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XEROX®

Reference Guide
Guide de référence
Guida di riferimento
Referenzhandbuch
Guía de referencia
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Naslaggids
Referensguiden
Справочное руководство

X®

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1 Features

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This topic includes:

Printer Features

The Phaser 4500 Laser Printer embodies many features to meet your printing needs:

- Great performance and superior print quality
  - 36 pages per minute (ppm) (Letter)
  - 34 ppm (A4)
  - Up to 256 MB of RAM
- Flexible paper handling
  - Standard 150-Sheet Tray
  - Standard 550-Sheet Tray
  - Two optional 550-Sheet Feeders
  - Optional 500-Sheet Stacker
  - Total paper capacity of 1800 sheets
  - Accommodates a wide range of media types
- Wide variety of productivity features
  - PhaserSMART online troubleshooting
  - CentreWare IS provides an embedded web server to help manage, configure, and troubleshoot the printer from your computer.
  - Usage Analysis Tool provides cost tracking that logs each job and the cost for each page.
  - PrintingScout provides on-screen notification and guidance if the printer needs help.

Available Configurations

The Phaser 4500 Laser Printer has four configurations:

Configurations

Features	Printer Configuration			
	4500B	4500N	4500DT	4500DX
Maximum Print Speed (Pages Per Minute)	36	36	36	36
Hard Drive	Optional	Optional	Optional	Standard
PostScript and PCL Fonts	Standard	Standard	Standard	Standard

Configurations (Continued)

Features	Printer Configuration			
	4500B	**4500N**	**4500DT**	**4500DX**
550-Sheet Feeder	Optional	Optional	Standard	Standard
500-Sheet Stacker	Optional	Optional	Optional	Standard
Automatic 2-Sided Printing (Duplex)	Optional	Optional	Standard	Standard

Front View
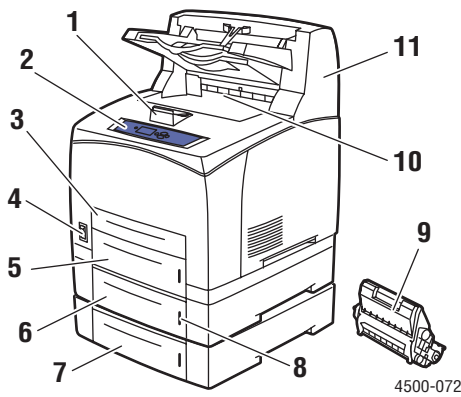
1. Paper stop
2. Front panel
3. Tray 1
4. On/Off switch
5. Tray 2
6. Optional Tray 3
7. Optional Tray 4
8. Paper gauge
9. Print cartridge
10. Standard output tray
11. Optional 500-Sheet stacker

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Rear View
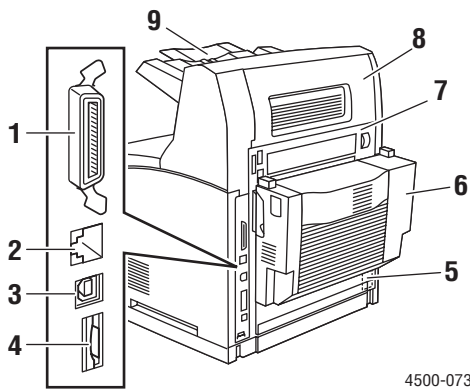
1. Parallel cable connection
2. Ethernet 10/100 Base-T connection
3. USB connection
4. Configuration card
5. Power receptacle
6. Duplex unit
7. Rear cover
8. Stacker rear cover
9. Stacker extension

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Printer Options and Upgrades

Options and upgrades are available for the Phaser 4500 Laser Printer.

Note

Print a "Configuration Page" after installing an option to confirm that the option has been installed correctly.

Upgrades

■ Phaser 4500B to 4500N

Options

■ 64 MB memory card, 128 MB memory card
■ Up to two 550-Sheet feeders
■ 500-Sheet stacker
■ Internal hard drive with additional PostScript fonts
■ 16 MB Flash memory
■ Duplex unit
■ 550-Sheet tray
■ Upgrade kit

For more information on printer options and upgrades, go to www.xerox.com/office/4500supplies.

Resources

You can obtain information regarding your printer and its capabilities from the following sources:

Information	Source
Setup Guide	Packaged with printer
Quick Reference Guide	Packaged with printer
Warranty	Packaged with printer
Reference Guide	Packaged with printer (*User Documentation CD-ROM*)
Printer Management Tools	www.xerox.com/office
infoSMART Knowledge Base	www.xerox.com/office/infoSMART
PhaserSMART	www.phaserSMART.com
Technical Support	www.xerox.com/office/4500support
Information Pages	■ Front panel ■ CentreWare IS ■ Printer Driver

Front Panel

This topic includes:

■ "Front Panel Features" on page 1-5
■ "Front Panel Layout" on page 1-6
■ "Error and Warning Messages" on page 1-7
■ "Print Icon" on page 1-7
■ "Menu Map" on page 1-7
■ "Information Pages" on page 1-7
■ "Sample Pages" on page 1-8

Front Panel Features

The front panel:

■ Displays the printer's operating status (for example, **Printing**, **Ready to Print**, printer errors and warnings).
■ Prompts you to load paper, replace supplies, and clear jams.
■ Enables you to access tools and information pages to help resolve problems.
■ Enables you to change printer and network settings.

Go to Reference/Features/Printer Settings on the *User Documentation CD-ROM* for details about front panel settings.

Front Panel Layout

The front panel on your printer has three components:

■ Multi-colored LED
■ Graphic display
■ Six button cluster
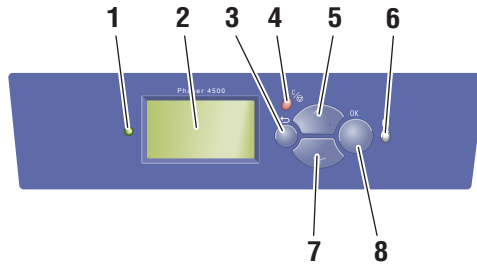
1. Status Indicator LED:

   Blinking green = Printer is busy or in Standby mode

   Steady green = Ready to print or Power Saver mode

   Blinking yellow = Warning, continues to print

   Blinking red = Error condition

   Steady red = Startup sequence

2. Graphic display shows status messages and menus.

3. **Back** button

   Returns to the previous menu item.

4. **Cancel** button

   Cancels the current print job.

5. **Up Arrow** button

   Scrolls upward through the menus.

6. **Information (i**) button

   Displays a help message with information about the printer, such as printer status, error messages, and maintenance information.

7. **Down Arrow** button

   Scrolls downward through the menus.

8. **OK** button

   Accepts the setting selected.

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The Graphic Display has two sections:

■ The top section displays status messages and titles for the printer.
■ The bottom section displays the front panel menus and information text.

Error and Warning Messages

When there is a problem with the printer, the front panel displays (1) an error or warning message. Press the **i** button (2) for more information about the error or warning message and ways to solve the problem.

1   **2**
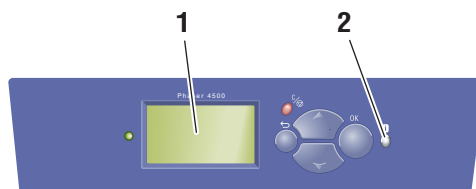
4500-075

Print Icon

There are a number of information pages accessible through the front panel. When the print icon appears before a title on the front panel display, press the **OK** button to print that page.

Menu Map

The "Menu Map" is a visual representation of the front panel Menu Map structure. To print the "Menu Map":

1. At the printer's front panel, select **Information**, then press the **OK** button.
2. Select **Menu Map**, then press the **OK** button to print.

Note
Print the "Menu Map" to see other information pages available for printing.

Information Pages

Your printer comes with a set of information pages that helps you solve printing problems and obtain the best results from your printer. Access these pages from the printer's front panel.

To print information pages:

1. At the printer's front panel, select **Information**, then press the **OK** button.
2. Select **Information Pages**, then press the **OK** button.

3. Select the appropriate information page, then press the **OK** button to print.

Note

Print the "Menu Map" to see other information pages available for printing.

Sample Pages

Your printer comes with a set of sample pages which demonstrate different printer functions.

To print sample pages:

1. At the printer's front panel, select **Information**, then press the **OK** button.
2. Select **Sample Pages**, then press the **OK** button.
3. Select the desired sample page, then press the **OK** button to print.

Printer Drivers

This topic includes:

■ "Available Printer Drivers" on page 1-9
■ "Printer Driver Features" on page 1-10

Printer drivers enable your computer and printer to communicate and provide access to your printer features. Xerox makes driver installation easy with its Walk-Up Technology. For more information about printer drivers, see the video at www.xerox.com/office/drivers.

Available Printer Drivers

Xerox provides drivers for a variety of page description languages and operating systems. The following drivers are available:

Driver	Source*	Description
Windows PostScript Driver	CD-ROM and Web	The PostScript driver is recommended to take full advantage of your printer's custom features and genuine Adobe® PostScript®. (Default driver)
Windows PCL Driver	CD-ROM and Web	The Printer Command Language driver can be used for applications requiring PCL.
Xerox Walk-Up Printing Driver (Windows)	Web only	This driver enables printing from a PC to any Xerox PostScript-enabled printer. This is especially helpful for mobile professionals who travel to multiple locations and need to print to different printers.
Macintosh OS Driver	CD-ROM and Web	This driver enables printing from a Macintosh OS 9.x or OS X, version10.1 or higher.
UNIX Driver (Linux, Solaris)	Web only	This driver enables printing from a UNIX operating system.

* You can access the printer drivers listed above on the *Printer Installer and Utilities CD-ROM* that came with your printer or go to www.xerox.com/office/drivers as indicated.

For more information about driver features, go to Reference/Printing/Adjusting Printing Options on the *User Documentation CD-ROM*.

Printer Driver Features

The following table displays the Xerox driver features that are available with specific operating systems.

Note

    All features shown are both PCL and PostScript unless noted.

Feature	Windows 98, Me	Windows NT4	Windows, 2000, XP, Server 2003	Macintosh OS 9.x[1]	Macintosh OS 10.x[1]
Separation Pages	●	●	●	●	●
Cover Pages	●	●	●	●	●
Pages per Sheet (N-Up)	●	●	●	●	●
Booklet	■	■	■	–	–
2-Sided Printing	■	■	■	■	■
Edge-to-Edge Printing	●	●	●	●	●
Image Smoothing	●[1]	●[1]	●[1]	●[1]	●[1]
Scaling	●	●	●	●	●
Mirror Images	●	●	●	●	–
Watermarks	●	–	●	–	–
Negative Images	●	–	–	●	–
Job Completion Notification	▲	–	▲	–	–
Secure Print	◆	◆	◆	◆	◆
Proof Print	◆	◆	◆	◆	◆
Saved Print	◆	◆	◆	◆	◆
Collation	◆	◆	◆	◆	◆
Job Offset (Jogging)	▼	▼	▼	▼	▼

1	PostScript only
● =	Supported
■ =	Must have duplex unit (DT or DX configuration)
◆ =	Must have hard drive
▲ =	Only available when your printer is connected to your computer via a network
▼ =	Must have 500-Sheet stacker

Managing Your Printer

This topic includes:

- "Printer's IP Address" on page 1-11
- "CentreWare Internet Services (IS)" on page 1-11
- "PhaserSMART" on page 1-12
- "PrintingScout" on page 1-12

There are a number of resources available to help you get the best quality prints from your printer.

Note

The information in this section applies only to network printers.

Printer's IP Address

You need your printer's IP address to change printer settings through CentreWare IS. Follow these steps to identify your printer's IP address:

1. At the printer's front panel, select **Information**, then press the **OK** button.
2. Select **Printer Identification**, then press the **OK** button.
3. Note the printer's **IP Address**.

CentreWare Internet Services (IS)

CentreWare IS is a printer management tool that helps users and administrators accomplish many tasks. It is available on all networked printers. With CentreWare IS you can:

- Configure and manage multi-vendor printers.
- Access remote diagnostics and troubleshooting information for printer problems.
- Monitor printer and supply status.
- Link to software updates and Technical Support.

CentreWare IS uses TCP/IP (your printer's IP address) to communicate directly with an embedded web server on the printer. CentreWare IS runs on any TCP/IP enabled computer with a web browser.

Launching CentreWare IS

To launch CentreWare IS:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. For detailed information about CentreWare IS software, click **HELP** on the upper right of the CentreWare IS screen.

For more information about "CentreWare IS" go to Reference/Connections & Networks/ Printer Management Software on the *User Documentation CD-ROM*.

PhaserSMART

PhaserSMART Technical Support is an automated, Internet-based support system. Use your default web browser to send diagnostic information from your printer to our web site for analysis. PhaserSMART Diagnostic Tool examines the information, diagnoses the problem, and proposes a solution. If the problem is not resolved with the solution, PhaserSMART Technical Support assists you in opening a Service Request with Xerox Customer Support.

Launching PhaserSMART from CentreWare IS

To access PhaserSMART Technical Support through CentreWare IS:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Support**.
4. Click the **PhaserSMART Diagnostic Tool** link to access PhaserSMART technical support.

PrintingScout

PrintingScout, installed with your printer driver and available only with Windows, automatically checks the printer status and sends instant notification to your computer if the printer needs attention.

Whenever the printer is unable to print your document, the printer automatically sends an on-screen message that provides helpful text and illustrations showing how to fix the printer.

Printer Settings

This topic includes:

■ "Accessing the Startup Page" on page 1-13
■ "Accessing Power Saver" on page 1-14
■ "File Security System" on page 1-15
■ "Selecting Tray Settings" on page 1-16
■ "Adjusting Front Panel Brightness" on page 1-17
■ "Adjusting Front Panel Contrast" on page 1-18
■ "Changing Printer Language" on page 1-18

Accessing the Startup Page

The printer automatically produces a "Startup Page" each time the printer is turned on or reset. You can turn off the automatic printing of the "Startup Page" and later print it from the information pages menu.

To turn on/off the "Startup Page" use either:

■ The printer's front panel
■ CentreWare IS

Using the Printer's Front Panel

To turn on/off the Startup Page:

1. Select **Printer Setup**, then press the **OK** button.
2. Select **Printer Controls**, then press the **OK** button.

   The **Startup Page** is highlighted. The end of the line displays the setting (**On** or **Off**).

3. Press the **OK** button to change the setting.

Using CentreWare IS

To turn on/off the automatic printing of the "Startup Page":

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select the **General** folder on the left sidebar.
5. Select **Printer Defaults**.
6. Select **Off** or **On** from the **Printer Startup Page** drop-down list to change the setting.
7. Click **Save Changes** at the bottom of the page.

Printing the Startup Page

To print the "Startup Page":

1. Select **Information**, then press the **OK** button.
2. Select **Information Pages**, then press the **OK** button.
3. Select **Startup Page**, then press the **OK** button to print.

Accessing Power Saver

To save energy, the printer enters a Power Saver, low-energy consumption mode after a pre-defined period of time since its last activity. In this mode, most printer electrical systems are shut down. When a print job is sent to the printer, the printer enters Warmup Mode. You can also warm up the printer by pressing the **OK** button on the front panel.

If you find that the printer is going into Power Saver mode too often and you do not want to wait while the printer warms up, increase the length of time before the printer goes into Power Saver mode. Change the timeout value as follows:

1. At the printer's front panel, select **Printer Setup**, then press the **OK** button.
2. Select **Printer Controls**, then press the **OK** button.
3. Select **Power Saver Timeout**, then press the **OK** button.
4. Press the **Down Arrow** or **Up Arrow** button to scroll to a selected Power Saver timeout value. Select a larger value if you want to extend the length of time before the printer goes into Power Saver mode.
5. Press the **OK** button.

Preventing Access to Front Panel Settings

To prevent access to front panel settings, you can lock the front panel settings from CentreWare IS. A lock icon appears next to items in the front panel that cannot be accessed by users.

Using CentereWare IS

To set front panel menu preferences:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select the **General** folder on the left sidebar.
5. Select **Printer Defaults**.
6. Select **On** or **Off** from the **Front Panel Menu** drop-down list**.**
   - Select **On** to have all menus available.
   - Select **Off** to limit the printer setup items.

7. Click **Save Changes** at the bottom of the page.

File Security System

If your printer has a hard drive, your system administrator can use the front panel's **File Security** menu to:

■ Make removed files unrecoverable
■ Remove old Proof and Secure Job Print files

Accessing Load Paper Timeout

When your print job is formatted for a type or size of paper that is not loaded in the printer, the printer's front panel displays a message requesting you to load the appropriate paper. The Load Paper Timeout controls the amount of time the printer waits before printing on another type or size of paper.

