XES Synergix™ Controller 8855 Setup Manual for Firmware 7.0

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ENGINEERING
SYSTEMS

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Safety Information

Your AccXES™ controller has been designed and tested to meet strict safety requirements. These include safety agency examination, approval, and compliance with established environmental standards.

Please read the following instructions carefully before operating the controller and refer to them as needed to ensure the continued safe operation of the product.

Follow all warnings and instructions marked on or supplied with the product.

Unplug the controller from the wall outlet before cleaning the exterior. Always use materials specifically designated to clean the controller exterior. Other materials may result in poor performance and could create a hazardous situation.

Do not use aerosol cleaners. Follow the instructions in this operator manual for the proper cleaning methods.

Never use supplies or cleaning materials for purposes other than those for which they were intended. Keep all supplies and materials out of the reach of children.

Do not use this product near water, wet locations, or outdoors.

This product is equipped with a three-wire, grounding-type plug (i.e., a plug having a grounding pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. To avoid the risk of electric shock, contact your electrician to replace the receptacle if you are unable to insert the plug into the outlet.

Never use a ground adapter plug to connect the controller to a power source that lacks a ground connection terminal.

This product should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your local power company.

The power supply cord is the disconnect device for this equipment. Make sure that the installation is near the socket outlet and is easily accessible.

Do not allow anything to rest on the power cord. Do not locate the controller where someone can step on the cord.

Slots and openings in the controller are provided for ventilation. To ensure reliable operation of the controller and to protect it from overheating, these openings should never be placed near a radiator or heat register. The controller should not be placed in a built-in installation unless proper ventilation is provided.

Never push objects of any kind into the openings of the controller as they may touch dangerous voltage points or short out parts, resulting in a risk of fire or electric shock.

Never spill liquid of any kind on the controller.

Never remove any covers or guards that require a tool for removal. There are no operator serviceable areas within these covers.

Never attempt any maintenance function that is not specified in this operator manual.

Unplug the controller from the power outlet and refer servicing to qualified service personnel under the following conditions:

- When the power cord is damaged or frayed.

- If liquid has been spilled into the product.

- If the controller has been exposed to rain or water.

- If the controller is producing unusual noises or odors.

- If the cabinet has been damaged.

- If you need additional safety information concerning the controller or supplied materials, you may call Xerox Engineering Systems.

EMC Notices

Australia/New Zealand

Changes or modifications to this equipment not specifically approved by Fuji Xerox Australia Pty. Limited may void the user's authority to operate this equipment.

Shielded cables must be used with this equipment to maintain compliance with the Radiocommunications Act 1992.

European Union

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Changes or modifications to this equipment not specifically approved by Xerox Europe may void the user's authority to operate this equipment.

Shielded cables must be used with this equipment to maintain compliance with the EMC Directive (89/336/EEC).

WARNING

In order to allow this equipment to operate in proximity to Industrial, Scientific and Medical (ISM) equipment, the external radiation from ISM equipment may have to be limited or special mitigation measures taken.

Canada

This Class "A" digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe "A" est conforme à la norme NMB-003 du Canada.

Japan

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

Changes or modifications to this equipment not specifically approved by Fuji Xerox Limited may void the user's authority to operate this equipment.

Shielded cables must be used with this equipment to maintain compliance with the Voluntary Control Council for Interference by Information Technology Equipment regulations.

USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications to this equipment not specifically approved by the Xerox Corporation may void the user's authority to operate this equipment.

Shielded cables must be used with this equipment to maintain compliance with FCC regulations.

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AutoCAD is a registered trademark of Autodesk, Inc.

ADI is a registered trademark of Autodesk, Inc.

HDI is an acronym for Heidi® Device Interface. Heidi is a registered trademark of Autodesk, Inc.

HP-GL/2 is a trademark of Hewlett-Packard Company.

Windows 95, Windows 98, Windows NT, and Windows 2000 are registered trademarks of Microsoft Corporation.

Contents

Purpose of This Manual

The purpose of this manual is to provide information to aid in connecting the AccXES Controller to remote workstations to the 8855 System.

