32 contain the customer's name. Column 80 contains a code indicating the account status: C indicates the account is current and D indicates the account is delinquent.

```
----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9
CUSTOMER 1 NAME                                                                        C
        .
        .
        .
CUSTOMER 2 NAME                                                                        D
        .
        .
        .
CUSTOMER 3 NAME                                                                        C
        .
        .
        .
CUSTOMER 4 NAME                                                                        C
```

Using conditional formatting, you could merge the data with the appropriate statement format without any preprocessing of your application output. In the example, the condition is the account status: current or delinquent.

The example illustrates an ‘equal to’ condition. There are two ‘equal to’ conditions in the same statement, each of which specifies a different action.

Each string in your input data stream that you want to test with conditional formatting would require a separate conditional formatting statement. For example, you could set condition statement 1 to test for the account status code and condition statement 2 to test for a change in the customer name.

The change in formatting is a call for the appropriate customer statement. The change occurs before the current record is processed so that the customer information will be printed on the correct statement.

The action in the example is to use a named copy modification. Use the same page layout, but begin printing on a new physical sheet. The named copy modification contains the appropriate statement format.

Within a condition ID in the page format, you would set up these conditional formatting statements:

- To test for a current account and select a copy modification named STMTC, which contains the statement format for current accounts, use these values:

  Start position: 80
  Length: 1
  Comparison text: C
  Type: EQ (Is the input value equal to C?)
  Copy modification name: STMTC
  Page layout name: NULL

- To test for a delinquent account and select a copy modification named STMTD, which contains the statement format for delinquent accounts, use these values:

  Start position: 80
  Length: 1
  Comparison text: D
  Type: EQ (Is the input value equal to D?)
  Copy modification name: STMTD
  Page layout name: NULL

Alternatively, you could use the EQ and OT type codes to the select customer statement formats. By specifying OT as Type and leaving the Comparison text field blank in the STMD copy modification, the input field would be tested only once.

Refer to chapter 60, “Page format examples” for additional examples using step-by-step procedures.

Creating and generating a page format

Use the page format editor (XOAF option P) to:

- Create the page format using the ISPF panels. The information you enter through the ISPF panels is stored in an editable format in libraries that you allocate during installation or by using the Allocate Page Format Datasets option.
- Generate the page format. This process transforms the source you create using the ISPF panels into machine-readable format. The generated page format is the version that you reference using the PAGEFORM extended JCL keyword when printing a document.

  Generated page formats are stored in your XPAF page format library. This is the library referenced by the PGFRMDD initialization parameter or PAGEFORMLIB printer profile parameter.

  Your page format library must have these file specifications:

  DSORG: PO
  RECFM: VB
  LRECL: 8205
  BLKSIZE: 8209

  If you change a page format through XOAF after you generate it, you must regenerate it for the changes to take effect.

Procedures for each task are provided in Section Eight.

Invoking a page format

Use the PAGEFORM extended JCL keyword to invoke a page format when you submit a job. For detailed information about printing page-formatted documents, refer to *Section Four: Printing Documents with XPAF*. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the PAGEFORM extended JCL keyword.

52. Introduction to the page format editor

This chapter describes how to access and use the Xerox page format editor through the Xerox Output Administrative Facility (XOAF). You use the page format editor to create and update page formats used to format line-mode data streams.

This chapter also discusses the conventions used for the ISPF panels that can be accessed through the Xerox page format editor.

Panel conventions

You should be aware of the following conventions when using the ISPF panels in the Xerox page format editor.

Panel keys

These keys are in effect when you use the panels:

- Press the **ENTER** key to cause XPAF to process your input.
- Enter either the **HELP** command on the COMMAND line or press the **PF1** function key to display online information about how to use that panel.
- Enter either the **END** command on the COMMAND line or press the **PF3** function key to return to a previous panel.

In addition, you must use the ‘D’ option on a selection panel to delete an individual element from a list of elements. You cannot delete the element by using the ErEOF key or space bar to erase the name.

NOTE: If you have remapped your standard PF keys, use the appropriate keys to perform these functions.

Valid values

Where space permits, the valid values or range of values for a field appear after the field name. For example, this partial panel shows that the only valid values for the ‘Report Stacking’ and ‘Split Report’ fields are YES and NO.

```
              Form Name for Front:
               Form Name for Back:
                       BFORM Name:
     Report Stacking (YES/NO): NO
        Split Report (YES/NO): NO
```

Information about the valid values for fields on a panel also appears in the Help panel for that function.

Dataset names can be 1- to 44-characters long. Unless otherwise noted, dataset names and member names must follow standard z/OS naming conventions.

Panel message display

ISPF messages may appear when you use the Xerox page format editor panels. The ISPF messages for the page format editor use the prefix XOAF or XPFE and are documented in *Section Six: XPAF Messages*.

XPAF writes two versions of each ISPF message to the TSO terminal:

- A short version that appears on the first row of an XOAF panel.
- A long version that appears on the third row of an XOAF panel. You can display this message only by either entering HELP on the COMMAND line and pressing ENTER, or by pressing the PF1 key.

NOTE: If you are using the ISPF window “pop-up” option for messages, the long version of the ISPF message can be displayed anywhere on the panel.

If the long version of a message overwrites the OPTION or COMMAND line, press **ENTER** to refresh the panel display.

Other ISPF messages may be issued from the host system. These messages are issued without a message number and prefix, and include both uppercase and lowercase characters. Because these messages are not issued by XPAF, they are not documented in *Xerox Printer Access Facility Version 5.0 Messages*.

This sample panel shows both versions of an ISPF message issues by XPAF:

Short ISPF Message

Long ISPF Message

```
                    Xerox Output Administrative Facility MISSING REQUIRED ENTRY
                    Update Xerox Font Characteristics Information
XOAF008E - ENTER LOGICAL FONT NAME AT THE CURSOR POSITION.
COMMAND ===>

       Dataset Name: PRODTEST2.CFONTLIB

  Logical Font Name: _
```

Scroll fields

A ‘SCROLL’ field appears on some panels where the number of rows of data to be displayed exceeds the physical rows available on the terminal page. The ‘SCROLL’ field enables you to page forward and backward through the list of data using the page FORWARD and BACKWARD commands or function keys (typically PF8 and PF7).

For example, this panel shows a ‘SCROLL’ field:

```
                    Xerox Output Administrative Facility     Row 1 to 6 of 9
                          Create/Edit Page Layouts

COMMAND ===>                                                 SCROLL ===> PAGE

* In OPTION column, enter 'I' to insert, 'E' to edit, or 'D' to delete a page
  layout.

  Page Format Name: PFM123

  OPTION   PAGE LAYOUT NAME   ORIENTATION
  _        PL0001__           PORTRAIT
  _        PL0002__           PORTRAIT
  _        PL0003__           LANDSCAPE
  _        PL0004__           IPORT
  _        PL0005__           PORTRAIT
  _        PL0006__           ILAND
```

Panels containing a ‘SCROLL’ field display a message in the upper right corner indicating which rows currently are being viewed and the total number of rows available for viewing.

COPY command

If you are creating or editing a page format component that is similar to an existing component, you can use the COPY command to copy the parameters from the existing component. For example, you can copy the parameters from an existing copy modification to use as the basis for a new copy modification that you are creating.

The COPY command is available when you perform any of these functions:

- Specifying copy modification parameters
- Specifying global parameters
- Specifying line data parameters
- Specifying a field format
- Specifying conditional formatting parameters
- Editing a font list

To use this command, perform one of these steps:

- Enter **COPY** on the COMMAND line followed by a space, then the name of the existing component. Press **ENTER**.
- Enter **COPY** on the COMMAND line, then press **ENTER**. The system displays a selection list of existing members for that component type. To select a member from the list, enter **S** next to the appropriate name, then press **ENTER**.

The system copies the parameters from the component and updates the fields on the panel with the new values. For global specifications, line data specifications, and font lists, the system also copies all page layout data, including conditional formatting parameters, field formats, and the font list.

System Services menu

CAUTION: When you log on to TSO, you must use a minimum region size of 4M to run the page format editor.

When you invoke XOAF, this menu appears:

```
                    Xerox Output Administrative Facility
                          System Services 5.0

OPTION ===>

  1.  Load Resources
  2.  Convert Resources
  3.  Manage Resource Lists
  4.  Manage Tables
  5.  Manage Custom Replica Fonts
  6.  Refresh PDS / Display Printer Status
  7.  Manage Libraries

  E.  ISPF Edit
  I.  Installation Verification Procedure
  P.  Xerox Page Format Editor
  T.  Help Tutorial
  X.  Exit
```

From this menu, select option **P** and press **ENTER** to access the Xerox page format editor.

NOTE: Section Eight focuses on the functions provided through option P on the System Services menu. For information about the other System Services menu options, refer to *Section Three: Managing Resources with XPAF*.

Xerox Page Format Editor menu

After you enter P at the System Services menu OPTION line, this menu appears:

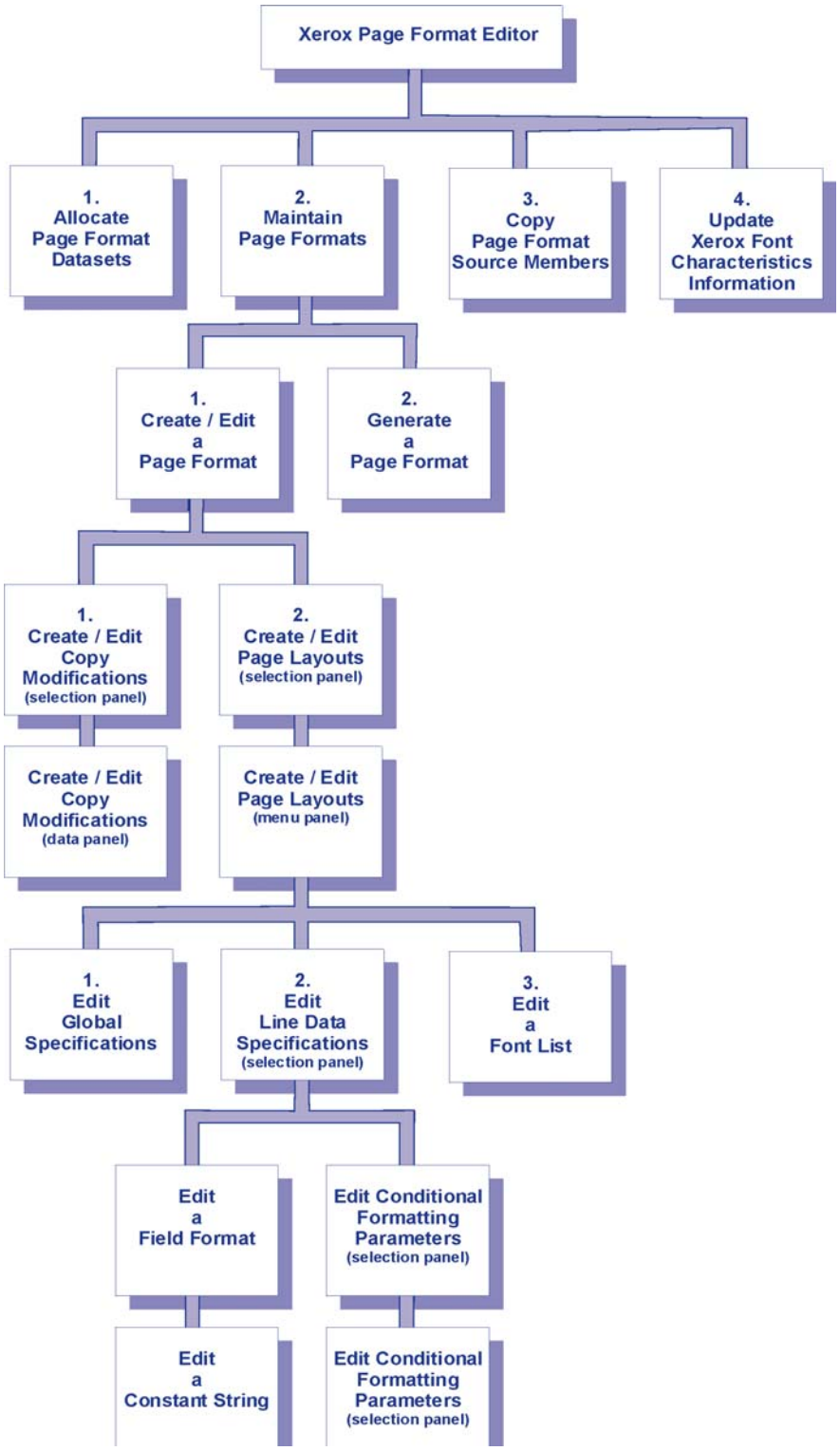
```
                    Xerox Output Administrative Facility
                    Xerox Page Format Editor

OPTION ===>

  1.  Allocate Page Format Datasets

  2.  Maintain Page Formats

  3.  Copy Page Format Source Members

  4.  Update Xerox Font Characteristics Information
```

Select the option you want to perform and press **ENTER**:

- Enter **1** if you are accessing the page format editor for the first time or you want to change your source dataset prefix for a session. Refer to Chapter 53, "Allocating page format datasets," for more information.
- Enter **2** to create, edit, or generate page formats. Refer to chapter 54, chapter 55, chapter 56, and chapter 57 for more information.
- Enter **3** to copy a page format's source members from one set of datasets to another. Refer to chapter 58, "Copying page format source members," for more information.
- Enter **4** to update Xerox font characteristics information. Refer to chapter 59, "Updating Xerox font characteristics information," for more information.

Figure 52-1 shows the organizational flow of the menus/options accessible through this panel.

Figure 52-1. Organizational flow of page format editor panels



53. Allocating page format datasets

This chapter provides instructions about how to set up and maintain your configuration. The first time you access the page format editor after you install XPAF, you must define a dataset name high-level qualifier and dataset allocation values for the libraries shown in table 53-1 where page format component source members are stored.

Table 53-1. Page format libraries

Library name	Function
COND	Stores conditional formatting data specifications.
CPMOD	Stores copy modification data specifications.
FIELDD	Stores field data specifications.
FLIST	Stores a member that contains a list of copy modifications in the page format.
LINED	Stores page layout data specifications.
PLIST	Stores a member that contains the list of page layouts in the page format.

You can change the high-level qualifier prefix and allocate a different set of datasets at any time.

Setting up your configuration

To set up your configuration for the first time, enter **1** at the Xerox Page Format Editor menu OPTION line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Allocate Page Format Datasets

COMMAND ===>

  Dataset Prefix:

  DATASET OPTIONS
    Allocation Units (CYLS/TRKS/BLKS): TRKS
            Volume (blank for default):

  SPECIFICATIONS          COND   CPMOD   FIELDD   FLIST   LINED   PLIST
  Primary Allocation      3      3       3        3       3       3
  Secondary Allocation    1      1       1        1       1       1
  Directory Blocks        20     10      20       10      10      10
  Record Length           8204   255     160      40      8204    40
  Record Format           VB     FB      FB       FB      VB      FB
  Block Size              8208   7650    8800     8800    8208    8800
```

Complete these fields:

Field/Column	Action
Dataset Prefix	Enter the fully-qualified prefix to be attached to these page format source datasets: COND CPMOD FIELDD FLIST LINED PLIST Do not enclose the prefix in quotes; XOAF does not attach your user ID to the prefix.

Field/Column	Action
DATASET OPTIONS **Allocation Units**	Enter the dataset allocation units. Valid values: CYLS Cylinders TRKS Tracks BLKS Blocks Default: TRKS
Volume	Enter the volume serial number of the DASD on which you want to allocate the datasets or leave this field blank to use your TSO default volume.
SPECIFICATIONS **Primary Allocation**	Enter the number of units of primary allocation for the datasets. Default: 3
Secondary Allocation	Enter the number of units of secondary allocation for the datasets. Default: 1
Directory Blocks	Enter the number of directory blocks to be allocated for the datasets. When setting this value, consider that there will be a large number of small members in these datasets. Default: For CPMOD, FLIST, LINED, and PLIST: 10 For COND and FIELDD: 20
Record Length	This field displays the record length. You cannot change this value.
Record Format	This field displays the record format. You cannot change this value.
Block Size	Enter the number of records per block on your DASD device. The block size is based on the record length and record format. Defaults: COND 8208 CPMOD 7650 FIELDD 8800 FLIST 8800 LINED 8208 PLIST 8800

After you complete your entries, press **ENTER** to allocate the datasets to be used during this session. The system displays the Maintain Page Formats panel.

```
                    Xerox Output Administrative Facility    PREFIX XE9999
                              Maintain Page Formats

OPTION ===>

  1.  Create/Edit a Page Format

  2.  Generate a Page Format


          Page Format Name:

  Page Format Library Name: 'prefix.PAGEFORM'

    Editor Dataset Allocation Status
       prefix.COND                                        Allocated
       prefix.CPMOD                                       Allocated
       prefix.FIELDD                                      Allocated
       prefix.FLIST                                       Acquired
       prefix.LINED                                       Acquired
       prefix.PLIST                                       Acquired
```

If the allocation status for a dataset shows Allocated, your dataset allocation was successful. If the allocation status for a dataset shows Acquired, the dataset existed already and has been acquired for use.

Refer to chapter 54, “Selecting a page format,” for more information about this panel.

Maintaining your configuration

You may at some future date need to change your configuration options. For example, if your data processing organization changes naming conventions, you may need to change the dataset name prefix. You also may find that the allocation for a particular dataset needs to be expanded.

Changing your dataset name prefix

To change your dataset name prefix, follow this procedure:

Step 1. Access the Allocate Page Format Datasets panel using the procedure described previously. This panel displays your current dataset name high-level qualifier and the default allocation values.

Step 2. Type over the current dataset name prefix with the new high-level qualifier, then press **ENTER**. The system allocates new datasets, then displays the Maintain Page Formats panel.

Step 3. Use the ISPF copy utility to copy your page format source members from the old datasets to the new datasets.

Step 4. After you verify your page format source members have been copied successfully to the new datasets, delete the old datasets.

Expanding your dataset space allocation

To change your dataset space allocation, follow this procedure:

Step 1. Rename your existing page format source dataset(s).

Step 2. Access the Allocate Page Format Datasets panel using the procedure described previously. This panel displays your current dataset name high-level qualifier and the default allocation values.

Step 3. Type over the existing specifications with your new values, then press **ENTER**. The system allocates new datasets, then displays the System Services menu.

Step 4. Use the ISPF copy utility to copy your page format source members from the renamed dataset(s) to your expanded dataset(s).

Step 5. After you verify your page format source members have been successfully copied to the expanded dataset(s), delete your renamed dataset(s).

54. Selecting a page format

This chapter describes how to navigate through the page format editor panels to create a new page format or edit an existing format.

NOTE: When you first create a page format, it contains default values. The default page format values supplied with XPAF are contained in the DEFAULT page format. If the default values do not meet your needs, you can change them by editing this page format. For example, you can change the default units of measurement for page height and width from inches to centimeters.

Specifying a page format

To create or edit a page format, follow this procedure.

Step 1. Enter **2** at the Xerox Page Format Editor menu OPTION line and press **ENTER**. This panel appears:

```
                    Xerox Output Administrative Facility    PREFIX XE99999
                              Maintain Page Formats

OPTION ===>

  1.  Create/Edit a Page Format

  2.  Generate a Page Format


          Page Format Name:

  Page Format Library Name:
```

The prefix of the datasets allocated for this page format editor session appears in the top right corner of the panel. To allocate different datasets for this session, invoke option 1, Allocate Page Format Datasets, from the Xerox Page Format Editor menu and enter a different prefix in the ‘Dataset Prefix’ field.

Step 2. Enter **1** at the Maintain Page Formats menu OPTION line. If you are creating a new page format, or you know the name of an existing page format you want to edit, enter the name in the ‘Page Format Name’ field, leave the ‘Page Format Library Name’ field blank, and press **ENTER**. Skip steps 3 and 4 and continue with step 5. If you are editing an existing page format, but you do not know the exact name, continue with step 3.

Step 3. Leave the 'Page Format Name' field blank or enter the first few characters of the name followed by an asterisk (*), then press **ENTER**. A panel similar to this one appears and displays a list of the existing page formats that match the name pattern you entered or all page formats if you left the field blank.