To change the load paper timeout, use either:

■ The printer's front panel
■ CentreWare IS

Using the Printer's Front Panel

To change the load paper timeout:

1. Select **Printer Setup**, then press the **OK** button.
2. Select **Paper Handling Setup**, then press the **OK** button.
3. Select **Load Paper Timeout**, then press the **OK** button.
4. Scroll to the desired timeout value. The values (**None**, **1**, **3**, **5**, or **10** minutes, **1** hour or **24** hours) indicate the length of time you want the printer to wait for you to load paper before printing. If you select a value of **None**, the printer does not wait for paper to be inserted and immediately picks paper from the default tray.
5. Press the **OK** button to save the change.

Using CentreWare IS

To change the load paper timeout:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select the **General** folder on the left sidebar.
5. Select **Printer Defaults**.
6. Scroll to the desired **Load Paper Timeout** value in **Timeout Settings**. The values (**None**, **1**, **3**, **5**, or **10** minutes, **1** or **24** hours) indicate the length of time you want the printer to wait for you to load paper before printing. If you select a value of **None**, the printer does not wait for paper to be inserted and immediately picks paper from the default tray.

7. Click **Save Changes** at the bottom of the screen.

Selecting Tray Settings

You can select trays by two different methods:

■ The printer's front panel
■ CentreWare IS

Using the Front Panel

To specify tray selection:

1. At the printer's front panel, select **Printer Setup**, then press the **OK** button.
2. Select **Paper Handling Setup**, then press the **OK** button.
3. Select **Paper Source**, then press the **OK** button.
4. Scroll to the desired tray or **Auto Select**.
5. Press the **OK** button to save the changes.

Note

The driver overrides the front panel settings and CentreWare IS for tray selection.

Using CentreWare IS

To select a default tray:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select the **General** folder on the left sidebar.
5. Select **Printer Defaults**.
6. Scroll to **Print Mode Settings**, then select the tray from the **Paper Source** drop-down list.
7. Click **Save Changes** at the bottom of the screen.

Tray Switching

Tray switching is the printer's ability to switch between trays that have the same paper type and size when a tray runs out of paper.

Tray switching is controlled by the printer driver, front panel, or CentreWare IS.

PCL jobs always use tray switching, but PostScript jobs disable tray switching when a specific tray has been selected as the paper source.

Tray Sequence

The tray sequence can be set to a particular order, including all or fewer than all trays in the printer. When fewer than all trays are set and a job specifies a tray not in the list, tray switching from that tray does not occur, even when otherwise enabled.

The tray sequence called Off uses a default sequence which is determined by the number of installed trays and the current Paper Source set in the front panel or CentreWare IS. This default sequence starts as 2-3-4-1, then removes the not-installed trays, and then moves the current Paper Source tray to the front if a specific tray is selected.

You can specify the sequence the printer uses to select trays containing the correct paper type and size for a print job. The tray sequence can be specified using two different methods:

■   The printer's front panel
■   CentreWare IS

Using the Front Panel

To specify the tray sequence:

1.   At the printer's front panel, select **Printer Setup**, then press the **OK** button.
2.   Select **Paper Handling Setup**, then press the **OK** button.
3.   Select **Tray Sequence**, then press the **OK** button.
4.   Scroll to the desired tray sequence.
5.   Press the **OK** button to save the changes.

Using CentreWare IS

To specify the tray sequence:

1.   Launch your web browser.
2.   Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3.   Click the **Properties** tab.
4.   Select **Printer Defaults** in the left sidebar.
5.   Select the desired tray sequence from the **Tray Sequence** drop-down list.
6.   Click the **Save Changes** button at the bottom of the screen.

Adjusting Front Panel Brightness

To adjust the brightness of the front panel's background lighting:

1.   At the printer's front panel, select **Printer Setup**, then press the **OK** button.
2.   Select **Front Panel Setup**, then press the **OK** button.
3.   Select **Front Panel Brightness**, then press the **OK** button.
4.   Press the **Down Arrow** or **Up Arrow** button to increase or decrease the front panel brightness value. The brightness values range from **0** (no background light) to **10** (brightest background light).
5.   Press the **OK** button to save your change.

Adjusting Front Panel Contrast

To adjust the contrast between the text and the background to make the front panel text more readable:

1. At the printer's front panel, select **Printer Setup**, then press the **OK** button.
2. Select **Front Panel Setup**, then press the **OK** button.
3. Select **Front Panel Contrast**, then press the **OK** button.
4. Press the **Down Arrow** or **Up Arrow** button to increase or decrease the front panel contrast value. The contrast values range from **1** (brightest background light) to **10** (no background light).
5. Press the **OK** button to save your change.

Changing Printer Language

To change the language used for the text on the front panel, CentreWare IS, and some information pages:

1. At the printer's front panel, select **Printer Setup**, then press the **OK** button.
2. Select **Front Panel Setup**, then press the **OK** button.
3. Select **Front Panel Language**, then press the **OK** button.
4. Select the desired language, then press the **OK** button.

Fonts

This topic includes:

- "Types of Fonts" on page 1-19
- "Resident Printer Fonts" on page 1-19
- "Viewing a List of Available Fonts" on page 1-19
- "Printing a List of Available Fonts" on page 1-20
- "Downloading Fonts" on page 1-21

Types of Fonts

Your printer uses the following types of fonts:

- Resident fonts
- Fronts downloaded into printer memory
- Fonts downloaded with your print job from the application

Adobe Type Manager (ATM) software enables your computer to display these fonts on your computer screen as they will appear in your prints.

If you do not have ATM on your computer:

1. Install it from the *Printer Installer and Utilities CD-ROM*.
2. Install the printer's screen fonts for your computer from the ATM folder.

Resident Printer Fonts

Printer-resident PostScript and PCL fonts are always available for printing. Print a sample of the resident PostScript or PCL fonts at the front panel. See "Information Pages" in this section for information on how to print the sample.

Viewing a List of Available Fonts

To view a list of available PCL or PostScript fonts, use CentreWare IS:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select the **Web Server** folder on the left sidebar.
5. Select **Font Files**.

Printing a List of Available Fonts

To print a list of available PostScript or PCL fonts, use:

■ The printer's front panel
■ CenterWare IS
■ The printer driver

Using the Printer's Front Panel

To print either a PostScript or PCL font list at the front panel:

1. Select **Information**, then press the **OK** button.
2. Select **Information Pages**, then press the **OK** button.
3. Select either **PCL Font List** or **PostScript Font List**, then press the **OK** button to print.

Using CentreWare IS

To print either a PostScript or PCL font list from CenterWare IS:

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select the **Web Server** folder on the left sidebar.
5. Select **Font Files**.
6. Click the **Printer** icon to print the list of fonts.

Using a PC Printer Driver

To print either a PostScript or PCL font list from your printer driver:

1. Select **Start**, select **Settings**, then select **Printers**.
2. Right-click the **4500** printer, then select **Properties**.
3. Select the **Troubleshooting** tab.
4. Click the drop-down arrow in the **Printer Information** field to view the list of options.
5. Select **PostScript Font List** or **PCL Font List** from the drop-down list.
6. Click **Print**.

Listing the Fonts from a Mac

Use the Apple Printer Utility to list the fonts available on your printer.

1. If you do not have the Apple Printer Utility on your computer, install it from the *Printer Installer and Utilities CD-ROM*.
2. Double-click the **Apple Printer Utility** icon (in the **PhaserTools** folder on your computer's hard drive) to launch the utility.
3. In the **Printer Selector** dialog box:
    a. Under **AppleTalk Zones**, select your printer's zone.
    b. Under **Printers**, select your printer.
    c. Click **Open Printer**.
4. From the **File** menu, select **Print Font Samples**.

Downloading Fonts

To supplement the resident fonts (which are always available for printing), downloadable fonts can be sent from your computer and stored in the printer's memory or on the printer's hard drive.

Note

If you turn the printer off, the fonts you download to memory are deleted. You must download them again when you turn the printer on.

Before printing, verify that the fonts specified in your document are installed in the printer or are set up to download correctly. If your document has a font not currently in your printer, or downloaded with your print job, a different font will be used.

The printer accepts the following downloadable fonts:

PCL Font Type Support:

- Type 0
- Type 10
- Type 11
- Type 15
- Type 20

Postscript Font Type Support:

- Type 1
- Type 3
    - Adobe
    - Agfa
    - Bitstream
    - Microsoft
    - Apple

TrueType (Scalable to any point size; looks the same on-screen and printed)

To list the fonts available on your printer, install the font management utility from the Xerox web site at www.xerox.com/office/support.

1. Select your printer from the **Network Printers** drop-down list.

2. Select the **platform** you are running from the drop-down list, "Which files for your printer would you like?"

3. Select **Printer Utilities** from the drop-down list.

4. Click **Go**.

5. Select the CentreWare **Font Management Utility**.

6. Save the **.exe** file to your desktop.

7. Double-click the **.exe** file icon on your desktop to install the font manager.

Downloading Fonts from CentreWare Font Management Utility

The CentreWare Font Management Utility (FMU) is a Windows application that helps manage fonts, macros and forms on a printer's hard drive. Downloading fonts to a printer can improve printing performance and reduce network traffic. You can list, print, and download PostScript and PCL fonts using the Font Management Utility. To download the Font Management Utility, go to www.xerox.com/office/drivers and use the Key word search **FMU**.

Downloading Fonts from a Mac (9.x only)

Use the Apple Printer Utility to download fonts to the printer.

Note

If you do not have the **Apple Printer Utility** on your computer, install it from *Printer Installer and Utilities CD-ROM*.

1. Double-click the **Apple Printer Utility** icon (in the **PhaserTools** folder on your computer's hard disk) to launch the utility.

2. In the **Printer Selector** dialog box:

    a. Under **AppleTalk Zones**, select your printer's zone.

    b. Under **Printers**, select your printer.

    c. Click **Open Printer**.

3. Click the arrow next to **Printer Preferences**.

4. Click the arrow next to **Fonts** to display the list of installed fonts and their locations, then click **Add**.

5. Select the folder containing the font you want to download, select the font, then click **Add**. The font is listed as ready to download.

    Note

    To add all of the fonts in the folder to the list of fonts to download, click the **Add All** button. If you decide not to download a font, highlight the font in the list of fonts to download, then click **Remove**.

6. Select either the printer's memory or hard drive for **Destination**.

7. Click **Send** to download the fonts in the list.

Note

To remove downloaded fonts from the printer, follow Steps **2** through **4.** Click the **Fonts** drop-down list, select the font you want to remove, then click **Remove**.

Registering Your Printer

Registering your printer is quick and easy. You can register your printer using one of the following methods:

- Registration card that came with your printer
- Online form at www.xerox.com/office/4500support
- Web link from the *Printer Installer and Utilities CD-ROM*

Registering your printer gives you access to Color Connection, a great source for the latest printing hints and tips, and new ideas to promote your business. Color Connection has everything you need to help you look great in print.

Registering your printer also provides you with updates and news about your printer.

2 Printing

This section includes:

- "Changing Paper" on page 2-2
- "Supported Papers" on page 2-6
- "Basic Printing" on page 2-11
- "Adjusting Printing Options" on page 2-19
- "2-Sided Printing" on page 2-26
- "Transparencies" on page 2-28
- "Envelopes" on page 2-31
- "Labels, Index Cards, and Greeting Cards" on page 2-34
- "Custom Size Paper" on page 2-39
- "Advanced Options" on page 2-42
- "Supplies and Recycling" on page 2-50

Changing Paper

This topic includes:

- "Guidelines" on page 2-2
- "Tray Setup" on page 2-2

The paper trays adjust to accommodate most sizes and types of paper, transparencies, or other specialty media. For more information about loading paper, go to Reference/Printing/Basic Printing on *User Documentation CD-ROM*.

Caution

If you change the type of paper in a tray, you **must** change the paper type and size on the front panel to match the paper that you loaded. **If you fail to do this, print-quality problems can occur and the fuser can be damaged**.

Guidelines

After loading any tray and adjusting the paper guides, set the paper type and size as required at the front panel. All trays require front panel settings for both paper type and size.

- Do not overload the paper tray. See the tray label for the maximum fill line indicators.
- If excessive jams occur, turn the paper or media over. If jams continue to occur, use paper, transparencies, or other specialty media from a new package.
- Use only paper envelopes. Do not use envelopes with plastic windows or metal clasps.

Tray Setup

1. When loading paper, transparencies, or other specialty media in a tray, pull the tray completely out of the printer.
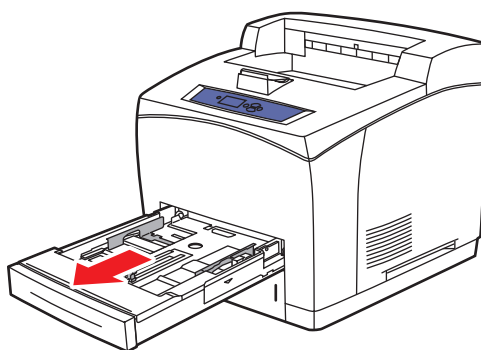
4500-001

2. If loading paper having a different width or length, adjust the width and length guides.
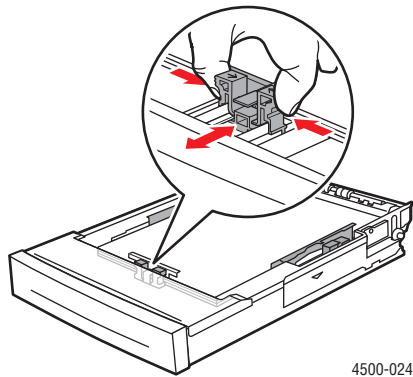
4500-024

Paper Length Guide
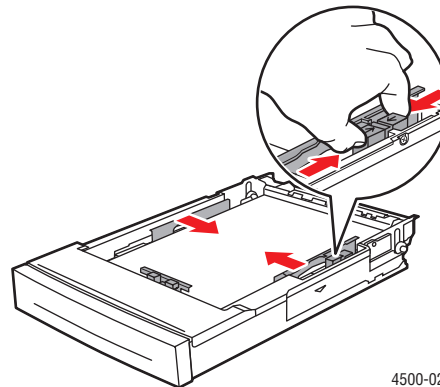
4500-023

Side Paper Guides

3. Extend the tray to accommodate legal or US Folio (legal 13) paper by moving the release tabs to the sides of the tray and pulling out on the front of the tray. Contract the tray by moving the release tabs to the sides of the tray and pushing in the front of the tray.
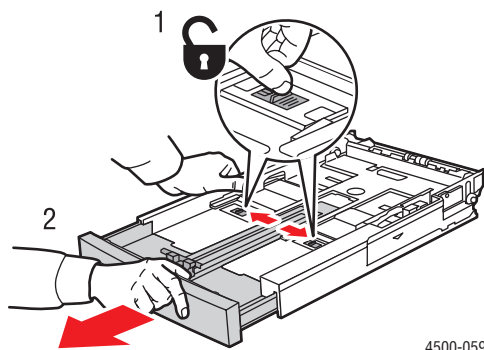
4500-059

Extending Tray
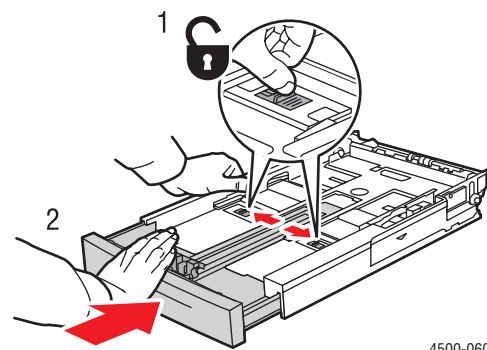
4500-060

Contracting Tray

4. Load the paper, transparencies, or other specialty media in the tray. Do not load paper above the fill line inside the tray.
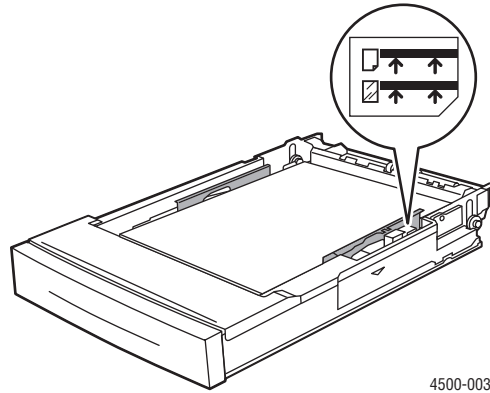
4500-003

Paper and Transparency Fill Lines

5. Slide the side guide firmly against the paper or other specialty media.
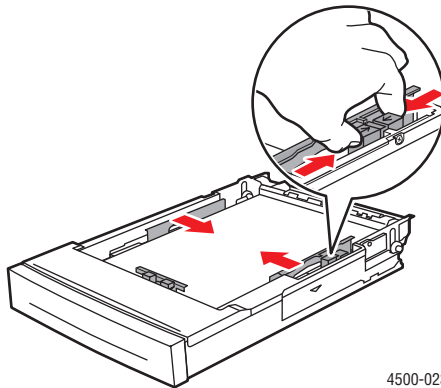
4500-023

6. Insert the tray into the printer slot and push it completely to the back of the printer.
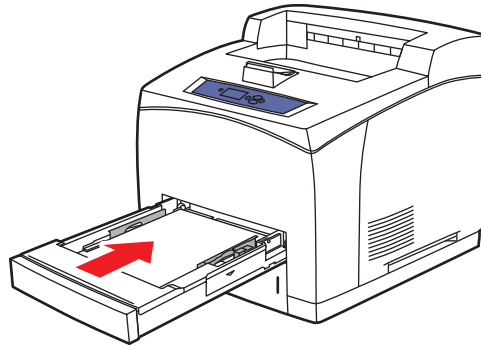
4500-040

7. Set the paper size and type when prompted by the front panel.

4500-020

Caution

Damage caused by using unsupported paper, transparencies, and other specialty media is not covered by the Xerox warranty, service agreement, or Total Satisfaction Guarantee. The Total Satisfaction Guarantee is available in the United States and Canada. Coverage may vary outside these areas; please contact your local representative for details.

