

# ***Xerox DocuColor 2060 NPS/IPS***

## ***System Overview 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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# Safety

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## Laser safety

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### WARNING

**Adjustments, use of controls, or performance of procedures other than those specified herein may result in hazardous light exposure.**

The Xerox DocuColor printers are certified to comply with the performance standards of the U.S. Department of Health, Education, and Welfare for Class 1 laser products. Class 1 laser products do not emit hazardous radiation. The DocuColor printers do not emit hazardous radiation because the laser beam is completely enclosed during all modes of customer operation.

The laser danger labels on the system are for Xerox service representatives and are on or near panels or shields that must be removed with a tool.

**DO NOT REMOVE LABELED PANELS OR PANELS NEAR LABELS. ONLY XEROX SERVICE REPRESENTATIVES HAVE ACCESS TO THESE PANELS.**

**DANGER**

**LASER RADIATION WHEN OPEN  
AVOID DIRECT EXPOSURE TO BEAM**

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## Ozone information: U. S. only

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This product produces ozone during normal operation. The amount of ozone produced depends on copy volume. Ozone is heavier than air. The environmental parameters specified in the Xerox installation instructions ensure that concentration levels are within safe limits. If you need additional information concerning ozone, call 1-800-828-6571 to request the Xerox publication 600P83222, *OZONE*.

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## Operation safety: U. S.

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Your Xerox equipment and supplies have been designed and tested to meet strict safety requirements. They have been approved by safety agencies, and they comply with environmental standards. Please observe the following precautions to ensure your continued safety.

### **WARNING**

**Improper connection of the equipment grounding conductor may result in risk of electrical shock.**

- Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.
- Never use a ground adapter plug to connect equipment to an electrical outlet that lacks a ground connection terminal.
- Always place equipment on a solid support surface with adequate strength for its weight.
- Always use materials and supplies specifically designed for your Xerox equipment. Use of unsuitable materials may result in poor performance and may create a hazardous situation.
- Never move either the printer or the printer controller without first contacting Xerox for approval.
- Never attempt any maintenance that is not specifically described in this documentation.
- Never remove any covers or guards that are fastened with screws. There are no operator-serviceable areas within these covers.
- Never override electrical or mechanical interlocks.



- Never use supplies or cleaning materials for other than their intended purposes. Keep all materials out of the reach of children.
- Never operate the equipment if you notice unusual noises or odors. Disconnect the power cord from the electrical outlet and call service to correct the problem.

If you need any additional safety information concerning the equipment or materials Xerox supplies, call Xerox Product Safety at the following toll-free number in the United States:

**1-800-828-6571**

For customers outside the United States, contact your local Xerox representative or operating company.

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## Operation safety: Europe

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This Xerox product and supplies are manufactured, tested and certified to strict safety regulations, electromagnetic regulations and established environmental standards.

Any unauthorised alteration, which may include the addition of new functions or connection of external devices, may impact the product certification.

Please contact your Xerox representative for more information.

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## Warning markings

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All warning instructions marked on or supplied with the product should be followed.



This WARNING alerts users to areas of the product where there is the possibility of personal damage.



This WARNING alerts users to areas of the product where there are heated surfaces, which should not be touched.

### Electrical supply

---

This product shall be operated from the type of electrical supply indicated on the product's data plate label. If you are not sure that your electrical supply meets the requirements, please consult your local power company for advice.



This product must be connected to a protective earth circuit. This product is supplied with a plug that has a protective earth pin. This plug will fit only into an earthed electrical outlet. This is a safety feature. Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.

To disconnect all electrical power to the product, the disconnect device is the power cord. Remove the plug from the electrical outlet.

### Ventilation

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Slots and opening in the enclosure of the product are provided for ventilation. Do not block or cover the ventilation vents, as this could result in the product overheating.

This product should not be placed in a built-in installation unless proper ventilation is provided, please contact your Xerox representative for advice.

Never push objects of any kind into the ventilation vents of the product.

### Operator accessible areas

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This product has been designed to restrict operator access to safe areas only. Operator access to hazardous areas is restricted with covers or guards, which would require a tool to remove. Never remove these covers or guards.

## **Maintenance**

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Any operator product maintenance procedures will be described in the user documentation supplied with the product. Do not carry out any maintenance on the product, which is not described in the customer documentation.

## **Before cleaning your product**

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Before cleaning this product, unplug the product from the electrical outlet. Always use materials specifically designated for this product, the use of other materials may result in poor performance and may create a hazardous situation. Do not use aerosol cleaners, they may be flammable under certain circumstances.

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## **CE mark: Europe only**

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January 1, 1995: Council Directive 73/23/EEC, amended by Council Directive 93/68/EEC, approximation of the laws of the member states related to low voltage equipment.

January 1, 1996: Council Directive 89/336/EEC, approximation of the laws of the member states related to electromagnetic compatibility.

March 9, 1999: Council Directive 99/5/EC, on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

A full declaration of conformity, defining the relevant directives and referenced standards, can be obtained from your Xerox representative.

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

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

Shielded interface cables must be used with this product to maintain compliance with Council Directive 89/36/EEC.

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## Radio and telecommunications equipment directive (Europe only)

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### **Certification to 1999/5/EC Radio Equipment and Telecommunications Terminal Equipment Directive:**

This Xerox product has been self-certified by Xerox for pan-European single terminal connection to the analog public switched telephone network (PSTN) in accordance with Directive 1999/5/EC.

The product has been designed to work with the national PSTNs and compatible PBXs of the following countries:

Austria	Germany	Luxembourg	Sweden
Belgium	Greece	Netherlands	Switzerland
Denmark	Iceland	Norway	United Kingdom
Finland	Ireland	Portugal	
France	Italy	Spain	

In the event of problems, contact your local Xerox representative in the first instance.

This product has been tested to, and is compliant with, TBR21, a specification for terminal equipment for use on analog switched telephone networks in the European Economic area.

The product may be configured to be compatible with other country networks. Please contact your Xerox representative if your product needs to be reconnected to a network in another country. This product has no user-adjustable settings.

*NOTE: Although this product can use either loop disconnect (pulse) or DTMF (tone) signaling, it should be set to use DTMF signaling. DTMF signaling provides reliable and faster call setup.*

Modification or connection to external control software, or to external control apparatus not authorized by Xerox, invalidates its certification.

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## **For further information**

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For more information on Environment, Health and Safety in relation to this Xerox product and supplies, please contact the following customer help lines:

Europe:+44 1707 353434

USA:1 800 8286571

Canada:1 800 8286571



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# Introduction

This guide provides an overview of the individual components of the NPS/IPS printing system and how they work together. It is designed to provide you with background information that can be used to make informed decisions regarding printer use and performance.

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## About this guide

This guide provides information to help you quickly determine hardware, software, and connectivity requirements for printing from various clients to the DocuColor NPS/IPS.

This reference is useful for users who want to understand the overall DocuColor NPS/IPS. Managers can use the reference information to assist them in making planning decisions.

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## Contents

This section lists the contents of this guide:

- Chapter 1, “System overview,” describes the features of the DocuColor 2060 NPS/IPS and identifies its major components.
- Chapter 2, “Printer controller,” provides information on the Printer controller components, software, and fonts.
- Chapter 3, “Printer components and options,” details the printer components.
- Chapter 4, “Network printing environment,” provides information that is specific to printing from client workstations over the network.
- Chapter 5, “IPDS printing environment,” provides information that is specific to IPDS printing from a network or channel-attached IBM host.

- Appendix A, “Paper and other supplies,” provides information and specifications on paper and other media used with the system, as well as instructions for ordering supplies.

## Conventions

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This guide uses the following conventions:

- **All caps and angle brackets:** Within procedures, the names of keys are shown in all caps within angle brackets (for example, press <ENTER>).
- **Angle brackets:** Variable information, or the position of a specified argument in the command syntax, appears in angle brackets (for example, List Fonts <Pattern>).
- **Bold:** Within procedures, text and numbers that you enter are shown in bold (for example, enter **privilege operator**).
- **The word “enter” within procedures:** The two-step process of keying in data and pressing <ENTER> (for example, enter **y**).
- **Italics:** Document and library names are shown in italics (for example, the *Xerox DocuPrint NPS/IPS Guide to Managing Print Jobs*).
- **Quotation marks:** Keywords you can enter as arguments appear in quotes (for example, “USLetter”).
- **Vertical bars:** Alternatives to specified arguments are separated by vertical bars (for example, Set Time <Time | Remote Host Name | IP Address>).

*NOTE: Notes are hints that help you perform a task or understand the text.*

### CAUTION

*Cautions alert you to an action that could damage hardware or software.*

### WARNING

**Warnings alert you to conditions that may affect the safety of people.**



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## Related publications

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The Xerox DocuColor NPS/IPS documentation set includes the documents listed below.

*NOTE: For a list of IBM reference manuals for IPDS printing, refer to the Solutions Guide for IPDS Printing.*

- *Guide to Configuring and Managing the System*
- *Guide to Managing Print Jobs*
- *Guide to Performing Routine Maintenance*
- *Guide to Submitting Jobs from the Client*
- *Guide to Using Page Description Languages*
- *Installation Planning Guide*
- *System Overview Guide*
- *Troubleshooting Guide*
- *Solutions Guide for IPDS Printing*
- *Decomposition Service and Tools Guide*
- *Glossary*
- *Master Index*
- *Customer Information Quick Reference Card*
- *Printer Controller Commands Quick Reference Card*
- *Operator Quick Reference Card*
- *Submitting your Jobs from Macintosh Quick Reference Card*
- *Submitting your Jobs from UNIX & DOS Quick Reference Card*
- *Submitting your Jobs from Windows NT 4.0 (QuickPrint) Quick Reference Card*
- *Submitting your Jobs Using Windows NT 4.0 Drivers Quick Reference Card*

The documentation set also includes an electronic version, the DocuPrint NPS/IPS Interactive Customer Documentation CD.



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# 1. System overview

This chapter provides an overview of the features and functions of the DocuColor 2060 NPS/IPS.

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## Functional overview of the NPS/IPS

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The NPS/IPS printers support the processing and printing of PDL and ASCII jobs from network workstations, as well as IPDS jobs from an IBM host. Supported PDL formats are PostScript levels 1 and 2, HP PCL 5e, and TIFF.

Your organization may print only IPDS jobs, network PDL jobs, or jobs from both environments.

*NOTE: The DocuColor 2060 NPS/IPS does not support printing of color PCL jobs.*

DocuColor 2060 NPS/IPS printers support:

- Full-color printing
- Printing at a rated speed of up to 60 ppm in 600 dpi
- Printing simplex and duplex
- Processing and printing of network PDL jobs and IPDS jobs without soft boot to switch modes
- Multiple weights, sizes and types of paper (refer to the “Supplies” appendix for details)
- Optional high-capacity feeder
- Optional high-capacity stacker
- Optional high-capacity stacker stapler
- Sixth Sense, a diagnostic tool that provides system assessment and problem analysis.

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## System component overview

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<b>DocuColor NPS/IPS</b>	The entire DocuColor NPS/IPS system includes the printer (also known as an IOT or print engine), printer controller, printer interface, and all appropriate software. “DocuColor printer” or “printer” refers to the base printer engine (IOT) only, without the printer controller and interface.
<b>Xerox-supplied printer controller</b>	The printer controller includes two processors, DVD-ROM drive, diskette drive, keyboard, mouse, and a liquid crystal display (LCD) flat panel monitor. The printer controller accepts the print job from the client workstation or host, converts the files into page images, and sends the page images to the printer. The user interface at the printer controller allows you to perform tasks such as monitoring job status, prioritizing jobs, and configuring the system.
<b>Xerox-supplied printer interface</b>	The printer interface cables provide high-speed data transport and communication between the printer controller and the printer.
<b>Xerox-supplied DocuColor printer</b>	The printer accepts data from the printer controller and prints the document according to the print options specified by the user. The printer also provides paper stacking and optional sampling.

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### Connectivity configurations

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The NPS/IPS can process network PDL and IPDS jobs concurrently.

To support the submission of jobs from a variety of hosts, configuration possibilities include:

- The same Token Ring or Ethernet connection can be used for both IPDS and PostScript, PCL, ASCII, or TIFF.
- Both a Token Ring card and an Ethernet card can reside in the Sun workstation controller, with one being used for IPDS and the other for network PDLs.
- Bus and tag attachment through the channel interface board can be used for IPDS jobs from a channel-attached host; Token Ring or Ethernet connection can be used for jobs submitted over the network.