```
MEMBER LIST ---------------------------------------- ROW 00001 OF 00002
COMMAND ===>                                          SCROLL ===> PAGE
  Name           VV.MM  Created     Changed     Size  Init   Mod   ID
  DFLT1
  FMTA
  FMTB
  FMTC
  FMTD
  LO002
  L0003
  L0004
  **END**
```

Step 4. To select a page format from this list, tab to the field next to the character set name, enter **S**, and press **ENTER**.

This menu appears:

```
                    Xerox Output Administrative Facility
                       Create/Edit a Page Format

 OPTION ===>

   1.  Create/Edit Copy Modifications

   2.  Create/Edit Page Layouts
```

Select the option you want to perform and press **ENTER**:

- Enter **1** to create or edit the copy modifications for this page format. Proceed to chapter 55, "Using copy modification options."
- Enter **2** to create or edit the page layouts for this page format. Proceed to chapter 56, "Using page layout options."

55. Using copy modification options

This chapter describes how to maintain the copy modifications contained in a page format.

NOTE: If you are using conditional formatting to select different copy modifications, you must add the copy modifications named in the condition ID to the copy modification list and define their parameters. The names must be identical in both places or an error will occur when you generate the page format.

Selecting a copy modification

Enter **1** at the Create/Edit a Page Format menu OPTION line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility    Row 1 to 3 of 3
                         Create/Edit Copy Modifications

COMMAND ===>                                                  SCROLL ===> PAGE

* In OPTION column, enter 'I' to insert, 'E' to edit, or 'D' to delete a copy
  modification.

  Page Format Name: PFM123

  OPTION   COPY MODIFICATION NAME
  _        CPM001__
  _        CPM002__
  _        CPM003__
************************ BOTTOM OF DATA ****************************
```

Complete these fields and press **ENTER**:

Field/Column	Action
Page Format Name	This field displays the name of the page format you are creating or editing.
OPTION	Enter the letter that corresponds to the function you want to perform. Valid values: I Inserts a line below this line. You must type a unique copy modification name for the system to add it to the page format. The system erases any blank lines when you update the record. E Creates or edits parameters for the identified copy modification. Refer to "Specifying copy modification parameters" later in this chapter. D Deletes the identified copy modification name from the page format. You cannot delete all copy modifications from the page format; you must leave at least one copy modification. The copy modification member of the same name is not deleted from the CPMOD source library.
COPY MODIFICATION NAME	• If you are creating a new page format, this panel displays a single copy modification named DEFAULT. This is the default copy modification that is provided with XPAF. Type over this name with the 1- to 8-character name of the copy modification you are creating. This must be a unique name that begins with an alphabetic character, @, #, or $. The new copy modification is initialized with the values contained in DEFAULT. • If you are editing a page format, this panel displays the existing copy modifications in the order in which you entered them. • If you are inserting or repeating a line, enter the new copy modification name, typing over the existing name if necessary. Default: DEFAULT

Specifying copy modification parameters

After you enter E in the 'OPTION' column of the Create/Edit Copy Modifications panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Create/Edit Copy Modifications

COMMAND ===>

         Copy Modification Name: CPM001
    Unit Measure (CM/DOT/IN/MM): IN
              Page Origin Across: 0
                Page Origin Down: 0.5
    Number of Copies (1 to 255): 1
           Duplex Mode (YES/NO): NO
           Tray Number (1 to 9): 1
                   Cluster Name:
            Form Name for Front:
             Form Name for Back:
                     BFORM Name:
       Report Stacking (YES/NO): NO
          Split Report (YES/NO): NO
  Front Shift Value (-75 to 75): 0
   Back Shift Value (-75 to 75): 0
     Signal Function 1 (YES/NO): NO
     Signal Function 2 (YES/NO): NO
  Separator Page First (YES/NO): NO
```

Complete these fields and press **ENTER**:

Field	Action
Copy Modification Name	This field displays the name of the copy modification you are creating or editing.
Unit Measure	Enter the units of measure for the 'Page Origin Across' and 'Page Origin Down' fields. Valid values: CM Centimeters DOT 300 dots per inch IN Inches MM Millimeters Default: IN

Field	Action
Page Origin Across	Enter the amount by which the logical page is offset across from the physical page origin. Figure 55-1 illustrates the effect of the page format's orientation on the across dimension. Orientation is set in the page layout. Default: 0
Page Origin Down	Enter the amount by which the logical page is offset down from the physical page origin. Figure 55-1 illustrates the effect of the page format's orientation on the down dimension. Orientation is set in the page layout. Default: 0.5
Number of Copies	Enter the number of uncollated copies of each page to be printed. For example, if a document consists of two pages and you enter 3 in this field, the printer will print 3 copies of page 1 followed by three copies of page 2. Valid values: 1 through 255. Default: 1 Refer to the COPIES IBM JCL keyword in the *Section Five: XPAF Parameter and Keyword Reference* for related information about printing collated copies of a document.
Duplex Mode	Specify whether printing is duplex. Valid values: YES Prints duplex. NO Prints simplex. Default: NO
Tray Number	Enter the number of the paper tray used as the paper source. Valid values: 1 through 9. Default: 1 If your printer has only one tray, do not change the default; this parameter is ignored. ***NOTE:*** If you enter a value in the 'Cluster Name' field, that value overrides your entry in this field.
Cluster Name	Enter the 1- to 6-character cluster name. This identifies one or more paper trays that are loaded with the same type of paper. This name must begin with an alphabetic character. Cluster names are valid only for documents sent to centralized printers. ***NOTE:*** An entry in this field overrides any entry in the 'Tray Number' field.
Form Name for Front	Enter the 1- to 6-character name of the form to be printed on the front of the page. The form must be in .FRM format.

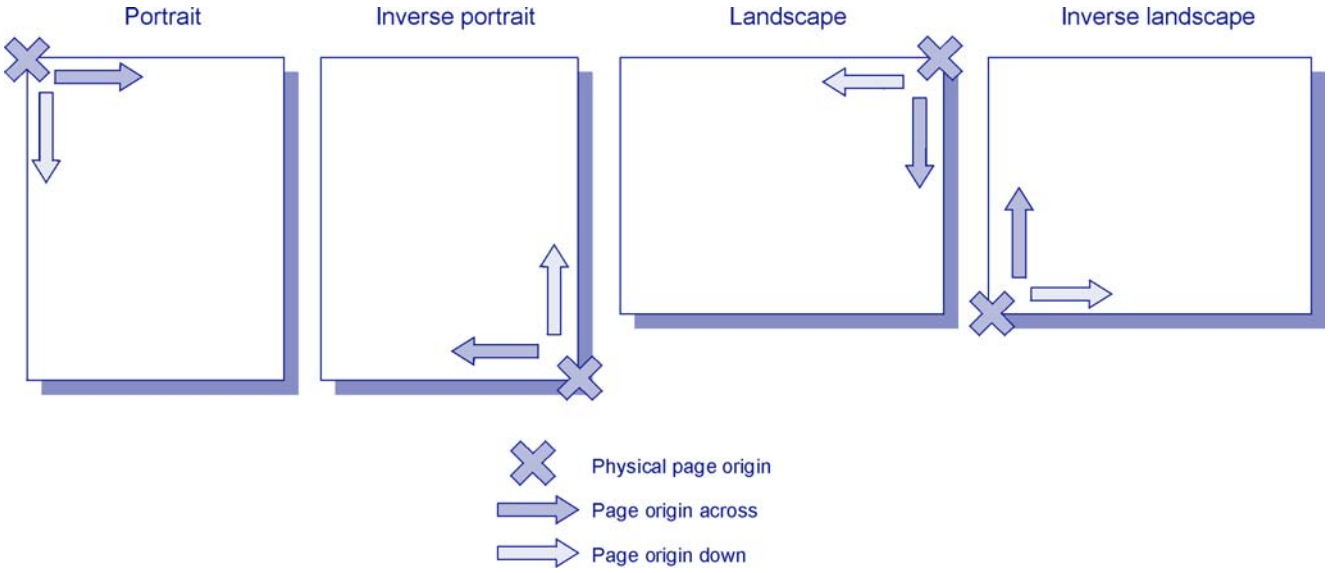
Field	Action
Form Name for Back	• Enter the 1- to 6-character form name if the value of the 'Duplex Mode' field is YES and you want to print a form on the back of the page with data. • Leave this field blank if the value of the 'Duplex Mode' field is NO or you have made an entry in the 'BFORM Name' field.
BFORM Name	• Enter the 1- to 6-character form name if the value of the 'Duplex Mode' field is YES and you want to print a form on the back of the page without any data. • Leave this field blank if the value of the 'Duplex Mode' field is NO or you have made an entry in the 'Form Name for Back' field.
Report Stacking	Specify whether the output for this set of copies is offset from the output from the preceding set of copies. Valid values: YES Offsets this set of copies from the preceding set. NO Does not offset this set of copies from the preceding set. Default: NO
Split Report	Specify whether the output for this copy modification will be split from the preceding output for finishing purposes. This option will take effect only for centralized printers that have a value of DFA specified for the FEATURE parameter in the printer's profile. Refer to *Section Five: XPAF Parameter and Keyword Reference* for more information about the FEATURE printer profile parameter. Valid values: YES Splits the output for this copy modification split from the preceding output. NO Does not split the output for this copy modification from the preceding output. Default: NO

Field	Action
Front Shift Value	Enter the number of dots by which you want to shift the printed output relative to the binding edge. You can specify a shift as a positive or negative value; the result depends on the page format orientation. Enter negative values using the minus symbol. Valid values: -75 through 75 dots. Default: 0 If you enter a positive value, the shift is: • To the right for a portrait orientation • To the left for an inverse portrait orientation • Down for a landscape orientation • Up for an inverse landscape orientation If you enter a negative value, the shift is: • To the left for a portrait orientation • To the right for an inverse portrait orientation • Up for a landscape orientation • Down for an inverse landscape orientation
Back Shift Value	If ‘Duplex Mode’ is YES, enter the number of dots by which you want to shift the printed output on the back of the page relative to the binding edge. You can specify a shift as a positive or negative value; the result depends on the page format orientation. Enter negative values using the minus symbol. Valid values: -75 through 75 dots. Default: 0 If you enter a positive value, the shift is: • To the right for a portrait orientation • To the left for an inverse portrait orientation • Down for a landscape orientation • Up for an inverse landscape orientation If you enter a negative value, the shift is: • To the left for a portrait orientation • To the right for an inverse portrait orientation • Up for a landscape orientation • Down for an inverse landscape orientation

Field	Action
Signal Function 1	Specify whether XPAF sends a DJDE to a centralized printer to raise or lower signal function 1 at the start of a page that uses this copy modification. Signal function 1 is used by printers running the Document Finishing Architecture (DFA) interface (version 4.1 or higher) to communicate with finishing equipment provided by third-party vendors. XPAF does not determine the function of signal function 1; the function is defined by the document finishing equipment supplied by the third-party vendor. Valid values: YES — Sends the SF1=YES DJDE to the printer to raise (that is, turn on) signal function 1 for output using this copy modification. XPAF will send the SF1=YES DJDE only if the FEATURE parameter specifies a value of DFA in the printer's profile. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the FEATURE printer profile parameter. NO — Sends the SF1=NO DJDE to the printer to lower (that is, turn off) signal function 1 for output using this copy modification. ***NOTE:*** Refer to the finishing equipment documentation supplied by your third-party vendor for information about the equipment's use of signal functions. For information about DJDEs, refer to the PDL/DJDE reference manual for your printer.

Field	Action
Signal Function 2	Specify whether XPAF sends a DJDE to a centralized printer to raise or lower signal function 2 at the start of a page that uses this copy modification. Signal function 2 is used by printers running the Document Finishing Architecture (DFA) interface (version 4.1 or higher) to communicate with finishing equipment provided by third-party vendors. XPAF does not determine the function of signal function 2; the function is defined by the document finishing equipment supplied by the third-party vendor. Valid values: YES — Sends the SF2=YES DJDE to the printer to raise (that is, turn on) signal function 2 for output using this copy modification. XPAF will send the SF2=YES DJDE only if the FEATURE parameter specifies a value of DFA in the printer's profile. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about the FEATURE printer profile parameter. NO — Sends the SF2=NO DJDE to the printer to lower (that is, turn off) signal function 2 for output using this copy modification. ***NOTE:*** Refer to the finishing equipment documentation supplied by your third-party vendor for information about the equipment's use of signal functions. For information about DJDEs, refer to the PDL/DJDE reference manual for your printer.
Separator Page First	Specify whether XPAF sends a SEPARATORS=FIRST DJDE to indicate that a separator should be printed for every segment of the corresponding copy group. This option will take effect only for centralized printers that have a value of DFA specified for the FEATURE parameter in the printer's profile. Refer to *Section Five: XPAF Parameter and Keyword Reference* for more information about the FEATURE printer profile parameter. Valid values: YES — Sends the SEPARATORS=FIRST DJDE to the printer to insert a separator as the first page of each printed output segment using this copy modification. NO — Does not send the SEPARATORS=FIRST DJDE to the printer for this copy modification. Default: NO ***NOTE:*** For information about DJDEs, refer to the PDL/DJDE reference manual for your printer.

Figure 55-1. Effect of orientation on page origin



56. Using page layout options

This chapter describes how to maintain the list of page layouts that are contained in a page format.

NOTE: If you are using conditional formatting to select a different page layout, you must add the page layouts named in the condition ID to the page layout list and define their parameters. The names must be identical in both places or an error will occur when you generate the page format.

Selecting a page layout

Enter **2** at the Create/Edit a Page Format menu OPTION line and press **ENTER**. A panel similar to this appears:

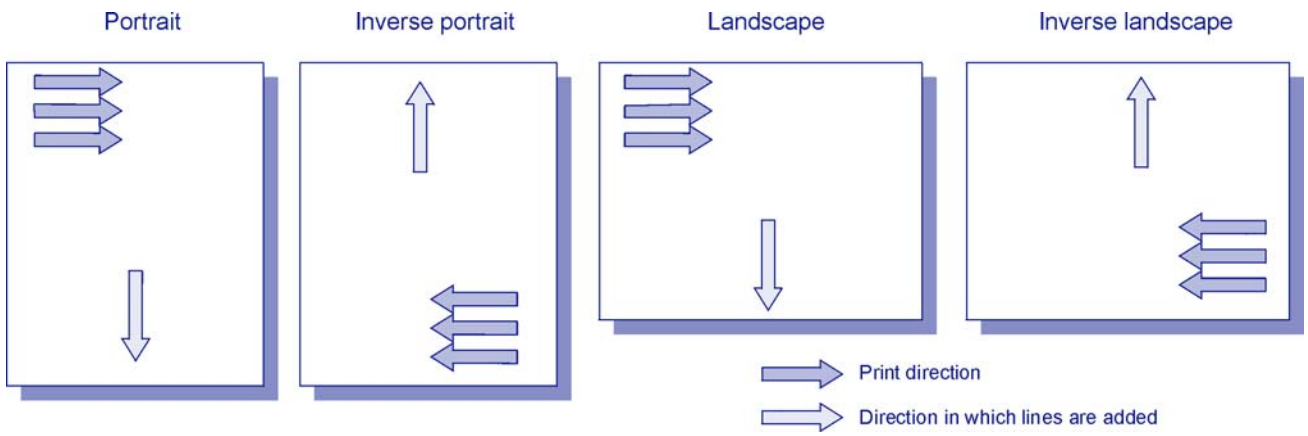
```
                    Xerox Output Administrative Facility     Row 1 to 2 of 2
                          Create/Edit Page Layouts

COMMAND ===>                                                  SCROLL ===> PAGE

* In OPTION column, enter 'I' to insert, 'E' to edit, or 'D' to delete a page
  layout.

  Page Format Name: PFM123

  OPTION   PAGE LAYOUT NAME   ORIENTATION
  _        PL0001__           PORTRAIT
  _        PL0002__           PORTRAIT
```

Complete these fields and press **ENTER**:

Field/Column	Action
Page Format Name	This field displays the name of the page format you are creating or editing.
OPTION	Enter the letter that corresponds to the function you want to perform. Valid values: I Insert a line below this line. To add the entry to the page format, type a unique page layout name for the system. E Creates or edits parameters for the identified page layout. Refer to "Selecting page layout parameters" later in this chapter for details. D Deletes the identified page layout from the page format. You cannot delete all page layouts from the page format; you must leave at least one page layout. The page layout member of the same name is not deleted from the LINED source library.
PAGE LAYOUT NAME	• If you are creating a new page format, this panel displays a single page layout named DEFAULT. This is the default page layout that is provided with XPAF. Type over this name with the 1- to 8-character name of the page layout you are creating. This must be a unique name that begins with an alphabetic character (A–Z), @, #, or $. The new page layout is initialized with the default values contained in DEFAULT. • If you are editing a page format, this panel displays the existing page layouts in the order in which you entered them. • If you insert or repeat a line, enter the new page layout name, typing over the existing name if necessary. Default: DEFAULT

Field/Column	Action
ORIENTATION	Enter the page layout print direction. Remember that the interrelation of physical page parameters (such as page origin) and logical page parameters (such as orientation) determines the actual placement of text in a document. Figure 56-1 illustrates how the text is placed. Valid values: PORTRAIT, PORT, or P — The print direction is from left to right and lines are added from top to bottom. IPORT — The print direction is from right to left and lines are added from bottom to top. LANDSCAPE, LAND, or L — The print direction is from left to right and lines are added from top to bottom. ILAND — The print direction is from right to left and lines are added from bottom to top. Default: PORTRAIT

Figure 56-1. Effect of orientation on print direction



Selecting page layout parameters

After you enter E in the 'OPTION' column of the Create/Edit Page Layouts panel, a menu similar to this appears:

```
                    Xerox Output Administrative Facility
                        Create/Edit Page Layouts

OPTION ===>

  1.  Edit Global Specifications

  2.  Edit Line Data Specifications

  3.  Edit a Font List
```

Select the option you want to perform and press **ENTER**:

- Enter **1** to edit specifications that apply to the entire page layout (for example, logical page size). Refer to "Specifying global parameters" later in this chapter.
- Enter **2** to edit specifications for individual lines, including conditional formatting parameters and field formats. Refer to "Specifying line data parameters" later in this chapter.
- Enter **3** to edit the Xerox font list for this page layout. Refer to "Specifying font list parameters" later in this chapter.

Specifying global parameters

Enter **1** at the Create/Edit Page Layouts menu and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                          Edit Global Specifications

COMMAND ===>

             Page Layout Name: PL0001

                        Width: 7.5

                       Height: 10

  Unit Measure (CM/DOT/IN/MM): IN

                       Margin: 0

                          LPI: 6
```

Complete these fields and press **ENTER**:

Field	Action
Page Layout Name	This field identifies the page layout for which you are setting up global specifications.
Width	Enter the width of the logical page in units as defined by the entry in the 'Unit Measure' field. This value must be equal to or less than the width of the printable page. Defaults: For portrait and inverse portrait: 7.5 For landscape and inverse landscape: 10.0
Height	Enter the height of the logical page in units as defined by the entry in the 'Unit Measure' field. This value must be equal to or less than the height of the printable page. Defaults: For portrait and inverse portrait: 10.0 For landscape and inverse landscape: 7.5
Unit Measure	Enter the unit of measurement for the 'Width', 'Height', and 'Margin' fields. This unit of measurement also applies to the 'POSITION ACROSS' and 'POSITION DOWN' columns shown on the Edit Line Data Specifications panel. Valid values: CM Centimeters DOT 300 dots per inch IN Inches MM Millimeters Default: IN
Margin	Enter the width of the left margin of the logical page in units as defined by the entry in the 'Unit Measure' field. Default: 0
LPI	Enter the number of lines printed per inch, using a number that divides evenly into 300. This avoids dealing in fractional dots, which can produce unpredictable results. This LPI specification is used for any line group for which the LPI field is left blank. You can override this value at the individual line or field level. Default: 6

Specifying line data parameters

Enter **2** at the Create/Edit Page Layouts menu OPTION line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility    Row 1 to 3 of 8
                          Edit Line Data Specifications

COMMAND ===>                                  SCROLL ===> PAGE

* In OPT column, enter 'E 'to edit a field format or 'C' to edit conditional
  formatting parameters.
* In OPT column, enter 'I' to insert, 'R' to repeat, or 'D' to delete a line.