For online support information, go to www.xerox.com/office/4500support.

Supported Papers

This topic includes:

- "Paper Weights" on page 2-7
- "Paper Usage Guidelines" on page 2-9
- "Paper Storage Guidelines" on page 2-9
- "Paper that May Damage Your Printer" on page 2-10

Follow the guidelines in these tables to ensure the best print quality and avoid printer jams. For best results, use only Xerox Printing Media specified for your printer; they are guaranteed to produce excellent results with your Phaser 4500 Laser Printer.

Paper and Media Sizes

	Input		Output	
Paper Size	**Tray 1**	**Trays 2–4**	**Standard Tray**	**500-Sheet Stacker***
Letter (8.5 x 11 in.)	●	●	▲	▲
A4 (210 x 297 mm)	●	●	▲	▲
A5 (148 x 210 mm)	●	●	▲	▲
A6 (105 x 148 mm)	■	■	▲	▲
ISO B5 (176 x 250 mm)	■	■	▲	▲
B5 JIS (182 x 257 mm)	●	●	▲	▲
Index Card (3 x 5 in.)	■[1]	–	▲	–
Statement (5.5 x 8.5 in.)	■	■	▲	▲
Executive (7.25 x 10.5 in.)	●	●	▲	▲
US Folio (legal 13) (8.5 x 13 in.)	●	●	▲	▲
Legal (8.5 x 14 in.)	●	●	▲	▲
Envelopes				
#10 Commercial (4.12 x 9.5 in.)	■[1]	■[1]	▲	▲
Monarch (3.87 x 7.5 in.)	■[1]	■[1]	▲	▲
DL (110 x 220 mm)	■[1]	■[1]	▲	▲
C5 (162 x 229 mm)	■[1]	■[1]	▲	▲
B5 (176 x 250 mm)	■[1]	■[1]	▲	▲
Capacity[2]	150	550	500	500

● = Auto-Sensed size

■ = User-Selected size

▲ = Output

* = Option

1 = 1-Sided printing only

2 = Maximum capacity at 75 g/m^2 (20 lb.) paper stock. Capacity is reduced for heavier/thicker stock.

For online support information, go to www.xerox.com/office/infoSMART.

Simplex and Duplex Sizes

	Input		Output	
	Tray 1	**Trays 2–4**	**Standard Tray**	**500-Sheet Stacker**
Simplex (1-Sided Printing)				
Width	76 – 216 mm 3.0 – 8.5 in.	98 – 216 mm 3.9 – 8.5 in.	76 – 216 mm 3.0 – 8.5 in.	90 – 216 mm 3.5 – 8.5 in.
Height	127 – 356 mm 5.0 – 14.0 in.	148 – 356 mm 5.8 – 14.0 in.	127 – 356 mm 5.0 – 14.0 in.	140 – 356 mm 5.5 – 14.0 in.
Duplex (2-Sided Printing)				
Width	90 – 216 mm 3.5 – 8.5 in.	98 – 216 mm 3.9 – 8.5 in.	Same as Input	
Height	140 – 356 mm 5.5 – 14.0 in.	148 – 356 mm 5.8 – 14.0 in.	Same as Input	

Paper Weights

The Phaser 4500 Laser Printer supports the following paper types and weights:

Paper and Media Types and Weights

Paper/Media Type	Weight
Bond	60-216 g/m^2 (16-58 lb.)
Labels*	Xerox A4 24-Up Label Xerox Multipurpose 30-Up Label
Transparency*	Xerox Clear Transparency
Greeting Cards	190 g/m^2 (70 lb. Cover)
Index Card Stock	60-216 g/m^2 (33-120 lb.)
Tag Card Stock	60-216 g/m^2 (37-133 lb.)
Cover Card Stock	60-216 g/m^2 (37-133 lb.)
* 1-Sided printing only	

Xerox Printing Media

Xerox Professional Printing Paper	Size	Description	Part Number
Xerox Premium Multipurpose 4024	Letter 8.5 x 11 in.	20 lbs. (75 g/m^2)	3R721
Xerox Business Multipurpose 4200	Letter 8.5 x 11 in.	20 lbs. (75 g/m^2)	3R2047
Xerox Premium Multipurpose 4024	Legal 8.5 x 14 in.	20 lbs. (75 g/m^2)	3R727
Xerox Premium Multipurpose 4024	Letter 8.5 x 11 in.	20 lbs. (75 g/m^2)	3R2531
Xerox Premier Paper	A4 210 x 297 mm	80 g/m^2	3R91720 or 3R91805
Xerox Business Paper	A4 210 x 297 mm	80 g/m^2	3R91820
Xerox Cover and Index Stock			
Xerox Premium Multipurpose 4024 Cover	Letter 8.5 x 11 in.	65 lbs. (243 g/m^2)	3R3041
Xerox Premium Multipurpose 4024 Index	Letter 8.5 x 11 in.	90 lbs. (243 g/m^2)	3R3004
Xerox Recycled Paper			
Xerox Multipurpose Recycled - 30% PCW	Letter 8.5 x 11 in.	20 lbs. (75 g/m^2)	3R6296
Xerox Recycled Paper - 100% PCW	A4 210 x 297 mm	80 g/m^2	3R91165
Xerox Pre-Punched Paper			
Xerox Premium Multipurpose 4024 - 3Hole	Letter 8.5 x 11 in.	20 lbs. (75 g/m^2)	3R2193
Xerox Premium Multipurpose 4200 - 3Hole	Letter 8.5 x 11 in.	20 lbs. (75 g/m^2)	3R2641
Xerox Premium Multipurpose 4024 - 3Hole	Letter 8.5 x 11 in.	24 lbs. (90 g/m^2)	3R3317
Xerox Business Paper - 4Hole	A4 210 x 297 mm	80 g/m^2	3R91823
Xerox Labels			
Xerox High Speed Labels	Letter 8.5 x 11 in.	33 labels per sheet	3R3139
Xerox Clear High Speed Labels	Letter 8.5 x 11 in.	33 labels per sheet	3R5139
Xerox High Speed Labels	A4 210 x 297 mm	24 labels per sheet	3R96178
Xerox Transparency Film			
Xerox Clear - No Strip	Letter 8.5 x 11 in.		3R3117
Xerox Paper-backed - Clear	Letter 8.5 x 11 in.		3R4173
Xerox Type C, Plain	A4 210 x 297 mm		3R96002
Xerox Carbonless Media			
2 - Part (White/Canary)	Letter 8.5 x 11 in.	Straight/Reverse Collation	3R12130
2 - Part (White/Pink)	Letter 8.5 x 11 in.	Straight/Reverse Collation	3R12132
2 - Part (White/Canary)	Legal 8.5. x 14 in.	Straight/Reverse Collation	3R12133
3 - Part (White/Canary/Pink)	Legal 8.5 x 14 in.	Straight Collation	3R12137
3 - Part (White/Canary/Pink)	Letter 8.5 x 11 in.	Straight Collation	3R12135
3 - Part (White/Canary/Pink)	A4 210 x 297 mm	Straight Collation	3R97108

Paper Usage Guidelines

The printer accommodates most sizes and types of paper, transparencies, or other specialty media. Only Tray 1 accommodates 3 x 5 in. index cards.

■ Use only paper envelopes. Do not use padded envelopes.

■ Do not use envelopes with windows, metal clasps, or adhesives with release strips.

Paper Storage Guidelines

Providing a good environment, and safe handling and storage conditions for your paper, contributes to ultimate print quality.

■ Store paper in dark, cool, relatively dry locations. Most paper items are susceptible to damage from ultraviolet (UV) and visible light. UV radiation, which is emitted by the sun and fluorescent bulbs, is particularly damaging to paper items. The intensity and length of exposure to visible light on paper items should be reduced as much as possible.

■ It is recommended that you maintain constant temperatures and relative humidity.

■ Avoid light, heat, and dampness.

■ Avoid attics, kitchens, garages, and basements for storing paper. Inside walls are drier than outside walls where moisture can collect.

■ Store paper flat. Paper should be stored on pallets, cartons, shelves, or in cabinets.

■ Avoid having food or drinks in the area where paper is stored or handled.

■ Do not open sealed packages of paper until you are ready to load them into the printer. Leave paper in the original packaging, and leave the packages in the shipping carton. For most commercial cut-size grades, the ream wrapper contains an inner lining that protects the paper from moisture loss or gain.

Phaser media is sold with appropriate packaging to prevent transportation problems and to promote positive customer results. Leave the media inside the packaging until you are ready to use it; reinsert unused media in the original packaging and reseal it for protection.

Paper that May Damage Your Printer

Your printer is designed to be used with a variety of paper types. For more information about supported papers, go to Reference/Printing/Supported Papers on the *User Documentation CD-ROM*.

Other media types can cause poor print quality, increased paper jams, or damage to your printer.

Following are examples of unacceptable paper:

■ Rough or porous media
■ Paper that has been photocopied
■ Paper with cutouts or perforations
■ Paper with staples inserted
■ Envelopes with windows, metal clasps, adhesives with release strips, or side seams.

Warning

Use only Xerox clear transparency film. Other types of transparency film may melt and damage the printer.

Basic Printing

This topic includes:

- "Loading Paper in Tray 1" on page 2-11
- "Loading Paper in Trays 2-4" on page 2-15
- "Factors Affecting Printer Performance" on page 2-18

Follow these steps to print jobs:

1. Load paper in the tray.
2. Adjust the tray guides.
3. If prompted by the front panel, confirm the paper type and/or size and change it as required.
4. Select **File/Print** to adjust the printing options in the printer driver.
5. Send the job to the printer from the application's **Print** dialog box.

For more information on paper types, weights, and sizes, go to Reference/Printing/Supported Papers on the *User Documentation CD-ROM*.

Loading Paper in Tray 1

Tray 1 can be used for all paper, transparencies, and specialty media, as well as 3 x 5 in. index cards.

Caution

If you change the type of paper in a tray, you **must** change the paper type and size on the front panel to match the paper that you loaded. **If you fail to do this, print-quality problems can occur and the fuser can be damaged**.

4500-020

For more information on paper types, weights, and sizes, go to Reference/Printing/Supported Papers on the *User Documentation CD-ROM*.

1. Pull the tray completely out of the printer.
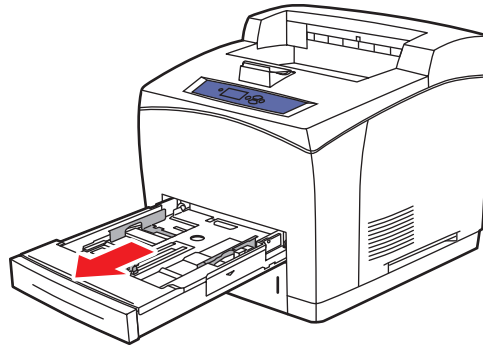
4500-001

2. If loading paper having a different width or length, adjust the width and length guides.
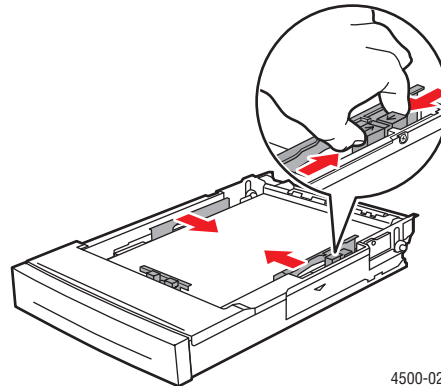
4500-024

4500-023

3. Extend the tray to accommodate legal or US Folio (legal 13) paper by moving the release tabs to the sides of the tray and pulling out on the front of the tray. Contract the tray by moving the release tabs to the sides of the tray and pushing in the front of the tray.
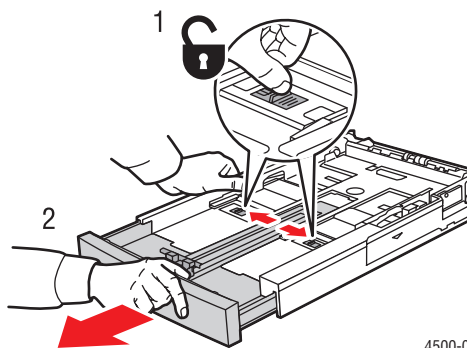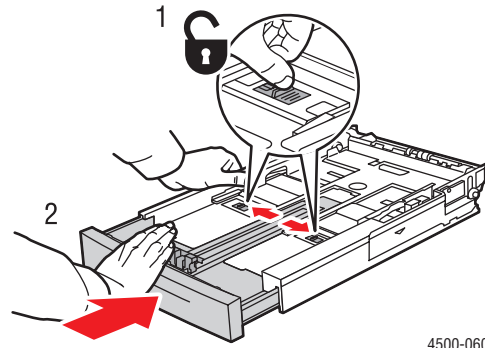
4500-0

4500-060

4. Load the paper, transparencies, or other specialty media in the tray.

4500-016

4500-003

Note
> Do not load paper, transparencies, or specialty media above the fill lines inside the tray. Only use flat paper, transparencies, or specialty media. If frequent jamming occurs with card stock or heavier paper that is less than 175 mm (7 in.) long, reduce the number of sheets in the tray.

5. Slide the side guide firmly against the paper or other specialty media.
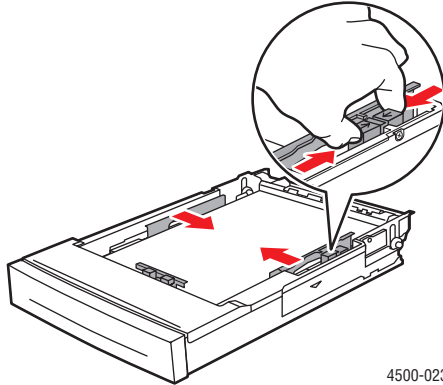
4500-023

6. Insert the tray into the printer slot and push it completely to the back of the printer.

4500-040

7. Confirm or change the paper size and type when prompted by the front panel.

4500-020

Loading Paper in Trays 2-4

Use Trays 2-4 for all paper, transparencies, and specialty media *except* 3 x 5 in. index cards.