## **NPS/IPS concurrent printing**

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The Xerox NPS/IPS can receive a variety of data streams including IPDS, PostScript Levels 1 and 2, PCL 5e, TIFF, and ASCII. The system automatically senses the type of job and processes it appropriately.

When your system is printing IPDS jobs, it can accept network PDL data streams in the background. When network PDL jobs are printing, only one IPDS job can be queued.

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## **SNMP support**

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The system provides functionality to export the state of a printer using the Simple Network Management Protocol (SNMP), thus allowing printer management software to monitor and report on the printer state.

SNMP is a standardized communications protocol for managing arbitrary networked devices from different vendors, such as workstations, servers, printers, or routers. The information to be communicated is presented as variable name/value pairs, defined in a set of standardized management information bases (MIBs). The MIBs define the legal variables, their types, and possibly a fixed set of values.

SNMP was designed to facilitate managing a heterogeneous set of networked devices that communicate using TCP/IP. Specifically, it addressed management of the network itself and the network traffic between those devices. Over time, MIBs were defined to expand the types of devices that could be managed using SNMP. For example, MIBs were defined specific to managing a workstation or a printer.

The system currently supports variables defined in the following MIBs:

- MIB-II (RFC 1156)

This MIB defines the basic set of variables any device running TCP/IP should make accessible. It includes, for a particular device, variables for information such as a system description, information about each of the network interfaces present on the device, and information about all the IP datagrams sent and received by the device.

- Host Resources MIB (RFC 1514)

This MIB defines variables useful in managing a “host” system. In this context, a host is a computer that is directly used by human beings and that communicates with other similar computers attached through a network. The Host Resources MIB includes information such as how long the system has been up, descriptions of the processors and attached storage devices, and possibly information about software running on the host.

- Printer MIB (RFC 1759)

This MIB defines information useful in managing a printer. It includes information about the physical status of the printer, such as the number of input trays, the media loaded in them, and the number and types of marking engines included in the printer.

Most variables in these MIBs are supported in a standard way, as described in the standard documentation, except that writing to read/write variables is not supported. All variables are treated as read-only. In all cases, the NPS/IPS SNMP implementation supplies textual information only in English.

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## IPP support

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The system supports the Internet Printing Protocol (IPP), which allows you to:

- Add the printer to your PC directly as an Internet printer with a URL, rather than indirectly as an lpr-connected local printer.
- Use an IPP client to access the printer. A limited subset of IPP operations is supported; query the IPP client for details.

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## Sixth Sense

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Sixth Sense is a unique suite of diagnostic tools that allows Xerox customer service engineers, analysts, and consultants to serve customers more effectively.

Sixth Sense is intended to automate and expedite the range of service-related support functions. Sixth Sense is a tool that enables Xerox to provide benchmark service support. Xerox customers benefit from the ability to bring broader support to focus more quickly.

For example, Sixth Sense can allow the Service Representative to repeatedly "preview" the condition of the system prior to an actual site visit. This may provide the ability to determine the correct part or piece of information to have on hand when the site visit is made.

Sixth Sense is a no-charge feature available to customers through Xerox Service. The customer need only provide an analog phone line for use by the Sixth Sense modem connection. For those customers unable to dedicate a phone line to the Sixth Sense connection, three and five port phone share devices are available for purchase.

To take advantage of Sixth Sense, the customer needs to:

- Request Sixth Sense enablement through Xerox Service
- Provide an analog phone line
- If necessary, purchase an optional phone share device.

More information about the Sixth Sense can be found in the *Troubleshooting Guide* for your system.

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## Software license

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In order to use the operating system software, the owner must obtain a software license from Xerox. The license, which is a 20-character text string, is entered at the controller.

Your Xerox service representative can obtain this license text string for you and enter it when the printer is installed or when the software is upgraded. Although your service representative usually does this for you, you are able to enter your license string yourself from the NPS/IPS main window.

Until the license string is entered, your printer cannot print or receive data. You can, however, perform all offline tasks, such as setting up virtual printers.

For details on obtaining and entering the license string, refer to the *Guide to Configuring and Managing the System*.

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## Printing considerations for the DocuColor 2060 NPS/IPS

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This section describes some special considerations for color printing on the 2060.

### Image quality

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This section describes image quality considerations.

- One of the most important factors influencing color output is the quality of the paper used; high quality stock enhances the output quality.
- Color quality perception is subjective and will be affected by surrounding lighting conditions.
- Like other color reproduction processes, there will be some variation of output quality over time. For example, long runs with an area coverage greater than 70% (per color) may produce different output quality between the first and last sheets.
- Image quality is strongly influenced by paper surface structure, texture, and color. Key applications should be printed on the DocuColor 2060 using representative paper and reviewed by the document owner prior to production.
- When using coated paper with large areas of process-black coverage (greater than 220% on the second side), image quality may be degraded due to the lack of moisture content in the paper.
- The surface texture of some uncoated papers may cause increased graininess in halftone areas printed with only black toner. This effect may be minimized by adding process black and/or using smooth or coated papers.
- Density variation may occur on applications with high area coverage when using coated stocks with weights around 220 gsm.

### Image area

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The DocuColor 2060 does not print from edge to edge. There is a 4 mm border around the page image.



## **Duplex printing**

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The DocuColor 2060 can automatically produce duplex color prints from all paper trays for media weights up to 220 gsm. The system will not automatically duplex media heavier than 220 gsm or larger than 320 mm x 458 mm.

## **Color pages in copiers or other printers**

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DocuColor 2060 prints should not be run through the printing path of DocuTech Production Publishing systems. However, the prints can be used with the Interposer module.

If you plan to run DocuColor 2060 prints through other equipment, it is highly recommended you test the application before committing to the job. Many factors (operating temperature of the fuser, fuser oils, fix reaction of toner/inks) impact the success of running DocuColor 2060 prints in other equipment.

## **No automatic tray switching**

---

The DocuColor 2060 printer does not support automatic tray switching. This feature can be enabled by your service representative if you use the same kind of paper in all trays at all times.

*NOTE: If automatic tray switching is enabled on the printer, and different stock is loaded in various trays, jobs may print on the wrong stock.*

## **Limitations for stock within a job**

---

The printer does not allow mixing of paper sizes within a job.

Mixing of coated and uncoated stocks or different weight papers within the same job is allowed, but may lead to significant performance problems.



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## 2. Printer controller

The printer controller manages print options, provides the user interface, and runs system management and diagnostic operations on demand. The following is an explanation of tasks that enable the job to be printed:

- The printer controller detects which job protocol is being sent.
- Print option parameters are stored in the Job Pool Manager (JPM) database, which maintains a database of all jobs. This database contains a reference to the print data on the fixed disk, as well as the print options parameters for the print data. The JPM responds to the printer controller commands for deleting, holding, and prioritizing jobs.
- Print data is stored on the printer controller disk for queuing and while printing.
- When the printer controller begins processing a job, it sends the print data to the decomposer. The decomposer converts the print data into a bitmap in the resolution appropriate to the printing device.

The decomposer utilizes font data from font files stored on the printer controller disk or font information sent to the printer controller with the print job.

- When processed data comes back from the decomposer, the printer controller Device Driver transmits the print data and print option parameters to the printer. Printing is then initiated.
- After the job has been printed successfully, the print data file is deleted from the disk. If an error inhibits job completion, the printer controller manages the recovery and completion of the job.

The system can manage the processing of multiple jobs and the printing of another job simultaneously. When you are printing IPDS jobs, the printer controller is able to queue multiple PostScript and PCL jobs at the same time. When you are printing PostScript and PCL jobs, you can send one IPDS job.

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## Printer controller components

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The printer controller consists of a specially-configured Sun workstation and uses proprietary Xerox hardware, firmware, and software.

### Sun Blade 1000 workstation

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The printer controller is based on the Sun Blade 1000, a workstation with a high-performance architecture for complex processing tasks. It contains the following hardware components:

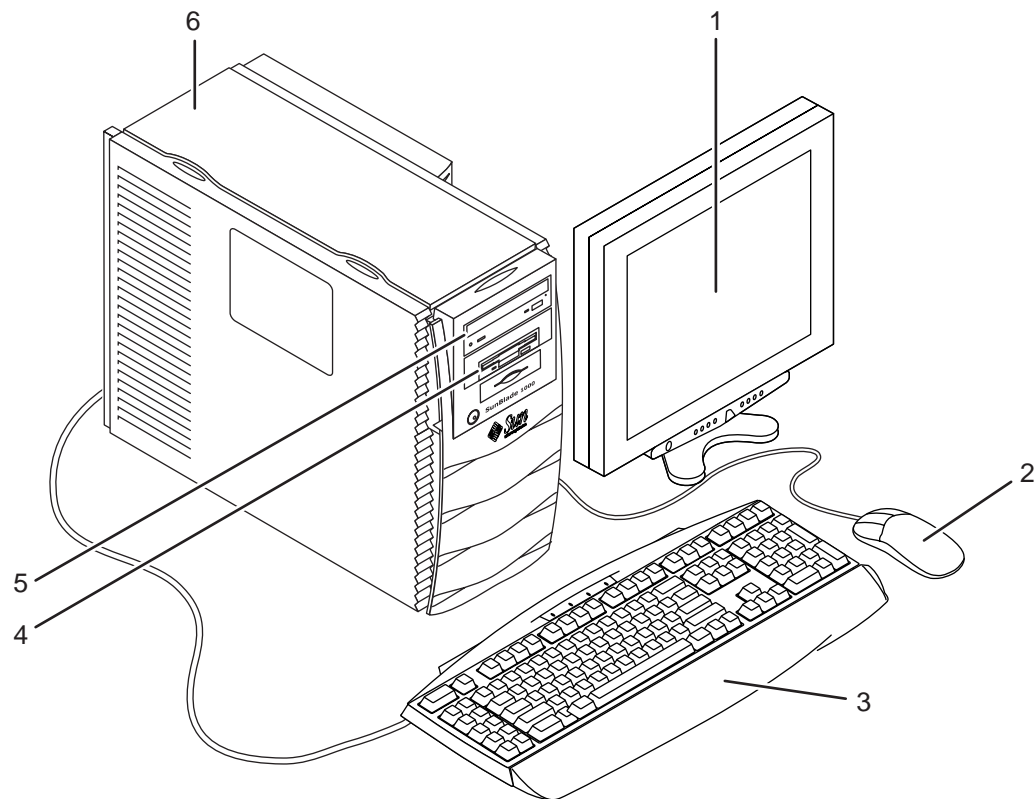
- Processor (system unit) containing the following:
  - Two UltraSPARC III 750 Mhz central processing unit (CPU) modules
  - 4 GB memory (four 1 GB Dual In-line Memory Modules, or DIMMs)
  - 36 GB hard disk drive
  - DVD-ROM drive
  - 3.5 inch diskette drive
- Keyboard and mouse
- Monitor
- Optional Token Ring board
- Two Printer Controller Interface (PCI) boards installed in the processor to interface with the print engine.

#### **Optional components**

For channel connection to a host for IPDS printing, the system may use a channel interface board that is connected to a channel cable connector box.

An external 4 mm tape drive is available and recommended for backing up site files. A typical color calibration file is 1.5 MB.

A second internal 36 GB hard disk drive is optional, as are two additional external disks.



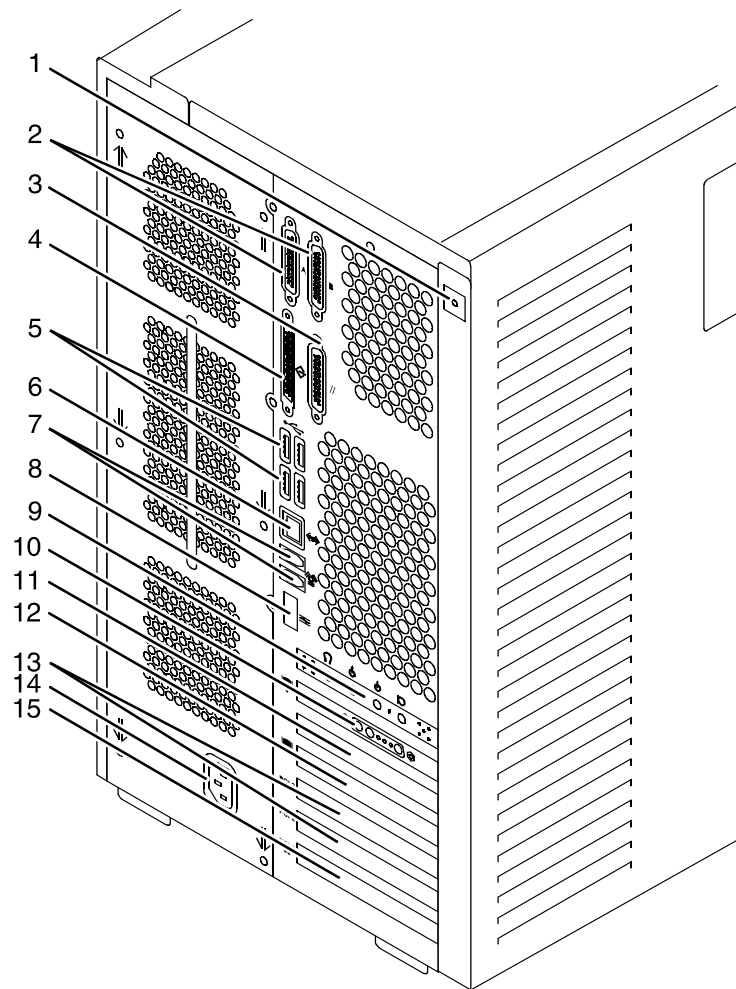
**Figure 2-1. Components of the printer controller**

1. Monitor
2. Mouse
3. Keyboard
4. Diskette drive
5. DVD-ROM drive
6. Processor

**Processor** The central processing unit contains the memory, internal disk drive, a graphics board, a DVD-ROM drive, a diskette drive, power receptacle and outlet, connectors and ports.