Refer to the Web Printer Manager Tool (PMT) User Guide for specific instructions on configuring the controller using the Web PMT.

This manual includes the following sections:

- Floor Space Requirements.

- Power Requirements.

- Power Connections. If you are not familiar with the controller power switch, ports refer to the figures.

- Controller Port Locations. Locate all the ports to be used. Refer to instructions in this manual on preparing each port.

- Controller Specifications.

- I/O Download of Firmware Upgrades.

- Enabling Ports and Port Specifications.

Viewing the Test Prints

When power is switched on, the controller sends a test print to the printer. The purpose of test prints is to provide a record of current system settings for use in daily operations, Network Communications setup, and restoration of desired parameters in cases of unexpected change (such as through accidental use of the Restore Factory Default utility). Test print sets should be saved at the following times:

- When the initial install is complete and default settings are defined.

- Anytime default settings are changed.

The reference sets of the test print pages should be stored with the machine service log, behind the service door of the XES Synergix 8855 printer.

NOTE: The printer must have bond paper installed to enable the printing of any test print. When bond paper is not present (vellum or film only installed in the printer) the test print must be canceled.

Setting the Controller Port Defaults

The AccXES controller will operate with one, two, or all ports active. A 10/100 Ethernet interface, supporting TCP/IP is standard on the controller.

To prepare the AccXES controller to print:

- Connect cables and interface devices to the appropriate ports, then refer to Viewing the System Configuration Defaults section of this document for instructions on activating the port(s).

- Load your workstation with the desired client software to manage the job flow to the selected port(s). The software manuals contain install instructions for each of the platforms, so use the correct procedure.

- Additional network setup information is contained in the XES Synergix 8825/8830/8855 Network Administrator's Guide that was shipped with your 8855 System.

Note: *Changes to controller parameters require up to 60 seconds to be written to the system memory. When setting changes have been made, and especially after a Factory Default Reset, wait 60 seconds for the changes to take effect.*

Setting up the Ten Custom Print Job Defaults

Ten sets of custom job defaults may be assigned and stored for future use. These custom job default values may be entered remotely. Use a workstation with the appropriate software loaded (for example, Microsoft Internet Explorer browser) to access the Web Printer Manager Tool. When using this method, refer to the Web Printer Manager Tool (PMT) User Guide for the procedure required to access the Miscellaneous Page of the Web PMT. The custom job defaults are labeled "Active User Setup" on this page.

Floor Space Requirements

The controller requires the minimum floor space shown in this figure
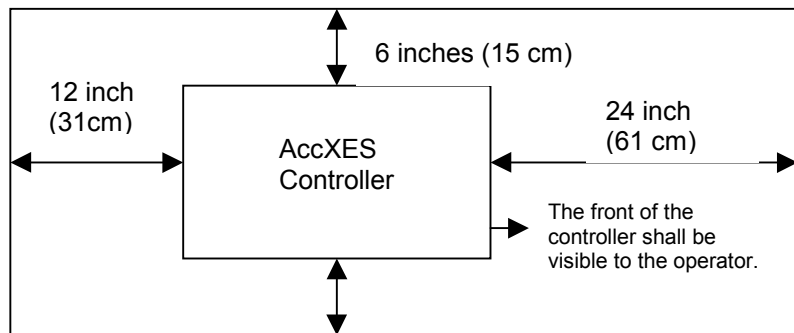
Figure 1 - Floor Space Requirements

Power Requirements

The controller requires the following, depending on source power:

- 15 ampere at 115 volts

- 7 amperes at 220 volts

Power Locations

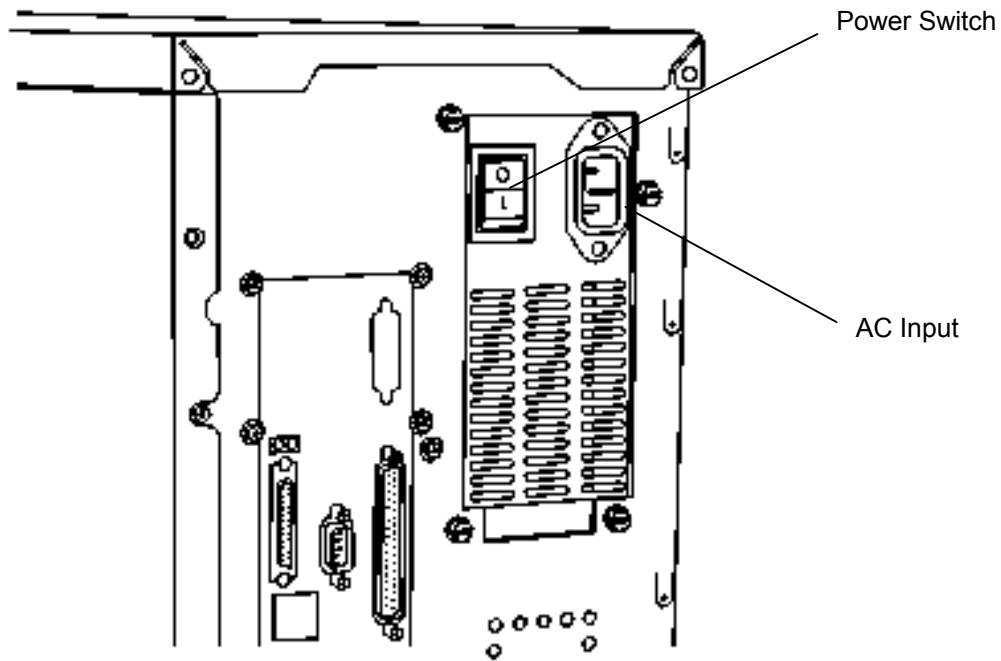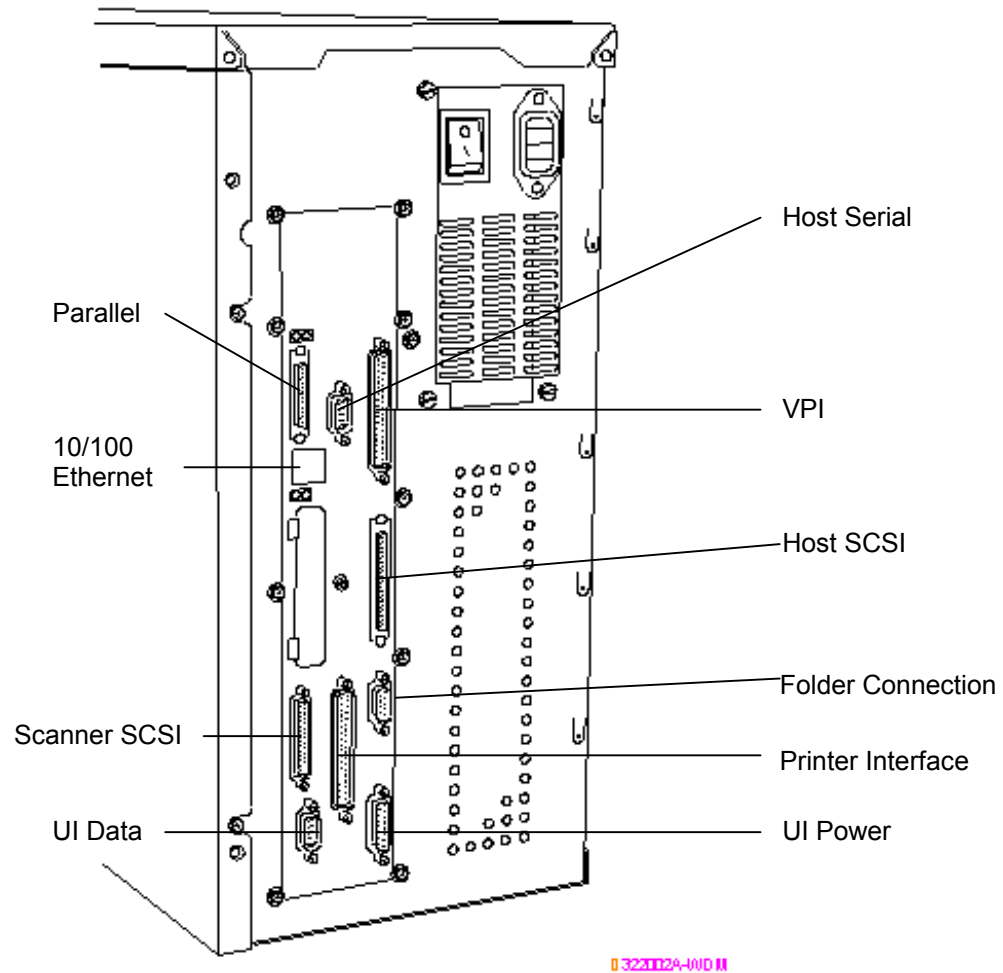The positions of the power connection and power switch are shown in this figure.