Caution

> If you change the type of paper in a tray, you **must** change the paper type on the front panel to match the paper that you loaded. **If you fail to do this, print-quality problems can occur and the fuser can be damaged**.
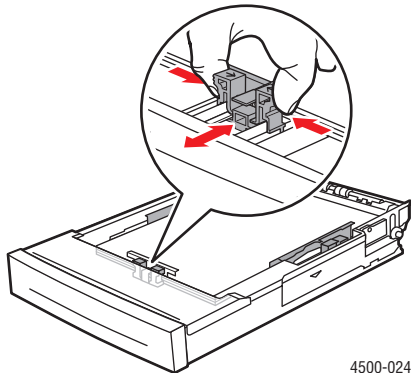

4500-020

1. Pull the tray completely out of the printer.
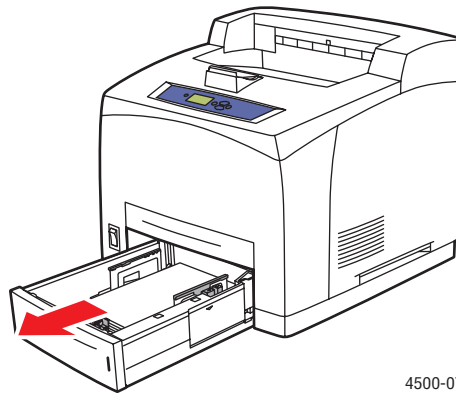
4500-078

2. If loading paper having a different width or length, adjust the width and length guides.
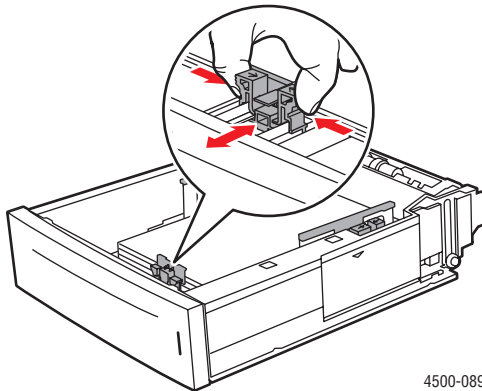
4500-089
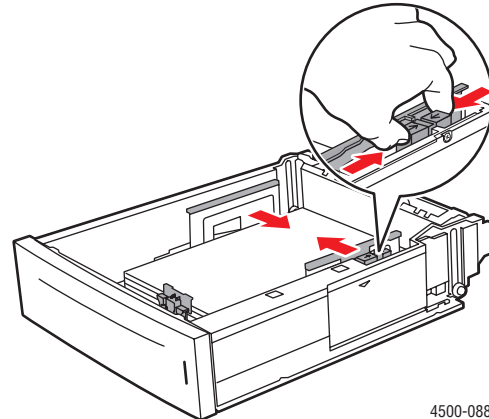
4500-088

3. Extend the tray to accommodate legal or US Folio (legal 13) paper by moving the release tabs to the sides of the tray and pulling out on the front of the tray. Contract the tray by moving the release tabs to the sides of the tray and pushing in the front of the tray.
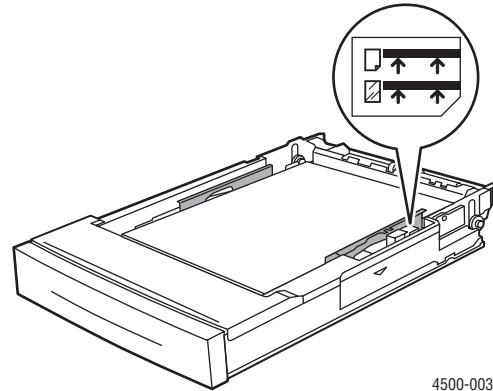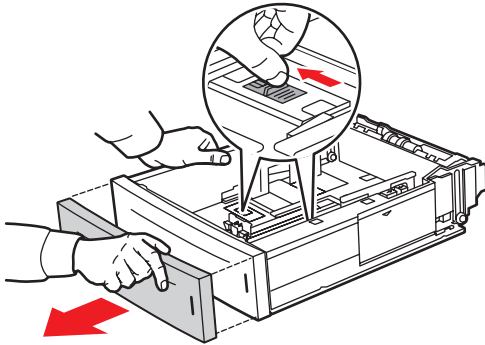

4500-090
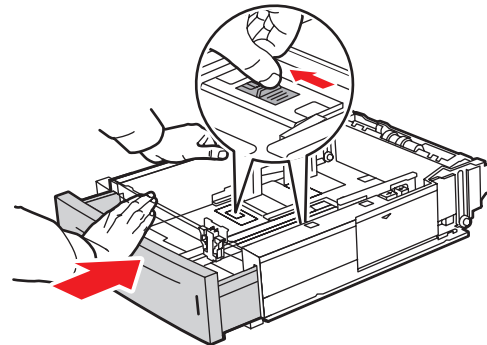
4500-091

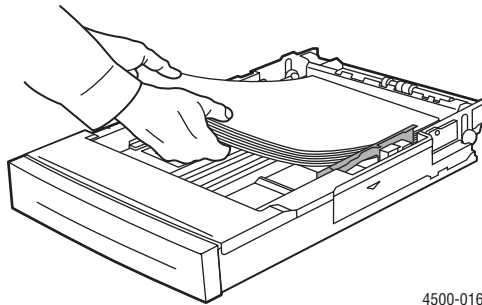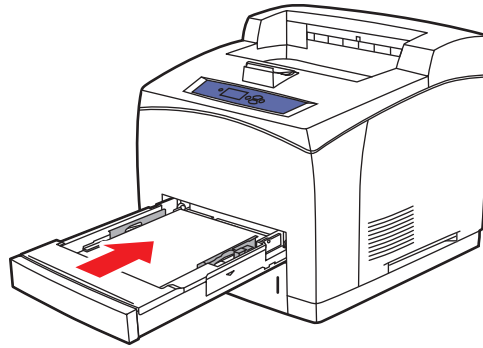**4.** Load the paper, transparencies, or other specialty media in the tray.

Note

Do not load paper, transparencies, or specialty media above the fill lines inside the tray. Only use paper, transparencies, or specialty media that are flat. If frequent jamming occurs with card stock or heavier paper that is less than 175 mm (7 in.) long, reduce the number of sheets in the tray.
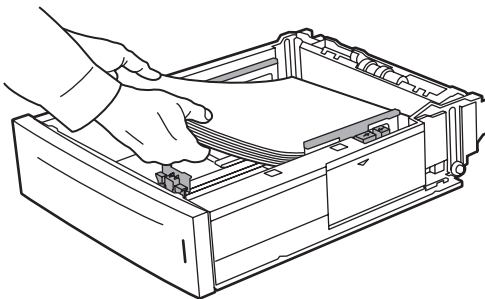
4500-087
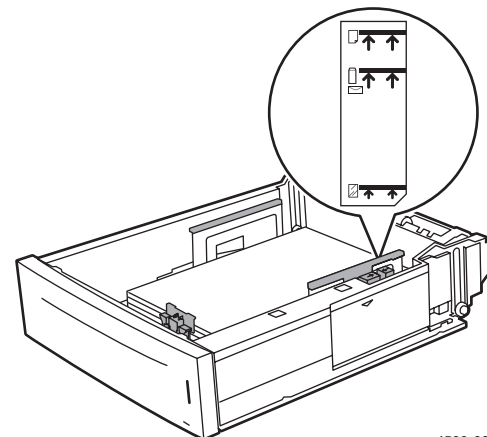
4500-086

5. Slide the side guide firmly against the paper or other specialty media.
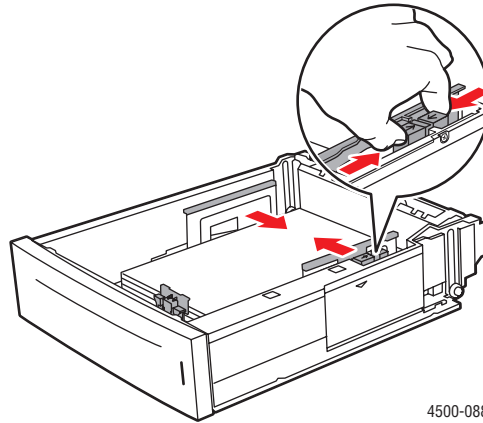
4500-088

6. Insert the tray into the printer slot and push it completely to the back of the printer.
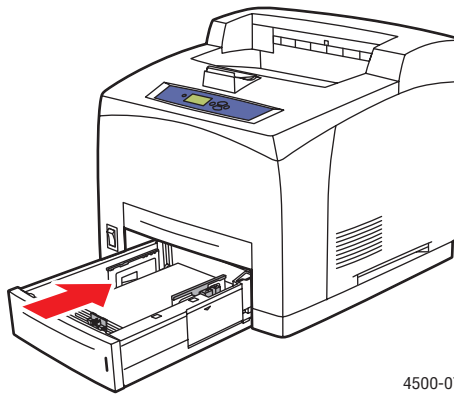
4500-077

7. Set the paper size and type when prompted by the front panel.

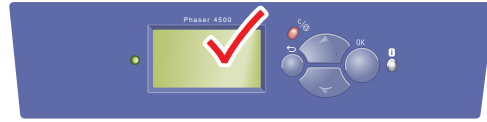4500-020

Note

For more information about printing options and other selections, click the **Help** button on the printer driver tab to view the online help.

Factors Affecting Printer Performance

Many factors affect a print job. They include the print speed (stated in number of pages per minute), the media used, download time, and printer processing time.

The computer download time and printer processing time are affected by several factors including:

■ Printer memory
■ Connection type (network, parallel or USB)
■ Network operating system
■ Printer configuration
■ File size and type of graphics
■ Computer speed

Note

Additional printer memory (RAM) may improve overall printer functions, but will not increase the pages per minute (ppm) ability of the printer.

Adjusting Printing Options

This topic includes:

- "Setting Printing Options" on page 2-19
- "Selecting Properties for an Individual Job (Mac)" on page 2-23
- "Selecting Print-Quality Modes" on page 2-25

Setting Printing Options

Many printing options are available with the Xerox printer driver.

Selecting Printing Preferences in Windows

Printer preferences control all of your jobs, unless you overwrite them specifically for your job. For example, if you want to use automatic 2-sided printing for most jobs, set this option in printer settings.

1. Click **Start**, select **Settings**, then click **Printers**.
2. In the **Printers** folder, right-click the icon for your printer.
3. From the popup menu, select **Printer Preferences** or **Properties**.
4. Make selections from the driver tabs. See the "Windows PostScript Driver Settings" and "Windows PCL Driver Settings" tables for specific printing options.
5. Click the **OK** button to save your selections.

Selecting Properties for an Individual Job (Windows)

If you want to use special settings for a particular job, change the driver settings before sending the job to the printer. For example, if you want to use **True 1200 x 1200 dpi** print-quality mode for a particular graphic, select this setting in the driver before printing that job.

1. With the document or graphic open in your application, access the **Print** dialog box.
2. Select the Phaser 4500 printer for use and click the **Properties** button to open the printer driver.
3. Make selections from the driver tabs. See the following tables for specific printing options.
4. Click the **OK** button to save your selections.
5. Print the job.

Windows PostScript Driver Settings

Operating System	Driver Tab/Dialog Box	Printing Options
Windows 2000, Windows XP, or Windows Server 2003	**Layout** tab	■ Orientation ■ Print on Both Sides (Duplex) ■ Pages Per Sheet
	Advanced dialog box	■ Graphics (Scaling and True Type Font) ■ Document Options (PostScript Options, Offset Collated Sets, Edge-to-Edge Printing, Image Smoothing, Draft Mode, and Watermark)
	Paper/Quality tab	■ Paper Type ■ Paper Size ■ Tray Selection ■ Cover Pages ■ Print Quality
	Output Options tab	■ Paper Destination ■ Separation Pages ■ Proof, Saved, Secure Printing ■ End of Job Notification
	Troubleshooting tab	■ PrintingScout ■ Printer Information Pages ■ Helpful Web Links
Windows NT	**Page Setup** tab	■ Orientation ■ Print on Both Sides (Duplex Printing)
	Advanced tab	■ Scaling ■ Page Layout (N-Up Option) ■ Allow Mirrored and Negative Output ■ Printer Features (Edge-to-Edge Printing, Image Smoothing, Separation Page Source, Separation Page)
	Paper/Quality tab	■ Paper Type ■ Paper Size ■ Tray Selection ■ Cover Pages ■ Print Quality
	Output Options tab	■ Paper Destination ■ Separation Pages ■ Proof, Saved, Secure Printing
	Troubleshooting tab	■ Printer Information Pages ■ Helpful Web Links

Windows PostScript Driver Settings (Continued)

Operating System	Driver Tab/Dialog Box	Printing Options
Windows 98 or Windows Me	**Setup** tab	■ Paper Type ■ Paper size ■ Tray Selection ■ Orientation ■ Print on 1 Side or Print on 2 Sides ■ Print Quality
	Output Options tab	■ Separation Pages ■ Cover Pages ■ Proof, Saved, Secure Printing

Windows PCL Driver Settings

Operating System	Driver Tab	Printing Options
Windows 2000, Windows XP, or Windows Server 2003	**Layout** tab	■ Orientation ■ Print on Both Sides (Duplex) ■ Pages Per Sheet
	Paper/Quality tab	■ Paper Type ■ Paper Size ■ Tray Selection ■ Cover Pages ■ Print Quality (Not present in PCL5e)
	Output Options tab	■ Paper Destination ■ Notify Me When My Job Completes ■ Proof, Saved, Secure Printing ■ Separation Pages
	Troubleshooting tab	■ PrintingScout ■ Printer Information Pages ■ Helpful Web Links
Windows NT	**Page Setup** tab	■ Orientation ■ Print on Both Sides (Duplex)
	Paper/Quality tab	■ Paper Type ■ Paper Size ■ Tray Selection ■ Cover Pages
	Output Options tab	■ Paper Destination ■ Proof, Saved, Secure Printing ■ Separation Pages
	Troubleshooting tab	■ Information Pages ■ Web Links
Windows 98, Me	**Setup** tab	■ Page Layout ■ Print Quality
	Output Options tab	■ Paper Destination ■ Separation Pages ■ Cover Pages ■ Proof, Saved, Secure Printing
	Troubleshooting tab	■ PrintingScout ■ Printer Information Pages ■ Helpful Web Links

Note

For more information about printing options and other selections, click the **Help** button on the printer driver tab to view the online help.

Selecting Properties for an Individual Job (Mac)

To select print settings for a particular job, change the driver settings before sending the job to the printer.

1. With the document open in your application, click **File**, then click **Print**.
2. Select the desired printing options from the menus and drop-down lists that are displayed.

   Note

   In Macintosh OS X, click **Save Preset** on the **Print** menu screen to save the current printer settings. You can create multiple presets and save each with its own distinctive name and printer settings. To print jobs using specific printer settings, click the applicable saved preset in the **Presets** list.

3. Click **Print** to print the job.

Macintosh PostScript Driver Settings

Operating System	Driver Drop-Down Title	Printing Options
Mac OS 10.x and higher	Copies & Pages	■ Copies ■ Pages
	Layout	■ Pages Per Sheet ■ Layout Direction ■ Border
	Output Options	■ Save as File ■ Format
	Printer Features	■ Separation Page Source ■ Separation Page (On/Off) ■ Feature Sets
	Image Quality	■ Print Quality
	Error Handling	■ PostScript Errors ■ Tray Switching
	Paper Feed	■ All pages from ■ First page from ■ Remaining from
	Summary	Summary of all printer driver settings

Macintosh PostScript Driver Settings (Continued)

Operating System	Driver Drop-Down Title	Printing Options
Mac OS 9.x	General	■ Copies ■ Pages ■ Paper Source
	Background Printing	■ Print in ■ Print Time
	Color Matching	■ Print Color ■ Intent ■ Printer Profile
	Cover Page	■ Print Cover Page ■ Cover Page Paper Source
	Font Settings	■ Font Documentation ■ Font Downloading
	Job Logging	■ If there is a PostScript error ■ Job Documentation ■ Job Documentation Folder
	Layout	■ Pages per Sheet ■ Border ■ Print on Both Sides
	Save as File	■ Format ■ PostScript Level ■ Data Format ■ Font Inclusion
	Print Quality	■ 600 x 600 dpi ■ True 1200 x 1200 dpi ■ Image Smoothing
	Job Type	■ Normal ■ Proof Print ■ Saved Priint ■ Secure Print
	Advanced Options 1	■ Paper Destination ■ Paper Types ■ Offset Collated Sets ■ Edge-to-Edge Printing ■ Media Mismatch Policy ■ Separation Page Source ■ Separation Page
	Advanced Options 2	■ Last Page Paper Source ■ Draft Mode

Selecting Print-Quality Modes

Type of Print Job	Print-Quality Mode
Best general-purpose mode for high-speed printing. Produces crisp, bright prints.	**600 x 600 dpi**
Highest-quality prints with best detail. Recommended for photo prints. Produces superior text resolution. This mode takes longer to process and print than 600 x 600 dpi.	**True 1200 x 1200 dpi**

To select the print-quality mode in a supported driver:

■ **Windows 98, Windows Me PostScript driver:**

On the **Setup** tab, select a print-quality mode.

■ **Windows 2000, Windows XP, Windows Server 2003, Windows NT PostScript driver:**

On the **Paper/Quality** tab, select a print-quality mode.

■ **Mac OS 9 driver:**

In the **Print** dialog box, select **Print Quality** from the drop-down list, then select a print quality mode.

■ **Mac OS X (version 10.1 and higher) driver:**

In the **Print** dialog box, select **Image Quality** from the drop-down list, then select a print quality mode from the **Print Quality** drop-down list.