- **Memory:** Four 1 GB Dual In-line Memory Modules, or DIMMs are provided as a standard feature of the processor.

- **Hard disk drive:** A 36 GB primary disk drive is provided as a standard feature of the processor. The operating system, the NPS/IPS application, and any queued print jobs are stored on the internal disk. This disk cannot be used to store other applications or data except as directed by your service representative.
- **Graphics board:** The Creator-3D series 3 graphics board is provided as a standard feature of the processor.
- **Diskette drive:** Diskettes inserted into a diskette drive are used to install fonts and to load files to, and back up files from, the internal disk drive. The diskette drive uses industry standard 3.5 inch, 1.44 MB, double-sided, high-density diskettes.
- **DVD-ROM drive:** The DVD-ROM drive is a high density, read-only, optical laser storage device used for loading the NPS/IPS operating system and other files. The CD-ROM drive is located in the processor above the diskette drive.
- **Back panel:** The back panel of the processor has a power receptacle and outlet, connectors, connector openings, and ports. The following figure shows the back panel of the controller.



**Figure 2-2. Back panel of the printer controller**

1. Access panel lock block
2. Serial connectors A and B, DB-25
3. Parallel connector
4. SCSI connector
5. Universal serial bus (USB) connectors
6. Twisted-pair Ethernet (TPE) connector
7. IEEE 1394 connectors
8. Fibre Channel-Arbitrated Loop (FC-AL) connector
9. Audio module headphones, line-in, line-out, and microphone connectors
10. Graphics card / video connector (frame buffer 0)
11. PCI card slot 4

12. Graphics card / video connector (frame buffer not used)

13. PCI card slots 3 and 2

14. Power connector

15. PCI card slot 1

**Keyboard** The keyboard consists of alphanumeric keys similar to a typewriter, symbols and special character keys, an extended character set, and function keys. You can use the keyboard to enter commands that control functions such as requesting sample prints or shutting down the system.

**Mouse** Use the mouse to select, move, or resize windows.

**Display monitor** The 18.1-inch LCD monitor allows you to interact with the printer and to monitor its interaction with the various components. During a print job, printer error messages may display to notify you of any unexpected conditions.

*NOTE: For information on channel-attached systems, refer to the chapter, "IPDS printing environment".*

*NOTE: Printer controller hardware configurations are subject to upgrade.*

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## Printer controller software and fonts

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The installation of printer controller software is performed by your service representative once all the hardware components are in place and properly connected. The following is a summary of major software components installed on the printer controller:

- Xerox printer controller software
  - UNIX Sun operating system

*NOTE: The Sun operating system used on the controller is based on the standard Sun operating system; however, it has been customized for use with the Xerox printer controller. Therefore, not all standard Sun operating system features are available.*



- DocuPrint Print Service Software including software components for the user interface, driver, decomposers, Job Pool Manager, and other operating system utilities.
- Xerox Client Software
  - Xerox client protocol software (print command) can be downloaded to client workstations or PCs as a means of sending jobs to the printer controller.
- Adobe Type 1 PostScript fonts
  - Courier (Courier, Bold, Oblique, Bold Oblique)
  - Helvetica (Helvetica, Bold, Oblique, Bold Oblique, Light, Light Oblique, Black, Black Oblique Condensed, Condensed Oblique, Condensed Bold, Condensed Bold Oblique Narrow, Narrow Bold, Narrow Oblique, Narrow Bold Oblique)
  - ITC AvantGarde Gothic (Book, Book Oblique, Demi, Demi Oblique)
  - ITC Bookman (Demi, Demi Italic, Light, Light Italic)
  - ITC Garamond (Light, Light Italic, Bold, Bold Italic)
  - ITC Korinna (Korinna, Kursiv Regular, Bold, Kursiv Bold)
  - ITC Zapf Chancery (Medium Italic)
  - ITC Zapf Dingbats (Medium)
  - New Century Schoolbook (Roman, Bold, Italic, Bold Italic)
  - Palatino (Roman, Bold, Italic, Bold Italic)
  - Symbol (Medium)
  - Times (Roman, Bold, Italic, Bold Italic)

Using font installation commands, you can load other Type 1 PostScript fonts in \*.PFB file format from a MS-DOS-formatted, 3.5-inch diskette or CD-ROM or DVD-ROM. Refer to the *Guide to Configuring and Managing the System* for more information on the font installation commands. Type 1 and Type 3 PostScript fonts can also be downloaded with a print job.

- PCL fonts: Intellifont (scalable)
  - CG Times (Medium, Italic, Bold, Bold Italic)
  - Universe (Medium, Italic, Bold, Bold Italic)
  - Universe Condensed (Medium, Italic, Bold, Bold Italic)
  - Courier (Medium, Italic, Bold, Bold Italic)

- Letter Gothic (Medium, Italic, Bold)
- Albertus [Medium (semi-bold), Extra Bold]
- Antique Olive (Medium, Italic, Bold)
- Clarendon Condensed (Bold)
- Coronet (Medium Italic)
- Garamond [Antique (medium), Kursiv (Italic), Halbfett (Bold), Kursiv Halbfett (Bold Italic)]
- Marigold (Medium)
- CG Omega (Medium, Italic, Bold, Bold Italic)
- PCL fonts: Truetype (scalable)
  - Arial (Medium, Italic, Bold, Bold Italic)
  - Times new Roman (Medium, Italic, Bold, Bold Italic)
  - Symbol (Medium)
  - Wingdings (Medium)
- PCL fonts: Bitmap
  - Line Printer (16.67 pitch / 8.5 point medium)
- MICR fonts

E13B fonts in PCL and PostScript are also provided for 96/4635/180 MICR systems.

*NOTE: The resident fonts are used for PostScript and PCL printing.*

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### 3. Printer components and options

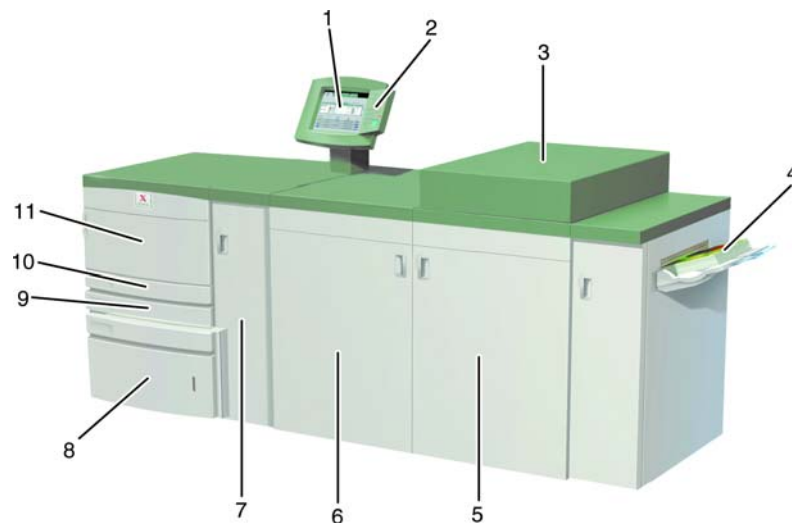
The printer processes the electronic data and images received from the controller and produces the printed output. This chapter describes the components and options available for the printer.

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#### Printer components

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The standard printer components are the printer control panel, the touch screen, the offset catch tray, and the feeder trays. Labels are located throughout the printer to assist you with a variety of tasks such as clearing a paper jam.



**Figure 3-1. DocuColor 2060 NPS/IPS**

1. Touch screen
2. Printer control panel
3. Dry ink / toner compartment
4. Offset catch tray
5. Right front door
6. Left front door

7. Transport module
8. Tray 3
9. Tray 2
10. Tray 1
11. Upper door

### **Input tray capacity**

Tray capacity for the input trays is:

- Trays 1 and 2 hold 550 sheets of 24-pound or 90 gsm bond paper.
- Tray 3 holds 2200 sheets of 24-pound or 90 gsm bond paper.

*NOTE: For special stock, use tray 3.*

All three input trays have buttons to specify weight. In addition, tray 3 has selections for paper size (Non Standard or Standard), and the paper type (Coated or Uncoated). You must use these specifications for the printer to print properly. For the procedure on loading paper and specifying the weight, paper size and paper type, refer to the *Guide to Performing Routing Maintenance*, “Paper trays” chapter.

*NOTE: Although the tray input buttons for the DocuColor 2060 require you to specify weight, you also specify media weight when using the Set Tray command at the printer controller. The buttons on the tray require you to specify weight in gsm, whereas the Set Tray command allows you to use any unit of measurement for weight. Therefore, the number you specify on the tray, and the number you specify using Set Tray may be different numbers, while still referring to the same actual weight. Additionally, Set Tray allows you to specify 0 to indicate no preference.*

### **Output tray capacity**

The offset catch tray holds 500 sheets of 24-pound or 90 gsm bond paper.

If you have the optional high-capacity stacker (HCS) or high-capacity stacker stapler (HCSS), the built-in top tray in these devices replaces the standard offset catch tray. Refer to the “Printer options” section for information on these optional stackers.

## **Touch screen**

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The touch screen displays messages that indicate the status of the printer during idle, run, or fault conditions.

The touch screen displays the default screen selected in the Tools Mode by your system administrator. The default screen can be either the Basic Features, Job Status, or Machine Status screen. For information on the Tools Mode, refer to the *Guide to Performing Routing Maintenance*, “Default settings” chapter.

*NOTE: For most functions, you will use the printer controller rather than the Touch Screen.*

### **Message area**

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The message area at the top of the touch screen displays messages concerning the printer status, programming conflicts, or errors. The messages may also provide instructions for the operator.

### **Tabs, buttons, and icons**

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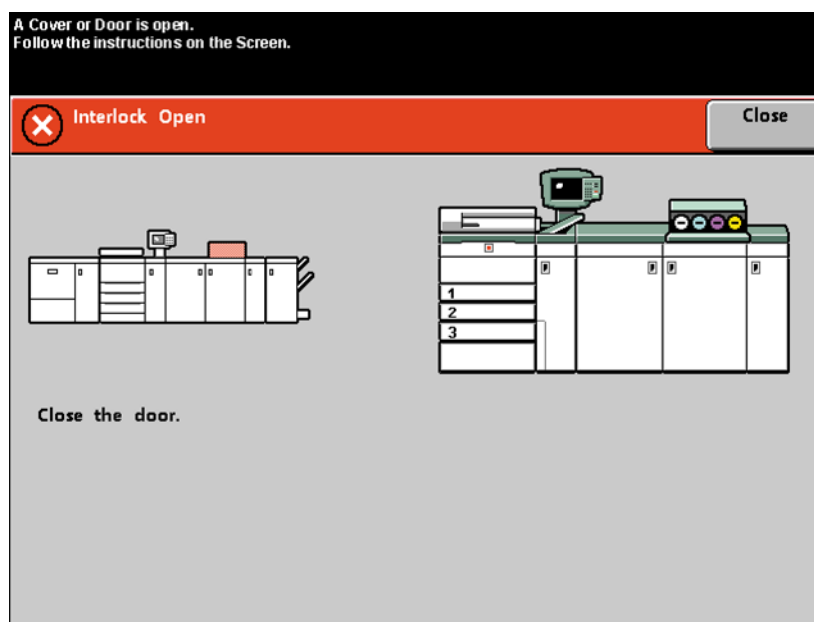
Some screens on the touch screen display tabs that contain various selectable options.