Figure 2 - Power Connection

Controller Ports Location

Figure 3 -Port Connections on Rear

Front Panel LEDs

The controller has four status LEDs in on the front panel. The functions of these LED's are as follows:

- LED1 – Color Green, labeled "Ready" –Indicates the controller is powered-up and ready to process incoming jobs.

- LED2 – Color Green, labeled "Busy" –Indicates the controller is busy processing a job.

- LED3 – Color Yellow, labeled "Mismatch" –Indicates either a media mismatch has occurred and is blocking the job queue or a Job Accounting error has occurred.

- LED4 – Color Red, named "Attention" –Indicates an printer or finisher fault occurred, or a paper jam, or out of toner or media, or a communications problem with one of the devices.

During power-on self-test (POST), the AccXES software turns on LEDs 2,3, and 4. After POST has successfully completed, LEDs 2,3, and 4 are extinguished and LED 1 is turned on. If POST did not successfully complete and the controller is not able to go into "Ready" state, all four LEDs are extinguished.
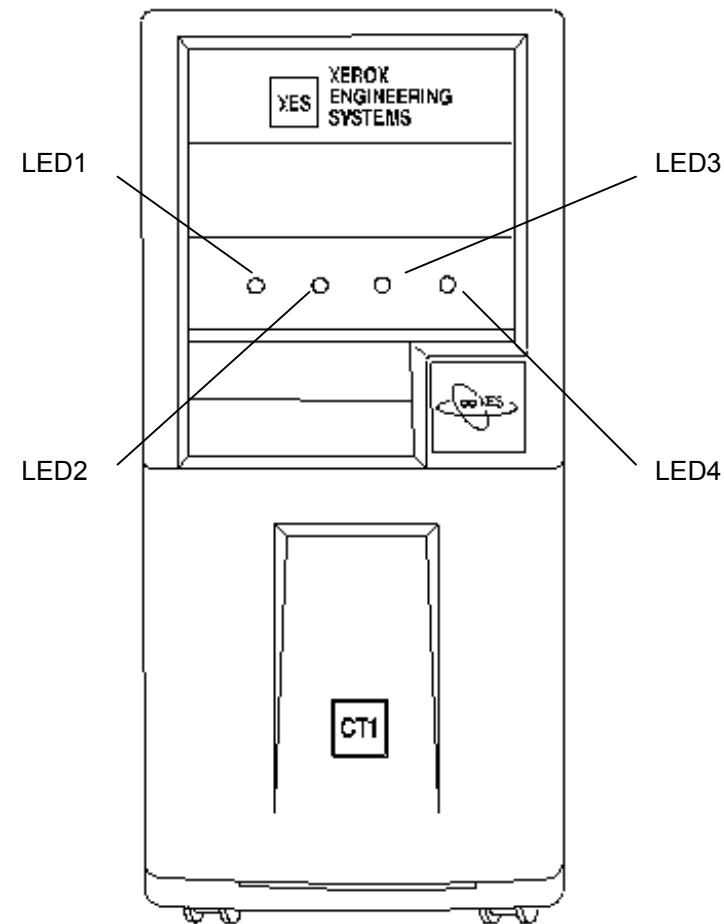
Figure 4 - Location of LEDs

I/O Download of Firmware Upgrades

It is possible to upgrade the firmware version with new releases by sending a file to the controller over the network, serial or parallel cable connection.