  Page Layout Name: PL0001

       POSITION                 FIELD          END
 OPT COUNT ACROSS  DOWN    LPI   CHAN FONT   FORMAT   COL  COND  GROUP
  _   20_   MARGIN  TOP____   6____  __   UN104E  FF0001    DEF  NO    NO
  _   10_   MARGIN  3.5____   6____  __   UN104E  ________  DEF  YES   NO
```

This panel displays the lines or line groups for the page layout identified in the ‘Page Layout Name’ field. It also provides access to panels used for field formatting and conditional formatting.

Complete these fields and press **ENTER**:

Field/Column	Action
Page Layout Name	This field identifies the page layout for which you are setting up line data specifications.
OPT	Enter the letter that corresponds to the function you want to perform. Valid values: E Formats this line as a series of individual fields. You must also make an entry in the ‘FIELD FORMAT’ column. The Edit a Field Format panel appears. For details, refer to “Specifying a field format” later in this chapter. C Creates or edits the list of condition IDs for this line group. The Edit Conditional Formatting Parameters panel appears. Use the Edit Conditional Formatting Parameters panel to set up the conditional formatting IDs and parameters for this line group. For details, refer to “Selecting conditional formatting” later in this chapter. I Inserts a line below the current line. R Repeats the current line. Change the duplicate values to your desired values. D Deletes this line group from the page layout. This is the only way to delete a line group.

Field/Column	Action
COUNT	Enter the number of lines in the input data stream to be formatted using these parameters. This is a function of the LPI value and the logical page dimensions. If you are using conditional formatting, each line in this group will be tested for the condition(s) you have defined. Valid values: A number between 1 and the maximum number of lines that will fit on the page. Default: 60
POSITION ACROSS	Enter the line starting position relative to the left edge of the logical page. The units entered in the global parameters are used for this column. Valid values: *value* — A horizontal offset from the left edge of the logical page, not the margin. This value cannot exceed the page width. MARGIN — Indicates that the starting point is controlled by the margin specified in the global parameters. Default: MARGIN
POSITION DOWN	Enter the line starting position relative to the top of the logical page. The units entered in the global parameters are used for this column. Valid values: *value* — A decimal value that does not exceed the page height. TOP — The baseline is positioned at 80 percent of one interline space below the top of the printable area. For example, if LPI = 6, the interline spacing equals .16667 inch. Therefore, the baseline of the first line = .16667 × .8 (or .133336) inches from the top of the page. NEXT — The baseline is advanced from the baseline of the previous line by the amount of the interline spacing. For example, assume that the last line baseline is 2 inches from the top. If LPI = 6, the interline spacing equals .16667 inch. Therefore, the baseline of the next line would be 2 + .16667 (or 2.16667) inches. Default: TOP
LPI	• Enter the number of lines per inch for this line group, using a number that divides evenly into 300. This avoids dealing in fractional dots, which can produce unpredictable results. This value overrides the LPI specified on the Edit Global Specifications panel. • Leave this column blank if you want the system to default to the value specified in the ‘LPI’ field on the Edit Global Specifications panel. Default: 6

Field/Column	Action
CHAN	Enter the channel skip code for this line group. Valid values: 1 through 12 If a corresponding channel skip code is encountered in the first column of a line in the input data stream, the system skips from the active line group to the first line in this line group. For example, assume line group 1 has a count of 10 and line group 2 has a channel skip code value of 1. If line 7 in the input data stream contains a channel skip code 1, the output is formatted as follows: input lines 1 through 6 are formatted using line group 1. Although line group 1 has a count of 10, the channel skip code instructs the system to begin formatting input line 7 as the first line in line group 2.
FONT	• Enter the name of the Xerox font for this line group. For each font you specify, you must execute option 4, Update Xerox Font Characteristics Information, on the Xerox Page Format Editor menu to generate the necessary font table entries. For instructions on using this option, refer to chapter 59, "Updating Xerox font characteristics information." • Leave this column blank under any of these conditions: — You want to use the same font for this line group that you specified in the 'FONT' column for the field format. — You want to use the system default font. Default fonts can be used only when the field print direction is across. To use the system default font, you also must leave the 'FONT' column blank in the field format. ***NOTE:*** The system default font used depends on the orientation of the page layout: – For a portrait orientation, the default font is P0612C. – For a landscape orientation, the default font is L0112B. – For an inverse portrait orientation, the default font is PR107F. – For an inverse landscape orientation, you cannot use a system default font. You must specify a font for the line group or field format, or use font indexing.

Field/Column	Action
FIELD FORMAT	• Enter the name of the field format for this line group. The field format controls the placement of the individual fields of this line group. This name, which can be up to eight characters in length, must begin with an alphabetic character (A–Z), @, #, or $. The remaining characters can be alphanumeric, @, #, or $. • Leave this column blank if you want the system to treat the entire line as one field and position it on the page according to the parameters set up for this line group. ***NOTE:*** You cannot mix line and field formatting. If you format a line as a series of fields, you must define entries in the field format for each item of data you want to print. If you entered E in the 'OPT' column, you also must enter a name in this column. The Edit a Field Format panel appears. Use this panel to specify the parameters for positioning individual fields. Refer to "Specifying a field format" later in this chapter for details.
COL	Enter a code to identify the color in which this line group will be printed. Valid values: BLK Black BLU Blue BRW Brown DEF The default color set up for the printer GRN Green PNK Pink RED Red TRQ Turquoise YLW Yellow Default: DEF
COND	Indicate whether conditional formatting is active for this line group. Valid values: YES Conditional formatting is active for this line group. NO Conditional formatting is not active for this line group. Default: NO ***NOTE:*** If you entered C in the 'OPT' column, this column defaults to YES and the Edit Conditional Formatting Parameters panel appears. Refer to "Specifying conditional formatting parameters" later in this chapter for details.

Field/Column	Action
END GROUP	Specify whether this is the end of a line group for conditional formatting purposes. For more information about how line groups are used in conditional formatting, refer to chapter 51, "Page format overview." Valid values: YES Specifies the end of a line group. NO Specifies that this is not the end of a line group. Default: NO

Specifying a field format

After you enter E in the 'OPT' column and a name in the 'FIELD FORMAT' column on the Edit Line Data Specifications panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility    Row 1 to 1 of 1
                                Edit a Field Format

COMMAND ===>                                                   SCROLL ===> PAGE

* In OPTION column, enter 'E' to edit a constant string.
* In OPTION column, enter 'I' to insert, 'R' to repeat, or 'D' to delete a
  line.

  Field Format: DEAL

  Unit Measure: IN

  LPI: 6

             INPUT            OUTPUT       PRINT
  OPTION  START  LENGTH   ACROSS  DOWN     DIR    FONT    COLOR  CONSTANT
  _       1___   8__      CURRENT CURRENT  A      ______  DEF    NO
```

Complete these fields and press **ENTER**:

Field/Column	Action
Field Format	This field displays the name of the field format you are editing.
Unit Measure	Enter the unit of measurement to be used for all the field positioning parameters in the field format. Valid values: CM Centimeters DOT 300 dots per inch IN Inches MM Millimeters Default: IN
LPI	• Enter the number of lines per inch for this field, using a number that divides evenly into 300. This avoids dealing in fractional dots, which can produce unpredictable results. This LPI value overrides the value specified in the global specifications and/or the line data specifications. • Leave this field blank if you want the system to default to the value specified in the global specifications and/or the line data specifications. Default: 6
OPTION	Enter the letter that corresponds to the function you want to perform. Valid values: E Edits the constant string associated with this field. You must also enter **YES** in the 'CONSTANT' column. Refer to "Creating/Editing a constant string" later in this chapter for details. I Inserts a line below the current line. R Repeats the current line. Change the duplicate values to your desired values. D Deletes the current line. This is the only way to delete a line from the table.
INPUT START	• Enter the field's starting column in the input data stream. • Leave this column blank if you are defining a constant string. Default: 1
INPUT LENGTH	• Enter the field's length in the input data stream. • Leave this column blank if you are defining a constant string. Default: 8

Field/Column	Action
OUTPUT ACROSS	Enter the horizontal print position of this field relative to the start of the line. Valid values: CURRENT — The horizontal starting location is the same as the current line position. *value* — The horizontal offset from the current line position. The current line position is defined by the 'POSITION ACROSS' column on the Edit Line Data Specifications panel. Default: CURRENT
OUTPUT DOWN	Enter the vertical print position of this field relative to the current line position. Valid values: CURRENT — The vertical starting location is the same as the current line position. NEXT — The field is positioned on the next line, calculated using the LPI parameter. *value* — The vertical offset from the current line position. The current line position is defined by the 'POSITION DOWN' column on the Edit Line Data Specifications panel. Default: CURRENT
PRINT DIR	Specify the print direction of this field relative to the upper left corner of the logical page. You also can use this field to rotate an entire line or line group, if you define the entire line or line group as a field. Valid values: A — Across. Prints successive characters in this field from left to right. If you have defined a line group as a field, subsequent lines are added from top to bottom. B — Back. Prints successive characters from right to left. If you have defined a line group as a field, subsequent lines are added from bottom to top. D — Down. Prints successive characters from top to bottom. If you have defined a line group as a field, subsequent lines are added from right to left. U — Up. Prints successive characters from bottom to top. If you have defined a line group as a field, subsequent lines are added from left to right. Default: A ***NOTE:*** If you specify a print direction other than A (across), make sure your Xerox font selection has the correct orientation. Figure 56-2 shows the print direction for different orientations. Refer to table 56-1 for help in selecting the appropriate font.

Field/Column	Action
FONT	• Enter the name of the font to be used for this field. Only Xerox fonts can be used with the page format editor. For each font you specify, you must execute option 4, Update Xerox Font Characteristics Information, on the Xerox Page Format Editor menu to generate the necessary font table entries. For instructions on using this option, refer to chapter 59, "Updating Xerox font characteristics information." • Leave this column blank under any of these conditions: — You want to use the same font for this field format that you specified in the 'FONT' column for the line group. — You want to use the system default font. Default fonts can be used only when the field print direction is across. To use the system default font, you also must leave the 'FONT' column blank in the line data specifications. ***NOTE:*** The system default font used depends on the orientation of the page layout: – For a portrait orientation, the default font is P0612C. – For a landscape orientation, the default font is L0112B. – For an inverse portrait orientation, the default font is PR107F. – For an inverse landscape orientation, you cannot use a system default font. You must specify a font for the line group or field format, or use font indexing.
COLOR	Enter a code to identify the color used for printing this field. Valid values: BLK Black BLU Blue BRW Brown DEF The default color set up for the printer GRN Green PNK Pink RED Red TRQ Turquoise YLW Yellow Default: DEF

Field/Column	Action
CONSTANT	Indicate whether this field is associated with a constant string or a field in an input data stream. Valid values: YES This field is associated with a constant string. You must leave the 'INPUT START' and 'INPUT LENGTH' columns blank. If you enter YES, you must define the constant string for this field. Refer to "Creating/Editing a constant string" later in this chapter for details. NO This field is associated with a field in an input data stream. Default: NO

Figure 56-2. Effect of orientation on field print direction

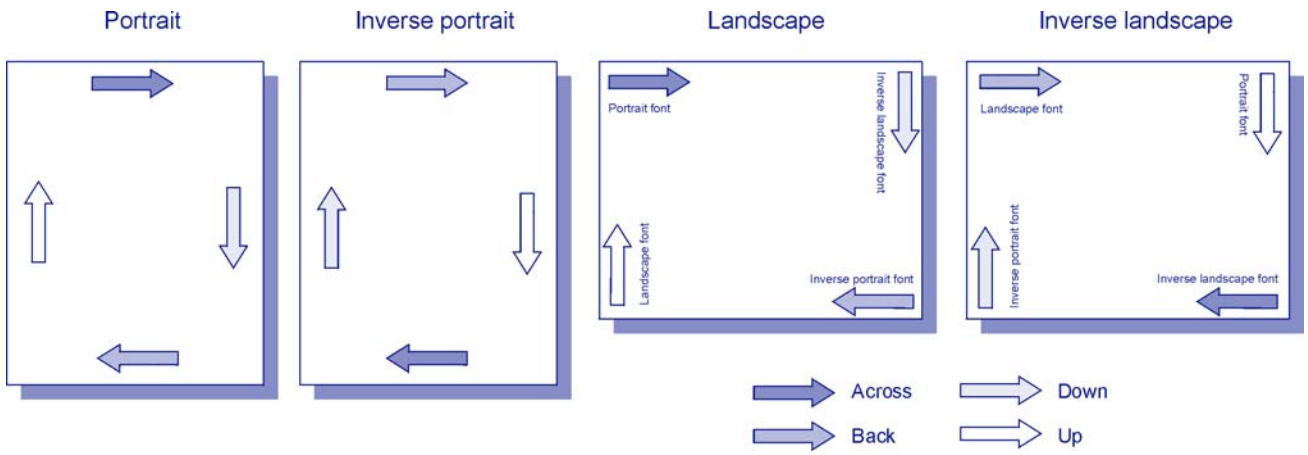


Table 56-1. Font choices for combinations of field print direction and page layout orientation

Field print direction	Page layout orientation			
	PORTRAIT	**IPORT**	**LANDSCAPE**	**ILAND**
ACROSS	Portrait or P0612C (default)	Inverse portrait or PR107F (default)	Landscape or L0112B (default)	Inverse landscape (no default)
BACK	Inverse portrait or PR107F (default)	Portrait or P0612C (default)	Inverse landscape (no default)	Landscape or L0112B (default)
DOWN	Inverse landscape (no default)	Landscape or L0112B (default)	Portrait or P0612C (default)	Inverse portrait or PR107F (default)
UP	Landscape or L0112B (default)	Inverse landscape (no default)	Inverse portrait or PR107F (default)	Portrait or P0612C (default)

Creating/Editing a constant string

After you enter E in the 'OPTION' column of the field for which you are setting up a constant string, a panel similar to this appears.

```
                    Xerox Output Administrative Facility
                         Edit a Constant String

COMMAND ===>

  Field Format: DEAL

    Type (C/X): C

     Delimiter: @

        String: SALESPERSON  @_____________________________________________
```

Complete these fields and press **ENTER**:

Field	Column
Field Format	This field displays the name of the field format for which you are setting up a constant string.
Type	Specify the type of data entered in the 'String' field. Valid values: C Character. X Hexadecimal character. This is useful for including characters in your string that are not available on your keyboard. Default: C
Delimiter	Enter the character to be used as the string delimiter. You must use a character that is not contained in your printed constant string. When encountered in a constant string, the character is interpreted as the end of the string. This delimiter is required only if you want to pad your constant string with space characters. This field is not applicable for hexadecimal character strings, where embedded spaces are not permitted. Default: @

Field	Column
String	Enter the literal that you want printed as a constant for this field. The system prints this information in the position described by the field format. To leave space characters after the literal, enter the delimiter character you specified in the 'Delimiter' field at the end of the series of space characters. For example, the Edit a Constant String panel shows the constant "SALESPERSON" padded by five spaces, then the delimiter @. This field is case sensitive, so be sure to enter the constant string exactly as you want it to appear in your output. All alphanumeric characters and special characters are allowed except the ampersand (&). ***NOTE:*** For a hexadecimal string, you must enter an even number of characters because each EBCDIC character is composed of two hexadecimal digits.

After you set up a constant string for a field, you can activate or deactivate it by entering YES or NO in the 'CONSTANT' column on the Edit a Field Format panel.

Selecting conditional formatting

After you enter C in the 'OPT' column of the line group for which you are setting up conditional formatting, a panel similar to this appears:

```
                    Xerox Output Administrative Facility  Row 1 to 2 of 2
                     Edit Conditional Formatting Parameters

COMMAND ===>                                                SCROLL ===> PAGE

* In OPTION column, enter 'I' to insert, 'E' to edit, or 'D' to delete a
  condition ID.

  Page Layout Name: PL0001

  OPTION   CONDITION ID
  _        CONDA1__
  _        CONDA2__
```

Complete these fields and press **ENTER**:

Field/Column	Action
Page Layout Name	This field displays the name of the page layout you are editing.
OPTION	Specify the function you want to perform. Valid values: I Adds a blank line below this line. You must enter a value in the 'CONDITION ID' column to save the inserted line. E Edits a condition ID. The Edit Conditional Formatting Parameters panel appears. D Deletes a condition ID from the list.
CONDITION ID	• If you are creating a new page format, this panel displays a single condition ID named DEFAULT. This is the default condition ID that is provided with XPAF. Type over this name with the 1- to 8-character name of the condition ID you are creating. This must be a unique name that begins with an alphabetic character (A–Z), @, #, or $. You can set up a maximum of 25 conditional IDs per line group. • If you are editing a page format, this panel displays the existing condition IDs in the order in which you entered them. • If you insert or repeat a line, enter the new condition ID name typing over the existing name if necessary.

Specifying conditional formatting parameters

After you enter E in the 'OPTION' column of the Edit Conditional Formatting Parameters panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility      Row 1 to 2 of 2
                      Edit Conditional Formatting Parameters

COMMAND ===>                                                  SCROLL ===> PAGE

* In OPTION column, enter 'E' to edit comparison text.
* In OPTION column, enter 'I' to insert, 'R' to repeat, or 'D' to delete a
  line.

  Condition ID: CONDA1

  Start Position: 1

  Length: 20

  OPTION  TYPE  B/A  L/G  COPY MODIFICATION NAME  PAGE LAYOUT NAME
  _       EQ    B    G    CURRENT_                NULL____
  _       LT    A    G    CM002___                PL002___
```

Complete these fields and press **ENTER**:

Field/Column	Action
Condition ID	This field displays the name of the condition ID you are editing.
Start Position	Enter the starting position in the input data stream of the field being compared. Default: 1
Length	Specify the length of the field in the input data stream that is being compared. Default: 20
OPTION	Enter the letter that corresponds to the function you want to perform. Valid values: E Creates or edits the text to be compared with the field in the input data stream. I Inserts a line below this line. R Repeats this line. Change the duplicate values to your desired values; otherwise, the system will not save them. D Deletes this line from the conditional formatting parameters. This is the only way to delete a line.

Field/Column	Action
TYPE	Identify the type of comparison to be performed between the input data and your entry in the 'COMPARISON TEXT' column on the Edit Comparison Text panel. To determine if the input data is greater than, less than, or equal to the comparison text, the page format editor processes these entries as hexadecimal values. For example, a C (hexadecimal C3) in the input data is greater than a c (hexadecimal 83) in the comparison text. Valid values: CH A change from a prior value or character string. XPAF stores the input record(s) for comparison with subsequent records. If a subsequent record is different, then a change condition has been detected. The changed record is then stored as the new comparison record. If you select this type code, leave the 'COMPARISON TEXT' column blank on the Edit Comparison Text panel. EQ Equal to. GE Greater than or equal to. GT Greater than. LE Less than or equal to. LT Less than. NE Not equal to. OT Other than the specified comparison types. If you select this type code, leave the 'COMPARISON TEXT' column blank on the Edit Comparison Text panel, and specify at least one other comparison type. Default: EQ
B/A	Identify where the action resulting from the condition test is to occur. This column is used in conjunction with the 'L/G' column. Valid values: B Before the line or line group. When you select this option, the line or line group input records are reprocessed using the copy modification and page layout specified in the condition ID; however, they are printed only once. For information about 'before' and 'after' processing, refer to chapter 51, "Page format overview." A After the line or line group. Default: B
L/G	Identify where the action resulting from the conditional formatting will occur. This column is used in conjunction with the 'B/A' column. Valid values: L Processing occurs before or after the current line. G Processing occurs before or after the line group that is identified by the 'END GROUP' column. Default: G

Field/Column	Action
COPY MODIFICATION NAME	Identify the copy modification to be used if the condition is true. Valid values: *name* — Uses the named copy modification. The copy modification must be defined in this page format. CURRENT or = — Use the current copy modification again. FIRST — Uses the first copy modification in the page format. NEXT — Uses the next copy modification in the page format. If NEXT is called from the last copy modification in the page format, the first copy modification in the page format is used. NULL or / — Continues using the current copy modification and continues printing on the current physical sheet. Default: CURRENT ***NOTE:*** Any value except NULL or slash (/) causes printing to begin on the front of a new physical sheet.
PAGE LAYOUT NAME	Identify the page layout to be used if the condition is true. Valid values: *name* — Uses the named page layout. The page layout must be defined in this page format. CURRENT or = — Use the current page layout again. FIRST — Uses the first page layout in the current page format. NEXT — Uses the next page layout in the current page format. If NEXT is called from the last page layout in the page format, the first page layout in the page format is used. NULL or / — Continues using the current page layout and continues printing on the current sheet. Default: NULL ***NOTE:*** Any value except NULL or slash (/) causes printing to begin on the first logical page of the next physical sheet. To skip to the front of a new sheet when printing duplex, specify CURRENT for the copy modification and NULL for the page layout. To skip to a new side of a page when printing duplex, specify NULL for the copy modification and CURRENT for the page layout.

Creating/editing comparison text

After you enter E in the 'OPTION' column of the Edit Conditional Formatting Parameters panel, a panel similar to this appears:

```
                    Xerox Output Administrative Facility      Row 1 to 1 of 1
                              Edit Comparison Text

COMMAND ===>                                                   SCROLL ===> PAGE

* In OPT column, enter 'I' to insert, 'R' to repeat, or 'D' to delete a line.

  Condition ID: CONDA1

  OPT COMPARISON TEXT
  _   TEST TEXT_____________________________________________________________
```

Complete these fields and press **ENTER**:

Field/Column	Action
Condition ID	This field displays the condition ID for which you are editing comparison text.
OPT	Enter the letter that corresponds to the function you want to perform. Valid values: I Inserts a line below this line of text. R Repeats a line of text in the string. D Deletes this line of text from the string.
COMPARISON TEXT	Enter the text to be compared with the field in your input data stream. You can enter a maximum of 700 characters. No quotes are necessary. All characters except the ampersand character (&) are allowed. If you entered CH or OT in the 'COMPARISON TYPE' column on the previous panel, do not enter any comparison text. The values entered for this column must be case sensitive. Enter the same combination of uppercase and lowercase characters here that you expect to find in your input data stream. Default: TEST TEXT

When you reach the end of a line, the text editor does not automatically wrap. You must insert a new line. You also must ensure there is a space between the last character on a line and the first character on the next line. If you do not insert the space, the system recognizes the last word on a line and the first word on the next line as a single word.

Specifying font list parameters

As an alternative to specifying fonts for each line in a page layout, you can select fonts through font lists coupled with a font index contained in the input data stream. Only Xerox fonts can be used with the page format editor.

The font index is entered in the second column of the input data stream. Each font index references a Xerox font in a font list that is associated with a page layout. Within a font list, you can set up 127 unique font indexes.

If you use font indexing to select your fonts, you can change fonts only with each subsequent line of your input data stream. You cannot also specify a different font for an individual field within the line.

For each font you specify, you must execute option 4, Update Xerox Font Characteristics Information, on the Xerox Page Format Editor menu to convert Xerox font characteristics. For instructions on using this option, refer to chapter 59, “Updating Xerox font characteristics information.”

You must edit your JCL so that the font index byte is recognized in your input data stream. The font index byte must be in the byte immediately following the carriage control byte. You must also include one of the following IBM JCL keywords in the JCL:

- TRC=YES (on the OUTPUT statement)
- DCB=OPTCD=J (on the DD statement)

Editing a font list

Enter **3** at the Create/Edit Page Layouts menu OPTION line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility     Row 1 to 2 of 2
                                Edit a Font List

COMMAND ===>                                                   SCROLL ===> PAGE

* In OPTION column, enter 'I' to insert or 'D' to delete a line.

  Page Layout Name: PL0001

  OPTION   FONT INDEX   FONT
  _        __0          UN104E
  _        _10          UN104A
  _        ___          ______
```

Complete these fields and press **ENTER**:

Field/Column	Action
Page Layout Name	This field identifies the page layout for which you are creating or editing a font list.
OPTION	Enter the letter that corresponds to the function you want to perform. Valid values: I Inserts a line below this line in the list. For the line to be saved, you must enter a valid font index and Xerox font name. D Deletes this line from the font list.
FONT INDEX	Enter a unique font index value by which this Xerox font will be referenced in your input data stream. Valid values: 0 through 126. You can enter the font index values in any order; when you press ENTER or enter END, the system automatically sorts them in ascending numerical order. Use the scroll keys to scroll through the list.
FONT	Enter the 1- to 6-character name of the Xerox font to be associated with the font index.