Features and options are initially set to the factory default settings. These settings can be changed by your system administrator in Tools mode.

## Alert screens

---

An alert screen has a red bar across the screen when a consumable product such as dry ink needs to be replaced. An alert screen also indicates that the printer is unable to print because of a fault condition. Follow the instructions on the screen to resolve the problem and resume printing.



**Figure 3-2. Alert screen**

## Printer control panel

Your DocuColor 2060 NPS/IPS has a control panel with words or with international symbols.

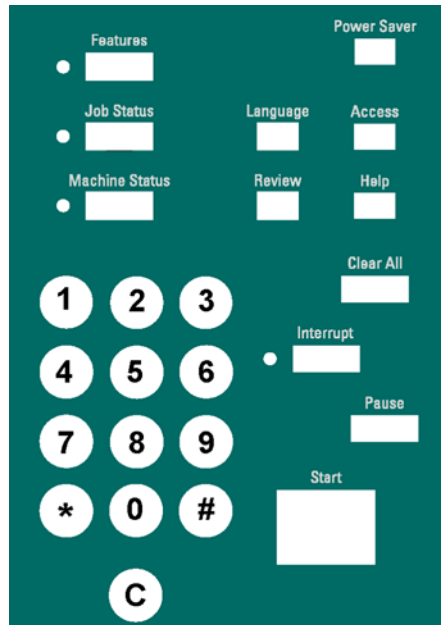


Figure 3-3. Printer control panel with words

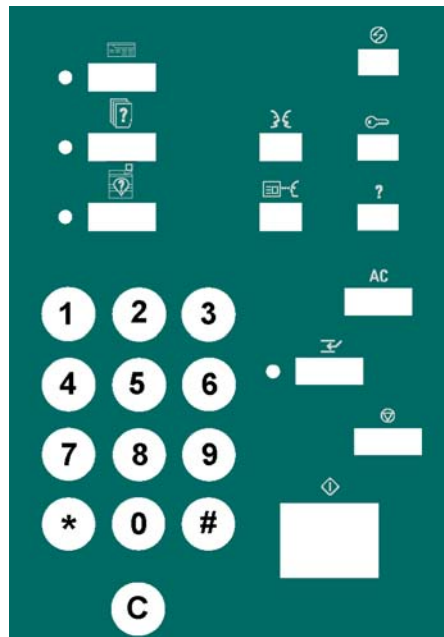


Figure 3-4. Printer control panel with international symbols

The function of each button is described in the following table.

*NOTE: All functions may not be activated for your system.*

Table 3-1. **Control panel buttons**













Name and symbol	Function
<p>Features</p> 	Not used for DocuColor 2060 NPS/IPS.
<p>Power Saver</p> 	Puts the system in a standby status mode, where the fuser temperature is lowered. The factory default is 60 minutes. The power saver time out can be changed in Tools to reflect a value from 1 to 240 minutes.
<p>Job Status</p> 	<p>Displays a list and the current status of all jobs submitted on the touch screen.</p> <p><b>CAUTION</b></p> <p><i>The option to hold, release, promote, delete and see the options selected for each job in the queue <b>should not be used</b> for DocuColor 2060 NPS/IPS. These functions must be performed at the printer controller.</i></p>
<p>Language</p> 	Allows you to select one of two languages to be displayed on the touch screen.
<p>Access</p> 	Allows access to the password-protected Tools Pathway and the Auditron Administration Pathway. For information on the Tools mode, refer to the <i>Guide to Performing Routing Maintenance</i> , "Default settings" chapter.
<p>Machine Status</p> 	Gives the status of the paper trays, machine details, error log and maintenance information. Machine Status is where you will find the serial number for the printing system, the customer support telephone numbers and the meters that show the count for color, black and white, color large size and total output.
<p>Review</p> 	Not used for DocuColor 2060 NPS/IPS.



Table 3-1. Control panel buttons (Continued)

Name and symbol	Function
Help 	Additional information useful in completing a task is displayed on the touch screen.
Clear All 	Not used for DocuColor 2060 NPS/IPS.
Interrupt 	Not used for DocuColor 2060 NPS/IPS.
Pause 	Not used for DocuColor 2060 NPS/IPS.
Start 	Press the <b>Start</b> button in the Tools mode for certain settings. For information on the Tools mode, refer to the <i>Guide to Performing Routing Maintenance</i> , “Default settings” chapter.
Keypad	Use the keypad to enter: <ul style="list-style-type: none"> <li>• Your password for access to Tools mode, or</li> <li>• The number of copies desired for a job.</li> </ul>
C	Not used for DocuColor 2060 NPS/IPS.

## Audio tones

---

The printer sounds an audible tone to direct your attention to a printer problem.

There are three tones:

- Attention

The Attention tone indicates that the button pressed is not able to be selected.

- Button selection

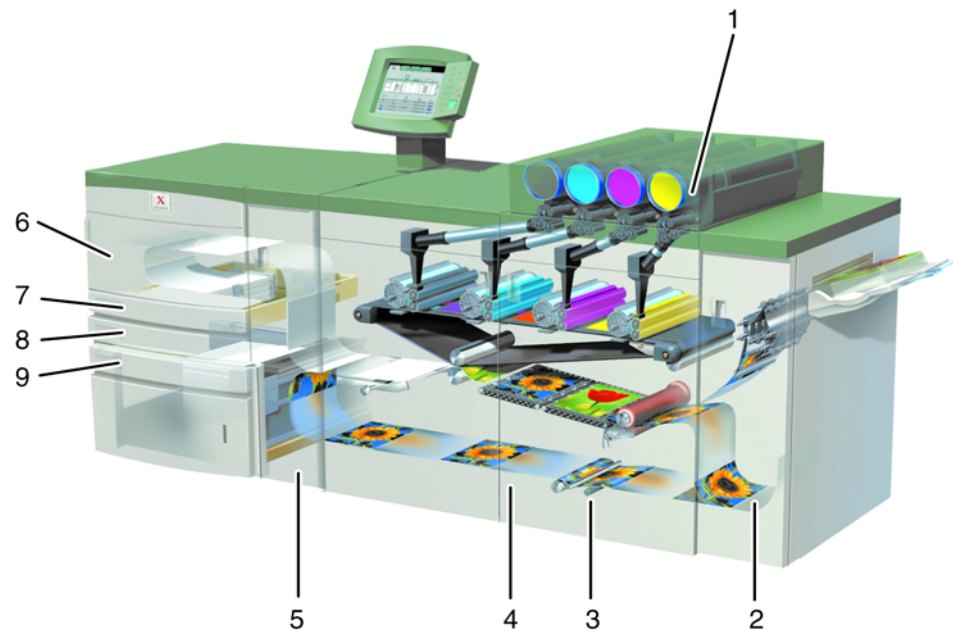
The Button Selection tone indicates that the button pressed is able to be selected.

- Fault

The Fault tone indicates that the printer is in a fault condition and will not operate until the fault is cleared.

The tones can be activated or deactivated through the Tools mode. For the procedure, refer to the *Guide to Performing Routing Maintenance*, the “Default settings” chapter.

## Identifying the internal components



**Figure 3-5. Internal view of the DocuColor 2060**

1. Dry ink / toner cartridges
2. Exit module paper path
3. Paper path
4. Serial number label
5. Transport paper path
6. Upper door
7. Tray 1
8. Tray 2
9. Tray 3

### **Dry Ink cartridges**

The colors, from left to right, are black, cyan, magenta and yellow. Refer to the *Guide to Performing Routine Maintenance* for instructions on changing the cartridge.

### Serial number label

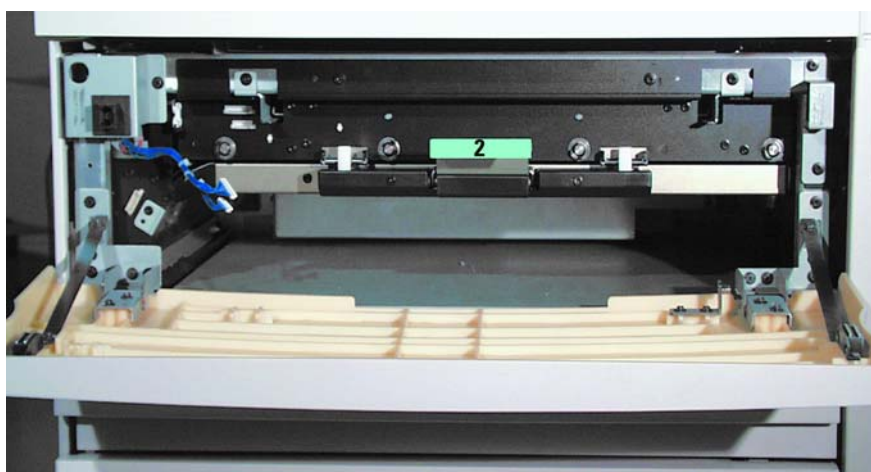
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If the DocuColor 2060 has a loss of power making it impossible to access the Machine Details tab to get the serial number, open the two main front doors. The serial number label is in the center of the bottom frame of the printer.

### Upper door

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The upper door paper path transports paper from trays 1, 2 and optional tray 4 to the transport module.

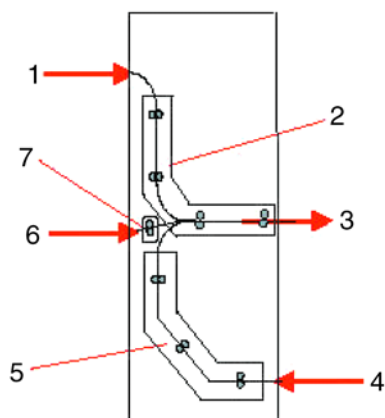


**Figure 3-6. Upper door**



## Transport module

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**Figure 3-8. Transport module paper path**

1. Paper from trays 1, 2, and 4
2. Upper transport
3. To the printer
4. Single sided prints from the horizontal transport
5. Lower transport
6. Paper from tray 3
7. Takeaway transport

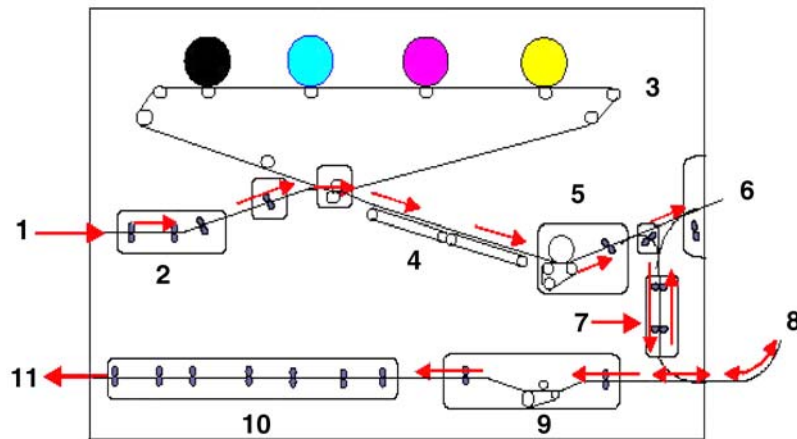


**Figure 3-9. Transport module**

The upper paper path in the Transport Module carries the paper from the Paper Trays to the upper paper path of the printer.

The lower paper path in the Transport Module carries the paper from the lower paper path in the printer to the upper paper path in the printer when duplexing.

### Paper path in the printer



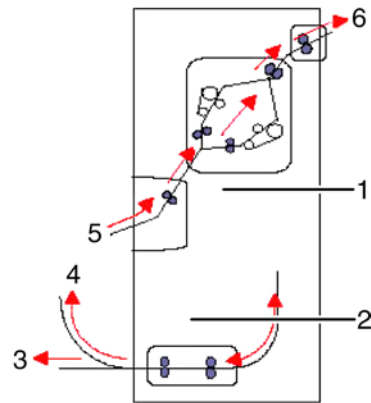
**Figure 3-10. Printer paper path**

1. From transport module
2. Alignment transport
3. Inverter gate
4. Vacuum transport
5. Fuser transport
6. To exit module
7. Inverter transport
8. From duplex Inverter transport
9. Horizontal transport 1
10. Horizontal transport 2
11. To transport module

The paper path in the printer transfers an image to the paper and fuses it for both the simplex and duplex selections. It has two areas, the upper paper path and the lower paper path. The upper paper path is used for both simplex and duplexing. The lower paper path is used for duplexing only. Horizontal transport 1 decurls the paper when printing duplex.