Customers can download new firmware releases from the internet or can acquire the files on a CD-ROM. If obtaining the firmware from the internet, go to www.xes.com and follow the instructions provided.

Use the Document Submission Tool (part of AccXES Client Tools) or Web Printer Manager Tool to send the firmware upgrade file to the controller. Note that the Web PMT includes a useful **Upload File** button on the "Upload File" page to assist in sending the new firmware upgrade to the controller.

When the firmware upgrade is sent to the controller, the Ready LED extinguishes and the Busy LED will illuminate. After the firmware upgrade is complete, the controller will re-boot showing the re-boot pattern (all LEDs on except for Ready).

Note: The controller must be connected to the printer and both devices powered to successfully download firmware.

Note: Print out a full set of test prints BEFORE performing the upgrade as settings may be returned to their Factory Defaults and you may lose your custom settings for the Active Parameters set. For Active Parameters Set information, see "Setting the Active Parameters Option" in this manual.

Controller Specifications

Physical Characteristics

The controller is a tower positioned adjacent to the XES Synergix 8855 Printer.

Electrical Requirements

100 - 250 VAC auto-ranging power supply.

Agency Approvals

Safety: UL 1950, CA22.2 No. 950 (CUL), EN 60950 (CE Mark)

EMC: CE Mark, FCC Class A, Canada Radio Interference Regulations Class A, VCCI Class 1

Hardware Specifications

CPU   Power PC 740 operating at 200 Mhz clock speed.

RAM   Maximum RAM is 192 MB

Hard disk   Ultra SCSI, 7200 rpm internal hard disk drive

I/O Ports

Serial   Two 9 pin serial ports provided. The scanner uses one when this option is connected. The second is used as an input port for receiving data via serial port connection.

Parallel   (IEEE 1284 Compliant) High-density port connector provided.

SCSI   50-pin SCSI Connector provided.

VPI   37 pin D Connector provided.

Scanner   68-pin SCSI Connector provided.

Ethernet   Built-in 10/100 Ethernet Network Interface: RJ-45 connection, supporting TCP/IP only.

     Note: An optional, external Ethernet adapter, attached to the Controller's parallel port, provides additional support for TCP/IP, IPX/SPX, and NetBEUI protocols. Contact your XES sales or service representative for specific ordering and setup information.

Job Printing and Processing Specifications

Network Protocols

TCP/IP only on the 10/100 Ethernet port.

TCP/IP, IPX/SPX and NetBEUI on the optional, external Ethernet Adapter.

Platforms supported

SUN: OS and Solaris

PC: Windows 95 / Windows 98 / Windows NT 4.0 / Windows 2000

Auto Port Sensing

Yes. Ports may also be enabled or disabled remotely.

Client Software

PC/DOS platform:

- No longer supported

PC/Windows 95 and Windows 98 platforms:

- HP RTL Print Driver
- ADI Drivers for AutoCAD R13/14
- HDI Drivers for AutoCAD 2000 and 2000i
- PostScript PPD System Print Driver
- AccXES Client Tools
- Web Printer Manager Tool

PC/Windows NT 4.0 and Windows 2000 platforms:

- HP RTL/HP-GL/2 Print Driver
- ADI Drivers for AutoCAD R13/14
- HDI Drivers for AutoCAD 2000 and 2000i
- PostScript PPD System Print Driver
- AccXES Client Tools
- Web Printer Manager Tool

Job Printing and Processing Specifications (continued)

UNIX platform:

- tftp puts

- telnet

- lpr/lpd support

- Access Client Tools

- Web Printer Manager Tool

Job Control Language

HP-PJL with custom extensions.

Job Spooling/Queue

Job input buffering is internal to the controller.