57. Generating a page format

This chapter describes how to generate a page format.

Generation procedure

Before you can use a page format, you must compile the source into a machine readable format using this procedure:

Step 1. Enter **2** at the Xerox Page Format Editor menu OPTION line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                         Maintain Page Formats

OPTION ===>

  1.  Create/Edit a Page Format

  2.  Generate a Page Format


          Page Format Name:

  Page Format Library Name:
```

Step 2. Enter **2** in the menu OPTION line.

Step 3. If you know the name of the page format you want to generate, enter the 1- to 8-character name in the ‘Page Format Name’ field.

If you do not know the exact name, leave the ‘Page Format Name’ field blank or enter the first few characters of the name followed by an asterisk (*), then press **ENTER**.

A panel similar to this appears and displays a list of the existing page formats that match the name pattern you entered:

```
MEMBER LIST ------------------------------------- ROW 00001 OF 00008
COMMAND ===>                                       SCROLL ===> PAGE
   Name          VV.MM  Created   Changed    Size   Init  Mod   ID
  DFLT1
  FMTA
  FMTB
  FMTC
  FMTD
  LO002
  L0003
  L0004
  **END**
```

Enter **S** to the left of the page format you want to generate, then press **ENTER**.

Step 4. In the ‘Page Format Library Name’ field, enter the name of the library in which you want to store the generated page format and press **ENTER**. If you do not enclose the library name in single quotes, the system automatically prefixes it with your user ID.

After the system has generated the page format, it displays a confirmation message. The system stores the generated page format in the page format library. This is the library specified in the XOSF start-up proc DD statement named by the PGFRMDD initialization parameter or the PAGEFORMLIB printer profile parameter. Refer to *Section Five: XPAF Parameter and Keyword Reference* for information about these parameters.

The generated page format cannot be edited online. To make changes, you must edit the page format source, then regenerate it. For the changes to take effect, you must drain your XOSF-controlled printers, then restart them.

58. Copying page format source members

This chapter describes how to copy a page format's source members. This is useful when, for example, you want to copy a page format from test libraries to production libraries.

From the following datasets, you can copy all members that make up the page format:

- COND
- CPMOD
- FIELDD
- FLIST
- LINED
- PLIST

You can rename the page format during the copy and store the copied members in different datasets.

Specifying the copy source

Enter **3** at the Xerox Page Format Editor menu OPTION line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                    Copy Page Format Source Members

COMMAND ===>

  INPUT
      Dataset Prefix:
    Page Format Name:

  OUTPUT
      Dataset Prefix:
    Page Format Name:
```

Complete these fields and press **ENTER**:

Field	Action
INPUT **Dataset Prefix**	Enter the prefix of the datasets where the page format source to be copied resides. Do not enclose the prefix in quotes.
Page Format Name	Enter the 1- to 8-character name of the page format whose source members you want to copy.
OUTPUT **Dataset Prefix**	Enter the prefix of the datasets in which you want to store the copied members. These datasets must be allocated before performing the copy.
Page Format Name	Enter the 1- to 8-character name by which you want the copied version of the page format known. The name can be the same as or different from the input page format name.

59. Updating Xerox font characteristics information

This chapter describes how to update the XPAF EBCDIC font widths (XPAFEFW) table and EBCDIC-to-ASCII (XPAFE2A) table with information that is needed to position characters correctly at print time. When using Xerox fonts in a page-formatted document, XPAF uses centralized font dimensions to position both centralized and decentralized font characters on the page.

After loading a new centralized font or converting a centralized font to a decentralized font, you must execute the Update Xerox Font Characteristics Information option or CONVERT FONT TSO/batch command before you use either a centralized or decentralized version of the font in a page-formatted document.

NOTE: This conversion requires a region of at least eight megabytes to run successfully.

For a complete list of available Xerox centralized fonts, refer to Xerox Laser Printing Systems Standard Font Library Font User Guide. For more information about the XPAFEFW and XPAFE2A tables, refer to *Section Three: Managing Resources with XPAF*.

Specifying font characteristics

Enter **4** at the Xerox Page Format Editor menu OPTION line and press **ENTER**. A panel similar to this appears:

```
                    Xerox Output Administrative Facility
                 Update Xerox Font Characteristics Information

COMMAND ===>

       Dataset Name:

  Logical Font Name:
```

Complete these fields and press **ENTER**:

Field	Action
Dataset Name	Enter the name of the PDS or native centralized font library in which the font is stored. The dataset specifications are: RECFM=F or FB LRECL=128 BLKSIZE=A value appropriate for your site
Logical Font Name	• Enter the 1- to 6-character name of the Xerox centralized font that you want to use in a page-formatted document. The name must match the logical font name in the Xerox font information (XPAFXFI) table. For more information about the XPAFXFI table, refer to *Section Three: Managing Resources with XPAF*. • Enter an asterisk (*) to convert all fonts in the PDS or native centralized library.

TSO batch command

You can use this TSO/batch command as an alternative to using the Update Xerox Font Characteristics Information option:

CONVERT FONT('*input-dataset-name*({ *member-name* | * })')

Refer to the *XPAF TSO/Batch Commands Quick Reference Card* for information about other commands you can use.

60. Page format examples

This chapter illustrates several ways in which you can use the page format editor to format documents. It provides these examples:

- A list report which illustrates how to create global and line data specifications and steps you through the process of setting up a copy modification
- A statement report which illustrates field formatting and printing the same data multiple times on the report
- Mail merging which illustrates conditional processing and shows you how to use comparison text to test for a particular condition

A full explanation of the fields shown in the examples can be found in earlier chapters of Section Eight.

List report

This example illustrates a page format that can be used to print a simple list report.

Assumptions

Assume you want to format a report that lists phone calls by department and within department by extension. The report prints each extension beginning on a separate page.

- The report is printed on 8.5 by 11 inch paper in portrait orientation.
- The logical page is offset 0 inches across and 0.75 inches down from the physical page origin. The logical page is 7 by 10 inches, with a 1.5 inch margin.
- For each department there are three title lines, which are positioned at the top of the logical page:
  - Line one contains the company name. It also contains a skip-to-channel 1 code.
  - Line two contains the report title and the month and year it was produced.
  - Line three contains the department name and extension number.
- There is one column heading line, which is positioned 1.25 inches down from the top of the logical page and aligned with the margin.
- There may be up to 45 detail records per page. The detail records are positioned 1.5 inches down from the top of the logical page and are aligned with the margin.
- All data is printed in font P07TYA.

The input data stream format is shown in figure 60-1. A sample phone call log report is shown in figure 60-2.

Figure 60-1. Phone call log report input data stream

```
1                    Rainbow Office Supplies
                   Phone Call Log for June 1999
                 Purchasing Department Ext.: 2120
 Date       Number dialed       Time     Mins        Charge
 06/03      305-896-0110        9:38     3.41           .76
 06/03      561-222-4844       10:14     2.18           .48
 06/04      305-896-2506        1:17    10.25          2.26
 06/05      561-222-9933        2:05     6.15          1.36
 06/05      305-896-2562        3:14    10.11          2.23
 06/06      813-636-2400        8:58     1.50           .33
 06/06      561-222-7008        9:27    13.45          2.96
 06/10      305-896-3200        9:56     5.04          1.11
 06/11      305-896-2506       11:12     2.09           .46
 06/11      407-804-3003        3:37     4.01           .89
 06/12      305-896-2562        4:11     6.23          1.37
 06/13      561-222-0620        4:27     4.44           .98
 06/13      813-636-0027        4:52    11.26          2.48
 06/14      305-896-8251        9:13    15.16          3.34
 06/14      305-896-4354       10:09     2.50           .55
 06/15      407-804-7777       10:23    12.57          2.77
 06/16      305-896-6389       12:17     3.11           .69
 06/17      305-896-0700        8:32     8.17          1.80
 06/17      561-222-6363        8:54    11.22          2.47
 06/18      305-896-2282       11:47     2.51           .56
 06/26      407-804-9542        3:31     6.36          1.40
 06/26      813-636-2459        3:41     4.41           .98
 06/27      305-896-1166        9:19     5.52          1.22
 06/27      305-896-1200       11:06    15.08          3.32
```

Figure 60-2. Phone call log report sample output

Rainbow Office Supplies
Phone Call Log for June 1999
Purchasing Department Ext.: 2120

Date	Number Dialed	Time	Mins	Charge
06/03	305-896-0110	9:38	3.41	.76
06/03	561-222-4844	10:14	2.18	.48
06/04	305-896-2506	1:17	10.25	2.26
06/05	561-222-9933	2:05	6.15	1.36
06/05	305-896-2562	3:14	10.11	2.23
06/06	813-636-2400	8:58	1.50	.33
06/06	561-222-7008	9:27	13.45	2.96
06/10	305-896-3200	9:56	5.04	1.11
06/11	305-896-2506	11:12	2.09	.46
06/11	407-804-3003	3:37	4.01	.89
06/12	305-896-2562	4:11	6.23	1.37
06/13	561-222-0620	4:27	4.44	.98
06/13	813-636-0027	4:52	11.26	2.48
06/14	305-896-8251	9:13	15.16	3.34
06/14	305-896-4354	10:09	2.50	.55
06/15	407-804-7777	10:23	12.57	2.77
06/16	305-896-6389	12:17	3.11	.69
06/17	305-896-0700	8:32	8.17	1.80
06/17	561-222-6363	8:54	11.22	2.47
06/18	305-896-2282	11:47	2.51	.56
06/26	407-804-9542	3:31	6.36	1.40
06/26	813-636-2459	3:41	4.41	.98
06/27	305-896-1166	9:19	5.52	1.22
06/27	305-896-1200	11:06	15.08	3.32

Page format values

To print the phone call log report using the input data shown in figure 60-1, you would create a page format with the following values. Assume the page format is called REPORT.

Step 1. Access the page format editor (XOAF option P).

Step 2. On the Xerox Page Format Editor menu panel, select option **2**. Press **ENTER**.

Step 3. On the Maintain Page Formats panel, enter **1** on the COMMAND line and **REPORT** in the 'Page Format Name' field. Press **ENTER**.

Step 4. On the Create/Edit a Page Format panel, select option **1**. Press **ENTER**.

Step 5. On the Create/Edit Copy Modifications panel, enter **E** in the 'OPTION' column and **REPORT** in the 'COPY MODIFICATION NAME' column. Press **ENTER**.

Step 6. Make these entries on the Create/Edit Copy Modifications panel:

Unit Measure (CM/DOT/IN/MM): **IN**
Page Origin Across: **0**
Page Origin Down: **0.75**
Number of Copies (1 to 255): **1**
Duplex Mode (YES/NO): **NO**
Tray Number (1 to 9): **1**
Cluster Name:
Form Name for Front:
Form Name for Back:
BFORM Name:
Report Stacking (YES/NO): **NO**
Split Report (YES/NO): **NO**
Front Shift Value (-75 to 75): **0**
Back Shift Value (-75 to 75): **0**
Signal Function 1 (YES/NO): **NO**
Signal Function 2 (YES/NO): **NO**
Separator Page First (YES/NO): **NO**

Press **ENTER**, then press **PF3** twice.

Step 7. On the Create/Edit a Page Format menu panel, enter **2** in the COMMAND line and press **ENTER**.

Step 8. On the Create/Edit Page Layouts panel, enter **E** in the 'OPTION' column, **REPORT** in the 'PAGE LAYOUT NAME' column, and **PORTRAIT** in the 'ORIENTATION' column. Press **ENTER**.

Step 9. On the Create/Edit Page Layouts menu panel, select option **1**. Press **ENTER**.

Step 10. Make these entries on the Edit Global Specifications panel:

Width: **7**

Height: **10**

Unit Measure (CM/DOT/IN/MM): **IN**

Margin: **1.5**

LPI: **6**

Press **ENTER**, then press **PF3**.

Step 11. On the Create/Edit Page Layouts menu panel, select option **2**. Press **ENTER**.

Step 12. Repeat the line data shown on the panel twice and make these entries on the Edit Line Data Specifications panel:

```
        POSITION                FIELD          END
OPT COUNT  ACROSS DOWN   LPI   CHAN FONT   FORMAT   COL  COND  GROUP
_   3__   MARGIN TOP____ 6____ 1_   P07TYA ________ DEF  NO    NO
_   1__   MARGIN 1.25___ 6____ __   P07TYA ________ DEF  NO    NO
_   45_   MARGIN 1.5____ 6____ __   P07TYA ________ DEF  NO    NO
```

Press **ENTER**. Then press **PF3** until you return to the Maintain Page Formats panel.

Step 13. On the Maintain Page Formats panel, enter **2** on the COMMAND line, **REPORT** in the ‘Page Format Name’ field, and your page format library name in the ‘Page Format Library Name’ field. Press **ENTER**.

The page format is generated and stored in your page format library. This is the library specified in the XOSF start-up proc DD statement named by the PGFRMDD initialization parameter or the PAGEFORMLIB printer profile parameter. You can now submit a job using this page format by specifying PAGEFORM=REPORT in your extended JCL.

Statement report

This example illustrates a page format that merges customer data with a statement form.

Assumptions

A medical insurance company prints statements of employee benefits for claims filed with their office. They have created a standard statement of benefit form called INSTMT. The form is 8.5 by 11 inches and is portrait. It is designed as a tri-fold with a window for the employee's mailing address. A detachable check prints in the lower third of the form.

- The logical page is offset 0.0 inches across and 0.0 inches down from the physical page origin. The logical page dimensions are 8.5 by 11.0 inches.
- The input data stream contains the variable data for each claim.
- The data is printed in font P07TCB.
- The employee name appears in the data stream once; however, it is printed on the statement three times.
- The employee address appears in the data stream once; however, it is printed on the statement three times.
- Up to eight individual "services" can be listed.
- Up to six lines of notes can be printed below the address window.

The input data stream format is shown in figure 60-3. A sample claims statement is shown in figure 60-4.

Figure 60-3. Claims statement input data stream

```
1A41208  RAINBOW OFFICE SUPPLIES
 707-07-9854  BARBARA RODRIGUEZ
 1265 SUMMER STREET               SANDY BEACH          FL 32111
 A12345 BARBARA RODRIGUEZ  EMPLOYEE  9999901  06/15/99
 1999 100  80  50
 0601 0601 PHRO ADULT    PRINCIPAL DMD     3400       3400 G
 0601 0601 XR BITE       PRINCIPAL DMD     1500                  1500
2                                          4900       3400       1500

                                                                 1500
                                                                 100

                                                                 1500
           $15.00                  $15.00
 G:  NO BENEFIT PAID BECAUSE TREATMENT EXCEEDS PLAN FREQUENCY
34732
1A41208  RAINBOW OFFICE SUPPLIES
 699-92-1234  VALERIE GLASS
 7 MOSS TERRACE                   SANDY BEACH          FL 32111
 A12091 VALERIE GLASS      EMPLOYEE  9999903  06/15/99
 1999 100  80  50
 0531 0531 OFFICE VISIT  EMS CLINIC        6300                  6300
 0531 0531 XR/MACHINE    EMS CLINIC        6500                              6500
 0531 0531 SUPPLIES      EMS CLINIC         700                               700
2                                         13500                  6399       7200
                                                                            5000
                                                                 6399       2200
                                                                 100
        80

                                                                 6300       1760
           $80.60                  $80.60

34732
1A41208  RAINBOW OFFICE SUPPLIES
 732-08-8712  JAMES LEMANSKI
 56 ORCHID TREE LANE              SALTY SHORES         FL 32110
 A12298 JAMES LEMANSKI     EMPLOYEE  9999906  06/15/99
 1999 100  80  50
 0519 0519 OFFICE VISIT  WALKER MD         4800                  4800
 0519 0519 CULTURE       WALKER MD         2400                  2400
2                                          7200                  7200

                                                                 7200
                                                                 100

                                                                 7200
           $72.00                  $72.00

34732
```

Figure 60-4. Claims statement sample output

EXPLANATION OF BENEFITS

GROUP NUMBER	GROUP NAME	EMPLOYEE SS	EMPLOYEE
A41208	RAINBOW OFFICE SUPPLIES	707-07-9854	BARBARA RODRIGUEZ 1265 SUMMER STREET SANDY BEACH FL 32111

CLAIM NUMBER	CLAIMANT	RELATIONSHIP	CHECK	CHECK DATE
A12345	L	EMPLOYEE	9999901	6/15/99

DATE 1999 FROM	TO	SERVICE	PROVIDED BY	CLAIM AMOUNT	NOT COVERED SEE NOTES		PAYABLE IF 100 %	PAYABLE IF 80 %	PAYABLE IF 50 %
0601	0601	PHRO ADULT	PRINCIPAL DMD	34.00	34.00	G			
0601	0601	XR BITE	PRINCIPAL DMD	15.00			15.00		
			TOTALS	49.00	34.00		15.00		
				LESS DEDUCTIBLE					
				NET			15.00		
				BENEFIT %			100%		
				AMOUNT PAYABLE			15.00		

TOTAL BENEFIT	$15.00
ADJUSTMENT	
TOTAL AMOUNT	$15.00

G: NO BENEFIT PAID BECAUSE TREATMENT EXCEEDS PLAN FREQUENCY

DOE INSURANCE ADMINISTRATORS
P. O BOX 123
KINSALE, WA 90294-1234

QUESTIONS? CONTACT: OR CALL (413) 555-1234 EXT. 4732

BENEFIT ACCOUNT OF: RAINBOW OFFICE SUPPLIES

CHECK DATE	CHECK
6/15/99	9999901

GROUP	EMPLOYEE NAME	
A41208	BARBARA RODRIGUEZ	
CLAIMANT	PATIENT	CLAIM
BARBARA RODRIGUEZ		A12345

CHECK AMOUNT
$15.00

PAY TO THE ORDER OF
BARBARA RODRIGUEZ
1265 SUMMER STREET
SANDY BEACH FL 32111

DOE INSURANCE ADMINISTRATORS

Page format values

To print the claims statement of benefits illustrated in figure 60-4 using the form INSTMT and the input data shown in figure 60-3, you would create a page format with the following values. Assume the page format is called INSTMT.

Step 1. Access the page format editor (XOAF option P).

Step 2. On the Xerox Page Format Editor menu panel, select option **2**. Press **ENTER**.

Step 3. On the Maintain Page Formats panel, enter **1** on the COMMAND line and **INSTMT** in the 'Page Format Name' field. Press **ENTER**.

Step 4. On the Create/Edit a Page Format panel, select option **1**. Press **ENTER**.

Step 5. On the Create/Edit Copy Modifications panel, enter **E** in the 'OPTION' column and **INSTMT** in the 'COPY MODIFICATION NAME' column. Press **ENTER**.

Step 6. Make these entries on the Create/Edit Copy Modifications panel:

Unit Measure (CM/DOT/IN/MM): **IN**
Page Origin Across: **0.0**
Page Origin Down: **0.0**
Number of Copies (1 to 255): **1**
Duplex Mode (YES/NO): **NO**
Tray Number (1 to 9): **1**
Cluster Name:
Form Name for Front: **INSTMT**
Form Name for Back:
BFORM Name:
Report Stacking (YES/NO): **NO**
Split Report (YES/NO): **NO**
Front Shift Value (-75 to 75): **0**
Back Shift Value (-75 to 75): **0**
Signal Function 1 (YES/NO): **NO**
Signal Function 1 (YES/NO): **NO**
Separator Page First (YES/NO): **NO**

Press **ENTER**, then press **PF3** twice.

Step 7. On the Create/Edit a Page Format menu panel, enter **2** in the COMMAND line and press **ENTER**.

Step 8. On the Create/Edit Page Layouts panel, enter **E** in the 'OPTION' column, **INSTMT** in the 'PAGE LAYOUT NAME' column, and **PORTRAIT** in the 'ORIENTATION' column. Press **ENTER**.

Step 9. On the Create/Edit Page Layouts menu panel, select option **1**. Press **ENTER**.

Step 10. Make these entries on the Edit Global Specifications panel:

Width: **8.5**

Height: **11**

Unit Measure (CM/DOT/IN/MM): **IN**

Margin: **0**

LPI: **6**

Press **ENTER**, then press **PF3**.