2-Sided Printing

This topic includes:

- "Automatic 2-Sided Printing" on page 2-26
- "Binding Preferences" on page 2-26

Automatic 2-Sided Printing

Guidelines

- A duplex unit must be installed on your printer to perform automatic 2-sided printing. The 4500B and 4500N configurations may be upgraded to include this feature.
- To print a 2-sided document, verify that you are using the following ranges:

	Tray 1	**Trays 2–4**
Width	90 – 216 mm 3.5 – 8.5 in.	98 – 216 mm 3.9 – 8.5 in.
Length	140 – 356 mm 5.5 – 14 in.	148 – 356 mm 5.8 – 14 in.
Paper Weight	60 – 216 g/m^2 (16 – 130 lb.)	60 – 216 g/m^2 (16 – 130 lb.)

Binding Preferences

Use the printer driver to select **Portrait** or **Landscape** orientation for the images on the page. When you print 2-sided jobs, select the binding preference which determines how the pages turn.

Portrait
Bind on Side Edge
Flip on Long Edge
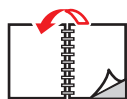
Portrait
Bind on Top Edge
Flip on Short Edge

Landscape
Bind on Side Edge
Flip on Short Edge

Landscape
Bind on Top Edge
Flip on Long Edge

To perform automatic 2-sided printing:

1. Insert paper into the tray. For more information, go to Reference/Printing/Basic Printing on the *User Documentation CD-ROM*.

2. In the printer driver:

■ Select either **Portrait** or **Landscape** orientation.

■ Select **2-sided printing** as described in the table below.

3. Click **OK** to accept the printer driver settings, then click **OK** to print.

Setting the Printer Driver for 2-Sided Printing

Operating System	Steps
Windows 98 or Windows Me	**1.** Select **File**, then select **Print**. **2.** Click **Properties**. **3.** On the **Setup** tab, then select **Print on 1 Side** or **Print on 2 Sides**. **4.** Select or deselect **Bind On Top Edge**.
Windows 2000, Windows XP, or Windows Server 2003	**1.** Select **File**, then select **Print**. **2.** Click **Properties**. **3.** On the **Layout** tab in **Print On Both Sides (Duplex)**, select **Flip on Long Edge** or **Flip on Short Edge**. **4.** Select **number of pages** in the **Pages Per Sheet** drop-down list.
Windows NT	**1.** Select **File**, then select **Print**. **2.** Click **Properties**. **3.** On the **Page Setup** tab in **Print On Both Sides (Duplex)**, select **Flip on Long Edge** or **Flip on Short Edge**.
Mac OS 9	**1.** Select **File**, then select **Print**. **2.** Select **Layout**. **3.** Select **Print on Both Sides.** **4.** Click the **Binding** icon that matches the edge to bind.
Mac OS X, version 10.1 (and higher)	**1.** Select **File**, then select **Print**. **2.** Select **Duplex**. **3.** Select **Print on Both Sides.** **4.** Click the **Binding** icon that matches the edge to bind.

Transparencies

This topic includes:

■ "Guidelines" on page 2-28
■ "Printing Transparencies from Trays 1-4" on page 2-28

Xerox Clear Transparencies can be printed from any tray. They should be printed on one side only. To order Xerox Clear Transparencies, contact your local reseller.

Videos are available with instructions for loading transparencies. Videos are located on the *User Documentation CD-ROM* and at www.xerox.com/office/4500support.

Guidelines

■ Remove all paper before loading transparencies in the tray.
■ Do not load transparencies above the fill line; it may cause the printer to jam.
■ Handle transparencies by the edges using both hands to avoid fingerprints and creases which can cause poor print quality.
■ Do not use transparencies with stripes on the side.
■ Change the paper type at the front panel for all trays.
■ Use Xerox Clear Transparencies; print quality may vary with other transparencies.

For more information on paper types, weights, and sizes, go to Reference/Printing/Supported Papers on the *User Documentation CD-ROM*.

Printing Transparencies from Trays 1-4

1. Pull the tray completely out of the printer.
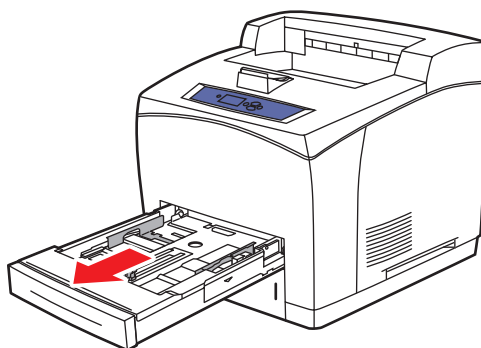
4500-001

2. Insert the transparencies into the tray.
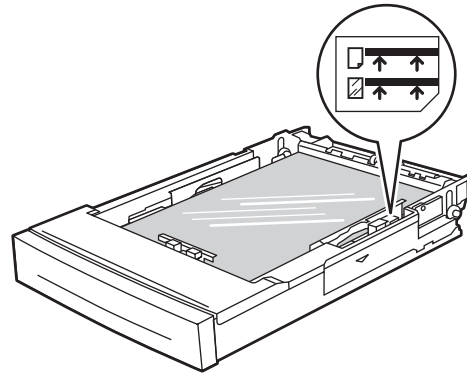
4500-081

Note

Do not load transparencies above the transparency fill line; it may cause the printer to jam.

3. Adjust the width and length paper guides to match the size of the transparencies.
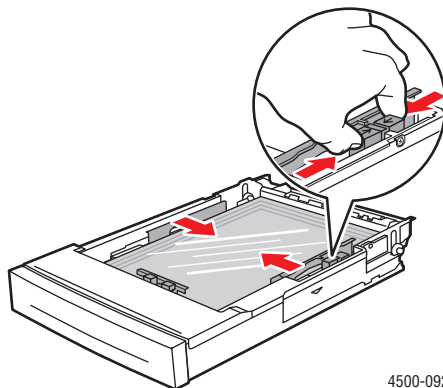
4500-092
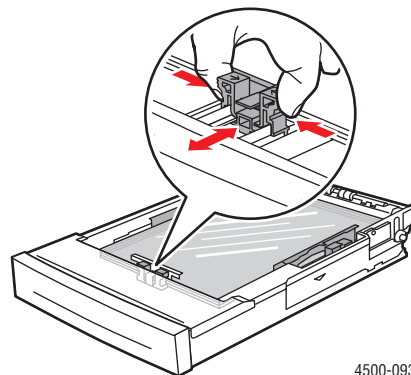
4500-093

4. Insert the tray into the printer tray slot and push it completely to the back of the printer.
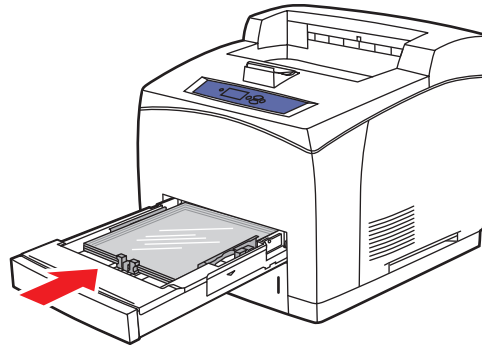
4500-098

5. At the printer's front panel, press the **OK** button to accept the paper size and type highlighted on the Front Panel.

Follow these steps if the paper size and type loaded is different than the paper size and type highlighted on the Front Panel:

a. Select **Change Paper Size**, then press the **OK** button.

b. Select **Auto-Sensed Letter (8.5 x 11 in.)**, then press the **OK** button.

c. Press the **Back** button.

d. Select **Change Paper Type**, then press the **OK** button.

e. Select **Transparency**, then press the **OK** button to save your selection.

6. In the printer driver, select the appropriate tray or paper type.

For more information, go to Reference/Printing/Basic Printing on the *User Documentation CD-ROM*.

Envelopes

This topic includes:

■ "Guidelines" on page 2-31
■ "Printing Envelopes from Trays 1-4" on page 2-32

Guidelines

Buying and Storing Envelopes

■ Use only paper envelopes specified in the Supported Papers table. Successful envelope printing is highly dependent on the quality and construction of the envelopes. Use envelopes made specifically for laser printers.
■ It is recommended that you maintain constant temperatures and relative humidity.
■ Store unused envelopes in their packaging to avoid the effects of moisture and dryness which can affect print quality and cause wrinkling. Excessive moisture can cause the envelopes to seal before or during printing.
■ Avoid padded envelopes; purchase envelopes that lie flat on a surface.
■ Remove air "bubbles" from the envelopes before loading by setting a heavy book on top of the envelopes.
■ If wrinkling or embossing problems occur, use a different brand of envelopes made specifically for laser printers.
■ For more information, go to Reference/Printing/Supported Papers on the *User Documentation CD-ROM*.

Preparing to Print

Follow these guidelines to prevent wrinkling problems:

■ Load envelopes **faceup** with the envelope flap to the **left** as you view the tray from the front.
■ Print only on the front of the envelope.
■ Load a maximum of 10 envelopes in Tray 1 and 75 envelopes in Trays 2-4 at any time.

Caution

Never use envelopes with windows or metal clasps; they can damage the printer. Damage caused by using non-Xerox envelopes is not covered under the Xerox warranty, service agreement, or Total Satisfaction Guarantee. The Total Satisfaction Guarantee is available in the United States and Canada. Coverage may vary outside these areas, please contact your local representative for details.

Printing Envelopes from Trays 1-4

1. Pull the tray completely out of the printer.
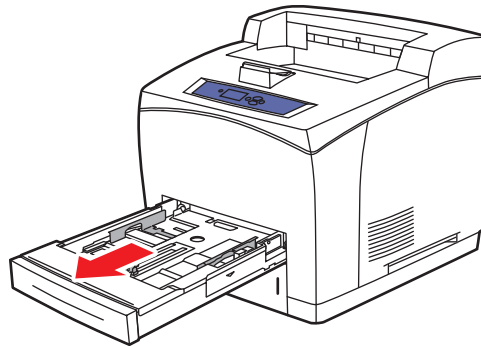
4500-001

2. Insert the envelopes into the tray, **faceup** with the **flap** of the envelope toward the **left** side of the tray.
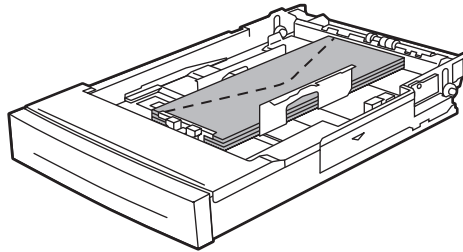
4500-082

3. Adjust the paper guides to match the size of the envelopes.

### Note
Do not load envelopes above the fill line inside the tray.

4. Insert the tray into the printer tray slot and push it completely to the back of the printer.
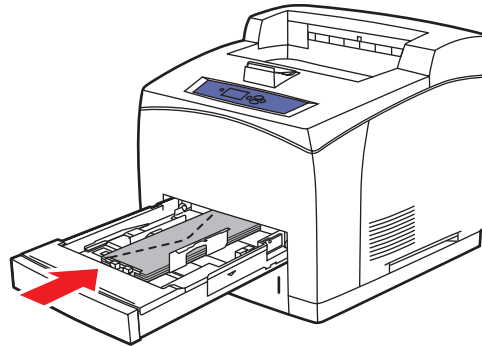
4500-104

5. At the printer's front panel, press the **OK** button to accept the paper size and type highlighted on the Front Panel.

Follow these steps if the paper size and type loaded is different than the paper size and type highlighted on the Front Panel:

   a. Select **Change Paper Size**, then press the **OK** button.

   b. Select **[Type of envelope] (w x h)**, then press the **OK** button.

   c. Press the **Back** button.

   d. Select **Change Paper Type**, then press the **OK** button.

   e. Select **Envelope**, then press the **OK** button to save your selection.

6. In the printer driver, select the appropriate tray or paper type.

For more information, go to Reference/Printing/Basic Printing on the *User Documentation CD-ROM*.

Labels, Index Cards, and Greeting Cards

This topic includes:

- "Guidelines" on page 2-34
- "Printing Index Cards from Tray 1" on page 2-34
- "Printing Labels from Trays 1-4" on page 2-36

Xerox labels can be printed from any tray. They should be printed on one side only. Index cards (3 in. x 5 in.) can be printed from Tray 1 only. They should be printed on one side only. To order labels, index cards, greeting cards, or other paper or specialty media, contact your local reseller.

Guidelines

- Do not use vinyl labels.
- Do not use any labels or cards on a sheet where items are missing; it may damage printer components.
- Store unused labels or cards flat in their original packaging. Leave the product inside the original packaging until ready to use. Return any unused product to the original packaging and reseal it for protection.
- Do not store labels or cards in extremely dry or humid conditions or extremely hot or cold conditions. Storing them in extreme conditions may cause print quality problems or cause them to jam in the printer.
- Rotate stock frequently. Long periods of storage in extreme conditions can cause the labels or cards to curl and jam the printer.
- Print only on one side of the sheet of labels.

Printing Index Cards from Tray 1

1. Pull the tray completely out of the printer.
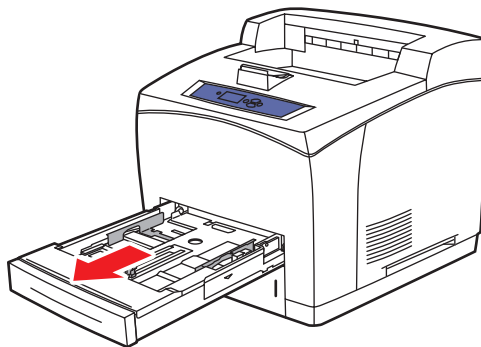
4500-001

2. Insert the 3 x 5 in. index cards into the tray with the side to be printed **faceup** with the **top** of the card toward the **back** of the tray.

Note

Do not load paper above the fill line inside the tray.
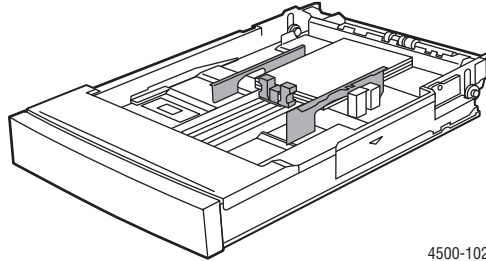
4500-102

3. Adjust the paper guides to fit against the index cards.

4. Insert the tray into the printer tray slot and push it completely to the back of the printer.
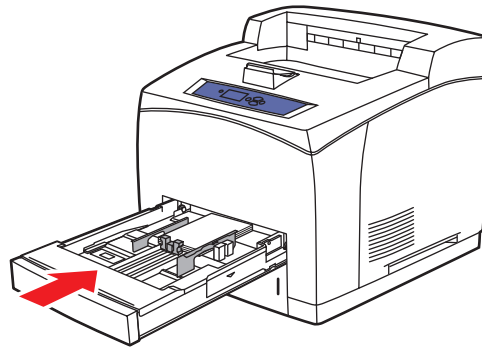
4500-105

5. At the printer's front panel, press the **OK** button to accept the paper size and type highlighted on the Front Panel.

Follow these steps if the paper size and type loaded is different than the paper size and type highlighted on the Front Panel:

a. Select **Change Paper Size**, then press the **OK** button.

b. Select **Index Card (3.0 x 5.0 in.)**, then press the **OK** button.

c. Press the **Back** button.

d. Select **Change Paper Type**, then press the **OK** button.

e. Select **Card Stock**, then press the **OK** button to save your selection.

6. In the printer driver, select the appropriate tray or paper type.

For more information, go to Reference/Printing/Basic Printing on the *User Documentation CD-ROM*.

Printing Labels from Trays 1-4

1. Pull the tray completely out of the printer.

4500-001

2. Insert the labels into the tray with the side to be printed **faceup** with the **top** of the page toward the **back** of the tray.
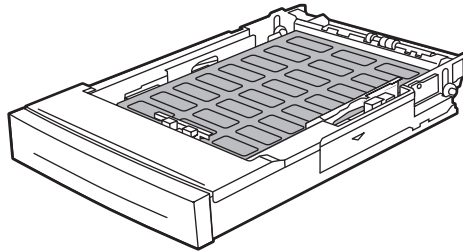
4500-083

3. Adjust the width and length paper guides to match the size of the paper.

4. Insert the tray into the printer tray slot and push it completely to the back of the printer.
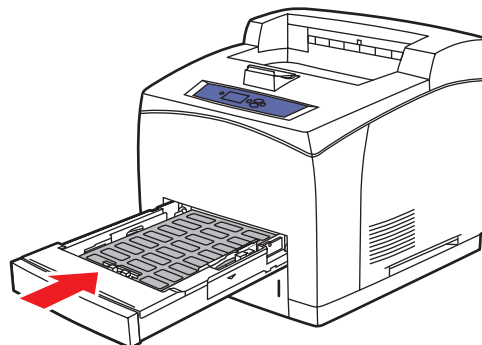
4500-103

5. At the printer's front panel, press the **OK** button to accept the paper size and type highlighted on the Front Panel.