## Exit module

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**Figure 3-11. Exit module paper path**

1. Decurler
2. Duplex inverter transport
3. To printer
4. To inverter transport
5. From printer
6. To the output device



**Figure 3-12. Exit module**



A completed print passes through the exit module to the offset catch tray.

The exit module contains a decurler that removes the curl from the paper which occurs during the fusing process.

The exit module also contains an inverter, which turns the paper over so that side 2 can print when duplexing or when face down output is selected.

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## Printer options

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DocuColor 2060 NPS/IPS printers are available with the following options:

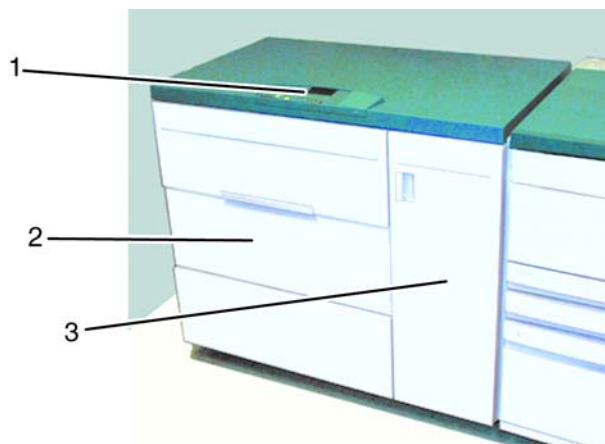
- High-capacity feeder (HCF)
- High-capacity stacker (HCS)
- High-capacity stacker stapler (HCSS).

These options allow you to customize your printing system for increased efficiency and for specialized applications.

### High-capacity feeder

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Three feeder trays are provided as part of the printer base configuration (feeder trays 1, 2, and 3). For the DocuColor 2060 NPS/IPS, the high-capacity feeder option increases the versatility and productivity of the printer with an additional feeder tray (tray 4), increasing the feeder capacity by approximately 2,500 sheets.



**Figure 3-13. Xerox DocuColor 2060 NPS/IPS high-capacity feeder**

1. Control panel
2. Left door
3. Right door

**Tray capacity** The high-capacity feeder tray holds 2500 sheets of 24-pound or 90 gsm bond paper.

*NOTE: Do NOT fill above the MAX line.*

**Paper stock specifications** Tray 4 is designed to feed the commonly used paper sizes and weights.

There are two positions in which paper is fed into the printer. One of the positions is called long edge feed (LEF). Long edge refers to the long edge of your paper. When you see LEF, position your paper so that the long edge is fed first. The other position is called short edge feed (SEF). Short edge refers to the short edge of your paper. When you see SEF, position your paper so that the short edge is fed first.

Special paper stock for tray 4 includes:

- Labels can be run, but are not recommended for tray 4
- Letterhead
- Drilled (hole punched) is not recommended to be run from tray 4, but can be fed SEF
- Colored paper
- Coated and non-coated paper

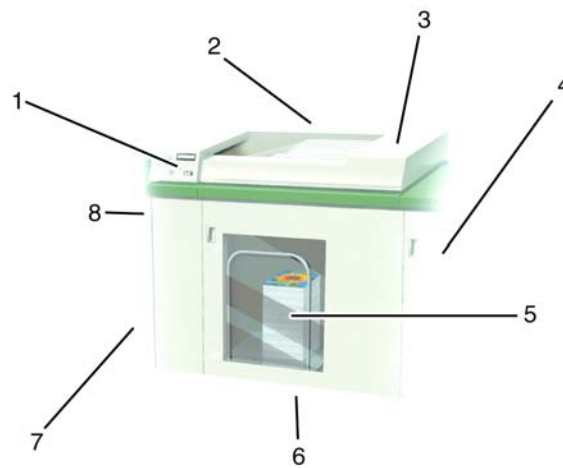
- Tabbed inserts can be run, but are not recommended for tray 4

### High-capacity stacker

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The high-capacity stacker is an optional finishing device that provides stacking and offsetting capabilities for output into a stacker cart.

*NOTE: The Xerox DocuColor 2060 NPS/IPS can have a high-capacity stacker (HCS) or a high-capacity stacker stapler (HCSS), but not both.*



**Figure 3-14. High-capacity stacker**

1. Control panel
2. Back
3. Top cover
4. Right side
5. Front door access to stacker cart
6. Front
7. Decking plate to DocuColor 2060 NPS/IPS
8. Left side

**Tray capacity** The stacker cart has a capacity of 3500 sheets of 24 pound (90 gsm) paper.

### **High-capacity stacker modes**

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The High-capacity stacker offers the following options for output.

**Top Tray mode** The High-capacity stacker diverts sheets that are too small or too large to be stacked and proof sets to the top tray. The capacity of the top tray is 250 sheets of 24 pound (90 gsm) paper.

*NOTE: When printing labels the back sometimes comes off when using the Stack mode. Use the Top Tray mode when printing labels to avoid this problem.*

**Stack mode** Stacks collated sets as received from the printer. The stacker tray has a capacity of 3500 sheets of 24 pound (90 gsm) paper.

*NOTE: When printing labels the back sometimes comes off when using the Stack mode. Use the Top Tray mode when printing labels to avoid this problem.*

### **High-capacity stacker stapler**

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The high-capacity stacker stapler is an optional finishing device that provides stacking, stapling, and offsetting capabilities for output into a stacker cart.

*NOTE: The Xerox DocuColor 2060 NPS/IPS can have a high-capacity stacker (HCS) or a high-capacity stacker stapler (HCSS), but not both.*



**Figure 3-15. High-capacity stacker stapler (HCSS)**

1. Control panel
2. Top tray
3. Offset catch tray

**Tray capacity** The HCSS offset catch tray has a capacity of 2000 sheets of 24 pound (90 gsm) paper. It has an offset mode that provides separation between the stacked sets. The HCSS can also send output to the Top Tray.

### **High-capacity stacker stapler modes**

The High-capacity stacker stapler offers the following options for output.

**Top Tray mode** Sends each print to the top tray of the HCSS. The top tray also accepts sheets that are diverted to it during a problem, and when the system is in the job recovery mode. The top tray holds a maximum of 250 sheets of 24 lb. (90 gsm) paper.

**Stack mode** Stacks collated sets as received from the printer in the offset catch tray. The offset catch tray has a capacity of 2000 sheets of 24 pound (90 gsm) paper.

**Staple mode** Staples each set and delivers it to the offset stacker stapler tray.



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## 4. Network printing environment

The NPS/IPS system supports the personal computer (PC), Sun workstation, DEC workstation, HP/Apollo, IBM RS/6000 and Apple Macintosh. It accepts PostScript levels 1 and 2, PCL 5, TIFF, and ASCII output.

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### Client workstations and system software

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To send print jobs to the printer, the customer needs to provide the proper client hardware, operating system, and network software.

Print data originates at the client workstation, mainframe or minicomputer. This is where a user creates and formats documents according to specifications with the help of application software. The printer supports the following types of networked client workstations and operating systems:

- Sun workstation running a Sun or Linux operating system
- PC running MS-DOS 6.2 and Microsoft Windows 3.1, configured for the network environment  
PC running Windows 95/98, configured for the network environment  
PC running Microsoft Windows NT or 2000, configured for the network environment
- PC 386 or 486, running MS-DOS, version 6.2, with one of the following TCP/IP packages:
  - PathWay Access 3.1, Wollongong Integrated Networking/Transmission Control Protocol (WIN/TCP) for DOS, release 6.0
  - FTP software, PC-TCP, release 3.0 or higher
  - Sun Personal Computer–Network File Services (PC-NFS), version 5.1
- IBM RS/6000 running IBM AIX, version 4.1
- HP/Apollo running HP-UX, version 10.01

- DECStation 5000/200 running DEC Ultrix, version 4.3
- Apple Macintosh, System 7, 7.5, or 8.x, using AppleTalk through EtherTalk, phase 1 or 2
- Any system that supports RFC-1179 lpr/lpd.

The software may be compatible with workstation models and software versions other than those listed above.

### Client software

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On your PC or workstation, you must install or set up a supported means of submitting jobs to the printer. Depending on your system, you can use the following:

- Xerox drivers for Windows 3.x, 95/98, or NT/2000
- Xerox Document Submission Software for DOS, Windows 3.x, 95/98, NT/2000, or Macintosh
- Third-party drivers
  - Some PostScript drivers can be used in conjunction with Xerox-supplied PPD files
  - HP LaserJet 4 for monochrome jobs
- Third-party TCP/IP lpd utility
- Apple/Macintosh Printer Access Protocol (PAP)

*NOTE: The printing options vary according to the network software that is loaded on the client workstation.*

### Submitting print jobs

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There are basically two ways you can submit print jobs: You can send print data directly from the application to the printer; or you can create a PDL data file on the workstation and then send the data file to the printer. The method you choose depends on the workstation configuration and the job submission requirements.

Sending the print data directly from the application to the printer is accomplished with a Xerox print driver or a third-party driver. This method is sometimes referred to as “transparent printing.” It may not support all available print options, such as number of copies, simplex or duplex printing, and stitching.



The other way to submit print jobs to the printer is by creating a PDL data file. After the file is created, the user closes the document and submits the job using one of the following methods:

- **lpr command:** Provides options for submitting print jobs. The functionality of the lpr command is dependent on the TCP/IP software installed on the workstation.
- **Xerox Client Software:** Provides a print command for submitting jobs and specifying print options. The functionality of the print command is dependent on the TCP/IP software installed on the workstation.
- **Xerox DocuPrint Document Submission Client software for the Macintosh:** Provides a graphical user interface for submitting jobs and specifying print options.
- **Xerox DocuPrint Print Submission software for Windows 3.x, Windows 95/98, Windows NT, and Windows 2000:** Provides graphical user interfaces for submitting jobs and specifying print options.
- **Internet Printing Protocol for Windows 2000:** Allows job submission over the Internet.

In many cases, the workstation can be set up for more than one method of job submission.

The application software provides the capability to print the document using a page description language (PDL). The application produces print data in one of the supported page description language formats, for example PostScript level 2.

## **Communicating with the network**

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After the print data has been prepared for printing and combined with print options data—either by the application software or by a print job submission utility—the print job is sent over the network.

The printer supports TCP/IP, AppleTalk, and Novell NetWare network communications protocols.

Client workstations require a network software utility that submits the job using the appropriate network protocol. This software must be installed and running for jobs to be submitted successfully to the printer. Once this software is installed, its operation is transparent to the user.

The Macintosh uses Printer Access Protocol (PAP) to communicate with one or more DocuPrint printers. For convenience, your internet may be divided into zones. A zone can be any logical grouping of individual workstations and printers. Your network administrator defines your zone when setting up the network.

Shown below are the workstations, networking options, and job submission methods available for each client.

**Table 4-1. Clients**

<b>Client workstation hardware</b>	<b>Operating system</b>	<b>Ethernet connection</b>	<b>Protocol; Translation requirements</b>	<b>Job submission method</b>
Sun Microsystems	Solaris SunOS	Standard	TCP/IP; none	Print using the lpr command or Xerox Client Software.
IBM PC and compatible	MS-DOS	Optional Ethernet interface card (for example, 3Com 3C503)	TCP/IP; <i>network communication utility recommended</i>	Print to disk file, then send using the lpr command or Xerox Client Software.
IBM PC and compatible	Windows 3.1	Optional Ethernet interface	TCP/IP or Novell Netware 3.1x; <i>network communication utility recommended with TCP/IP</i>	Print directly from application or use Xerox DocuPrint Print Submission software for Windows.
IBM PC and compatible	Windows 95/98	Optional Ethernet interface	TCP/IP or Novell Netware 3.1x; <i>network communication utility recommended with TCP/IP</i>	Print directly from application or use Xerox DocuPrint Print Submission software for Windows.
IBM PC and compatible	Windows NT	Optional Ethernet interface	TCP/IP or Novell Netware 3.1x; <i>network communication utility recommended with TCP/IP</i>	Print directly from application or use Xerox DocuPrint Print Submission software for Windows.
IBM PC and compatible	Windows 2000	Optional Ethernet interface	TCP/IP or Novell Netware 3.1x; <i>network communication utility recommended with TCP/IP</i>	Print directly from application or use Xerox DocuPrint Print Submission software for Windows, or the Internet Printing Protocol (IPP)

**Table 4-1. Clients (Continued)**

<b>Client workstation hardware</b>	<b>Operating system</b>	<b>Ethernet connection</b>	<b>Protocol; <i>Translation requirements</i></b>	<b>Job submission method</b>
Digital Equipment Corporation DECstation	ULTRIX	Optional Ethernet interface	TCP/IP; <i>none</i>	Print directly from application, or use the lpr command or Xerox Client Software.
Apple Macintosh	Apple OS	Optional Ethernet interface	AppleTalk using EtherTalk Phase I or II; <i>none</i>	Print directly from application or use Xerox DocuPrint Print Submission Client software for the Macintosh.
IBM RS/6000	IBM AIX	Standard	TCP/IP; <i>none</i>	Print using Xerox Client Software.
HP/Apollo	HP-UX	Standard	TCP/IP; <i>none</i>	Print using Xerox Client Software.