Step 11. On the Create/Edit Page Layouts panel, select option **2**. Press **ENTER**.

Step 12. Repeat the line displayed on the panel nine times and make these entries on the Edit Line Data Specifications panel:

	POSITION			FIELD		END				
OPT	COUNT	ACROSS	DOWN	LPI	CHAN	FONT	FORMAT	COL	COND	GROUP
_	1__	MARGIN	0_____	6____	1_	P07TCB	LINE1___	DEF	NO	NO
_	1__	MARGIN	0_____	6____	__	P07TCB	LINE2___	DEF	NO	NO
_	1__	MARGIN	0_____	6____	__	P07TCB	LINE3___	DEF	NO	NO
_	1__	MARGIN	0_____	6____	__	P07TCB	CLAIMNO_	DEF	NO	NO
_	1__	MARGIN	0_____	6____	__	P07TCB	DATES___	DEF	NO	NO
_	8__	MARGIN	0_____	6____	__	P07TCB	SERVICE_	DEF	NO	NO
_	5__	MARGIN	0_____	6____	2_	P07TCB	SUBTOT__	DEF	NO	NO
_	1__	MARGIN	0_____	6____	__	P07TCB	TOTALS__	DEF	NO	NO
_	6__	.4____	5.5____	6____	__	P07TCB	_____	DEF	NO	NO
_	1__	7.5___	7.88___	6____	3_	P07TCB	_____	DEF	NO	NO

Press **ENTER**.

Step 13. Enter **E** in the ‘OPT’ column for line group 1 to edit the field format LINE1. Press **ENTER**.

Step 14. Repeat the line displayed on the panel three times and make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT		PRINT				
OPTION	START	LENGTH	ACROSS	DOWN	DIR	FONT	COLOR	CONSTANT
_	1___	6___	.3_____	1.1____	A	_____	DEF	NO
_	1___	6___	.7_____	8.92___	A	_____	DEF	NO
_	9___	29__	1.0____	1.1____	A	_____	DEF	NO
_	9___	29__	1.8____	8.4____	A	_____	DEF	NO

Press **ENTER**, then press **PF3**.

Step 15. Enter **E** in the 'OPT' column for line group 2 to enter the field format LINE2. Press **ENTER**.

Step 16. Repeat the line displayed on the panel three times and make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT	PRINT					
OPTION	START	LENGTH	ACROSS	DOWN		DIR	FONT	COLOR	CONSTANT
_	1___	11__	4.1____	1.1____	A	_____	DEF	NO	
_	14__	29__	5.3____	1.1____	A	_____	DEF	NO	
_	14__	29__	1.45___	8.92___	A	_____	DEF	NO	
_	14__	29__	0.70___	9.9____	A	_____	DEF	NO	

Press **ENTER**, then press **PF3**.

Step 17. Enter **E** in the 'OPT' column for line group 3 to edit the field format LINE3. Press **ENTER**.

Step 18. Repeat the line displayed on the panel three times and make these entries on the panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT	PRINT					
OPTION	START	LENGTH	ACROSS	DOWN		DIR	FONT	COLOR	CONSTANT
_	1___	29__	5.3____	1.3____	A	_____	DEF	NO	
_	1___	29__	0.7____	10.05__	A	_____	DEF	NO	
_	34__	29__	5.3____	1.5____	A	_____	DEF	NO	
_	34__	29__	0.7____	10.20__	A	_____	DEF	NO	

Press **ENTER**, then press **PF3**.

Step 19. Enter **E** in the 'OPT' column for line group 4 to edit the field format CLAIMNO. Press **ENTER**.

Step 20. Repeat the line displayed on the panel eight times and make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT		PRINT				
OPTION	START	LENGTH	ACROSS	DOWN	DIR	FONT	COLOR	CONSTANT
_	1___	6___	.3_____	1.60___	A	_____	DEF	NO
_	1___	6___	3.9____	9.25___	A	_____	DEF	NO
_	8___	19__	1.0____	1.60___	A	_____	DEF	NO
_	8___	19__	.70____	9.25___	A	_____	DEF	NO
_	27__	8___	2.6____	1.60___	A	_____	DEF	NO
_	37__	7___	3.48___	1.60___	A	_____	DEF	NO
_	37__	7___	7.10___	8.40___	A	_____	DEF	NO
_	47__	9___	4.35___	1.60___	A	_____	DEF	NO
_	47__	9___	6.25___	8.40___	A	_____	DEF	NO

Press **ENTER**, then press **PF3**.

Step 21. Enter **E** in the 'OPT' column for line group 5 to edit the field format DATES. Press **ENTER**.

Step 22. Repeat the line displayed on the panel three times and make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT		PRINT				
OPTION	START	LENGTH	ACROSS	DOWN	DIR	FONT	COLOR	CONSTANT
_	1___	4___	.6_____	1.90___	A	_____	DEF	NO
_	6___	3___	6.0____	1.93___	A	_____	DEF	NO
_	10__	3___	6.8____	1.93___	A	_____	DEF	NO
_	14__	3___	7.6____	1.93___	A	_____	DEF	NO

Press **ENTER**, then press **PF3**.

Step 23. Enter **E** in the 'OPT' column for line group 6 to edit the field format SERVICE. Press **ENTER**.

Step 24. Repeat the line displayed on the panel nine times and make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT		PRINT					
OPTION	START	LENGTH	ACROSS	DOWN		DIR	FONT	COLOR	CONSTANT
_	1___	4___	.213___	2.35___	A	_____	DEF	NO		
_	6___	4___	.713___	2.35___	A	_____	DEF	NO		
_	11__	14__	1.2____	2.35___	A	_____	DEF	NO		
_	25__	14__	2.695__	2.35___	A	_____	DEF	NO		
_	40__	7___	4.145__	2.35___	A	_____	DEF	NO		
_	51__	7___	4.94___	2.35___	A	_____	DEF	NO		
_	62__	7___	5.90___	2.35___	A	_____	DEF	NO		
_	59__	1___	5.70___	2.35___	A	_____	DEF	NO		
_	73__	7___	6.70___	2.35___	A	_____	DEF	NO		
_	84__	7___	7.50___	2.35___	A	_____	DEF	NO		

Press **ENTER**, then press **PF3**.

Step 25. Enter **E** in the ‘OPT’ column for line group 7 to edit the field format SUBTOT. Press **ENTER**.

Step 26. Repeat the line displayed on the panel four times and make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT		PRINT					
OPTION	START	LENGTH	ACROSS	DOWN		DIR	FONT	COLOR	CONSTANT
_	40__	7___	4.145__	3.61___	A	_____	DEF	NO		
_	51__	7___	4.94___	3.61___	A	_____	DEF	NO		
_	62__	7___	5.90___	3.61___	A	_____	DEF	NO		
_	73__	7___	6.70___	3.61___	A	_____	DEF	NO		
_	84__	7___	7.50___	3.61___	A	_____	DEF	NO		

Press **ENTER**, then press **PF3**.

Step 27. Enter **E** in the ‘OPT’ column for line group 8 to edit the field format TOTALS. Press **ENTER**.

Step 28. Repeat the line displayed on the panel three times and make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT		PRINT					
OPTION	START	LENGTH	ACROSS	DOWN		DIR	FONT	COLOR	CONSTANT
_	6___	11__	7.00___	4.62___	A	_____	DEF	NO		
_	19__	11__	7.00___	4.77___	A	_____	DEF	NO		
_	30__	11__	7.00___	4.96___	A	_____	DEF	NO		
_	30__	11__	6.60___	9.10___	A	_____	DEF	NO		

Press **ENTER**. Then press **PF3** until you return to the Maintain Page Formats panel.

Step 29. On the Maintain Page Formats panel, enter **2** on the COMMAND line, **INSTMT** in the ‘Page Format Name’ field, and your page format library name in the ‘Page Format Library Name’ field. Press **ENTER**.

The page format is generated and stored in your page format library. This is the library specified in the XOSF start-up proc DD statement named by the PGFRMDD initialization parameter or the PAGEFORMLIB printer profile parameter. You can now submit a job using this page format by specifying PAGEFORM=INSTMT in your extended JCL.

Mail merge

This example illustrates a page format that merges names and addresses with one of two form letters.

Assumptions

The Rainbow Office Supplies company is offering a promotional special to new customers in the areas served by its two locations: Sunshine Parkway and East Beach Drive. They have created two letters as forms:

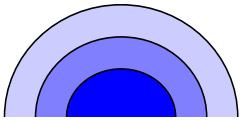
- LTR1 asks recipients in ZIP code areas beginning with 329 to visit the East Beach Drive location. Refer to figure 60-2.
- LTR2 asks recipients in ZIP code areas beginning with 331 to visit the Sunshine Parkway location.
- Each form is 8.5 by 11 inches.
- The letter is printed on 8.5 by 11 inch paper in portrait orientation.
- The logical page is offset 0 inches across and 0.5 inches down from the physical page origin. The logical page dimensions are 7.5 by 10 inches, with a 0.75 inch margin.
- The input data stream contains the date and name and mailing address for each recipient.
- The names and addresses are printed in font PR110E.
- The name is printed in two locations on the letter: in the mailing address and the salutation.
- Conditional processing tests the ZIP code to determine which form is merged with an individual address.

The input data stream format is shown in figure 60-1. A sample form letter is shown in figure 60-2. Sample JCL including this data is included in the XPFSAMP library member LETTER.

Figure 60-1. Form letter input data stream

```
1April 23, 1999
 David Ferris
 4179 North Azalea Way
 Sun Island FL    33115-2135
1April 23, 1999
 Karen Bolingi
 417 Canal Drive North
 Shell Bay FL     32904-3948
1April 23, 1999
 Kyle Trevor
 6500 Lilac Street
 Tide Point FL    33121-9122
1April 23, 1999
 Stewart Thompson
 2829 Marsh Road
 Catamaran FL     32908-3115
1April 23, 1999
 Jeanine Tante
 3197 Mango Grove Drive
 Cape Terra FL    33116-4678
1April 23, 1999
 Beatrice Allegra
 2117 South Ibis Parkway
 Amaryllis FL     32909-6172
1April 23, 1999
 Bradley Winton
 1809 Placid Drive
 Luna Cay FL      33120-2253
1April 23, 1999
 Erin Alson
 813 W. Espadrille Avenue
 Mica Sound FL    32910-5112
```

Figure 60-2. Form letter sample output



Rainbow Office Supplies
P.O. Box 2112
123 Sunshine Parkway

Dear

Congratulations on your recent purchase of computer printer supplies. We at Rainbow Office Supplies are sure you will enjoy the high quality of the products and services that we offer.

We would welcome the opportunity for you to meet with a member of our professional staff to discuss your office's requirements. Our highly trained experts have over 25 years of experience assisting individuals and businesses in determining the most cost-effective products available to meet their personal and/or organizational needs.

Rainbow Office Supplies has long-established relationships with the leading manufacturers of office supplies, thereby ensuring you the shortest delivery time possible for quality products and services.

We would like to extend to you a one-time offer of a 40% discount on any copier or printer supplies that you purchase within the next 60 days. To take advantage of this special offer, take the attached coupon to the location identified on the coupon and present it with your purchase. We look forward to helping you fulfill all of your office supply needs.

Sincerely,

Sarah Chen
Senior Sales Representative

DISCOUNT COUPON

Receive a **40%** discount on copier and
computer printer supplies purchased by
June 28, 1999.

Rainbow Office Supplies
248 East Beach Drive
Sandy Beach, FL 32111-0568

Call (999) 555-9056 to schedule your appointment.

Page format values

To merge the data shown in figure 60-1 with the appropriate form letter, you would create a page format with the following values. Assume the page format is called LETTER.

Step 1. Access the page format editor (XOAF option P).

Step 2. On the Xerox Page Format Editor panel, select option **2**, Maintain Page Formats. Press **ENTER**.

Step 3. On the Maintain Page Formats panel, enter **1**, Create/Edit a Page Format, in the COMMAND line and **LETTER** in the 'Page Format Name' field. Press **ENTER**.

Step 4. On the Create/Edit a Page Format menu option line, select option **1**, Create/Edit Copy Modifications, and press **ENTER**.

Step 5. On the Create/Edit Copy Modifications selection panel, enter **E** in the 'OPTION' column, and **LTR1** in the 'COPY MODIFICATION NAME' column. Press **ENTER**.

Step 6. Make these entries on the Create/Edit Copy Modifications data panel:

Unit Measure (CM/DOT/IN/MM): **IN**
Page Origin Across: **0**
Page Origin Down: **0.5**
Number of Copies (1 to 255): **1**
Duplex Mode (YES/NO): **NO**
Tray Number (1 to 9): **1**
Cluster Name:
Form Name for Front: **LTR1**
Form Name for Back:
BFORM Name:
Report Stacking (YES/NO): **NO**
Split Report (YES/NO): **NO**
Front Shift Value (-75 to 75): **0**
Back Shift Value (-75 to 75): **0**
Signal Function 1 (YES/NO): **NO**
Signal Function 2 (YES/NO): **NO**
Separator Page First (YES/NO): **NO**

Press **ENTER**, then press **PF3**.

Step 7. On the Create/Edit Copy Modifications selection panel, enter **I** in the 'OPTION' column. Press **ENTER**.

Step 8. Enter **E** in the 'OPTION' column and **LTR2** in the 'COPY MODIFICATION NAME' column. Press **ENTER**.

Step 9. Make these entries on the Create/Edit Copy Modifications data panel:

Unit Measure (CM/DOT/IN/MM): **IN**
Page Origin Across: **0**
Page Origin Down: **0.5**
Number of Copies (1 to 255): **1**
Duplex Mode (YES/NO): **NO**
Tray Number (1 to 9): **1**
Cluster Name:
Form Name for Front: **LTR2**
Form Name for Back:
BFORM Name:
Report Stacking (YES/NO): **NO**
Split Report (YES/NO): **NO**
Front Shift Value (-75 to 75): **0**
Back Shift Value (-75 to 75): **0**
Signal Function 1 (YES/NO): **NO**
Signal Function 2 (YES/NO): **NO**
Separator Page First (YES/NO): **NO**

Press **ENTER**, then press **PF3** twice.

Step 10. On the Create/Edit a Page Format panel, enter **2**, Create/Edit page Layouts, in the COMMAND line. Press **ENTER**.

Step 11. On the Create/Edit Page Layouts selection panel, enter **E** in the 'OPTION' column, **LETTER** in the 'PAGE LAYOUT NAME' column, and **PORTRAIT** in the 'ORIENTATION' column. Press **ENTER**.

Step 12. On the Create/Edit Page Layouts menu panel, select option **1,** Edit Global Specifications. Press **ENTER**.

Step 13. Make these entries on the Edit Global Specifications panel:

Width: **7.5**

Height: **10.0**

Unit Measure (CM/DOT/IN/MM): **IN**

Margin: **0.75**

LPI: **6**

Press **ENTER**, then press **PF3**.

Step 14. On the Create/Edit Page Layouts menu panel, select option **2**, Edit Line Data Specifications. Press **ENTER**.

Step 15. Repeat the line displayed on the panel three times and make these entries on the Edit Line Data Specifications selection panel:

```
        POSITION                    FIELD          END
OPT COUNT  ACROSS  DOWN   LPI   CHAN  FONT   FORMAT   COL COND  GROUP
_  1__     1_____  TOP____  6____  1_   UB110E  _______  DEF   NO    NO
_  1__     1_____  1.0____  6____  __   P07TYA  NAME____  DEF   NO    NO
_  1__     1_____  NEXT___  6____  __   P07TYA  _______  DEF   NO    NO
_  1__     1_____  NEXT___  6____  __   P07TYA  CITZIP__  DEF   YES   NO
```

Press **ENTER**.

Step 16. Enter **E** in the ‘OPT’ column on line 2 to edit the field format NAME. Press **ENTER**.

Step 17. Repeat the line displayed on the panel twice and make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

```
        INPUT          OUTPUT       PRINT
OPTION  START  LENGTH   ACROSS  DOWN    DIR   FONT    COLOR  CONSTANT
_       1___   25__     CURRENT CURRENT  A     ______  DEF    NO_
_       1___   25__     0.37___ 0.8____  A     UN110E  DEF    NO_
_       ____   ____     CURRENT 0.8____  A     UN110E  DEF    YES
```

Press **ENTER**.

Step 18. Enter **E** on line 3, then press **ENTER**.

Step 19. Make these entries on the Edit a Constant String panel:

```
Field Format:  NAME
  Type (C/X):  C
   Delimeter:  @
      String:  ,
```

Press **ENTER**, then press **PF3** twice.

Step 20. Enter **E** in the ‘OPT’ column on line 4 to update the field format CITZIP. Press **ENTER**.

Step 21. Make these entries on the Edit a Field Format panel:

Unit Measure: **IN**

LPI: **6**

	INPUT		OUTPUT	PRINT				
OPTION	**START**	**LENGTH**	**ACROSS**	**DOWN**	**DIR**	**FONT**	**COLOR**	**CONSTANT**
_	1___	30__	CURRENT	CURRENT	A	_____	DEF	NO_

Press **ENTER**, then press **PF3**.

Step 22. Enter **C** in the 'OPT' column on line 4 to define conditional processing parameters. Press **ENTER**.

Step 23. On the Edit Conditional Formatting Parameters selection panel, enter **E** in the 'OPTION' column and **LETTER** in the 'CONDITION ID' column. Press **ENTER**.

Step 24. Repeat the line displayed on the panel once and make these entries on the Edit Conditional Formatting Parameters panel:

Start Position: **18**

Length: **3**

OPTION	TYPE	B/A	L/G	COPY	MODIFICATION NAME	PAGE LAYOUT NAME
_	EQ	B	G	LTR2____	NULL____	
_	EQ	B	G	LTR1____	NULL____	

Press **ENTER**. Then enter **E** in the 'OPTION' column to define comparison text for the first comparison.

Step 25. Make this entry on the Edit Comparison Text panel:

OPT	COMPARISON TEXT
_	331_____

Press **ENTER**, then press **PF3.**

Enter **E** in the 'OPTION' column to define comparison text for the second comparison.

Step 26. Make this entry on the Edit Comparison Text panel:

```
OPT COMPARISON TEXT
_ 329_____________________________________________________________
```

Press **ENTER**. Then press **PF3** until you return to the Maintain Page Formats panel.

Step 27. On the Maintain Page Formats panel, enter **2** on the COMMAND line, **LETTER** in the 'Page Format Name' field, and your page format library name in the 'Page Format Library Name' field. Press **ENTER**.

The page format is generated and stored in your page format library. This is the library specified in the XOSF start-up proc DD statement named by the PGFRMDD initialization parameter or the PAGEFORMLIB printer profile parameter. You can now submit a job using this page format by specifying PAGEFORM=LETTER in your extended JCL.

Section Nine: Appendices

This section contains the appendices to the XPAF documentation.

Appendix A provides instructions on using the LDMUTIL utility to define and initialize your native resource libraries.

Appendix B provides sample JCL to use for uploading resources from a file to a the host system.

Appendix C identifies the initialization and printer profile parameters related to managing resources.

Section Nine: Appendices

A. Defining and initializing native libraries

You can use the library data management utility (LDMUTIL) to initialize and maintain native libraries. LDMUTIL is a batch utility that provides these functions:

- Initialize a native library
- Offload data from a native library
- Reload data that has been offloaded
- Verify the space bitmap in a library
- List directory entries or library statistics
- Expand the size of a native library

Because of the nature of these functions, some of them cannot be performed through XOAF.

Executing an LDMUTIL function

LDMUTIL reads a parameter card, which specifies the name of the function being executed and the name of the dataset against which the function is to be performed. You can specify multiple parameter cards for one execution of LDMUTIL.

Parameter card conventions

The parameter card is free-form, with these restrictions:

- No continuations are permitted.
- Both the function and dataset name must be included in the same card.

A function name can be coded in full or truncated to as few characters as required to identify it uniquely. For example, any of these options invokes the offload function:

O
OF
OFF
OFFL
OFFLO
OFFLOA
OFFLOAD

Required DD statements

Include these DD statements in your JCL:

Statement	Function
LDMPARM	Indicates LDMUTIL commands which can be stored in a dataset or included instream.
LDMPRINT	Indicates where LDMUTIL should log any messages produced during execution. This entry may specify SYSOUT or the name of a message dataset. If a dataset, it must have these file specifications: LRECL=133 RECFM=FA BLKSIZE=1330
SYSUT1	Names the input dataset for the reload function only.
SYSUT2	Names the output dataset for the offload function only. The maximum record length in a native library is 64K. File size definitions are not required because XOSF allocates the file automatically when you submit the job.

Offload and reload options

With both the offload and reload functions, you can use the INCLUDE, EXCLUDE, and wildcard options to make these functions more efficient. The function of each option is described below.

When using the options, follow these conventions:

- Use of the keywords INCLUDE or EXCLUDE is optional, the default is INCLUDE.
- The input card is free-form. You can enter the option and member name(s) in any order.
- You cannot specify the INCLUDE and EXCLUDE options on the same input card.
- The options cannot be abbreviated. For example, you can enter INCLUDE, but not INC.
- The dataset name, option, and member name(s) must be separated by commas.