Data Formats

HP-GL, HP-GL2, HP-RTL, CalComp 906 /907 /951 /PCI, TIFF 6.1, NIRS, Cals 1 & 2, Versatec Raster, XES 150 emulation, CGM, C4, Filenet, VCGL, VDS (Ordered Vector, Blocked Raster, Compacted Raster, Versatec Random Format), Adobe PostScript 3 with PDF (optional)

Compression types (for applicable raster formats):

CCITT G4, G3-ID, G3-2D, Packbits, RLE, Seed Row, Adaptive.

Compression

Hardware lossless Starlite 3410 chip provided.

Job Queue Management

Single prioritized queue, adjustable priority, job canceling, queue monitoring provided.

Long plot

Up to 6 Meters (19.7 feet) with 64 Mbytes memory installed.

Up to 16 Meters (52.5 feet) maximum with additional memory.

Auto format recognition

Yes

Color Support

All supported data formats which are color capable (TIFF, HP-RTL, HPGL/GL2, CGM, CalComp, NIRS) will be processed and converted to grayscale using a proprietary half-toning algorithm supporting 256 gray levels.

Color input in PostScript is converted to grayscale using the same halftone matrix with 128 gray levels.

Extended Processing Options

- Autoscaling
- Autorotation
- Auto Size Detect
- Banner Sheets
- Rotation (0, 90, 180, 270)
- Scaling (10% to 999%)
- Justification
- Margins
- Raster Stamps
- Labeling
- Page Composition/Plot Overlay
- Mirror
- Vector Halftone
- Media Mismatch Management
- Plot Nesting
- Control Panel Lockout
- Scan-to-Net (DDS option)
- Job Accounting (DDS option)

Number of copies

1 to 999

Electronic Collation

More than 200 E. (Assumes 10:1 compression ratio.)

Folding and Stacking

Optional Online Folder is available. Optional Stacker is available with a capacity of 500 prints.

Palettes and Patterns

8 user-defined pen palettes and 1 read-only factory default palette. User defines pen color, width, and pattern for up to 256 pens. 64 patterns (128 shading patterns, 16 random patterns, 15 user defined patterns). Each pen attribute is individually controllable.

Preparing the Serial Port

The Host Serial Port

This port requires a null modem serial cable to be connected from the controller host serial port to the workstation serial port. It is necessary to use the appropriate software drivers or system commands to send jobs to the controller.

The controller serial host interface port supports user-definable Baud Rate, Flow Control, and Parity.

Enable Controller Serial Port

Use the Printer_Defaults> Ports menu of the Web PMT to select the Baud Rate, Flow Control, and Parity to match those set at the workstation.
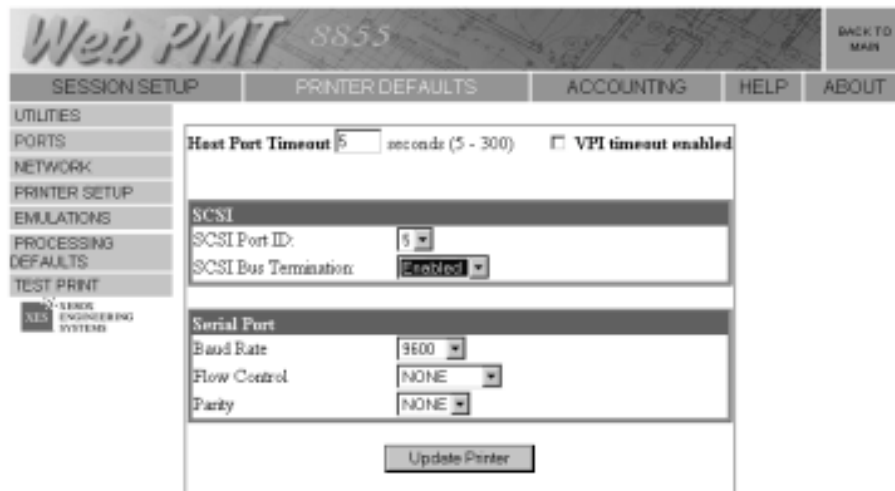

Figure 5 – Typical Web PMT page, showing the serial port setup

Software Supported

PC/WINDOWS 95 AND WINDOWS 98 PLATFORM:

- HP RTL Print Driver
- ADI Drivers for AutoCAD R13/14
- HDI Drivers for AutoCAD 2000 and 2000i
- PostScript PPD System Print Driver
- Document Submission Tool (part of AccXES Client Tools)

PC/WINDOWS NT 4.0 AND WINDOWS 2000 PLATFORMS:

- HP RTL/HP-GL/2 Print Driver
- ADI Drivers for AutoCAD R13/14
- HDI Drivers for AutoCAD 2000 and 2000i
- PostScript PPD System Print Driver
- Document Submission Tool (part of AccXES Client Tools)

UNIX PLATFORM:

Does not apply to the serial port.

Data Formats Supported

- HP-GL, HP-GL/2
- HP-RTL
- TIFF, NIRS
- CALS 1 & 2
- CalComp 906/907/951PCI with Electrostatic extensions
- CGM
- VCGL
- VDS
- C4
- Filenet
- Versatec Raw Raster
- PostScript 3 with PDF (option)

Serial Cable Description

The serial cable should be wired as a null modem with a standard 9 pin D connector at the controller end and a connector to match the workstation serial port connector at the host end.

CABLE PART NUMBERS

600T02058	Serial Cable, 9-pin to 9-pin
600T02073	Null Modem Adapter

Preparing the Parallel Port

Parallel Port

This port requires connecting a parallel cable between your workstation parallel port and the controller parallel port. An appropriate software print driver or system command is necessary to direct jobs to the printer.

Software Supported:

PC/WINDOWS 95 AND WINDOWS 98 PLATFORMS:

- HP RTL Print Driver
- ADI Drivers for AutoCAD R13/14
- HDI Drivers for AutoCAD 2000 and 2000i
- PostScript PPD System Print Driver
- Document Submission Tool (part of AccXES Client Tools)

PC/WINDOWS NT 4.0 AND WINDOWS 2000 PLATFORMS:

- HP RTL/HP-GL/2 Print Driver
- ADI Drivers for AutoCAD R13/14
- HDI Drivers for AutoCAD 2000 and 2000i
- PostScript PPD System Print Driver (NT 4.0 only)
- Document Submission Tool (part of AccXES Client Tools)

DATA FORMATS SUPPORTED

- HP-GL, HP-GL/2
- HP-RTL
- TIFF, NIRS
- CALS 1 & 2
- CalComp 906/907/951 PCI with Electrostatic extensions
- CGM
- VCGL
- VDS
- C4
- Filenet
- PostScript 3 with PDF(option)

Parallel Cable Description

The cable connector is a standard, "mini-Centronics" P1284C connector.

A ten foot, high density P1284A to P1284C cable is available (Xerox part number 98S03302).

The maximum length of the parallel cable must not exceed 12 feet (3.66 m).

Preparing the Host SCSI Port

Ultra SCSI Port (Host)

To use this port your workstation must have a SCSI interface card and appropriate software installed and operating.

Enable Controller SCSI Port

Use the Printer_Defaults>Ports menu of the Web PMT to set a device number compatible with your workstation and to disable the termination. By default, the host SCSI port bus termination is enabled.

Software Supported

- ServeWare Version 2.42 or later.
- VGS (in Xerox 150 Emulation Mode)

Data Formats Supported

- Xerox 150 Emulation
- Versatec Raw Raster
- VDS
- VCGL

SCSI Cable Description

The SCSI cable must not exceed a maximum length of 9.75 feet (3 meters).

Figure 6 – Typical Web PMT, Ports Setup Page

Preparing the 10/100 Ethernet Port

Overview

The controller contains an embedded 10/100Mhz Ethernet network interface port.

Enable Controller Ethernet Port

Use the Printer_Defaults>Network>TCP-IP menu of the Web PMT to set the net mask, IP address, gateway.