Follow these steps if the paper size and type loaded is different than the paper size and type highlighted on the Front Panel:

a. Select **Change Paper Size**, then press the **OK** button.

b. Select **Auto-Letter (8.5 x 11.0 in.)**, then press the **OK** button.

c. Press the **Back** button.

d. Select **Change Paper Type**, then press the **OK** button.

e. Select **Labels**, then press the **OK** button to save your selection.

6. In the printer driver, select the appropriate tray or paper type.

For more information, go to Reference/Printing/Basic Printing on the *User Documentation CD-ROM*.

Printing Greeting Cards from Trays 1-4

1. Pull the tray completely out of the printer.
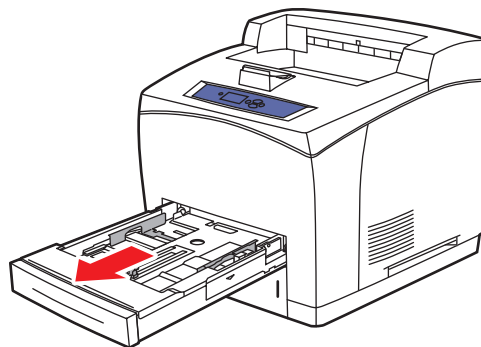
4500-001

2. Insert the greeting cards into the tray with the side to be printed **faceup** with the **top** of the page toward the **back** of the tray.
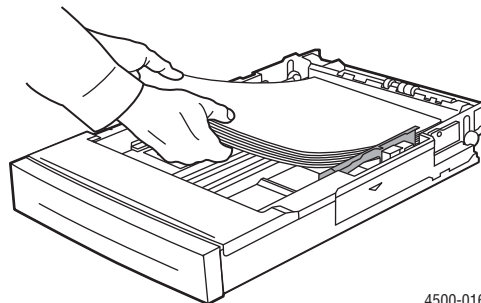
4500-016

3. Adjust the width and length paper guides to match the size of the paper.

4. Insert the tray into the printer tray slot and push it completely to the back of the printer.

5. At the printer's front panel, press the **OK** button to accept the paper size and type highlighted on the Front Panel.
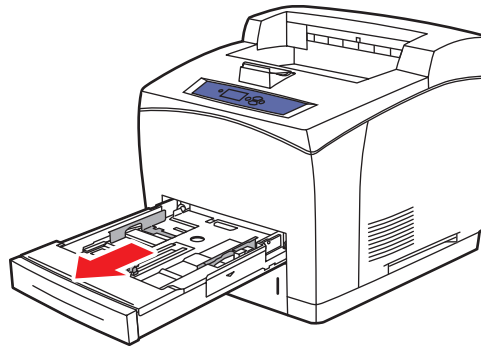
Follow these steps if the paper size and type loaded is different than the paper size and type highlighted on the Front Panel:

   a. Select **Change Paper Size**, then press the **OK** button.

   b. Select **Auto-Letter (8.5 x 11.0 in.)**, then press the **OK** button.

   c. Press the **Back** button.

   d. Select **Change Paper Type**, then press the **OK** button.

   e. Select **Card Stock**, then press the **OK** button to save your selection.

6. In the printer driver, select the appropriate tray or paper type.

Custom Size Paper

Print custom size paper, within the following ranges, from the trays listed.

	Input		Output	
	Tray 1	**Trays 2–4**	**Standard Tray**	**500-Sheet Stacker**
Simplex (1-Sided Printing)				
Width	76 – 216 mm 3.0 – 8.5 in.	98 – 216 mm 3.9 – 8.5 in.	76 – 216 mm 3.0 – 8.5 in.	90 – 216 mm 3.5 – 8.5 in.
Height	127 – 356 mm 5.0 – 14.0 in.	148 – 356 mm 5.8 – 14.0 in.	127 – 356 mm 5.0 – 14.0 in.	140 – 356 mm 5.5 – 14.0 in.
Duplex (2-Sided Printing)				
Width	90 – 216 mm 3.5 – 8.5 in.	98 – 216 mm 3.9 – 8.5 in.	Same as Input	
Height	140 – 356 mm 5.5 – 14.0 in.	148 – 356 mm 5.8 – 14.0 in.	Same as Input	

For more information on paper types, weights, and sizes, go to Reference/Printing/Supported Papers on the *User Documentation CD-ROM*.

Loading Custom Size Paper in Tray 1-4

1. Pull the tray completely out of the printer.
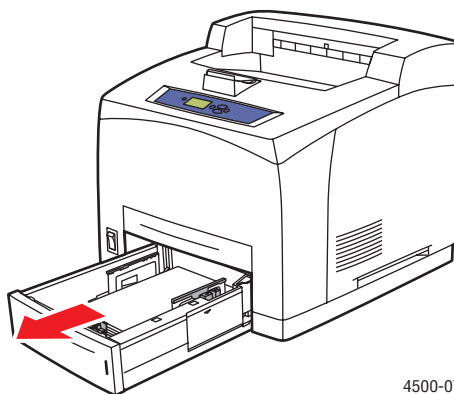
4500-078

2. Insert custom size paper into Tray 1, 2, 3, or 4.
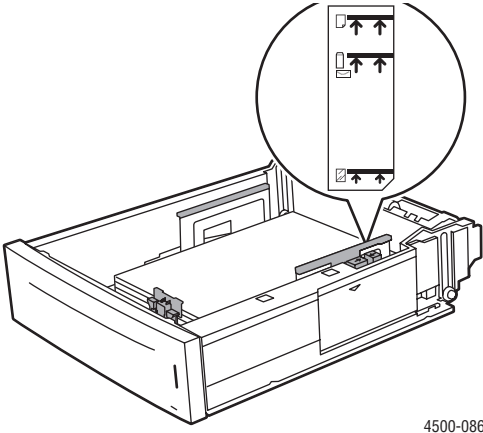
4500-086

Note

> Do not load paper, transparencies, or specialty media above the fill lines inside the
> tray. Only use flat paper, transparencies, or specialty media. If frequent jamming
> occurs with card stock or heavier paper that is less than 175 mm (7 in.) long, reduce
> the number of sheets in the tray.

3. Adjust the width and length paper guides to match the size of the paper.
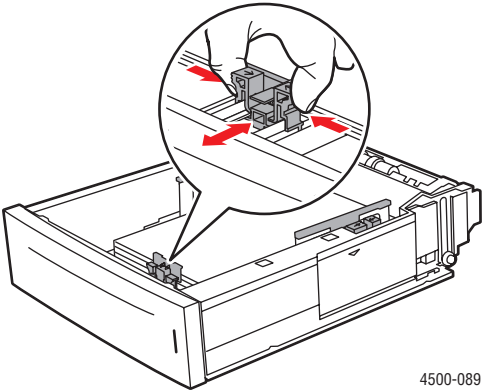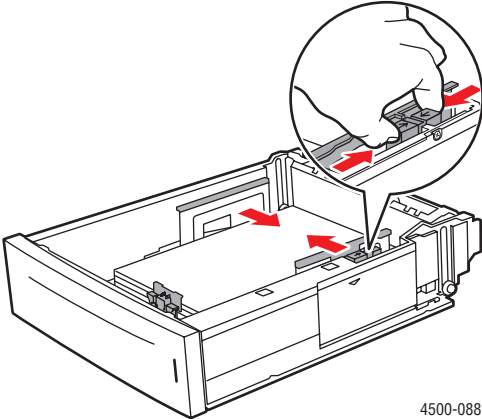
4500-088

4500-089

4. Insert the tray into the printer tray slot and push it completely to the back of the printer.
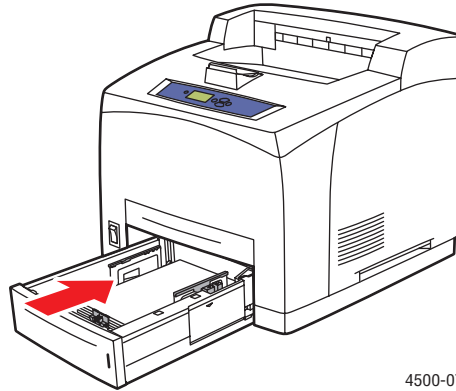
4500-077

5. At the printer's front panel:

    a. Select **Change Paper Size**, then press the **OK** button.

    b. Select **Custom**, then press the **OK** button.

    c. **Custom Width** is highlighted. Press the **OK** button, press the **Down Arrow** button to change the width, then press the **OK** button to save your change.

    d. Select **Custom Height**, then press the **OK** button.

    e. Press the **Down Arrow** button to change the height, then press the **OK** button to save your change.

    f. Press the **Back** button.

    g. Select **Paper Type**, then press the **OK** button.

    h. Select the type of paper loaded in the tray, then press the **OK** button to save your selection.

6. In the printer driver, select the appropriate tray or paper type.

For more information, go to Reference/Printing/Basic Printing on the *User Documentation CD-ROM*.

Advanced Options

This topic includes:

- "Printing Separation Pages" on page 2-42
- "Printing Multiple Pages on a Single Sheet (N-Up)" on page 2-43
- "Printing Negative and Mirror Images" on page 2-44
- "Scaling" on page 2-45
- "Printing Watermarks" on page 2-46
- "Printing Cover Pages" on page 2-47
- "Printing or Deleting Proof, Saved, and Secure Print Jobs" on page 2-48

Printing Separation Pages

A *separation page* (a divider page or slipsheet) can be inserted after a print job, between copies of a print job, or between individual pages of a print job. Specify the tray to use as the source for the separation pages.

To specify separation pages in a supported driver:

- **Windows 98, Windows Me PostScript driver:**

  On the **Output Options** tab, select the location of the separation pages and the tray source.

- **Windows 2000, Windows XP, Windows Server 2003, Windows NT PostScript driver:**

  On the **Output Options** tab, select the location of the separation pages and the tray source.

- **Mac OS 9 driver:**

  In the **Print** dialog box, select **Advanced Options 1** from the drop-down list, select the paper source from the **Separation Page Source** drop-down list, then select **On** from the **Separation Page** drop-down list.

- **Mac OS X (version 10.1 and higher) driver:**

  In the **Print** dialog box, select the **Printer Features** drop-down list, select **Separation Page** and **Source** from the drop-down list, then select **On** from the **Separation Page** drop-down list.

Printing Multiple Pages on a Single Sheet (N-Up)

When printing a multiple-page document, you can print more than one page on a single sheet of paper. Print one, two, four, six, nine, or 16 pages per side.
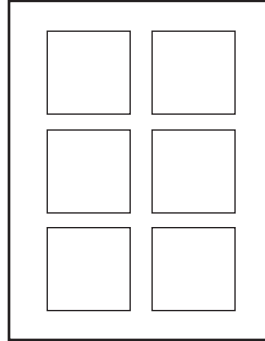
To print multiple pages on a single sheet of paper in a supported driver:

■ **Windows 98, Windows Me PostScript driver:**

On the **Setup** tab, click the **More Layout Options** button, then select the number of pages per sheet from the drop-down list**.** When you print more than one page on a sheet, you can also print a border around each page.

■ **Windows 2000, Windows XP, Windows Server 2003 PostScript driver:**

On the **Layout** tab, select the number of pages per sheet from the drop-down list.

■ **Windows NT PostScript driver:**

On the **Advanced** tab under **Document Options**, select the desired **Page Layout (N-up) Option**.

■ **Mac OS 9 driver:**

In the **Print** dialog box, select **Layout** from the drop-down list, then select the number of **Pages Per Sheet** and **Layout direction**.

■ **Mac OS X (version 10.1 and higher) driver:**

In the **Print** dialog box, select **Layout** from the drop-down list, then select the number of **Pages Per Sheet** and **Layout direction**.

Printing Negative and Mirror Images

You can print pages as a negative image (reverses the light and dark areas in your printed image) or mirror image (flips images horizontally on pages when printed).
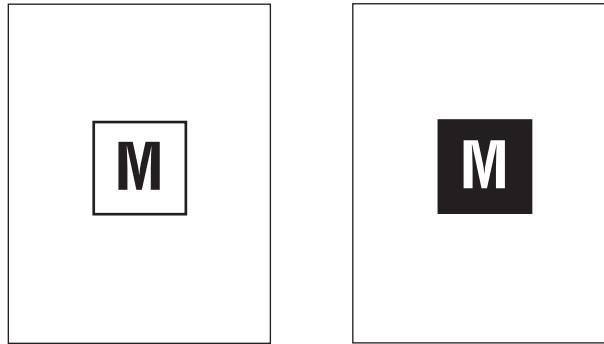
Negative Image
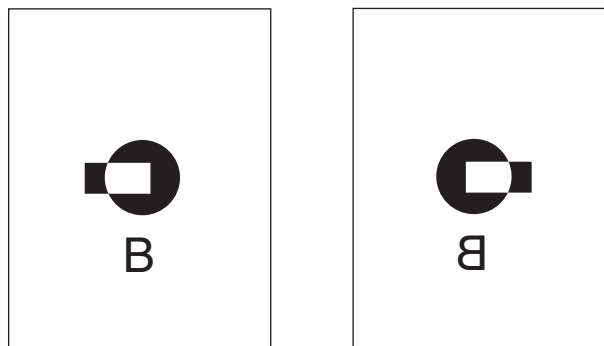
Mirror Image

To select negative or mirror images in a supported driver:

■ **Windows 98, Windows Me PostScript driver:**

On the **Setup** tab, click **More Layout Options**, then select **Print as a Negative Image** or **Print as a Mirror Image**.

■ **Windows 2000, Windows XP, Windows Server 2003 PostScript driver:**

From the **Layout** tab, click **Advanced**. Under **Document Options** and **PostScript Options,** select **Yes** for **Mirrored Output** or **Negative Output**.

■ **Windows NT PostScript driver:**

On the **Advanced** tab, under **Document Options** and **PostScript Options**, select **Yes** for **Mirrored Output** or **Negative Output**.

■ **Mac OS 9 driver:**

From the **File** menu, select **Page Setup**, choose **PostScript Options** from the drop-down list, then select **Invert Image** (to print a negative image) or **Flip Horizontal** (to print a mirror image).

Scaling

You can reduce or enlarge your page images when they are printed by selecting a scaling value between 25 and 400 percent. The default is 100 percent.

50%   100%   200%
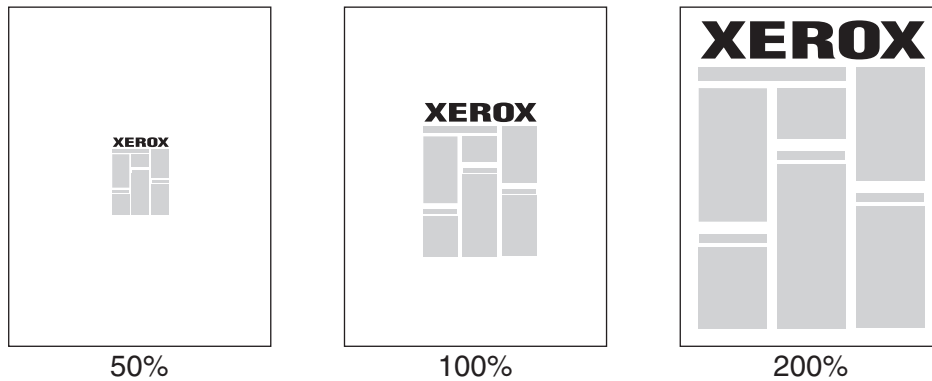
To select scaling in a supported driver:

■ **Windows 98, Windows Me PostScript driver:**

On the **Setup** tab, click **More Layout Options**, then specify the percentage to scale in the **Percentage** box.

■ **Windows 2000, Windows XP, Windows Server 2003 PostScript driver:**

From the **Layout** tab, click **Advanced**, select **Graphic**, then select the desired percentage for **Scaling**.

■ **Windows NT driver:**

On the **Advanced** tab, select **Graphic**, then select the desired percentage for **Scaling**.

■ **Mac OS 9, Mac OS X (version 10.1 and higher) driver:**

From the **File** menu, select **Page Setup,** then specify the percentage in the box for **Scale**.

Printing Watermarks

A watermark is additional text that can be printed across one or more pages. For example, terms like Draft, Confidential, Date, Version that you might stamp on a page before distribution, can be inserted with a watermark.
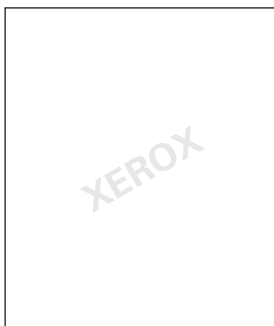
In some Windows drivers you can:

■ Create a watermark
■ Edit an existing watermark's text, color, location, and angle
■ Place a watermark on either the first page or every page in a document
■ Print the watermark in the background
■ Print the text of the watermark as an outline (instead of filled text)

Note

Not all applications support watermark printing.