INCLUDE option

Specify INCLUDE to offload or reload specific members from a library. For example, you could use any of these input cards to offload only the AAC129 member:

OFFLOAD *prefix.library-name*,AAC129,INCLUDE
OFFLOAD *prefix.library-name*,INCLUDE,AAC129
OFFLOAD *prefix.library-name*,AAC129

This example offloads the AAC129 and AAC130 members:

OFFLOAD *prefix.library-name*,INCLUDE,AAC129,AAC130

Including all members is the default and does not need to be specified. For example, you could use this input card to offload all the members from the native library named *prefix*.TABLELIB:

OFFLOAD *prefix*.TABLELIB

EXCLUDE option

Specify EXCLUDE to offload or reload all the members in a library except the ones identified in the command. For example, you could use either of these input cards to reload to prefix.library-name all the members except AAC129 and AAC130:

RELOAD *prefix.library-name*,AAC129,AAC130,EXCLUDE
RELOAD *prefix.library-name*,EXCLUDE,AAC129,AAC130

Wildcard option

Use an asterisk (*) as a wildcard to select member names with a particular prefix. For example, you could use this input card to offload all the members with FONT as the first four characters of their names:

OFFLOAD *prefix.library-name*,INCLUDE,FONT*

Abends

If any function gives a non-zero return code, LDMUTIL abends with a user abend.

An error message indicating why the abend occurred may be included in the job listing.

Initializing a native library

The initialize function prepares a native library for use. It defines a new native library, builds the header record, and initializes each library block in the library as empty. Before you can initialize a native library, you must allocate it using the IBM IDCAMS utility.

Example:

```
//job-name JOB job-information
//LDMINIT    EXEC PGM=LDMUTIL,REGION=2048K
//STEPLIB    DD   DSN=prefix.XPFLOAD,DISP=SHR
//SYSPRINT   DD   SYSOUT=class
//LDMPRINT   DD   SYSOUT=class
//LDMPARM    DD   *
 INITIALIZE  prefix.library-name
```

NOTE: When you use this function, z/OS issues message IEC070I for each dataset initialized. This is not an error; the message simply indicates that initialization is complete.

Offloading data from a native library

The offload function copies data from a native library to a sequential dataset defined by SYSUT2. You can use the INCLUDE, EXCLUDE, and wildcard options.

Example:

```
//job-name JOB job-information
//OFFLOAD    EXEC PGM=LDMUTIL,REGION=2048K
//STEPLIB    DD   DSN=prefix.XPFLOAD,DISP=SHR
//SYSUT2     DD   DSN=output-dataset-name,
//                DISP=(NEW,CATLG),UNIT=storage-unit,
//                SPACE=(TRK,(45,45)),VOL=SER=volser
//SYSPRINT   DD   SYSOUT=class
//LDMPRINT   DD   SYSOUT=class
//LDMPARM    DD   *
 0FFLOAD prefix.TABLIB1,INCLUDE,AAC129,AAC130
//
```

CAUTION: To enter more than one OFFLOAD statement per job execution, you must include DISP=MOD on the SYSUT2 statement. If you specify two or more OFFLOAD statements and do not specify DISP=MOD, the library from the last OFFLOAD statement will overwrite the previous offloads.

Reloading data that has been offloaded

The reload function reloads members that have been offloaded by the offload function.

CAUTION: You can only reload a member that was offloaded via XOSF. If you performed the offload via XOAF, you must use XOAF to reload the member.

You can use the INCLUDE, EXCLUDE, and wildcard options. Enter multiple input cards as needed to include a number of individual members.

Example:

```
//job-name JOB job-information
//RELOAD     EXEC PGM=LDMUTIL,REGION=2048K
//STEPLIB    DD   DSN=prefix.XPFLOAD,DISP=SHR
//SYSUT1     DD   DSN=input-library-name,DISP=SHR,
//                DCB=(BLKSIZE=32000,LRECL=X,RECFM=VBS)
//SYSPRINT   DD   SYSOUT=class
//LDMPRINT   DD   SYSOUT=class
//LDMPARM    DD   *
 RELOAD  prefix.TABLIB1,INCLUDE,AAC129,AAC130,AAC131
 RELOAD  prefix.TABLIB1,INCLUDE,AAC136,AAC138
```

Verifying the space bitmap in a library

The verify function follows the block chain pointers in the library blocks allocated to a library member, and marks the blocks as allocated in the space map. This function does not check for corrupted chains or verify that the dataset content is correct.

Example:

```
//job-name JOB job-information
//VERIFY     EXEC PGM=LDMUTIL,REGION=2048K
//STEPLIB    DD   DSN=prefix.XPFLOAD,DISP=SHR
//SYSPRINT   DD   SYSOUT=class
//LDMPRINT   DD   SYSOUT=class
//LDMPARM    DD   *
 VERIFY  prefix.library-name
```

Listing directory entries

The directory function prepares a list of the directory entries in a library. The listing shows this information:

- Member name
- Date and time of creation
- Date and time of last update
- Number of records
- Length of the user portion of the directory entry
- Up to eight bytes of data from the user portion of the directory entry

Example:

```
//job-name JOB job-information
//LDMUTIL     EXEC PGM=LDMUTIL,REGION=2048K
//STEPLIB     DD   DSN=prefix.XPFLOAD,DISP=SHR
//SYSPRINT    DD   SYSOUT=class
//LDMPRINT    DD   SYSOUT=class
//LDMPARM     DD   *
 DIRECTORY  prefix.library-name
```

The directory listing that is created looks similar to this:

```
MEMBER NAME   CREATE    CREATE    UPDATE    UPDATE  NUMBER OF    USER     8 BYTES OF
               DATE      TIME      DATE      TIME    RECORDS     LENGTH  DATA IN HEX
FONTFF0       8/22/95  12:34:56  11/05/95   6:20:08          5      0
FONTFF1       8/22/95  12:35:01  11/25/95   2:02:00          5      0
FORMFF0       1/01/95  11:40:50   1/25/95   9:15:21          1      0
FORMFF1       1/01/95  11:40:51   1/25/95   9:15:22          1      0
FORMFF5       1/01/95  11:40:52   1/25/95   9:15:23          1      0
IMAGFF0       4/01/95  12:34:56   4/17/95  10:00:44        178      0
```

Listing library statistics

The statistics function prepares a list of statistics for a native library. The listing shows this information:

- Date and time the directory was created
- Number of active members
- Blocks available
- Blocks used
- Blocks allocated

Example:

```
//job-name JOB job-information
//LDMUTIL   EXEC PGM=LDMUTIL,REGION=2048K
//STEPLIB   DD   DSN=prefix.XPFLOAD,DISP=SHR
//SYSPRINT  DD   SYSOUT=class
//LDMPRINT  DD   SYSOUT=class
//LDMPARM   DD   *
 STATISTICS prefix.library-name
```

The library statistics listing that is created looks similar to this:

```
            LIBRARY STATISTICS FOR prefix.library-name
DATE OF CREATION : 95/198
TIME OF CREATION : 12:34:00
NUMBER OF ACTIVE MEMBERS : 150
NUMBER OF BLOCKS AVAILABLE : 0
NUMBER OF BLOCKS USED : 896
NUMBER OF BLOCKS ALLOCATED : 896
```

Expanding the size of a native library

Occasionally, XPAF issues a message letting you know that a native library has become full. You also can find out if a library is full by using the LDMUTIL statistics function. When this happens, you should expand the size of the library.

XPAF manages the VSAM cluster as its own library, complete with space map and directory pointers. If you use IDCAMS REPRO to offload this library and DELETE/DEFINE followed by a REPRO to restore the cluster, you will not increase the size of the native library.

NOTE: You may want to use IDCAMS to perform a backup of the native library before you increase its size.

Perform these steps to expand the full library:

Step 1. Create a VBS record dataset, then offload the native library to the dataset. Refer to “Offloading data from a native library” earlier in this chapter for sample JCL to use.

Step 2. Using IDCAMS, DELETE and DEFINE a new native library with an increased cluster size. To determine the IDCAMS DEFINE specifications, view the JCL for the resource installation job RJOB101 used for installing XPAF.

Step 3. Initialize and reload the expanded cluster from the offload dataset. Refer to “Initializing a native library” and “Reloading data that has been offloaded” earlier in this chapter for sample JCL to use.

LDMEXPND: This is a sample JCL showing the procedure to expand the size of the XPAF VSAM library and should be used when the XPAF VSAM library becomes full and requires more space.

NOTE: Member LDMEXPND in XPFSAMP contains an example of how to expand a VSAM library.

B. Uploading resources from file to host

You can use this sample JCL to copy the members from a file into a library on the host. Be sure to make the necessary changes for your site's requirements.

Before you submit this JCL, make sure that a library has been allocated and initialized. For instructions, refer to appendix A, "Defining and initializing native libraries."

Sample JCL

```
//job-name JOB job-information
//*         YOU MUST CHANGE THE FOLLOWING:
//*    *    1.  nnnnnn - EXTERNAL NAME ON THE INPUT file AND
//*    *        file VOL=SER
//*    *    2.  member-name - PDS MEMBER NAME INTO WHICH file
//*    *        MEMBER IS LOADED
//*    *    3.  DCB INFORMATION FOR SYSUT1:
//*    *          JDL - F,80,80
//*    *          FONTS, FORMS, IMAGES - FB,128,512
//*    *    4.  DCB INFORMATION FOR SYSUT2:
//*    *          JDL - F,80,MULTIPLE OF 80
//*    *          FONTS, FORMS, IMAGES - FB,128,512
//*    *    5.  SPACE - ADJUST FOR RESOURCES BEING OFFLOADED
//*    *    6.  volser - VOLUME SERIAL NUMBER FOR OUTPUT PDS
//DELETE  EXEC  PGM=IEFBR14
//DD1       DD  DSN=dataset-name,
//                DISP=(MOD,DELETE,DELETE),
//                UNIT=3380,SPACE=(TRK,(0,0)
//UPLOAD  EXEC  PGM=IEBGENER
//SYSPRINT  DD  SYSOUT=*
//SYSUT1    DD  UNIT=file,DSN=nnnnnn,
//                DCB=(RECFM=X,LRECL=XX,BLKSIZE=XXX),
//                LABEL=(1,BLP),DISP=(OLD,PASS),VOL=SER=nnnnnn
//SYSUT2    DD  DSN=dataset-name(member-name),
//                DISP=(NEW,CATLG,DELETE),
//                DCB=(RECFM=XX,LRECL=XX,BLKSIZE=XXX),
//                SPACE=(TRK,(10,1,5)),UNIT=3380,VOL=SER=volser
//SYSIN     DD  DUMMY
```

C. Resource management parameters

During installation, your systems programmer specifies values for initialization and printer profile parameters. Initialization parameters and their values are stored in members XINSXOAF and XINSXOSF of XINPARM. The printer profile for each XPAF printer is stored in the library referenced by the PROFDD initialization parameter in XINSXOSF.

This appendix contains a table for each of these resource types:

- Fonts
- Forms
- Images
- Logos
- Resource lists
- PDL
- Page formats
- Paper-related tables
- Color cross-reference and color conversion tables

Each table identifies the parameters whose values you will need to know before you can manage that resource type. Use these tables to record your site's value for each parameter.

Parameters related to font resource management

Parameter	Type	Function	Default	Your site's value
AUTOREV	Initialization and printer profile	Specifies whether to download fonts automatically from the Xerox native font library that are newer than the same font on the printer.	• At initialization level: NONE • At printer profile level: AUTOREV initialization parameter value	
CFONTLIB	Initialization	Identifies the DD statement that specifies the system-wide centralized font library	CFONTLIB	
DELFONT	Printer profile	Indicates whether to delete downloaded fonts from the centralized printer after the document has been printed	NO	
DFONTLIB	Initialization	Identifies the DD statement that specifies the system-wide decentralized font library	DFONTLIB	
FNTTBLDD	Initialization	Identifies the DD statement that specifies the native library containing the XPAF font tables	TABLELIB	
FONTLIB	Printer profile	Identifies the DD statement that specifies the primary native font library for a printer	• For centralized printers: CFONTLIB initialization parameter value • For decentralized and PCL-capable printers: DFONTLIB initialization parameter value	
IBMFONTDD	Initialization	Identifies the DD statement that specifies the IBM font library for AFP processing	IBMFONT	

Parameter	Type	Function	Default	Your site's value
PFONTLIB	Initialization and printer profile	Identifies the DD statement that specifies the library in which fonts that have been converted dynamically to PCL format will be stored.	• At initialization level: PFONTLIB • At printer profile level: PFONTLIB initialization parameter value	
SFONTLIB	Printer profile	Identifies the DD statement that specifies the secondary (centralized) font library to be searched to obtain font metric information	CFONTLIB initialization parameter value	

Parameters related to form resource management

Parameter	Type	Function	Default	Your site's value
AUTOREV	Initialization and printer profile	For non-AFP resources, indicates whether to force a resource download if the most current resource is in the XPAF native resource library and not on the printer. For AFP resources, indicates whether to force a resource conversion and download if the most current resource is in the AFP resource library and not in the XPAF resource library.	• At initialization level: NONE • At printer profile level: AUTOREV initialization parameter value	
CFORMLIB	Initialization	Identifies the DD statement that specifies the system-wide centralized form library	CFORMLIB	
DELFORM	Printer profile	Indicates whether to delete downloaded forms from the centralized printer after the document has been printed	NO	
DFORMLIB	Initialization	Identifies the DD statement that specifies the system-wide decentralized form library	DFORMLIB	
FORMLIB	Printer profile	Identifies the DD statement that specifies the primary native form library for a printer	• For centralized printers: CFORMLIB initialization parameter value • For decentralized and PCL-capable printers: DFORMLIB initialization parameter value	

Parameter	Type	Function	Default	Your site's value
MERGEOVL	Initialization and printer profile	Indicates whether overlays will be consolidated	• At initialization level: None • At printer profile level: MERGEOVL initialization parameter value	
NOSTORE	Initialization and printer profile	Indicates whether to store AFP resources in native centralized libraries	N (for No)	
OVERLAYDD	Initialization	Identifies the DD statement that specifies the overlay library for AFP processing	OVERLIB	
PFORMLIB	Initialization and printer profile	Identifies the DD statement that specifies the library in which forms that have been converted dynamically to PCL format will be stored	• At initialization level: PFORMLIB • At printer profile level: PFORMLIB initialization parameter value	
SFORMLIB	Printer profile	Identifies the DD statement that specifies the secondary (centralized) form library to be searched if a decentralized form cannot be found in the decentralized form library	CFORMLIB initialization parameter value	
UNIQNAME	Initialization and printer profile	Specifies whether a unique 6-character suffix is generated for a converted overlay	• At initialization level: N (for No) • At printer profile level: UNIQNAME initialization parameter value	

Parameters related to image resource management

Parameter	Type	Function	Default	Your site's value
AUTOREV	Initialization and printer profile	For non-AFP resources, indicates whether to force a resource download if the most current resource is in the XPAF native resource library and not on the printer. For AFP resources, indicates whether to force a resource conversion and download if the most current resource is in the AFP resource library and not in the XPAF resource library.	• At initialization level: NONE • At printer profile level: AUTOREV initialization parameter value	
CIMAGELIB	Initialization	Identifies the DD statement that specifies the system-wide centralized image library	CIMGLIB	
DELIMAGE	Printer profile	Indicates whether to delete downloaded images from the centralized printer after the document has been printed	NO	
DIMAGELIB	Initialization	Identifies the DD statement that specifies the system-wide decentralized image library	DIMGLIB	
IMAGELIB	Printer profile	Identifies the DD statement that specifies the primary native image library a printer	• For centralized printers: CIMAGELIB initialization parameter value • For decentralized and PCL-capable printers: DIMAGELIB initialization parameter value	
NOSTORE	Initialization and printer profile	Indicates whether to store AFP resources in native centralized libraries	N (for No)	

Parameter	Type	Function	Default	Your site's value
PAGESEGDD	Initialization	Identifies the DD statement that specifies the page segment library for AFP processing	PSEGLIB	
PIMAGELIB	Initialization and printer profile	Identifies the DD statement that specifies the library in which images that have been converted dynamically to PCL format will be stored	• At initialization level: PIMGLIB • At printer profile level: PIMAGELIB initialization parameter value	
PRINTENV	Initialization	Determines how XPAF dynamically converts AFP images colorized via the IID structured field for printing on a centralized printer	MONO	
SIMAGELIB	Printer profile	Identifies the DD statement that specifies the secondary (centralized) image library to be searched if a decentralized image cannot be found in the decentralized image library	CIMAGELIB initialization parameter value	

Parameters related to logo resource management

Parameter	Type	Function	Default	Your site's value
AUTOREV	Initialization and printer profile	Specifies whether to download logos automatically from the Xerox native logo library that are newer than the same logo on the printer.	• At initialization level: NONE • At printer profile level: AUTOREV initialization parameter value	
CLOGOLIB	Initialization	Identifies the DD statement that specifies the system-wide native logo library	CLOGOLIB	
DELLOGO	Printer profile	Indicates whether to delete downloaded images from the centralized printer after the document has been printed	NO	
LOGOLIB	Printer profile	Identifies the DD statement that specifies the native logo library for a printer	CLOGOLIB initialization parameter value	

Parameters related to list resource management

Parameter	Type	Function	Default	Your site's value
FEATURE	Printer profile	Identifies whether the printer can store downloaded resources through the FILEKEEP/ NOFILEKEEP setting	Depends on the printer model	
FONTLIST	Printer profile	Identifies the resident font list for the printer	None	
FORMLIST	Printer profile	Identifies the resident form list for the printer	None	
IMAGELIST	Printer profile	Identifies the resident image list for the printer	None	
LIBRARY	Printer profile	Identifies the DD statement that specifies the native library for resident font, form, image and logo lists for a printer	None	
LOGOLIST	Printer profile	Identifies the resident logo list for the printer	None	
XNS	Printer profile	Identifies whether the printer can support two-way communication with XPAF	Depends on the printer type	

Parameters related to PDL resource management

Parameter	Type	Function	Default	Your site's value
PDLLIB	Initialization and printer profile	Identifies the DD statement that specifies the native library used when processing DJDE documents	• At initialization level: PDLLIB • At printer profile level: PDLLIB initialization parameter value	

Parameters related to page format resource management

Parameter	Type	Function	Default	Your site's value
PAGEFORMLIB	Printer profile	Identifies the DD statement that specifies the dataset containing page formats	PGFRMDD initialization parameter value	
PGFRMDD	Initialization	Identifies the DD statement that specifies the dataset containing page formats	PAGEFORM	

Parameters related to paper-related tables

Parameter	Type	Function	Default	Your site's value
CLUSTRTB	Printer profile	Identifies the cluster mapping table used to map a centralized paper tray cluster name to a paper tray on a decentralized or PCL-capable printer	DEFAULT*xxxx*, where *xxxx* is the printer model. For NPS printers, DEFAULTDPNP.	
PAPERSIZ	Initialization and printer profile	Specifies the default paper size	• At initialization level: LETTER • At printer profile level: PAPERSIZ initialization parameter value	
PAPNAMTB	Initialization and printer profile	Identifies the paper name table used to determine the physical page size dimensions that correlate to a specified paper name	• At initialization level: DEFAULT • At printer profile level: PAPNAMTB initialization parameter value	
PAPTBLDD	Initialization and printer profile	Identifies the DD statement that specifies the library where the paper-related tables are stored	• At initialization level: TABLELIB • At printer profile level: PAPTBLDD initialization parameter value	
VARPAPTB	Initialization and printer profile	Identifies the varying paper size tables used to determine the physical paper size that corresponds to the AFP bin number for the current printer	None	

Parameters related to color cross-reference tables and color conversion table

Parameter	Type	Function	Default	Your site's value
INKXLIB	Initialization and printer profile	Identifies the DD statement that specifies the native library that contains the color cross-reference tables and the color conversion table	• At initialization level: TABLELIB • At printer profile level: INKXLIB initialization parameter value	
INKXREF	Initialization and printer profile	Identifies the default color cross-reference table	• At initialization level: None • At printer profile level: INKXREF initialization parameter value	

Section Ten: Glossary

This section contains a list of glossary terms and abbreviations found in the XPAF documentation.

Glossary

Numerics

2700 font format — A standard font format that is used for Xerox decentralized fonts.

4-word FST font format — A standard font format that is used for Xerox centralized fonts. This format is based on the 4-word File Specification Table.

A

ABIC — Algorithm Bilevel Q-Coder

ACB — Access Control Block

Advanced Function Printing (AFP) — An IBM family of software products that enables you to place text and images at any point on a page.

AEG — Active Environment Group

AFP — See *Advanced Function Printing*.

AFP bin number — The medium source drawer value as specified in the MMC structured field of the form definition.

AFW — ASCII fonts width

all-points addressability (APA) — The ability to print text and images at any point on the page within the resolution of the printer (for example, 300 dots per inch) and the printable area of the page.

American Standard Code for Information Interchange (ASCII) — A code for representing alphanumeric information. ASCII values are used in conjunction with character identifiers in XPAF centralized and decentralized character mapping tables. XPAF uses two hexadecimal digits to represent the location of the character in the centralized or decentralized font.

ANSI — American National Standards Institute

APA — See *all-points addressability*.

APAR — See *Authorized Program Analysis Report*.

APDL — Active Printer Device List

APF — Authorized Program Facility

API — Application programming interface

Application programming interface — The interface by which an application program accesses the operating system and other services.