**Job status feedback**

Client workstations display fault messages and additional information, such as the status of feeder trays and output bins. If properly configured, the workstations may be able to display job status, as shown below.

**Table 4-2. Job status feedback**

<b>Platform</b>	<b>Job status capability</b>
Sun workstation	Job status and job deletion are available by issuing the appropriate command at the command line. Job status information is available for jobs submitted using Xerox Client Software.
IBM and compatible personal computers	Job status and job deletion are available depending on the TCP/IP software installed on the workstation. You must issue the appropriate command at the command line. Job status information is available for jobs submitted using Xerox Client Software. Job status information is available using the Novell PCONSOLE utility if the printer is configured with a RPRINTER or PSERVER enabled.
Apple Macintosh	Job status information is available at the workstation through AppleTalk.
IBM RS/6000 and HP/Apollo	Job status information is available for jobs submitted using Xerox Client Software or Ipstat (native utility).

To determine the status of jobs submitted using the `lpr` command, you must issue an `lpq` command at the command line. Some application software packages may provide a simplified means of obtaining job status, such as through the use of icons.

The job status command (`lpq`) is available at client workstations unless your TCP/IP network communications utilities do not support it.

Xerox Client Software provides commands for listing the status of the job and for listing the queue. These commands are available for jobs submitted using Xerox Client Software.

AppleTalk provides job status information at the client workstation through the print monitor function. Workstation users can also determine the status of a virtual printer.

*NOTE: Job status is also available by establishing a telnet connection to the Printer Controller to access the user interface from your workstation. Printer and additional status information is also available. You can also use a Web browser to obtain job status. See the Guide to Configuring and Managing the System for more information.*

### **Ethernet LAN**

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Users of networked client workstations may send print jobs to the printer over the Ethernet LAN using either the TCP/IP, AppleTalk using EtherTalk Link Access Protocol (ELAP), or Novell NetWare as the network protocol.

Regardless of printing or transmission protocol, the Ethernet connection to the Printer Controller must be compatible with the Institute of Electrical and Electronics Engineers (IEEE) 802.3 standard.

### **Token Ring**

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Users of networked client workstations may send print jobs to the printer over a Token Ring network using TCP/IP, Novell NetWare or AppleTalk network protocol.

Regardless of the printing transmission protocol, the Token Ring connection to the Printer Controller must be compatible with the Institute of Electrical and Electronics Engineers (IEEE) 802.5 standard.

**Multiple network connectivity**

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The system supports multiple network connectivity, that is, the ability for protocols such as TCP/IP to run on more than one network interface. For TCP/IP, the system can support any combination of Ethernet or Token Ring. One interface is designated as the primary network interface. Novell NetWare can run on only the primary network interface, but the type of interface can be selected.

AppleTalk can run on only one network interface, but it does not have to be the primary one.



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## 5. IPDS printing environment

The NPS/IPS emulates an IBM AFP Group 3 page printer with the Advanced Function Image and Graphics (AFIG) option. It can print in all the following PSF environments: MVS, VM (channel-attached only), VSE (channel-attached only, OS/2, OS/400 (with TCP/IP only), and AIX.

*NOTE: Although PSF/VSE does not support TCP/IP directly, a printing system with PSF/2, PSF/6000, or IBM InfoPrint Manager can attach to a PSF/VSE system and the PSF/2, PSF/6000, or IBM InfoPrint Manager can furnish the TCP/IP support for the printer.*

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### Host connectivity

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#### Host environments

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The system emulates an IBM AFP Group 3 page printer with the Advanced Function Image and Graphics (AFIG) option and can print in all the following PSF environments:

- MVS
- VM (channel-attached only)
- VSE (channel-attached only)
- OS/2
- OS/400 (with TCP/IP only)
- AIX

*NOTE: Although PSF/VSE does not support TCP/IP directly, a printing system with PSF/2, PSF/6000, or InfoPrint Manager can attach to a PSF/VSE system and the PSF/2, PSF/6000, or InfoPrint Manager can furnish the TCP/IP support for the printer.*

*NOTE: There is no minimum host operating system software level required. The minimum PSF level needed to support full color is v.3.2.*

The NPS/IPS can be set up to receive data from the IBM host in one of two ways:

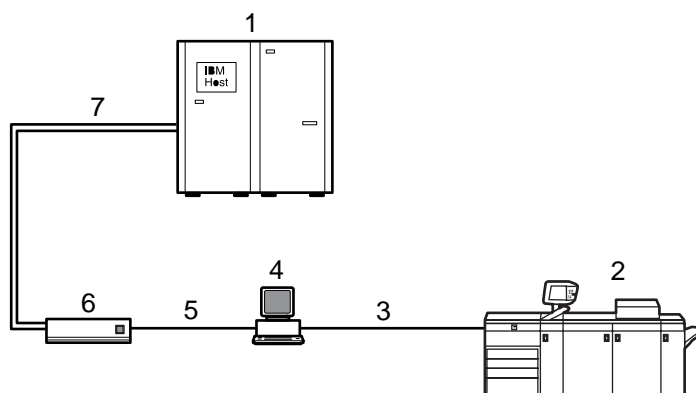
- Through a bus and tag channel connection.

*NOTE: If your system will be channel-attached, the printer controller requires an additional component—a channel interface board and channel cable connector box that serve as an interface between the IBM host and the printer controller.*

- Through a Token Ring or Ethernet interface using TCP/IP.

*NOTE: Your system supports only one other connectivity option in addition to Ethernet. For example, Ethernet and channel connection or Ethernet and Token Ring.*

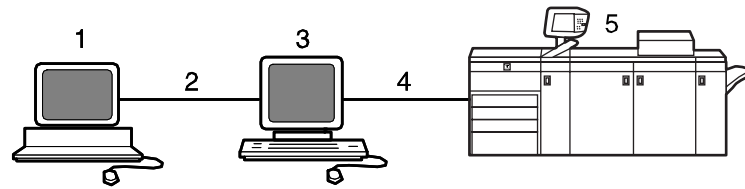
*NOTE: A transmission rate of at least 16 megabits per second should be used with a Token Ring interface. (Overall performance depends on network traffic and job density.)*



**Figure 5-1. Printing system: channel-attached configuration**

1. Host system (PC or mainframe)
2. Printer
3. Printer interface cables
4. Printer controller with channel interface board in the processor
5. Internal channel cable
6. Channel cable connector box
7. Bus and tag cables





**Figure 5-2. Printing system: TCP/IP configuration**

1. Host system (PC or mainframe)
2. Interface network (Ethernet or Token Ring)
3. Printer controller
4. Printer interface cables
5. Printer

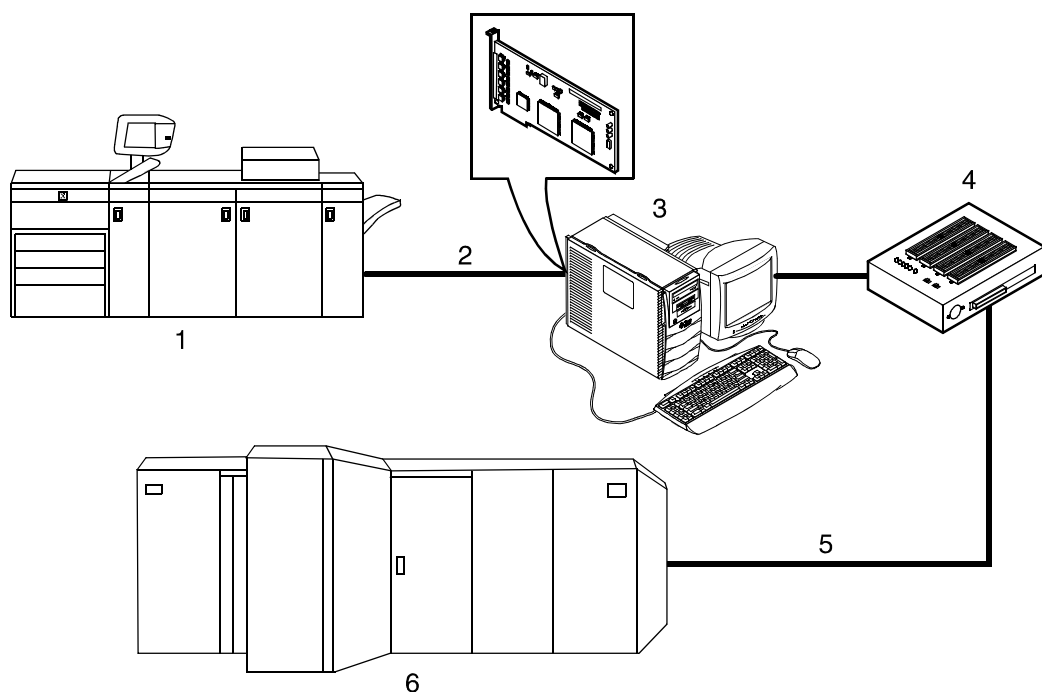
For information on the various printer configuration options, refer to the “Printer components and options” chapter of this guide.

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**Channel interface—channel-attached systems only**

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The channel interface board, connected to the channel cable connector box, handles all IPDS communications and handshaking with PSF on the host when the NPS/IPS is receiving data over a channel. (It is not used when the NPS/IPS is printing data using TCP/IP.)



**Figure 5-3. Channel interface board and channel cable connector box**

1. Printer
2. Printer control and video cable
3. Printer controller with channel interface board
4. Channel cable connector box
5. Channel cables
6. Host system

*NOTE: The customer is responsible for obtaining, stringing, and maintenance of the bus and tag cables. The bus and tag cables must be fully populated cable sets.*

## **IPDS data stream**

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All IPDS resources (print data sets, page definitions, form definitions, page segments, fonts, and overlays) that are supported by the IBM 3825 and 3827 printers are supported by the Xerox software. Additionally, the data towers that are supported within the AFP environment by the IBM 3825 and IBM 3827 printers are fully supported by the software. Data towers supported are:

- **IM Image IMD1**
- **FOCA:** Font Object Content Architecture
- **MO:DCA-P:** Mixed Object Document Content Architecture for Presentation
- **PTOCA PT1, PT2, and PT3:** Presentation Text Object Content Architecture
- **IOCA:** Image Object Content Architecture
- **GOCA:** Graphics Object Content Architecture
- **BCOCA:** Bar code Object Content Architecture
- **OL1:** Overlay One
- **PS1:** Page Segment One
- **Line mode data streams**

Each of the data objects follow the same object rule of containing delimiting fields with structured fields describing each object.

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## **Software features for IPDS**

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This section describes some of the software features for IPDS printing.

### **IOCA Replicate and Trim**

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The printer supports Replicate and Trim, which improves the processing of IM and IO images that contain large areas of shaded graphics. (IM images are resolution-dependent images that cannot be compressed or scaled; IO images are resolution-independent.)

The IOCA Replicate and Trim capability allows for faster transmission to the printer of AFP applications with IM images that have large or widespread shaded areas. It also reduces the storage area required on the host and on the printer.

### **Trace facility**

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To help diagnose problems, the system provides a trace mechanism. Trace files store system configuration information, maintain TCP/IP protocol headers, and time-stamp all records.

For detailed information on this feature, refer to the “Using utility commands” chapter in the *Guide to Configuring and Managing the System*.

### **Overstrike, underscore, subscript, and superscript**

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Support for the PT2 Subset of PTOCA enables the printer to print overstrikes, underscores, subscripts, and superscripts where specified in jobs.

### **Color image support**

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Some IM1 images (for example, logos) can be converted to IOCA for resolution correction. The bi-level IOCA feature enables such IM1 images to be printed in color on the highlight-color printer. PSF does not strip the color information from the print job.

Also supported are JPEG compressed IOCA, as well as JPEG and EPS files in object containers.

*NOTE: Hosts may not support JPEG files in object containers.*

### **Background color for OCA colors**

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Users can specify COLOR on DRAWBOX (i.e., background color) as long as the color is restricted to colors defined with the OCA model.

**Bi-level IOCA colors**

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The printer accepts the new IOCA color spaces in the extended controls (referred to as the “4E” color triplets). These include the Highlight Color and Standard OCA Color.