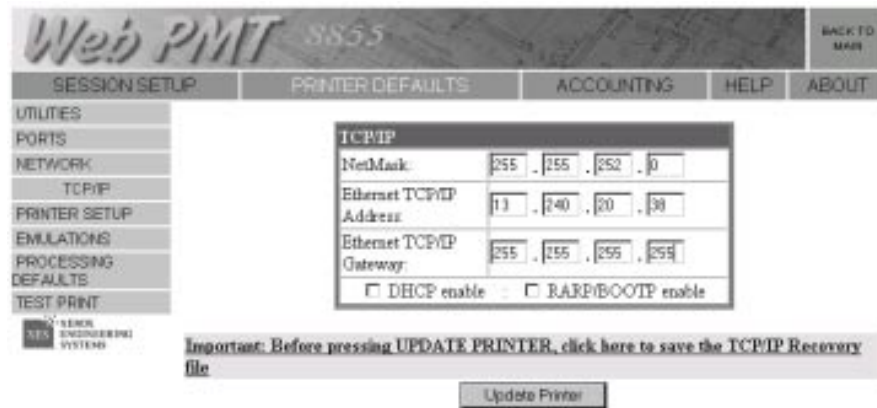Refer to the Web Printer Manager Tool User Guide for full instructions .

Figure 7 - Typical Web PMT, TCP-IP Setup Page

Note: Save the TCP/IP Recovery file to the workstation hard drive. The file is necessary to re-enter the Ethernet settings if they become corrupt.
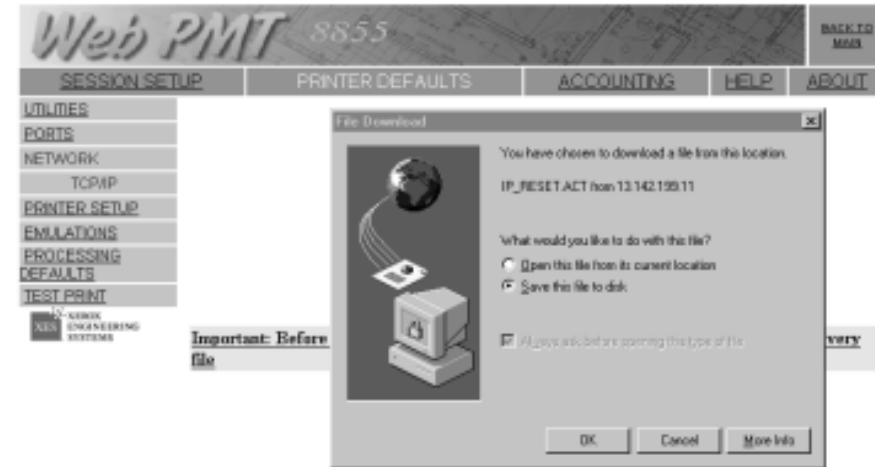

Figure 8 - Typical Screen for Saving a Recovery file in Web PMT

Network Protocols Supported:

TCP/IP

- lpr and lpd
- ftp and tftp
- telnet
- port 2000 monitor

Software Supported:

PC/WINDOWS 95 AND WINDOWS 98 PLATFORMS:

- RTL Print Driver
- ADI Drivers for AutoCAD R13/14
- HDI Drivers for AutoCAD 2000 and 2000i
- PostScript PPD System Print Driver
- AccXES Client Tools
- Web Printer Manager Tool

PC/WINDOWS NT 4.0 AND WINDOWS 2000 PLATFORMS:

- RTL/GL/2 Print Driver
- ADI Drivers for AutoCAD R13/14
- HDI Drivers for AutoCAD 2000 and 2000i
- PostScript PPD System Print Driver
- AccXES Client Tools
- Web Printer Manager Tool

UNIX PLATFORM:

- Web Printer Manager Tool
- tftp puts
- lpr/lpd support
- AccXES Client Tools

Data Formats Supported

- HP-GL, HP-GL2
- HP-RTL
- CalComp 906 /907 /951 /PCI
- TIFF 6.1
- NIRS
- Cals 1 & 2
- CGM
- VCGL
- VDS
- C4
- Filenet
- PostScript 3 with PDF (option)

Ethernet Cable Description

Category 5 cable with RJ-45 connectors.

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