Application socket — See *Direct socket.*

ASA — American Standards Association

ASCII — See *American Standard Code for Information Interchange*.

ASCII font widths table (XPAFAFW) — An XPAF font table that contains the widths of each physical character for a replica font. It is used to correct the positioning of characters when converting character placements from 240 to 300 dpi.

ASCII-to-ASCII table (XPAFA2A) — An XPAF font table that links the character mapping of the centralized version of the font to the character mapping of the decentralized version of the font. This table is used when printing centralized (DJDE) documents on decentralized printers to determine where a character is mapped within the decentralized version of the font being used.

Authorized Program Analysis Report (APAR) — A field-test ready patch or module replacement which resolves a specific customer problem.

B

backspacing — A capability whereby the console operator initiates backspacing using standard JES2 or JES3 printer commands. For line-mode, DJDE, XES, page-formatted, and AFP documents sent to centralized, decentralized, and PCL-capable printers, the printer backspaces to a specified page number from the current point of printing.

banner page — A page issued with a print job that contains certain job information, including but not limited to, the user ID, job ID, and print date. The banner page can be issued as a header page before each print job, as a trailer page after each print job, or as a separator page between each dataset. Also known as a separator page.

BASE300 — IBM AFP 300 dpi resolution raster fonts supplied as newly developed raster patterns.

baseline — An imaginary line on which the base of each successive character is placed.

bin number — The medium source drawer value as specified in the MMC structured field of the form definition.

bitmapped format fonts — A font for which each character is made up of a raster pattern.

BLDL — build list

BLKSIZE — block size

BOF — bottom of form

BPAM — Basic Partitioned Access Method

C

cataloged member — Cataloged member files and JSL files are the two file formats that are valid for PDL. CMEs and PDEs are the two most common types of cataloged members. See *copy modification entry* and *page description entry*.

CCITT — Consultive Committee for International Telegraph and Telephone

CCMV — Centralized character mapping table. See *character mapping table*.

CCW — channel command word

centralized printer — A high-volume printer that is generally channel-attached, but sometimes is remotely-attached to the host. These printers are used to print LCDS data streams. Centralized printers include these models: 9790, 9700, 8790, 8700, DocuPrint 4890 LPS, DocuPrint 4850 LPS, DocuPrint 4650 LPS, DocuPrint 4635 LPS, DocuPrint 4635MX LPS, DocuPrint 4235 LPS (XPPM mode), DocuPrint 4135 LPS, DocuPrint 4090 LPS, DocuPrint 4050 LPS, DocuPrint 180 EPS, DocuPrint 180 LPS, DocuPrint 96 LPS, and DocuPrint 92C LPS.

CFC — constant forms control

CFI — The coded font index structured field within an IBM coded font.

channel-attached — The direct attachment of devices by input/output channels to a host computer.

character identifier (CHARID) — A unique eight-character name that identifies a single character.

character mapping table — An XPAF font table that contains mapping information for fonts within a font mapping variation. The table relates a character identifier to a location within a font, usually in ASCII or EBCDIC representation.

character set — A set of character identifiers and their related raster patterns that make up an IBM font.

CHARID — See *character identifier*.

checkpoint restart — A capability whereby checks are taken at predefined intervals (for example, every 100 pages, or every 2 minutes) during transmission of a data stream. In the event of a system crash or a transmission failure, data transmission is resumed from the point at which the last check was taken.

CISZ — control interval size

CLPA — Clear Link Pack Area

cluster mapping table — An XPAF table, modifiable through XOAF, that maps a centralized paper tray cluster name to a paper tray on a decentralized or PCL-capable printer.

CM — Communications Module

CMD — command

CME — See *copy modification entry*.

code page — An IBM translate table that maps an EBCDIC code point to a character identifier.

code page global identifier — A unique code page identifier that is specified within the global resource identifier (GRID) value found in an MCF-2 structured field.

code page global identifier table (CPGID) — An XPAF font table that contains the graphic character set global identifier and code page global identifier values for every IBM code page member found in your IBM font library when an XPAF IBM font table update option is run. XPAF uses this table when processing an MCF-2 structured field GRID value to determine the character set and code page for the font being processed.

code point — The location of a specific character within a font, usually represented as a 2-digit hexadecimal ASCII or EBCDIC value.

coded font — A character set/code page pair.

coded font name table (XPAFCFN) — An XPAF font table that links an IBM coded font with a code page and character set.

color conversion table — The table that contains the ink color-to-RGB value translations for the 4700 printer. Whenever changes are made to this table, it must be reloaded using either the XOAF Maintain the Color Conversion Table option on the Manage Tables menu or the LOAD INKS TSO/batch command.

color cross-reference table — A table that defines ink color substitutions for a document to a 4850 or 4890 printer. Use the XOAF Maintain Color Cross-Reference Tables option on the Manage Tables menu to create, update, or delete color cross-reference tables.

color image — An image that includes one or more colors, except black.

composed text — Data that has been formatted into discrete pages for printing.

connection — A communication path between XPAF and a server.

conversation — An exchange of information between XPAF and a server. A job transmission from XPAF to a server is an example of a conversation.

copy modification (COPYMOD) — A set of parameters contained in a page format that defines how formatting changes from one set of copies to the next.

copy modification entry (CME) — A set of statements that modify the output printing characteristics of a report on a copy-to-copy basis. A CME can be a cataloged member, which is one of the valid formats for PDL.

COPYMOD — See *copy modification*.

CPC — The Code Page Control structured field within an IBM code page.

CPGID — See *code page global identifier table*.

CPI — The code page index structured field within an IBM code page.

CPU — central processing unit

CSA — Common Storage Area

CSI — Consolidated Software Inventory

CSN — character set name

cut sheet — The use of single, unconnected sheets of paper or other printing media in laser printers.

D

DASD — Direct Access Storage Device

DCB — Data Control Block

DCF — See *Document Composition Facility*.

DCMV — Decentralized character mapping table. See *character mapping table*.

DD — Data Definition

DDI — Dynamic Document Interface

DDN — Data Definition Name

DDNAME — Data Definition Name

decentralized printer — A low-volume printer that is generally remotely-attached to the host. These printers are used to print XES data streams. Decentralized printers include these models: 4700 II, 4213 II, 4197 MICR, 4045, 4030 II, 3700, and DocuPrint 4235 LPS.

DEG — Document Environment Group

desixelize — The process of converting a resource from sixelized format to a raster bit pattern.

DFA — See *Document Finishing Architecture*.

DFP — Data Facility Product

Direct connect — See *Direct socket.*

Direct LPR — A communication link using the LPR/LPD protocol to send data to an LPD server.

Direct socket — A direct communication link to an IP address.

distribution keyword — The IBM JCL keywords ADDRESS, BUILDING, DEPT, NAME, ROOM, and TITLE used for banner pages.

DJDE — See *dynamic job descriptor entry*.

Document Composition Facility (DCF) — An IBM software product that provides text formatting capabilities using SCRIPT/VS and the Generalized Markup Language (GML).

Document Finishing Architecture (DFA) — An interface that is available on some centralized printers. This interface enables the centralized printer to send a signal to third-party finishing equipment to begin a specific operation (for example, perforate) with the current sheet entering the finisher and continue until the signal is removed.

document switch processing — The process by which a printer switches from one document processing mode (for example, XES) to another, such as PCL. This processing is activated by the mode change key (MCK) command within a data stream.

dots per inch — The resolution of a resource or a page.

dpi — See *dots per inch*.

DSC — data stream compatibility

DSN — dataset name

DSNAME — dataset name

DSORG — dataset organization

duplex — A page that contains printing on both sides of the paper.

dynamic job descriptor entry (DJDE) — A Xerox control statement within a document that dynamically overrides or changes existing control statements or parameters which specify how a document should be printed on a Xerox printer. These specifications include forms and image merging, font selection, bin switching, report offsetting, and file downloading.

E

EBCDIC — See *Extended Binary Coded Decimal Interchange Code*.

EBCDIC font widths table (XPAFEFW) — An XPAF font table that contains the Xerox font widths rearranged into EBCDIC format for a given IBM character set.

EBCDIC-to-ASCII table (XPAFE2A) — An XPAF font table that translates EBCDIC values for IBM code pages to ASCII values for Xerox and replica fonts.

EC — error code

ECB — Error Control Block

EI — Environmental Intermedium

electronic printing system (EPS) — See *laser printing system*.

endpoint — See *IP address.*

EOF — end of file

EPS — See *electronic printing system*.

Extended Binary Coded Decimal Interchange Code (EBCDIC) — A code for representing alphanumeric information. EBCDIC values are used in conjunction with character identifiers in Xerox code page tables. XPAF uses two hexadecimal digits to represent the location of the character in the Xerox code page.

F

FB — fixed blocked

FBA — Fixed Block ANSI

FBM — Fixed Block Machine

FCB — Forms Control Buffer

FDL — See *forms description language*.

FEP — Front-end processing

FGID — See *font global identifier table*.

fixed metrics — The graphic character measurements, in physical units, such as dots or inches.

FLCA — Free Library Control Area

FND — The font descriptor structured field within an IBM font character set.

FNI — The font index structured field within an IBM font character set.

FNO — The font orientation structured field within an IBM font character set.

.FNT — A file format used for Xerox centralized fonts.

font — A set of printing characters that have common characteristics such as style, width, height, and weight.

font family information table (XPAFFFI) — An XPAF font table that supports the use of Xerox centralized fonts in IBM DCF.

font global identifier — A unique font identifier that is specified within the global resource identifier (GRID) value found in an MCF-2 structured field.

font global identifier table (FGID) — An XPAF font table that contains the font global identifier and width of the space character for every IBM character set found in your IBM font library when an XPAF IBM font table update option is run. XPAF uses this table when processing an MCF-2 structured field GRID value to determine the character set for the font being processed.

font index — A character string in an input data stream that identifies the font to be used to print a line of data. A font index is used in conjunction with a font list which matches the font index value to a specific font. See *font list*.

font list — A list of font names identifying the fonts that are resident on a printer.

Additionally, in a page format, a font list is a list of fonts and their associated font index values. See *font index*.

form — An electronically composed arrangement of predefined lines, boxes, text, logos, and embedded text that may be printed as is or merged with data during the printing process. This term is used to indicate either a Xerox centralized resource stored in .FRM file format or a Xerox decentralized resource stored in XES or XPAF-internal file format.

form definition (FORMDEF) — An AFP resource that defines the format of the physical page.

form list — A list of form names identifying the forms that are resident on a printer.

FORMDEF — See *form definition*.

forms description language (FDL) — A printer-resident source language used to design electronic forms. See *forms source language* and *.FRM*.

forms source language (FSL) — An uncompiled collection of user-created files containing FDL commands. See *forms description language* and *.FRM*.

forward spacing — A capability whereby the console operator initiates forward spacing using standard JES2 or JES3 printer commands. For line-mode, DJDE, XES, page-formatted, and AFP documents sent to centralized, decentralized, and PCL-capable printers, the printer forward spaces to a specified page number from the current point of printing.

.FRM — A compiled forms source language (FSL) file

FROM240 — IBM AFP 300 dpi resolution raster fonts converted from an original resolution of 240 dpi.

FSA — See *functional subsystem application*.

FSI — Functional Subsystem Interface

FSL — See *forms source language*.

FSS — See *functional subsystem*.

FST — Font Specification Table

functional subsystem (FSS) — An address space that communicates with JES to drive devices unsupported by JES.

functional subsystem application (FSA) — An application running within a functional subsystem.

G

GDDM — See *Graphical Data Display Manager*.

GDG — generation data group

GHO — See *Graphics Handling Option*.

global resource identifier (GRID) — An 8-byte external name found in the Fully Qualified Name triplet of an MCF-2 structured field. A global resource identifier is composed of the following values:

- graphic character set global identifier
- code page global identifier
- font global identifier
- width of the space character in 1/1440 inch units

Global Resource Serialization (GRS) — An z/OS component that provides resource protection in situations where resources are shared among multiple operating systems.

GML — Generalized Markup Language

graphic — See *image*.

A vector graphics language for printers.

graphic character set global identifier — An identifier that is specified within the global resource identifier (GRID) value found in an MCF-2 structured field.

Graphical Data Display Manager (GDDM) — An IBM software product that enables you to create images and convert them into a format that can be integrated with text, data, and forms.

Graphics Handling Option (GHO) — A Xerox printer option product that enables a centralized printer to store, merge, and print compressed images.

Graphics Video Generator (GVG) — A Xerox printer option that enables you to print 300/600 dpi images in text documents using a 4650 printer.

GRID — See *global resource identifier*.

GRS — See *Global Resource Serialization*.

GVG — See *Graphics Video Generator*.

GVGII — Graphics Video Generator II

H

HCCT — HASP Communication Control Table

HCF — high capacity feeder

HDC — See *host distributed communications*.

Hewlett Packard graphics language (HPGL) — A vector graphics language for printers.

HFDL — See *Host Forms Description Language*.

highlight color — The use of solid (spot) color to accentuate or contrast material from monochromatic (usually black) printed areas. The term highlight color is used by Xerox to mean printing with black plus one color.

HIP — Host Interface Processor

HLQ — high-level qualifier

host distributed communications (HDC) — The XPAF client services communications component which provides the LU 6.2 interface.

Host Forms Description Language (HFDL) — The Xerox host implementation of forms description language. See *forms description language*.

HPGL — See *Hewlett Packard graphics language*.

HPNS — High Performance Native Sockets

I

I/O — input/output

I/R — intervention required

IBM font widths table (XPAFIFW) — An XPAF font table that contains the width of each IBM character in an IBM character set/code page pair. It is used to calculate the intended width of a text string in an AFP document.

IBM-to-IBM table (XPAFI2I) — An XPAF font table that contains an entry for every IBM character set distributed with XPAF. This table allows the IBM character sets to be renamed without having to create new IBM-to-Xerox (XPAFI2X) table entries.

IBM-to-Xerox table (XPAFI2X) — An XPAF font table that identifies the Xerox fonts needed to replicate the fonts represented by an IBM character set.

IC — information code

ICC — Image Compression Code

ICP — Image Cell Position

IDCAMS — A VSAM file utility which reads control statements and performs dataset functions.

IDM — Invoke Data Map

IDR — see *ink descriptor.*

IDX — index

IID — See *Input Image Descriptor*.

IM image — One of two image object formats used in the AFP data stream. An IM image is device-dependent and uses pel-to-pel mapping for presentation. Contrast with *IO image*.

image — A resource that contains visual data such as a picture, map, or graph. For a Xerox resource, this term and *graphic* are used interchangeably to indicate either a centralized resource stored in .IMG file format or a decentralized resource stored in sixelized or .IMG file format. For an IBM resource, this term indicates an image referenced in an AFP data stream.

image dimension — The uncompressed size of an image. This size is relative to its origin in terms of positive x and y coordinates. The image dimension is expressed as the number of pels or dots in each direction based on the resolution of the image.

image list — A list of image names identifying the images that are resident on a printer.

Image Object Content Architecture (IOCA) — IBM's device-independent architecture for processing images. IOCA defines images and image attributes in a manner that can be interpreted uniformly by a variety of devices and software applications.

image position — The origin of an image relative to the page or resource origin. The origin is specified in terms of positive x and y coordinates. The image position is expressed as the number of pels or dots in each direction based on the resolution of the image.

.IMG — A file format used for Xerox centralized images.

IMM — Invoke Medium Map

initialization parameters — A set of predefined values that are supplied with XPAF. These values specify XPAF information required by z/OS, JES information required by XPAF, DD statement names, DJDE formats and defaults, and other processing options.

ink descriptor — A set of statements that defines the ink catalog, palette, and ink list used for a report. An IDR can be a cataloged member, which is one of the valid formats for PDL.

ink source language (ISL) — A printer-based keyword language used to define the multi-level hierarchy of inks that are available on a printer.

Input Image Descriptor (IID) — An IBM structured field containing the color code value of an AFP IM-type image object.

installation service macros (ISM) — A set of macros that are used to install XPAF, resources, usermods, user exits, and maintenance software.

installation verification procedure (IVP) — A series of jobs that are run after product software installation that validate product functionality.

interface device — A communication module, interface controller, printer adapter, or protocol converter which allows connectivity between the XPAF host system and remotely-attached printers.

interleaved — Refers to the format of a two-color RES .IMG file, whereby each color is represented by alternate bits in the raster data.

interpress — A Xerox high level printer command language.

IO image — One of two image object formats used in the AFP data stream. An IO image is device-independent and supports image compression on input, scaling, and data parameters for presentation. Contrast with *IM image*.

IOCA — See *Image Object Content Architecture*.

IOCP — Input/Output Control Program

IOE — Input/Output Error

IP — Internet Protocol

IP address — The host address defined by the Internet Protocol usually represented in dotted decimal notation.

IP direct — See *Direct socket.*

IPDFLT table — An XPAF font table that contains the default version of the IPSTND table.

IPL — Initial Program Load

IPS — Include Page Segment

IPSTND table — An XPAF font table that defines all the characters for all the IBM fonts which are supported by replica fonts. For each character, this table identifies the character identifier value, plane number, and the ASCII location within the plane.

IRD — Image Raster Data

ISL — See *ink source language*.

ISM — See *installation service macros*.

ISO6937 — The international standard that specifies graphic characters and control functions, and their coded representations, for use in text communications.

ISO8859-1 — The mapping format XPAF uses to place characters into centralized and decentralized fonts. Based on ISO8859 standards, it includes some box characters in the unused slots to extend plane 1 functionality.

ISPF — Interactive System Productivity Facility

IVP — See *installation verification procedure*.

J

JCL — Job Control Language

JDE — See *job descriptor entry*.

JDL — See *job descriptor library*.

JDT — JCL Descriptor Table

JES — Job Entry Subsystem

job descriptor entry (JDE) — A printer-resident command set that groups all the processing parameters for one print job or a group of print jobs which share print characteristics. Several JDEs make up a JDL.

job descriptor library (JDL) — An object or compiled file of PDL commands.

job source library (JSL) — JSL files and cataloged member files are the two file formats that are valid for PDL. A JSL file begins with a JDL command, includes system, catalog, and job level commands, and ends with an END command.

job ticket — A set of commands that specifies the printing, finishing, and job management requirements of a print job. Used by NPS and DocuSP printers.

JPEG — Joint Photographic Experts Group

JSL — See *job source library*.—

L

LAN — Local Area Network

landscape — The orientation of print lines or the top of an illustration parallel to the long edge of the paper.

laser printing system (LPS) — A printer that uses laser technology to transfer characters and images onto a page. Also known as an electronic printing system (EPS).

LCA — Library Control Area

LCAERRCD — Library Control Area Error Code

LCC — Line Control Code

LCDS — laser-conditioned data stream

LDM — Library Data Manager (XPAF component)

LDT — logical device table

.LGO — A file format used for Xerox centralized logos.

LIB — see *short-edge-feed MAP*

library — Defined areas internal and external to a software product that are used to store resources, files, and programs.

licensed font — A font for which you are required to pay royalties to a vendor depending on usage. You can use licensed fonts with XPAF and Xerox printers in accordance with the font licensor's shrink-wrap license agreement or executable license agreement which accompanies all licensed font products.

CAUTION: Printing with a licensed font to a non-Xerox printer may violate your licensing agreement.

line group — A group of lines on a page that are formatted identically. A line group is sometimes called a subpage.

line-mode documents — Documents with no formatting instructions except for carriage control characters.

LLA — library lookaside

logical page — The area of the physical page on which data can be printed.

logical unit (LU) — Also known as LU, a network accessible unit which gives users access to network resources and allows them to communicate with each other.

logical unit (LU) 6.2 — Also known as LU 6.2, a type of logical unit which is characterized by a peer relationship between session partners. LU 6.2 allows for efficiency in multiple-transaction sessions.

logical units (L-units) — Also known as L-units, a unit of linear measurement used by printer data streams. This value is expressed as the inverse of the resolution. In AFP data streams, for example, in a 240 dpi resolution document, one L-unit is equal to 1/240th of an inch; in a 300 dpi resolution document, one L-unit is equal to 1/300th of an inch.

logo — A resource that contains an identifying graphical symbol such as a trademarked company or product name. This term is used to indicate a Xerox centralized resource stored in .LGO file format.

LPA — Link Pack Area

LPD — Line Printer Daemon

LPI — lines per inch

LPR — Line Printer Requester

LPS — See *laser printing system*.

LRECL — logical record length

LSQA — Local System Queue Area

LU or LU 6.2 — See *logical unit* (hardware unit).

L-units — See *logical units* (software unit).

M

macro — A programming instruction that expands into multiple commands. Macros can be interpreted individually, or they can be nested within other macros, each of which can be expanded into individual commands.

MAS — Multi Access Spool

MCC — Medium Copy Count

MCF — Map Coded Font

MCF-2 — The structured field identifier for IBM's Map Coded Font format 2.

MCK — See *mode change key*.

MCS — Modification Control Statements

MDD — Medium Descriptor

medium source drawer — The IBM term for a paper tray.

Metacode — A Xerox-generated data stream that provides all-points addressability on centralized printers.

MICR — Magnetic Ink Character Recognition

Mixed Object Document Content Architecture (MO:DCA) — An architected device-independent data stream for interchanging documents.