**Outline font support**

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The printer supports the use of IBM outline fonts for both single-byte and double-byte applications. These fonts must be downloaded during the jobs.

These outline fonts allow users to specify a single font that can be rasterized in a variety of point sizes by the printer. The IBM outline fonts are based on Adobe type 1 and type 0 fonts that are in PostScript format.



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## A. Supplies

This appendix provides information and specifications for the media you use with your Xerox DocuColor 2060 NPS/IPS printer. Instructions for ordering supplies are also provided.

Consumable supplies (those that are depleted during operation of the system), such as paper, dry ink, developer, fuser agent, etc., must be ordered for your printer. It is important that an adequate supply of these items be on hand for installation, and that your supply be maintained afterwards.

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### Paper and other throughput stocks

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The success of any print run is greatly dependent on the proper selection, care, and handling of the stock used.

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#### Selecting paper

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You need to select your paper carefully. This is especially true for full color jobs, where the paper quality has a great impact on the quality of the output.

In addition, if you do not use the proper paper, you increase the probability of paper jams and misfeeds. The stocks you use must meet the specifications set forth by Xerox for operability in the printer.

For additional information about paper specifications, refer to *Helpful Facts about Paper*, delivered with your printer, as well as to the following documents:

- *DocuColor 2060/2045 Specialty Media Guide: Hints and Tips*
- *Recommended materials* lists
- *Materials Usage Guide*
- *The Paper Advantage Guide*

These and other documents are available at:

- The Xerox Field Information Center:  
**<http://www.xerox.com>**
- Global Service Network / Eureka II:  
**<http://13.252.6.252/dev/default.asp>**

**Acceptable paper stocks and sizes**

Table A-1 lists the types of papers that the DocuColor 2060 NPS/IPS printer accepts.

**Recommended weight and grade**

Use a good quality, xerographic-grade paper. For best results, use paper that is 24-pound or 90 gsm (grams per square meter or g/m<sup>2</sup>) bond, xerographic grade. Color Xpressions Bright White paper is the benchmark for this printer. Refer to table A-1 for specific tray weight limits.

**Table A-1. Paper guidelines**

	Tray 1 and tray 2	Tray 3	Tray 4 (optional)
<b>Types and sizes</b>	JIS B5 (LEF/SEF) 8.5 x 11 inch/A4 (LEF/SEF) JIS B4 (SEF) ISO B4 8 x 10 inch (LEF) 8.5 x 13 inch (SEF) 8.5 x 14 inch (SEF) 11 x 17 inch/A3 (SEF) 12 x 18 inch (SEF)* 12.6 x 17.7 inch/SRA3 (SEF)*	JIS B5 (LEF/SEF) 8.5 x 11 inch/A4 (LEF/SEF) JIS B4 (SEF) ISO B4 8 x 10 inch (LEF) 8.5 x 13 inch (SEF) 8.5 x 14 inch (SEF) 11 x 17 inch/A3 (SEF) 12 x 18 inch (SEF) 12.6 x 17.7 inch/SRA3 (SEF) 12.6 x 19.2 inch (SEF)	JIS B5 (LEF) 8.5 x 11 inch/A4 (LEF/SEF) JIS B4 (SEF) ISO B4 11 x 17 inch/A3 (SEF) 8 x 10 inch (LEF/SEF) 8.5 x 13 inch (SEF) 8.5 x 14 inch (SEF) 12 x 18 inch (SEF) 12.6 x 17.7 inch/SRA3 (SEF) 12.6 x 19.2 inch (SEF)
<b>Weight</b>	64 - 220 gsm	64 - 280 gsm	64 - 220 gsm
<b>Transparencies</b>	No	Yes	No
<b>Labels</b>	No	Yes	Yes, but not recommended
<b>Transfer paper</b>	No	Yes	No
<b>Coated paper</b>	No	Yes	Yes
<b>Tabbed inserts</b>	No	Yes	Yes, but not recommended
<b>Drilled</b>	Yes	Yes	Yes, but not recommended

\* Requires a paper guide to be removed in order to run these sizes. Call your Xerox service representative for the size guide removal.



**Duplexing** The DocuColor 2060 NPS/IPS prints duplex from all paper trays up to 220 gsm.

The system does not print duplex on media heavier than 220 gsm or larger than 12.6 x 18" / 321.1 x 458.1 mm.

**Characteristics** The paper stock should have the following characteristics:

- Low moisture content (a paper-to-moisture ratio below 5.7 percent). Paper with higher moisture content may curl and jam.
- Smooth surface
- Moisture-resistant wrapping
- No defects (bent edges, uneven surfaces)
- Grain long (parallel with the long side of paper).

Paper is usually fed into the printer with the long side as the leading edge. When you purchase paper, buy long-grain paper. Make sure the grain is parallel with the long side (long-grain) for the most reliable feeding and stacking.

**Special stocks** Following are some guidelines for choosing and using special materials. Refer to table 1 to determine if the tray used is capable of handling the special stock.

- **Transparencies:** Use only the transparencies recommended: Xerox Removable Paper Stripe: USA and Canada, 3R5765; Xerox Europe, 3R93179.

Load transparencies into tray 3 with the paper stripe side facing DOWN and with the stripe as the leading edge. (The leading edge is the edge that feeds into the printer first.)

- **Labels:** Must be the type designed for high-speed printers and must meet the specifications described in the section above. Loading instructions are printed on all paper trays.

Load labels with the label side up. You can direct them to any output tray.

- **Tinted paper:** Available in a variety of colors, it has many uses, including calling attention to certain printed material, separating special sections, or dividing chapters of a report.
- **Preprinted paper:** May be letterhead, forms, or logos.

- **Letterhead:** Different inks and dry inks are used to produce preprinted letterhead that may not pass through the printer intact. It is recommended that you run a sample job through the printer to determine output quality. The loading orientation of letterhead paper depends on how the job is programmed. It is recommended that a sample job always be run first to determine output quality.
- **Tabbed inserts:** Can be loaded into tray 3 as non-standard paper. Tabbed inserts can be run from, but are not recommended for, the optional tray 4 as non-standard paper. When loading, the non-tabbed, short edge of the tabbed insert should be the lead edge to the printer.
- **Predrilled paper:** Has a varying number of holes for use in binders or binder rings. Before loading predrilled paper, fan it to remove loose plugs that could cause paper jams.
  - **Simplex print jobs:** Load the drilled paper into trays 1, 2, or 3 with the holes positioned toward the rear of the paper tray.
  - **Duplex print jobs:** Load the drilled paper into trays 1, 2, or 3 with the holes positioned toward the front of the paper tray.
- **Perforated paper**
- **Non-standard size paper:** Paper (7.2 to 12.6 [LEF] or 7.2 to 19.2 [SEF]) can be loaded into tray 3 and optional tray 4. Ensure that non-standard size paper is selected on tray 3 and optional tray 4.
- **Oversize paper:** Paper (12 x 18" [SEF] or 12.6 x 17.7" /SRA3 [SEF]) can be loaded in trays 1 and 2 after the paper guides are removed by a Xerox service representative.

### Paper care

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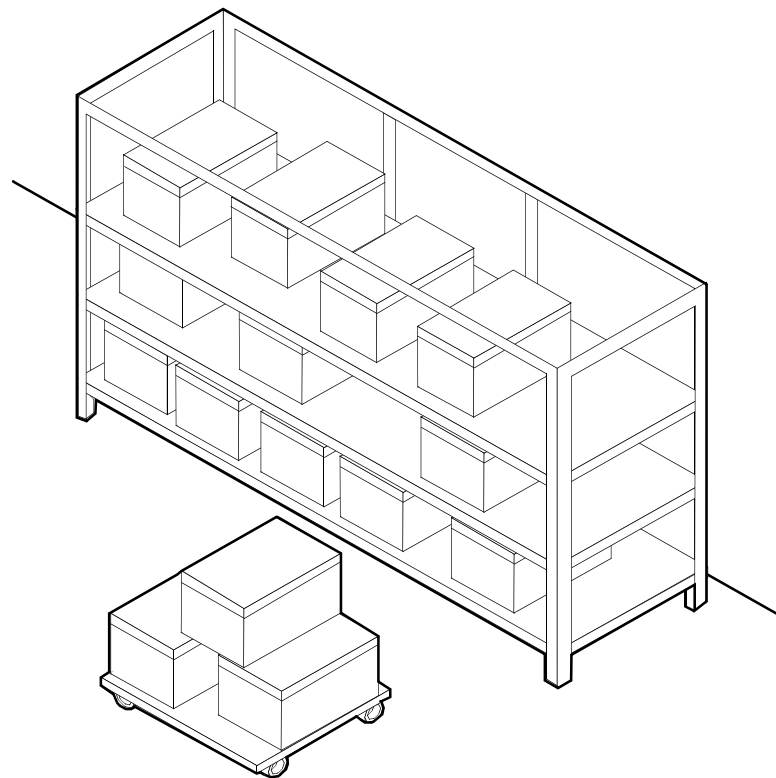
Once you have purchased your paper, you must be sure it is stored and conditioned properly, so that it performs optimally in the printer with a minimum of jams.

**Storing paper** Paper has a tendency to curl under the heat that is present inside xerographic equipment. To minimize the amount of curling, use paper with low moisture content. Paper with excessive moisture content has a tendency to jam because of the greater curl. The maximum recommended moisture content is 5.7 percent.

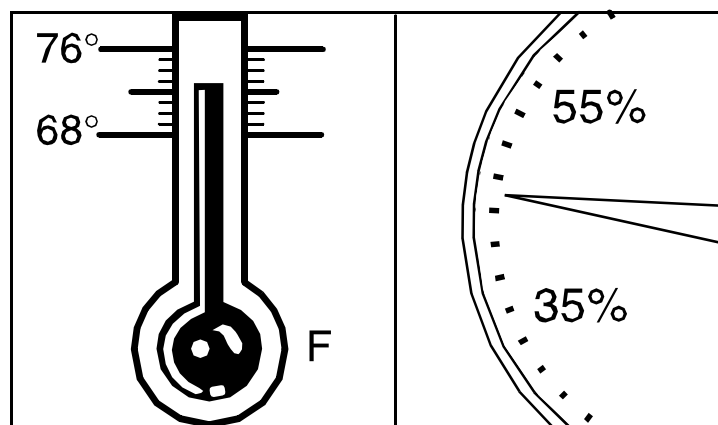
Keep these points in mind when preparing your paper storage area:

- Store paper in its own wrapper; do not leave it unwrapped or where it can be damaged by dampness or heat.
- Store paper on a flat surface and not on its side or edge.
- Store reams of paper in a closed cabinet.
- Always store paper in a cool, dry area. Store on pallets or shelves, not on the floor.
- Plan ahead and keep at least a day's supply of paper in the same area as the printer to allow environmental stabilization prior to printing.

For more detailed information on paper for Xerox printers, refer to *Helpful Facts about Paper*, provided with your printer.



**Figure A-1. Storing paper correctly**



**Figure A-2. Recommended temperature and humidity for paper storage**

**Conditioning  
paper**

Because temperature and humidity affect paper performance in the printer, you need to condition paper before using it. To do this, store paper for a specified length of time in the same type of environment as your printer.

The length of time you should condition your paper depends on the amount of paper and the difference between the storage and operating temperatures.

Use the following chart to determine the length of time needed to condition stacked cartons of paper.

*NOTE: The numbers in the top two rows indicate the temperature difference between the storage area and the operating environment, not actual room temperatures.*

**Table A-2. Paper conditioning: Recommended temperature differences between storage and operating areas**

Temperature differences between storage and operating areas							
Fahrenheit							
10°	15°	20°	25°	30°	40°	50°	
Centigrade							
5.5°	8.5°	11°	13°	17°	22°	28°	
Cartons	Hours						
1	4	8	11	14	17	24	34
5	5	9	12	15	18	25	35
10	8	14	18	22	27	38	51
20	11	16	23	28	35	48	67
40	14	19	26	32	38	54	75

**Example:** (See the shaded rows in the table above.) If you want to move ten cartons of paper from a storage area with a temperature of 90 °F to an operating area with a temperature of 75 °F (a 15° difference), you should do so at least 14 hours before using the paper.

## Other supplies

This section describes the supplies other than paper that are necessary for installation and afterward. Your sales representative will help you place your initial supply order.

### Fuser lubricant

Fuser lubricant is a consumable item required by the printer. You should keep at least two boxes (each box contains two tubes) on hand for installation by the service representative. The consumption rate of Xerox fuser lubricant is approximately one tube per 50,000 pages. For product information, refer to the consumable supplies table in this appendix.