To select, create, and edit watermarks using a supported Windows driver:

■ **Windows 98, Windows Me PostScript driver:**

On the **Setup** tab, click **More Layout Options**, then click **Watermark** to display the **Watermarks** dialog box.

■ **Windows 2000, Windows XP, Windows Server 2003 PostScript driver:**

From the **Layout** tab, click the **Advanced** button. In the box under **Document Options** and **Printer Features**, select **Watermarks**, then select **Modify** for the desired watermark.

Printing Cover Pages

A cover page is the first or last page of a document. The printer enables you to choose a different paper source for the cover page than for the body of a document. For instance, use your company letterhead for the first page of a document, or use card stock for the first and last pages of a report.

■ Use any applicable paper tray as the source for printing cover pages.
■ Verify that the cover page is the same size as the paper used for the rest of your document. If you specify a different size in the driver than the tray you select as a cover pages source, your cover(s) print on the same paper as the rest of your document.

You have several choices for cover pages:

■ **None** - Prints the first and last pages of your document from the same tray as the rest of your document.
■ **First** - Prints the first page on paper from the specified tray.
■ **First and Last** - Prints the first and last pages on paper from the specified tray.

Cover Page	Print Option	Pages Printed on Cover
First	1-sided printing	Page 1
	2-sided printing	Pages 1 and 2
Last	1-sided printing	Last page
	2-sided printing (odd-numbered pages)	Last page
	2-sided printing (even-numbered pages)	Last two pages

For the back of your front cover to remain blank when 2-sided printing, page two of your document must be blank. For the back cover of your document to remain blank, see the following table for inserting blank pages.

Print Option	Last Page of Text	Blank Pages
1-sided printing		Add one blank page at the end of the document.
2-sided printing	Odd-numbered	Add two blank pages at the end of the document.
	Even-numbered	Add one blank page at the end of the document.

To select cover pages in a supported driver:

■ **Windows 98, Windows Me PostScript driver:**

   On the **Output Options** tab**,** select **First Page Only** or **First and Last Pages**, then select the tray to use for the covers from the **Source** drop-down list.

- **Windows 2000, Windows XP, Windows Server 2003, Windows NT PostScript driver:**

  On the **Paper/Quality** tab under **Cover Pages**, select **First Page Only** or **First and Last Page**, then select the tray to use for the covers from the **Source** drop-down list.

- **Mac OS 9 driver:**

  In the **Print** dialog box, select **Cover Page** from the drop-down list, select **Before Document** or **After Document**, then select **Cover Page papeer Source** from the drop-down list.

- **Mac OS X (version 10.1 and higher) driver:**
  a. In the **Print** dialog box, select **Paper Feed**, then select **First Page From**.
  b. In the **Printer Features** dialog box, select **Remaining from:** paper source from the drop-down list.

Printing or Deleting Proof, Saved, and Secure Print Jobs

Note

These features are available if your printer has an internal hard drive. These jobs are stored on the hard drive and remain in the printer even when it is turned off.

Choose one of the following special job types:

- **Secure Print:** Prints confidential documents. Your four-digit numeric password-protected jobs are stored on the printer's hard drive. The jobs print only after the user name, four-digit password number, and job name are entered at the printer's front panel. The jobs are automatically deleted from the hard drive after printing.
- **Proof Print:** Prints only one copy of a multiple copy job in order to proof the copy. To print the remaining copies, select the job name at the printer's front panel. The job is automatically deleted from the hard drive after printing. If you do not want to print the remaining copies, delete the job at the front panel.
- **Saved Print:** Stores the job on the printer's hard drive so you can print it on demand. The job is not deleted after printing. This is useful for any document you frequently print, such as tax forms, personnel forms, or requisition forms.

Note

Protected Jobs are jobs that have been copied or moved from the Public Jobs group in CentreWare IS. For more information on Protected Jobs, go to *CentreWare IS Online Help*.

Sending Proof, Saved, and Secure Print Jobs to the Printer

Use a supported driver to specify a job as a secure print, proof print, or saved print job:

- **Windows 98, Windows Me PostScript driver:**

  On the **Output Options** tab, choose the job type under **Walk-Up Features**. For a secure print job, enter a 4-digit password to assign to this job. For a proof print or saved print job, enter the name you want to give this job.

- **Windows 2000, Windows XP, Windows Server 2003, Windows NT PostScript driver:**

  On the **Output Options** tab, choose the job type under **Walk-Up Features**. For a secure print job, enter a 4-digit password to assign to this job. For a proof print or saved print job, enter the name you want to give this job.

- **Mac OS 9 driver:**

  In the **Print** dialog box, select **Job Type** from the pull-down list, select **Normal** (default), **Proof Print**, **Saved Print**, or **Secure Print**. For a saved print job, enter the document name. For a secure print job, enter a 4-digit password to assign to this job.

- **Mac OS X (version 10.1 and higher) driver:**

  In the **Print** dialog box, select the **Printer Features** pull-down menu, select **Job Type** from the **Features Sets** drop-down list, then select **Proof Print**, **Saved Print,** or **Secure Print** from the **Job Type** drop-down list.

Printing or Deleting Secure Print Jobs

To print a secure print job, specify the four-digit password at the printer's front panel:

1. Select **Walk-Up Printing**, then press the **OK** button.
2. Select **Secure Print Jobs**, then press the **OK** button.
3. Scroll to your User Name, then press the **OK** button.
4. Scroll to the number for the first digit of the numeric password, then press the **OK** button to accept that digit.
5. Repeat Step 4 for the second, third, and fourth digits.

   Note

   If you entered less than four digits in the driver's **Password** field, enter zeros before your password so that there are four digits entered in the front panel. For example, if **222** is entered in the driver, enter **0222** at the front panel. Use the **Back** button to return to a previous digit.

6. If more than one secure print job is entered with a password, select the desired job to print or select **All of Them**, then press the **OK** button.
7. Select **Print and Delete** or **Delete**, then press the **OK** button to print.

Printing or Deleting Proof and Saved Print Jobs

To print a saved print job or the remaining copies of a proof print job, select the job name at the printer's front panel:

1. Select **Walk-Up Printing**, then press the **OK** button.
2. Select **Proof Print Jobs** or **Saved Print Jobs**, then press the **OK** button.
3. Scroll to the job name, then press the **OK** button.
4. Select **Print and Delete** (for proof prints) or **Print and Save** (for saved prints), then press the **OK** button.
5. Scroll to the desired number of copies, then press the **OK** button to print the job.

Supplies and Recycling

This topic includes:

■ "Supplies" on page 2-50
■ "Recycling" on page 2-50

Supplies

The printer's front panel displays status messages and warnings as the supply nears its replacement time. When the front panel prompts you that a supply is low or needs to be replaced, verify that you have replacements on hand. It is important to order these supplies when the messages first appear to avoid interruptions to your printing.

To order supplies, contact your local reseller or visit the Xerox web site at www.xerox.com/office/4500supplies.

Consumables

The only consumables for this printer are the Xerox print cartridges. To order print cartridges, contact your local reseller or visit the Xerox web site at www.xerox.com/office/4500supplies.

Caution

If you attempt to use a non-Xerox print cartridge, it may not fit properly in the printer. If the cartridge does not fit properly, the printer will not function.

Routine Maintenance Items

Routine maintenance items are printer parts or assemblies that have a limited life requiring periodic replacement. Replacements may be in the form of parts or kits. Routine Maintenance Items are typically customer replaceable.

The only routine maintenance item for the Phaser 4500 Laser Printer is the maintenance kit. Access the "Supplies Info" menu from the printer's front panel to see the remaining life for the maintenance kit.

Access the "Supplies Usage Page" from the printer's front panel, from CentreWare IS, or print the "Usage Profile" from the printer's front panel.

Recycling

For information on Xerox supplies recycling programs, go to www.xerox.com/office/recycle.

3 Connections and Networks

This section includes:

Connections and IP Address

This topic includes:

■ "Printer Setup" on page 3-2
■ "Connection Setup" on page 3-6

Printer Setup

> **i** The information in this section is also stored as an information page in your printer. Use the front panel to quickly print this information in the future.

Ethernet Connection (Recommended)

An Ethernet connection is recommended because it is faster than a USB cable connection. It also allows the user direct access to CentreWare IS.

Network Connection

Use an Ethernet connection with two twisted-pair (Category 5/RJ-45) cables and an Ethernet hub. Connect the computer to the hub with one cable, then connect the printer to the hub with the second cable. Connect to any port on the hub except the uplink port. TCP/IP and EtherTalk are the most common protocols used with Ethernet cables. To print using TCP/IP, each computer and printer requires a unique IP address. Go to "Setting an IP Address" in this section.

Standalone (Cable or DSL) Network Connection

For information about setting up a cable or DSL connection for your printer, go to www.xerox.com/office/infoSMART to view Document # 33188, entitled *Basic TCP/IP Tutorial and Home Networking Guidelines*.

Setting an IP Address

If your computer is on a large network, contact your network administrator for the appropriate TCP/IP addresses and additional configuration information.

If you are creating your own small Local Area Network or connecting the printer directly to your computer over Ethernet, follow the procedure for automatically setting the printer's IP address.

The printer and computer(s) must have unique IP addresses. It is important that the addresses are similar, but not the same. For example, your printer can have the address 192.168.1.2 while your computer has the address 192.168.1.3. Another device can have the address 192.168.1.4.

For more information, go to www.xerox.com/office/infoSMART to view Document # 18545.

Automatically Setting the Printer's IP Address

Use the Phaser installer on the *Printer Installer and Utilities CD-ROM* to detect and/or assign an IP address to your printer. For further instructions, insert the *Printer Installer and Utilities CD-ROM* into your computer's CD-ROM, launch the installer, then follow the prompts for installation.

Note

For the automatic installer to function, the printer must be connected to a TCP/IP network.

Manually Setting the Printer's IP Address

1. At the printer's front panel, select **Printer Setup,** then press the **OK** button.
2. Select **Connection Setup**, then press the **OK** button.
3. Select **Network Setup**, then press the **OK** button.
4. Select **TCP/IP Setup**, then press the **OK** button.
5. Select **DHCP/BootP**, then press the **OK** button to select **Off**.
6. Select **TCP/IP Address**, then press the **OK** button.
7. Enter your printer's IP address, then press the **OK** button.

Setting a Static IP Address on Your Computer

Windows 2000, Windows XP, and Windows Server 2003

1. On the desktop, right-click **My Network Places**, then click **Properties**.
2. Right-click **Local Area Connection**, then click **Properties**.
3. If you do not have TCP/IP available, click **Add**, then click **Protocol**.
4. Click **Add**, then click **Internet Protocol TCP/IP**.
5. Select the **General** tab, select the TCP/IP protocol for your network card, then click **Properties**.
6. Select the **General** tab, then click **Use the following IP address**.
7. Enter an IP address and Subnet mask, then click **OK**.
8. If prompted, click **OK** to restart Windows.

Windows NT 4.x

1. On the desktop, right-click **Network Neighborhood**, then click **Properties**.
2. On the **Protocols** tab, click **TCP/IP Protocol**, then click **Properties**.
3. Select the **IP Address** tab, then click **Specify an IP Address**.
4. Enter an IP Address and Subnet mask, then click **OK**.
5. If prompted, click **OK** to restart Windows.

Windows 98 and Windows Me

1. On the desktop, right-click **Network Neighborhood** or **My Network Places**, then click **Properties**.
2. On the **Configuration** tab, select the TCP/IP protocol for your network card, then click **Properties**.

3. Select the **IP Address** tab, then click **Specify an IP address**.

4. Enter an IP address and Subnet mask, then click **OK**.

5. If prompted, click **OK** to restart Windows.

Macintosh OS 9.x TCP/IP

1. Click the **Apple** icon, then select the **Controls Panel** folder.

2. Double-click **TCP/IP**, then verify that Ethernet is the connection type.

3. Enter an IP address and Subnet mask, then click **OK**.

4. If prompted, click **OK** to restart.

Macintosh OS X (10.1 and higher) TCP/IP

1. Click the **Apple** icon, click **System Preferences**, then click the **Network** icon.

2. In the **Network** control panel, click the **TCP/IP** tab.

3. Under **Location**, click **Automatic**.

4. Under **Show**, click **Built-in Ethernet**.

5. Under **Configure**, click **Manually**.

6. Enter the IP Address, Subnet Mask, and Router (Gateway).

7. Click **Apply Now** to activate the changes.

USB Connection

The USB connection requires a standard USB cable. This cable is not included with your printer and must be purchased separately. Verify that you are using the correct USB cable for your connection.

Windows 98 or Later and Windows 2000 or Later

Connect the USB cable to the PC and follow the **Add New Hardware Wizard** to create the USB port. Follow the **Add Printer Wizard** to install the printer driver from the *Printer Installer and Utilities CD-ROM*. For more information go to www.xerox.com/office/infoSMART to view these documents:

■ Windows 98: Document # 18215

■ Windows 2000: Document # 22701

■ Windows XP: Document # 53543

Macintosh OS 9.x

A USB-connected printer does not display in the Chooser. Install the printer driver from the *Printer Installer and Utilities CD-ROM*. Use the **Desktop Printer Utility** (version 1.2 or later) to create a desktop USB printer. The utility is located in the **PhaserTools** folder which is created during the software installation. For more information go to www.xerox.com/office/infoSMART to view Document # 33225.

Macintosh OS X (10.1 and Higher)

1. Install the printer driver from the *Printer Installer and Utilities CD-ROM*.
2. Open the **Print Center** utility. (On the Macintosh hard drive, open the **Applications** folder, then open the **Utilities** folder.)
3. Click the **Add** button.
4. Select **USB** from the top drop-down list.
5. Select the printer in the printers window.
6. Verify that your printer is set to **Auto Select**.
7. Click the **Add** button.

The printer is displayed as an available printer in the **Print Center**. For more information, go to www.xerox.com/office/infoSMART to view Document # 49355.

Connection Setup

Installing the Printer Driver

To download the latest printer drivers, go to www.xerox.com/office/support.

Windows 98 or Later and Windows 2000 or Later

Install the printer driver from the *Printer Installer and Utilities CD-ROM*. The *Printer Installer and Utilities CD-ROM* automatically installs and identifies the printer during the installation process. For more information go to www.xerox.com/office/infoSMART to view these documents:

■ Windows 98 and Windows Me: Document # 9840
■ Windows 2000, Windows XP, and Windows Server 2003: Document # 36894
■ Windows NT: Document # 11338

Macintosh OS 9.x EtherTalk

If you use EtherTalk, Macintosh computers do not require IP addresses.

1. Open the **AppleTalk** Control Panel.
2. Verify that the **Ethernet** port is the selected network port.
3. Double-click the installer on the *Printer Installer and Utilities CD-ROM* to install the printer driver.
4. Open the **Chooser**, then click the **LaserWriter** driver.
5. From the right column of the **Chooser**, select the printer, then click **Create** to create the desktop printer.

For more information go to www.xerox.com/office/infoSMART to view Documents # 2562 and # 1886.

Macintosh OS X (10.1 and Higher)

Macintosh OS X supports TCP/IP as the default protocol, as well as AppleTalk. For a TCP/IP installation, follow the instructions provided to set an IP address in the printer.

1. Install the printer driver from the *Printer Installer and Utilities CD-ROM*.
2. Open the **Print Center** utility. (On the Macintosh hard drive, open the **Applications** folder, then open the **Utilities** folder.)
3. Click the **Add Printer** button.
4. Choose the connection type you desire.

■ For **LPR**, enter the IP address of the printer that you set previously. The **Queue Name** field remains blank if the **Use default queue on server** box is checked (by default). Other options are **PS** or **AUTO**. Select the appropriate PPD for the printer model under the **Printer Model** drop-down list.

■ For **AppleTalk**, select the appropriate printer from the list that is displayed. The configuration process continues until configuration is complete. If AppleTalk is not available in the Print Center drop-down list, the AppleTalk protocol is disabled and must be installed on the Macintosh. If the AppleTalk protocol is enabled, but is not

available in the drop-down window, it is recommended that you contact your system administrator or Apple Computer Incorporated for assistance.

- For **Rendezvous**, select the appropriate printer from the list that is displayed.

For more information go to www.xerox.com/office/infoSMART to view Documents # 48704, # 50080, and # 49814.