MLPA — Modifiable Link Pack Area

MMC — Medium Modification Control

MO:DCA — See *Mixed Object Document Content Architecture.*

mode change key (MCK) — A code key that indicates whether the printer device supports *document switch processing*.

monochrome black .IMG — An image in standard .IMG format that represents only black dots.

monochrome RES .IMG — An image in RES format that contains one color (either black or another color).

MRP — mid-range printer

MSF — Message Service Facility (XPAF component)

MSFTBLD — Message Service Facility Table Build

MSG — message

z/OS/ESA — IBM's System z Operating System/Enterprise Systems Architecture

N

named fonts — Printer-resident PCL fonts stored on, and read from, the printer's hard drive.

national character set — Characters and symbols that are specific to a national language.

native library — A VSAM dataset used by XPAF to store resources.

native mode — A data stream submitted through XPAF that already is in a format recognized by Xerox laser printers. XPAF does not have to perform any conversions; however, it will condition the data stream if needed. A DJDE data stream being printed on a centralized printer is a native mode data stream.

native resource — The fonts, forms, images, or logos which are in a format recognized by Xerox laser printers. A native resource can be stored either on the printer, stored in a library on the host, or referenced inline in the data stream.

NCP — See *Network Control Program.*

Network Control Program (NCP) — An IBM licensed program that provides communication controller support for single-domain, multiple-domain, and interconnected network capability.

network printing system (NPS) — A network-connected printer that uses laser technology to transfer characters and images onto a page.

Network Terminal Option (NTO) — An IBM licensed program that is used in conjunction with NCP to allow certain non-SNA devices to participate in sessions with SNA application programs in the host processor. NTO converts data sent to and from the non-SNA device to the appropriate protocol — SNA or non-SNA.

NIC — network interface card

non-native mode — A data stream submitted through XPAF that requires conversion to a format the printer can understand. An AFP data stream is a non-native data stream.

NOP — No Operation

NPS — See *network printing system*.

NTO — See *Network Terminal Option*.

NTRI — NCP/token ring interconnection

O

OGL — See *Overlay Generation Language*.

orientation — The direction in which text or images are positioned on the page. When text and images are positioned with the lines parallel to the shorter sides of the paper, the orientation is referred to as portrait. When the lines of text are parallel to the longer sides of the paper, the orientation is called landscape.

OS/390 — Operating System/390

OSS — Operating System Software

overlay — An AFP resource that is equivalent to a Xerox form. See *form*.

Overlay Generation Language (OGL) — An IBM product which is functionally similar to the Xerox forms description language. OGL is used to create electronic forms in the IBM AFP environment.

P

page definition (PAGEDEF) — An AFP resource that specifies formatting of a print dataset into pages of data.

page description entry (PDE) — A set of statements that defines formatting (for example, page orientation) for each page of a report. A PDE can be a cataloged member, which is one of the valid formats for PDL.

page format (PAGEFORM) — A set of parameters that is used to format line-mode data streams into discrete pages.

page layout — A set of parameters contained in a page format that defines the layout of the logical page.

Page Printer Formatting Aid (PPFA) — An IBM program designed for creating page definitions and form definitions.

page segment (PAGESEG) — This AFP resource represents a portion of a page that may contain composed text and/or images.

PAGEDEF — See *page definition*.

PAGEFORM — See *page format*.

PAGESEG — See *page segment*.

PAL — Processor Action List

palette — A finite and predetermined set of colors used by color laser printers.

paper name — The name given to a specific paper size. For example, the paper name LETTER usually refers to a sheet of paper with the dimensions 8.5 by 11 inches. See *paper size*.

paper name table — An XPAF table, modifiable through XOAF, that assigns paper sizes to paper names. These paper names can be specified with the PAPERSIZ initialization or printer profile parameter or extended JCL keyword, and also correspond to the paper names in the varying paper size tables and cluster mapping tables.

paper size — The physical size (in width and height dimensions) of a sheet of paper. See *paper name*.

paper tray — The tray from which paper is pulled for printing.

paper-related table — A term used to describe the three types of XPAF paper-related tables: paper name table, varying paper size table, and cluster mapping table.

pass-through processing — A processing method which allows documents created by Xerox or non-Xerox applications to be passed directly to Xerox printers unaltered. XPAF does not verify the data stream; the data stream is neither conditioned nor converted. A PostScript data stream being printed on a PCL-capable printer is a pass-through data stream.

PC — personal computer

PCL — Printer Command Language

PCL-capable printer — A mid-volume printer that is generally remotely-attached to the host. These printers can print pass-through documents or documents converted to PCL format. The document types that can be printed via pass-through mode depend on the printer command language(s) supported by the printer. PCL-capable printers include these models: 4900, 4700 II, 4230 MRP, 4220 MRP, 4219 MRP, 4215 MRP, 4213 II, 4213 II, Document Centre 265LP, Document Centre 255LP, DocuPrint 4890 NPS, DocuPrint 4850 NPS, DocuPrint 4635 NPS, DocuPrint 4517,DocuPrint 4512, DocuPrint 4508, DocuPrint 4235 LPS, DocuPrint 4090 NPS, DocuPrint 4050 NPS, DocuPrint 180 EPS, DocuPrint 180 NPS, DocuPrint 96 NPS, DocuPrint 92C NPS, DocuPrint 65, DocuPrint C55, DocuPrint N40, DocuPrint N32, DocuPrint N24, DocuTech 6180, DocuTech 6155, DocuTech 6135, DocuTech 6100, Phaser 850DP, and Phaser 750DP.

PDE — See *page description entry*.

PDF — Program Development Facility

PDIR — peripheral device information record

PDL — See *print description language*.

PDL loader — The XOAF function which loads PDL to a native library and generates a report that consists of the contents of each newly created PDL library member. Access the PDL loader through either the XOAF Load PDL option on the Load Resources menu or the LOAD PDL TSO/batch command.

PDS — partitioned dataset

PDT — physical device table

permanent soft fonts — PCL fonts stored in the printer's memory. Permanent soft fonts remain in memory until the printer's power is turned off, and can be used for more than one document.

physical page — The sheet of paper or medium on which you are printing.

pipeline — A list of processes (for example, AFP-to-Metacode conversion) required to print a document on an XPAF-connected Xerox printer.

PJL — Printer Job Language

plane — When one font is split into multiple fonts, these resulting fonts are called planes. Each plane can contain up to 192 printable characters or 64K of raster data. One replica font can be split into a maximum of 16 planes, and one centralized font can be converted into a maximum of 8 decentralized planes.

PMF — See *Print Management Facility*.

POF — See *printer object file*.

portrait — The orientation of print lines or the top of an illustration parallel to the short edge of the paper.

PPD — Point Product Driver

PPFA — See *Page Printer Formatting Aid*.

PPT — Printer Profile Table (Xerox)
Program Properties Table (IBM)

presentation — The orientation in which the page is presented to the printer for printing. See *landscape* and *portrait*.

print description language (PDL) — A language used to describe printing jobs to a laser printer. PDL describes the input (type, format, characteristics), performs the processing functions (logical processing), and describes the output (type, format, fonts selection, accounting options). PDL has two valid file formats: JSL files and cataloged member files.

Print Management Facility (PMF) — An IBM program that is used to create and modify print resources (for example, page definitions, form definitions, and fonts) used on IBM page printers.

Print Services Facility (PSF) — An IBM software product that drives all-points addressable printers.

printer job language (PJL) — A facility that allows specification of printer-specific commands that apply to an entire document. For PCL-capable printers only.

printer object file (POF) — A file that contains printer resources, such as fonts, forms, images, and logos, used for printing documents.

printer profile — A printer- and site-specific file that defines the printing environment to XPAF.

Program Temporary Fix (PTF) — A field-tested solution to a specific customer problem or set of problems.

proportionally spaced font — A font that contains characters that vary in width.

PSAF — Print Services Access Facility

PSF — See *Print Services Facility*.

PTF — See *Program Temporary Fix*.

PTX — presentation text

PUT — Program Update Table

PVT — Program Vector Table

R

Raster Encoding Standard (RES) — A Xerox standard format for color images printed on a highlight color printer

.RBA — Relative Byte Address

RC — return code

RECFM — record format

relative metrics — The graphic character measurements expressed as fractions of the square, called the “em-square,” whose sides correspond to the vertical size of the font. These measurements are resolution independent.

remotely-attached — A device that is physically connected to a host computer via a telecommunications line.

replica font — A Xerox font that is a reproduction of an IBM font.

report stacking — The separation of a set of printed output from the previous set.

RES — See *Raster Encoding Standard*.

resolution — A measure of the sharpness of a resource or a physical printer, expressed as the number of addressable dots or pels per unit of length. For example, dots per inch, pels per centimeter.

resource — The fonts, forms, images, or logos that are required, in addition to data, to print a document. A resource can be stored either on the printer, in a library on the host, or inline in the data stream.

structured field (IBM)

resource conditioning — A process performed by XPAF which ensures that all resources required to print a document are available before sending the data stream to the printer.

RGB — The red-green-blue color format used by decentralized color printers.

RJE — Remote Job Entry

RPL — Request Parameter List

RTEXT — An RTEXT definition is a set of statements used to define ink catalogs, palettes, and ink lists used in a report. A TST can be a cataloged member, which is one of the valid formats for PDL.

S

SCSI — Small Computer System Interface

SDI — Shared Disk Interface

SDLC — Synchronous Data Link Control

secondary logical unit (SLU) — In SNA, the logical unit (LU) that contains the secondary half-session for a particular LU-LU session. An LU may contain secondary and primary half-sessions for different active LU-LU sessions.

separator page — See *banner page*.

separator page first (SEPF) — A SEPARATORS=FIRST DJDE sent by XPAF in a data stream which signals centralized printers to insert a separator as the first page of each printed output segment using this copy modification.

SEPF — See *separator page first*.

SF — See *signal function*. (Xerox)

structured field (IBM)

short-edge-feed MAP — (LIB) A set of statements that defines a font substitution list to be used to print a document on large paper that is fed short edge rather than long edge. A LIB can be a cataloged member, which is one of the valid formats for PDL.

signal function (SF) — A DJDE sent by XPAF in a data stream which signals centralized printers to communicate with document finishing equipment provided by third-party vendors. XPAF supports signal function 1 and signal function 2 for centralized printers equipped with the Document Finishing Architecture (DFA) interface, version 4.1 or higher. Signal function 1 and signal function 2 are used individually for separate functions in the finishing equipment (for example, signal function 1 can indicate perforate, while signal function 2 can indicate punch). XPAF does not determine the function of each signal; the signal's function is defined by the third-party finishing equipment.

SIL — set intensive logging

simplex — A page that contains printing on one side of the paper.

sixelized — A Xerox encoded data format used for Xerox decentralized fonts and decentralized images.

SJF — System JCL Facility

SLU — See *secondary logical unit*.

SMF — System Management Facilities

SMP/E — See *System Modification Program/Extended*

SMS — System Managed Storage

SNA — System Network Architecture

sockets — A method for communication between a client program and a server program in a TCP/IP network. A socket is defined as "the endpoint in a connection." Sockets are created and used with a set of programming requests or function calls, sometimes called the sockets application programming interface (API).

SRL — Service Request List

SSCT — Subsystem Communication Control Table

SSI — Subsystem Interface

SSN — Subsystem Name Table

STC — Set Text Color

STK — see *stockset*

stockset — A set of statements that defines a set of stocks used in a report. An STK can be a cataloged member, which is one of the valid formats for PDL.

string — Text, usually with a length restriction, that is enclosed in single quotation marks and is meant to be processed as one entity. It can usually include special characters as well as uppercase alphanumeric characters.

subpage — See *line group*.

substrate — A physical sheet of paper.

System Modification Program/ Extended (SMP/E) — An IBM program product used to install and update software in an z/OS environment.

T

TCB — Task Control Block

TCP — Transmission Control Protocol

TCP batch printing — The batch implementation XPAF uses to support the various third-party TCP stacks. This implementation allows you to customize TCP support for your site.

TDB — Table Definition Block

temporary soft fonts — PCL fonts stored in the printer's memory which are deleted when the printer is reset, i.e., at the end of the document.

THM — Table Handling Mechanism (XPAF component)

TIC — Token Ring Interface Coupler

TIFF — Tag Image File Format

TOF — top of form

track, track, record (TTR) — The relative disk address of a member within an IBM PDS or PDS/E library. Each member in a PDS library has a unique TTR associated with it that is stored within the directory entry for that member. For PDS/E datasets, the TTR is a unique token associated with each library member. Whenever a PDS or PDS/E member is updated, the TTR value is also updated.

transform — The process in which XPAF converts a print data stream to a different but equivalent format suitable for the destination printer.

translate table — A table that translates line-mode character-set values to values that Xerox printers can understand. A translate table maps the character values in the incoming data stream to the proper values of the actual font characters that are available on the printer.

TRC — Table Reference Character

triplet — A three-part variable length IBM parameter consisting of a length byte, an identifier byte, and one or more parameter value bytes. A structured field may contain one or more triplets.

TSO — Terminal Sharing Option

TST — see *RTEXT*

TTR — See *track, track, record*.

tumble duplex — A page that contains printing on both sides of the paper, with the top of the page's front side matched to the bottom of the page's back side.

two-color RES .IMG — An image in RES format that contains two colors (black and one other color).

U

UCS — Universal Character Set

UDK — See *user-defined key*.

UFL — Font Loader Utility (XPAF component)

UFT — Font Table Utility (XPAF component)

UIL — Color Conversion Table Loader (XPAF component)

UIX — Color Cross Reference Utility (XPAF component)

UJL — PDL Loader (XPAF component)

ULL — Logo Loader (XPAF component)

ULR — User Library Reload Utility (XPAF component)

unit base — The length of the measurement base. This value identifies the unit of length used to express resolution with respect to the total number of addressable dots or pels that are represented by that distance.

UPL — Form And Image Loader (XPAF component)

user exit — A program developed by the user that acquires control at various points during processing.

user-defined key (UDK) — See *Xerox Escape Sequence*.

usermod — A system modification that allows you to make changes to certain tables used by XPAF (for example, the JES offset table).

USS — Unformatted System Services

UTB — Table Creation Utility (XPAF component)

V

Variable Data Intelligent PostScript PrintWare (VIPP) — A set of page layout functions bundled as PostScript programs. This provides an easy way to use Xerox PostScript devices in a traditional non-PostScript environment. Output, such as line-mode data produced by traditional applications, can be imaged on a Xerox PostScript printer while requiring few, if any, modifications to the applications that generate the data. For more information, refer to the *Xerox Variable Data Intelligent PostScript PrintWare (VIPP) Reference Manual*.

varying paper size table — An XPAF table, modifiable through XOAF, that correlates a physical paper size with an AFP bin number; for use with AFP data streams only.

VBS — variable blocked spanned

VIPP — see *Variable Data Intelligent PostScript PrintWare*

VIPP-enabled — A print device on which VIPP software resides. VIPP documents must be sent to a VIPP-enabled print device.

VOLSER — volume serial number

VSAM — Virtual Sequential Access Method

VTAM — Virtual Telecommunications Access Method

W

WTO — write to operator

X

XAE — XNS Environmental Envelope (XPAF component)

XAM — AFP To Metacode Transform (XPAF component)

XAU — AFP To XES Transform (XPAF component)

XCC — Centralized Printer Resource Conditioner (XPAF component)

XCD — DJDE to XES Transform (XPAF component)

XCN — Font Metrics Converter (XPAF component)

XCO — Xerox Coax Option

XCTO — Xerox Coax/Twinax Option

XDDI — Xerox Dynamic Document Interface

XDI — Distributor (XPAF component)

XDPM — See *Xerox Distributed Print Mode*.

XDS — Xerox Direct Print Services (XPAF component)

XEI — Environmental Intermedium (XPAF component)

Xerox Distributed Print Mode (XDPM) — A Xerox term that describes printing in a decentralized environment.

Xerox Escape Sequence (XES) — A user-defined character used in control code sequences sent to decentralized printers. Also known as user-defined key.

Xerox font information table (XPAFXFI) — A table containing information about Xerox fonts (for example, typeface, weight, width, point size, and print direction) and referenced by either the XOAF Convert Xerox Fonts to IBM Format option or the Load Font TSO/batch command, which makes Xerox fonts available to IBM's DCF product.

Xerox Job Control Facility (XJCF) — The program which modifies data streams in order to format printouts to user specifications using standard IBM JCL keywords. You may run XPAF in addition to XJCF (coexistence mode) or instead of XJCF (simulation mode).

Xerox Network Services (XNS) — A protocol that consists of a variety of digital processors interconnected by means of a variety of transmission media. This protocol is used by XPAF for communicating print requests from a client to a print service.

Xerox Output Administrative Facility (XOAF) — The XPAF subsystem used to manage the resources (for example, fonts, forms, images) required to print documents.

Xerox Output Services Facility (XOSF) — The XPAF subsystem that interfaces with z/OS to accept documents from JES, transform them into a format suitable for the intended printer, and transmit them to the printer.

Xerox Printer Access Facility (XPAF) — A host-resident software product that enhances the capabilities and use of Xerox laser printers in an IBM z/OS environment.

Xerox Printing Services Client (XPSC-z/OS) — An z/OS host-based software product that provides two-way communications between the host mainframe and an XPSM server using LU 6.2 communication protocol.

Xerox Printing Services Manager for the IBM RS/6000 (XPSM) — IBM RS/6000 resident software that communicates with clients to accept jobs for printing. This XPSM server software transmits the jobs to printers under its control.

Xerox Production Print Mode (XPPM) — A Xerox term that describes printing in a centralized environment.

XES — See *Xerox Escape Sequence*.

XFC — Xerox Font Converter (XPAF component)

XFDB — Xerox Fragment Descriptor Block

XFI — Xerox Font Information

XFS — FSA Solicitor Prefix (XPAF component)

XFU — Form Converter (XPAF component)

XIN — Initialization (XPAF component)

XIS — Image To Sixel Converter (XPAF component)

XJC — JCL To DJDE Transform (XPAF component)

XJCF — See *Xerox Job Control Facility*.

XJCFSIM tables — The tables used by XPAF in XJCF simulation mode to simulate the XJCF program.

XJCL — Extended Job Control Language

XJS — PDL Processor (XPAF component)

XLC — Logo Converter (XPAF component)

XLD — LDM Utility (XPAF component)

XLOG — A dataset that is used for recording messages issued by XPAF.

XLW — Local Writer (XPAF component)

XMS — Xerographic mode switching

XNS — See *Xerox Network Services*.

XOA — XOAF Superstructure (XPAF component)

XOAF — See *Xerox Output Administrative Facility*.

XOAPRMS — XOAF parameters

XOSF — See *Xerox Output Services Facility*.

XPA — Common Parsing Routines (XPAF component)

XPAF — See *Xerox Printer Access Facility*.

XPAF extended JCL — A set of JCL keywords that are unique to XPAF.

XPAF full-client mode — A mode providing all XPAF functions to XPSM that are relevant to these centralized printers: 4890, 4850, 4635MX, 4635, 4135, 4090, or 4050. This mode enables you to print line-mode, DJDE, page-formatted, and AFP data streams.

XPAF-internal format — A file format, specific to XPAF, that is used when storing AFP overlays that have been converted to forms in the decentralized form library. At print time, forms that are in XPAF-internal format are converted to XES format before being downloaded to the printer.

XPAF-started identifier — The DJDE identifier in the JDE/JDL that is named by any of these parameters:

- JDE printer profile parameter
- JDL printer profile parameter
- DEFJDE initialization parameter
- DEFJDL initialization parameter

XPAFA2A — See *ASCII-to-ASCII table*.

XPAFAFW — See *ASCII font widths table*.

XPAFCFN — See *coded font name table*.

XPAFE2A — See *EBCDIC-to-ASCII table*.

XPAFEFW — See *EBCDIC font widths table*.

XPAFFFI — See *font family information table*.

XPAFI2I — See *IBM-to-IBM table*.

XPAFI2X — See *IBM-to-Xerox table*.

XPAFIFW — See *IBM font widths table*.

XPAFXFI — See *Xerox font information table*.

XPC — Xerox Printing Control Language (XPAF component)

XPCL — Xerox Printing Control Language (XPAF component)

XPFE — Xerox Page Format Editor (XPAF component)

XPFSAMP — The default sample source library for XPAF.

XPL — Pipeline (XPAF component)

XPPM — See *Xerox Production Print Mode*.

XPS — Xerox Print Services (XPAF component)

XPSC-compatibility mode — A mode providing all XPSC-z/OS 1.1 functions in XPAF to XPSM that are relevant to these centralized printers: 4890, 4850, 4635MX, 4635, 4135, 4090, or 4050. This mode enables you to print line-mode and DJDE data streams.

XPSC-z/OS — See *Xerox Printing Services Client*.

XPSM — See *Xerox Printing Services Manager for the IBM RS/6000*.

XRC — Centralized Image Transform (XPAF component)

XRD — Decentralized Image Transform (XPAF component)

XRF — AFP Resource Transform (XPAF component)

XSJ — JCL Keyword Processor (XPAF component)

XSL — Solicitor Nucleus (XPAF component)

XSTCB — Xerox Subtask Control Block

XTB — Printer Table Initialization/Termination (XPAF component)

Z

Z/os — IBM's System z Operating System **—**

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