### Developer

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Developer is not consumed by the printer but does have an effective life of approximately 100,000 pages per bottle, guaranteed by Xerox. Developer is a required item and must be kept on hand.

Use only the developer specified for use in your DocuColor 2060 NPS/IPS printer.

For colored inks, use the color developer specified for each color in the table below:

**Table A-3. Developers for use with colored inks**

Ink color	Use developer	Supply number
Black	Black	5R90246
Cyan	Cyan	5R90247
Magenta	Magenta	5R90248
Yellow	Yellow	5R90249

The developer is changed by your service representative. For product information, refer to the consumable supplies table, later in this appendix.

### Diskettes

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Diskettes are optional items that provide loading and backup of fonts, forms, and user files to and from the printing system. The processor accepts 3.5-inch, 1.44 MB, double-sided, high density diskettes.

### Tapes

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The optional 4 mm cartridge tape drive uses 5 GB or 8 GB tapes.

## Fonts

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Data can be printed on DocuColor printers in many sizes and type styles called fonts. A font is a character set which has unique characteristics, such as type style, size, weight, orientation (portrait, landscape, inverse portrait, and inverse landscape), character spacing (fixed and proportional), line spacing, and postures (Roman, italic, and so forth).

There are three classifications of fonts:

- Standard fonts
- Licensed fonts
- Custom fonts.

<b>Standard fonts</b>	A library of fonts is provided with your printer operating system software.
<b>Licensed fonts</b>	Additional fonts may be ordered from your local Xerox Font Center.
<b>Custom fonts</b>	Custom fonts and graphic images such as company logos and signatures can be digitized by the Xerox Font Center for use on your printer.
<b>Receiving fonts</b>	Fonts are received on a diskette from your local Xerox Font Center.

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## Consumable supplies tables

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A number of supplies are available from Xerox for your DocuColor printer. Use the following tables to help determine your supply needs.

*NOTE: Customers in the U. S. may use the part numbers in these tables to order supplies. Customers outside the U. S. should contact their local service organization for part numbers.*

### Paper and special stocks tables

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The following tables list all throughput stocks available for the DocuColor 2060 NPS/IPS printer, with size, order number, and a brief description for each.

**Table A-4. Stocks list for DocuColor 2060 NPS/IPS printer**

<b>Item</b>	<b>Description</b>	<b>Part number</b>
<b>Paper</b>	Xerox paper quantities are 10 reams (5,000 sheets) to a carton unless otherwise noted below.	
8.5 x 11 inch	4024 Dual Purpose Paper	3R721
A4	4024 Dual Purpose Paper	3R2594
8.5 x 14 inch	4024 Dual Purpose Paper	3R727
8.5 x 11 inch	4024 Dual Purpose Paper, 3-hole	3R723
8.5 x 11 inch	4024 Dual Purpose Paper, 3-hole*	3R2193
8.5 x 11 inch	4024 Dual Purpose Paper, 4-hole	3R1983
8.5 x 11 inch	4024 Dual Purpose Paper, 4-hole*	3R3008
8.5 x 11 inch	4024 Dual Purpose Paper, 7-hole	3R1984
8.5 x 11 inch	4024 Dual Purpose Paper, 7-hole*	3R3010
8.5 x 11 inch	4024 Smooth	3R2675
8.5 x 14 inch	4024 Smooth	3R2677
8.5 x 11 inch	Dual Purpose Colors—Blue	3R3052
8.5 x 11 inch	Dual Purpose Colors—Blue, 3-hole	3R3068
8.5 x 14 inch	Dual Purpose Colors—Blue, 3-hole	3R3084
8.5 x 11 inch	Dual Purpose Colors—Green	3R3056
8.5 x 11 inch	Dual Purpose Colors—Green, 3-hole	3R3072
8.5 x 14 inch	Dual Purpose Colors—Green	3R3088
8.5 x 11 inch	Dual Purpose Colors—Pink	3R3058
8.5 x 11 inch	Dual Purpose Colors—Pink, 3-hole	3R3074
8.5 x 14 inch	Dual Purpose Colors—Pink	3R3090
8.5 x 11 inch	Dual Purpose Colors—Yellow	3R3054
8.5 x 11 inch	Dual Purpose Colors—Yellow, 3-hole	3R3070
8.5 x 14 inch	Dual Purpose Colors—Yellow	3R3086
8.5 x 11 inch	Dual Purpose Colors—Buff	3R3060
8.5 x 11 inch	Dual Purpose Colors—Buff, 3-hole	3R3076
8.5 x 14 inch	Dual Purpose Colors—Buff	3R3092
<b>* 5/16-inch drilled holes</b> <b>** Rainbow pack contains 750 sheets each of blue and yellow, 500 sheets each of green and pink; and 250 sheets each of buff, gray, goldenrod, and ivory.</b>		



**Table A-4. Stocks list for DocuColor 2060 NPS/IPS printer (Continued)**

<b>Item</b>	<b>Description</b>	<b>Part number</b>
8.5 x 11 inch	Dual Purpose Colors—Goldenrod	3R3062
8.5 x 11 inch	Dual Purpose Colors—Goldenrod, 3-hole	3R3078
8.5 x 14 inch	Dual Purpose Colors—Goldenrod	3R3094
8.5 x 11 inch	Dual Purpose Colors—Ivory	3R3064
8.5 x 11 inch	Dual Purpose Colors—Ivory, 3-hole	3R3080
8.5 x 14 inch	Dual Purpose Colors—Ivory	3R3096
8.5 x 11 inch	Dual Purpose Colors—Gray	3R3066
8.5 x 11 inch	Dual Purpose Colors—Gray, 3-hole	3R3802
8.5 x 14 inch	Dual Purpose Colors—Gray	3R3098
8.5 x 11 inch**	Dual Purpose Colors, Rainbow Pack—35,000 sheets per carton**	3R3107
8.5 x 11 inches	4200 Primary Image	3R5802
8.5 x 14 inches	4200 Primary Image	3R5804
8.5 x 11 inches	4200 Primary Image, 3-hole	3R5803
8.5 x 11 inch	10 Series Dual Purpose Paper	3R2950
8.5 x 11 inch	10 Series Dual Purpose Paper, 3-hole	3R2952
8.5 x 11 inch	10 Series Dual Purpose Paper, 3-hole*	3R3016
8.5 x 14 inch	10 Series Dual Purpose Paper	3R2954
8.5 x 11 inch	10 Series Smooth	3R54
8.5 x 14 inch	10 Series Smooth	3R83
8.5 x 11 inch	4024 Dual Purpose, reinforced 3-hole*	3R2057
<b>* 5/16-inch drilled holes</b> <b>** Rainbow pack contains 750 sheets each of blue and yellow, 500 sheets each of green and pink; and 250 sheets each of buff, gray, goldenrod, and ivory.</b>		

**Table A-4. Stocks list for DocuColor 2060 NPS/IPS printer (Continued)**

Item	Description	Part number
<b>Transparencies</b>	Xerox transparencies are packaged 100 sheets to a box.	
8.5 x 11 inch	Clear, with a white strip on the edge	3R2780
8.5 x 11 inch	Clear, high speed, with paper backing	3R3028
<b>Labels (gummed)</b>	Xerox labels are packaged 100 sheets to a box.	
8.5 x 11 inch	33 labels per sheet	3R3139
8.5 x 11 inch	6 labels per sheet	3R3146
8.5 x 11 inch	Custom form (uncut)	Contact Xerox Supplies Order Service
8.5 x 11 inch	1-up label	3R4476
8.5 x 11 inch	1-up label	3R4475
8.5 x 11 inch	1-up label	3R4474
<b>Cover stock</b>	Xerox cover stock is packaged 2,500 sheets per carton.	
8.5" x 11"	65-pound, blue	3R3044
8.5" x 11"	65-pound, white	3R3041
<b>* 5/16-inch drilled holes</b> <b>** Rainbow pack contains 750 sheets each of blue and yellow, 500 sheets each of green and pink; and 250 sheets each of buff, gray, goldenrod, and ivory.</b>		

## Supplies lists

The following items are shipped with the DocuColor 2060 NPS/IPS. It is recommended that you have a supply of these items available to eliminate downtime when they need to be replaced.

**Table A-5. Items supplied with DocuColor 2060 NPS/IPS**

Supply Item	Description	Part Number (US)	Part Number (XE)	Items/ carton	Expected yield
<b>Developer material</b>	Packaged one container per carton. (Needs replacement only if current supply becomes contaminated.)				
	Black	5R629	5R90246	1/carton	36,000 - 30% (7.5% per color) 25,000 - 45% (11.25% per color) 19,000 - 60% (15% per color)
	Cyan	5R630	5R90247	1/carton	58,000 - 30% (7.5% per color)
	Magenta	5R631	5R90248	1/carton	39,000 - 45% (11.25% per color)
	Yellow	5R632	5R90249	1/carton	29,000 - 60% (15% per color)
<b>Dry ink</b>	Black	6R975	6R90289	1/carton	100,000 prints/carton
	Cyan	6R976	6R90290	1/carton	100,000 prints/carton
	Magenta	6R977	6R90291	1/carton	100,000 prints/carton
	Yellow	6R978	6R90292	1/carton	100,000 prints/carton
<b>Fuser lubricant</b>	Packaged in one tube	8R3993	8R4004	1/tube	200,000 prints/carton
<b>Waste dry ink Container</b>	Packaged one per carton	8R12662	8R90352	1/carton	50,000/carton

The following table lists the supplies in addition to the ones provided initially with your printer. Use this table to help you determine your supplies needs.

**Table A-6. Additional supplies for DocuColor 2060 NPS/IPS**

Item	Description	Part number	Items/ carton
<b>Diskettes</b>	3.5-inch, 1.44 MB, double-sided, high density diskettes.	8R7683	10/box
<b>Cleaning supplies</b>	4mm cartridge tape head cleaning kit	9R01189	
	Foam-tipped swabs	99P87256	
	Lint-free towels	35P2163	

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### Ordering supplies

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To avoid unnecessary downtime, always have an adequate amount of the necessary supplies. To do this, you need to establish a procedure for checking and ordering supplies. A supplies checklist is provided at the end of this appendix to help you with this task. It lists the supplies needed for the printer and contains a column for you to enter the date when you want to place the order and a column to record the date of the actual order. The consumable supplies table, above, contains a list of Xerox supplies available for the printer.

It is important that you check your supplies regularly and order before you run out. Plan on approximately five working days for delivery after placing the order. You can make arrangements to receive them sooner in emergency situations.

Your Xerox sales representative can help you submit the initial order of supplies needed for installation. These items include paper, dry ink, fuser lubricant, and developer.

Once your printer volume is established, planning ahead and buying Xerox supplies in quantity can save you money. Your Xerox supply specialists can help. There are two centers available to assist you:

- To order Xerox paper, transparencies, labels, dry ink, developer, fuser lubricant, stitcher wire, cartridge tapes, and diskettes, call the Xerox Supply Center at 1-800-822-2200, weekdays between 7:30 a.m. and 6:00 p.m., Pacific time.

If you prefer, you may mail orders to the following address:

Xerox Corporation  
P. O. Box 25075  
Santa Ana, CA 92799-5075

- To order cleaning supplies, call the Xerox Customer Parts and Product Support Center at 1-800-828-5881, weekdays between 5:30 a.m. and 5:00 p.m., Pacific time, (U.S. only).

You may also mail cleaning supply orders to the following address:

Xerox Corporation  
Parts Marketing Center  
Building 214-07S  
P. O. Box 1020  
Webster, NY 14580

Please provide the following information when placing orders:

- Your customer number (provided by your Xerox sales representative)
- Your printer model: Xerox DocuColor 2060 NPS/IPS
- Your supply order, including the following information:
  - Item name
  - Part number
  - Quantity desired
  - If your company requires a purchase order for payment of an invoice, you need to provide the purchase order number to Xerox at the time you place the order.

The following table is a checklist you can use to keep track of the supplies you order.

**Table A-7. Supplies checklist for DocuColor 2060 NPS/IPS**

<b>Supplies checklist</b> Use this checklist to help record the supplies and accessories you need, the date you plan to place the order, and the actual date of the order.				
<b>Item</b>	<b>Description and part number</b>	<b>Quantity</b>	<b>Date to order</b>	<b>Date ordered</b>
<b>Paper</b>				
<b>Transparencies, labels, and special stocks</b>				
<b>Dry ink</b>				
<b>Fuser lubricant</b>				
<b>Diskettes</b>				
<b>Cartridge tapes</b>				
<b>Cleaning supplies</b>				

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