Dynamic Methods of Setting the Printer's IP Address

An Internet Protocol (IP) address is required to identify your printer on a network. Set the printer's IP address by any of the following methods:

- DHCP
- CentreWare Internet Services
- Auto IP (Host Names)

Information Required for IP Addressing

Information	Comments
Internet (IP) address for the printer	Format is *xxx.xxx.xxx.xxx*, where *xxx* represents a decimal number from 0–255.
Network Mask	If you are unsure, leave this blank; the printer chooses an appropriate mask.
Default Router/Gateway address	If you want to communicate with the printer from anywhere other than the local network segment, you need the router address.

Enabling DHCP on the Printer

Verify that the printer's DHCP protocol is enabled by setting the front panel or using CentreWare IS.

Note

To determine your printer's IP address, select **Printer Identification** at the front panel. For information about the front panel, go to Reference/Features on the *User Documentation CD-ROM*.

Changing or Modifying the IP Address Using CentreWare Internet Services (IS)

CentreWare IS is a printer administration and support tool using web technology. With CentreWare IS software, you can access printer status and manage your printer over a TCP/IP network using a web browser. For more information, go to Explore/CentreWare IS on the *User Documentation CD-ROM*.

After setting the printer's IP address, you can modify the TCP/IP using CentreWare IS.

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select the **Protocols** folder on the left sidebar.
5. Select **TCP/IP**.
6. Enter or modify your printer's settings, then click **Save Changes** at the bottom of the page.

Using Host Names with the Domain Name Service (DNS)

The printer supports DNS through an embedded DNS resolver. The DNS resolver protocol communicates with one or more DNS servers to resolve the IP address for a given host name or the host name for a given IP address.

To use an IP host name for the printer, the system administrator must configure one or more DNS servers and a local DNS domain name space database.

To set up the printer for DNS, supply a maximum of two DNS name server IP addresses. There are two ways to set up the printer:

■ TCP/IP–Go to "DNS Setup Using CentreWare Internet Services."
■ DHCP–Go to "Dynamic Domain Name Service (DDNS)."

DNS Setup Using CentreWare Internet Services

Set up the printer for DNS using CentreWare IS after setting the printer's IP address.

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select the **Protocols** folder on the left sidebar.
5. Select **TCP/IP**.
6. In the DNS Settings section, enter your domain server's IP address in these fields:
   ■ **Primary Name Server IP Address** (required)
   ■ **Second Name Server IP Address** (optional)
7. Click **Save Changes** when you are finished entering the settings.

Dynamic Domain Name Service (DDNS)

This printer supports Dynamic DNS through DHCP. You must have DHCP enabled on the printer for DDNS to function. Your network's DHCP server must also support Dynamic DNS updates through option 12 or option 81 support. See your network administrator for details.

1. Launch your web browser.

2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).

3. Select **Properties**.

4. Select the **Protocols** folder on the left sidebar.

5. Select **TCP/IP**.

6. In the BOOT/DHCP Settings section, set the **BOOTP/DHCP** option to **ON**.

7. To enable DDNS, enter the following DDNS/WINS settings information:

   - **DDNS** - Set to **ON**.
   - **Release Host Name** - Set to **NO**.
   - **DDNS/WINS Name** - Use the default name provided by Xerox or enter another name.
   - **Primary WINS Server** (optional)
   - **Secondary WINS Server** (optional)

8. Click **Save Changes** when you are finished entering the settings.

Other Resources

For more information about network setup and troubleshooting, go to Reference/Connections & Networks on the *User Documentation CD-ROM*.

Printer Management Software

This topic includes:

- "Using CentreWare Software" on page 3-10
- "Using Printer Management Features" on page 3-12

Using CentreWare Software

CentreWare Internet Service (IS)

CentreWare IS is a printer administration and support tool using web technology. With CentreWare IS software, you can access printer status and manage your printer over a TCP/IP network using a web browser.

CentreWare IS enables you to:

- Receive printer status and manage printers independent of network servers and operating systems.
- Define a link to your local web server's support page.
- Access online manuals and technical support information by using built-in links to the Xerox web site.

CentreWare IS provides an easy-to-use, consistent interface that you can use for most configuration tasks.

CentreWare IS requires only a web browser and a TCP/IP connection between the printer and the network (in Windows, Macintosh, or UNIX environments). TCP/IP and HTTP must be enabled in the printer.

For complete information about CentreWare IS, see the *CentreWare IS Online Help.*

CentreWare DP for NetWare

CentreWare DP is easy-to-use printer management software that runs on Windows 98 or later and Windows 2000 or later. Through point-and-click navigation you can install, connect, and configure the printer quickly and easily on a network . It provides network administrators with setup procedures and management of networked printers.

The following table lists CentreWare DP key features and benefits.

Feature	Benefit
Setup Wizard	Provides a step-by-step guide to install your printer on the network.
Advanced Setup	Provides a tool to service multiple file servers and queues.
Instant Status	Enables you to select a printer from the Printer List to monitor the printer at any given time.
Remote Configuration and Management	Enables you to do most configuration and monitoring tasks from your workstation.
Printer Upgrades	Enables you to upgrade your printer from your workstation (if available for your printer model).

For more information go to www.xerox.com/office to view the *CentreWare DP User Guide*.

CentreWare MC (Microsoft Management Console)

CentreWare MC allows IP discovery of printers equipped with an embedded web server. The embedded web server in Xerox printers is called CentreWare Internet Services.

For installing or managing multiple printers on a Windows NT 4.x (Service Pack 6 or higher), Windows 2000, or Windows XP network with the TCP/IP protocol enabled, use the Xerox CentreWare MC snap-in to Microsoft Management Console. For more information go to www.xerox.com/office to view the *CentreWare MC User Guide*.

CentreWare Web

CentreWare Web is a multi-vendor printer management, installation, and troubleshooting application that can remotely manage, install, and troubleshoot printers on your network using a web browser. Printers are found through network or print server discovery and managed over TCP/IP networks using RFC-1759 SNMP (Simple Network Management Protocol).

Some of the features provided by CentreWare Web:

■ Remotely add ports, queues, and drivers to Windows 2000, XP, and NT4.x SP6 print servers.

■ Install, troubleshoot, upgrade, and clone wizards to aid all users in performing administrative tasks.

■ Install CentreWare Web on a server for availability to all clients on the network that have Internet access with a browser.

■ Support multiple users and provide for different levels/privileges of user access, such as administrators or guests.

■ Discover printers on local and remote subnets.

■ Automatically discover printers as scheduled.

■ Generate reports.

■ Connect to printer web servers for additional printer-specific features, including help.

For more information go to <u>www.xerox.com/office</u> to view the *CentreWare Web User Guide*.

Using Printer Management Features

Job Accounting

The printer stores information about print jobs in a log file. The log file is stored either in the printer's memory or on an optional hard disk if one is installed in the printer. If the log file is stored in the printer's memory, it is lost when the printer is reset. It is recommended that a hard disk be used for job accounting.

The log file lists job records. Each record contains fields such as user name, job name, pages printed, job times, and toner and ink used. Not all fields are supported by all printers. For information go to *CentreWare IS online help* or *CentreWare Web online help*.

The job accounting values reported vary depending on the protocol and print command used when each job was printed. For example, using NPRINT over NetWare provides the printer with the most information about the job being printed. When using Windows and NetWare, the job name is often LST: or LST:BANNER. Other jobs from other ports may provide less information about the job.

Job accounting is available through CentreWare IS and CentreWare Web.

Using CentreWare IS

1. Launch your web browser.

2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).

3. On the right side of the main CentreWare IS page, click **Jobs**.

The "Job Accounting Links" page provides links that enable you to browse, download, and clear job accounting records.

For complete information on CentreWare IS job accounting, including clearing job information, downloading job information to a file, and job accounting file formats, go to *CentreWare IS Online Help*.

MaiLinX Alerts

MaiLinX alerts allow the printer to automatically send email to the system administrator and others under the following conditions:

■ When printer errors, warnings, and alerts occur.

■ When the printer requires attention (for example, when service is required or supplies need to be replenished).

■ When a reply to a CentreWare IS Remote Internet Printing message is desired. For more information about CentreWare IS Remote Internet printing, go to *CentreWare IS Online Help*.

Three designated users can receive messages:

■ SysAdmin
■ Service
■ Key

Printer messages reporting errors, alerts, and warnings can be individually assigned to any of these users. You can customize the message text and the subject line in the Status Notification messages.

Status Notification is supplied by the printer's Simple Mail Transport Protocol (SMTP) client.

Setting Up CentreWare IS Status Notification

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Properties**.
4. Select **Mail Alerts** on the left sidebar. Follow the instructions on the page to select mail alert options.
5. Click **Save Changes**.

For complete information about CentreWare IS Status Notification, go to *CentreWare IS Online Help*.

Usage Profile Reports

The printer generates reports accessed through CentreWare IS that detail printer usage. Usage profile reports track multiple items, including:

■ Printer information, such as printer name, date installed, total pages printed, options installed, and network ID.
■ Supplies usage data, such as toner or ink. By tracking supplies usage, you can order supplies before they reach their end of life.
■ Media and tray information, such as how often prints are made on paper compared to transparencies, and how often each tray is used.
■ Job characteristics, such as size and timing of jobs.

Setting Up Usage Profile Reporting

1. Launch your web browser.
2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
3. Select **Jobs**.
4. Select **Usage Profile Reports** on the left sidebar.
5. Click the **Usage Profile Properties** link. Follow the instructions on the page to set up reports.
6. Click **Save Changes**.

For complete information about Usage Profile reporting, including descriptions of each field in the report, go to *CentreWare IS Online Help*.

Using CentreWare IS

Note

To send usage profile reports using email, the MaiLinX must be properly set up using "MaiLinX Alerts" on page 3-12.

1. Enter your printer's IP address into the browser to connect to the printer using CentreWare IS.
2. Select **Jobs**.
3. Select **Usage Profile Reports** on the left sidebar.
4. Enter the desired email address in the **Send to Specific Address** field.
5. Click **Send Usage Profile Report**.

Xerox Usage Analysis Tool

The Xerox Usage Analysis Tool is a Windows client/server application that allows system administrators to automatically track Xerox printer usage and obtain job accounting records. The tool supports large networks with many users and printers.

Job accounting and printer usage data is stored in a database. The application can be run on multiple clients using a single server. The data can be exported to a spreadsheet for viewing, analysis, and billing.

Go to www.xerox.com/office for complete information about using the Xerox Usage Analysis Tool provided by the application's online help system.

System Requirements

■ IP network
■ Xerox Phaser printers with Ethernet interface (optional hard disk recommended)
■ A PC with at least 32 MB of RAM. At least 1 GB of hard drive space is recommended for the server.
■ Supported operating systems: Windows 98 or later and Windows 2000 or later
■ Microsoft Excel 97 or Excel 2000 for export to spreadsheet (for graphing, billing, data analysis)

Windows 2000, Windows XP, and Windows Server 2003

This topic includes:

■ "Preliminary Steps" on page 3-15
■ "Quick CD-ROM Install Steps" on page 3-15
■ "Other Methods of Installation" on page 3-16
■ "Windows 2000, Windows XP, Windows Server 2003 Troubleshooting (TCP/IP)" on page 3-18

Preliminary Steps

These preliminary steps must be performed for all printers:

1. Verify that the printer is plugged in, turned on, and connected to an active network.

2. Verify that the printer is receiving network traffic by monitoring the LED's on the back of the printer or on the CentreDirect External Print Server. When the printer is connected to a functioning network and receiving traffic, its link LED is green, and its amber traffic LED is flashing rapidly.

3. Proceed to "Quick CD-ROM Install Steps" or "Other Methods of Installation" for the installation method desired.

4. Print the "Configuration Page" and keep it for reference.

Quick CD-ROM Install Steps

1. Insert the *Printer Installer and Utilities CD-ROM* into the computer's CD-ROM drive. If your PC is set to autorun, the installer launches automatically. If it does not launch, do the following:

   a. Click **Start**, then click **Run**.

   b. In the Run window, type: **<CD drive>:\INSTALL.EXE**.

2. Select your desired language from the list.

3. Select **Install Printer Driver**.

4. Click **I Agree** to accept the Xerox Software License Agreement.

5. In the Select Printer dialog box, the default **Use Walk-Up Technology (recommended for network printers)** is selected. Click **Next**.

6. Follow the **Use Walk-Up Technology** instructions displayed.

7. Click **Exit Program**.

Note

If the Walk-Up Technology dialog box remains onscreen after you have completed Steps 1–6, click the **Back** button, then click **Select from the following discovered printers**. Follow the onscreen prompts to complete the installation procedure.

Other Methods of Installation

Your printer can also be installed on a Windows 2000, Windows XP, or Windows Server 2003 network using one of these methods:

■ Microsoft TCP/IP Protocol
■ Xerox TCP/IP Port Monitor
■ Microsoft IPP Port

The following methods can also be used to monitor or configure your printer:

■ A web browser using CentreWare IS if your printer is connected to a Windows 2000, Windows XP, or Windows Server 2003 network with the TCP/IP protocol enabled.
■ The Xerox CentreWare MC snap-in to Microsoft Management Console for installing or managing multiple printers on a Windows 2000, Windows XP, or Windows Server 2003 network with TCP/IP protocol enabled. See the *CentreWare MC User Guide* at www.xerox.com/office.

Note

The CentreWare methods are not discussed in this section. For more information concerning CentreWare IS, CentreWare DP, or CentreWare MC, go to Reference/Connections & Networks/Printer Management Software on the *User Documentation CD-ROM*.

Microsoft TCP/IP Protocol

Note

For Windows XP, select Classic Look or the Windows XP procedures will not match the steps below. To select Classic Look, click **Start**, then **Settings**, then **Taskbar and Start Menu**. Select the **Start Menu** tab, then select the **Classic Start menu**. Click **OK**.

1. Right-click the **My Network Places** icon on the desktop, then click **Properties**.
2. Right-click **Local Area Connection**, then click **Properties**.
3. Click the **General** tab to verify that **Internet Protocol (TCP/IP)** is installed.
    ■ If the Internet Protocol (TCP/IP) box is checked, the software is installed.
    ■ If the Internet Protocol (TCP/IP) box is not checked, the software is not installed. Install TCP/IP software using the documentation provided by Microsoft, then return to this document.

Adding the Printer

1. On the desktop click **Start**, then click **Settings**.
2. Select one of these options:
    ■ For Windows 2000 click **Printers**, double-click **Add Printer** to launch the **Add Printer Wizard**, then click **Next**.
    ■ For Windows XP and Windows Server 2003, click **Printers and Faxes**. Double-click **Add Printer** to launch the **Add Printer Wizard**, then click **Next**.
3. Click the **Local Printer** button, then click **Next**.

4. Click the **Create a New Port** button.

5. Select **Standard TCP/IP Port** from the New Port Type pull-down menu, then click **Next**.

6. Click **Next**.

7. Click in the **Printer Name or IP Address** edit box and enter the IP Address of the printer you want to use. Click **Next**.

8. Select one of these options:

■ Click **Finish** in the **Confirmation** window if the data is correct.

■ Click the **Back** button to correct the data if incorrect, then click **Finish** in the **Confirmation** window when the data is correct.

Configuring the Printer

1. Insert the *Printer Installer and Utilities CD-ROM* into the computer's CD-ROM drive and click **Have Disk**.

2. Click the **Browse** button, then select the directory which contains the Windows 2000 or Windows XP drivers.

3. Select the ***.INF** file, then click **Open**.

4. Verify that the path and filename are correct, then click **OK**.

5. Enter a name for the printer and select whether you want that printer to be the default. Click **Next**.

6. Select one of these options:

■ If the printer is not shared, click **Next**.

■ If the printer is shared, enter a **Share Name**, check the **Share** box, then click **Next**.

Printing a Test Page

You are prompted to print a test page.

1. Select one of these options:

■ Click **Yes** to print a test page, then click **Next**.

■ Click **No** if you do not want to print a test page, then click **Next**.

2. Select one of these options in the **Completing the Add Printer Wizard** screen:

■ Click the **Finish** button if the data presented is correct. Proceed to step 3.

■ Click the **Back** button to correct the data if incorrect, then click **Finish** in the **Add Printer Wizard** when the data is correct. Proceed to Step 3.

3. If you printed a test page, you are prompted to confirm that the test page printed:

■ Click **Yes** if the test page printed successfully.

■ Click **No** if the test page did not print or printed incorrectly. Proceed to step 4.

4. Note the print-quality of the print job. If print-quality problems exist, or if the job does not print, go to Reference/Troubleshooting on the *User Documentation CD-ROM* for more information.

Microsoft IPP Port

Follow these steps to obtain the printer's URL and create an Internet Printing Protocol (IPP) printer.

Obtaining the Printer's URL (Network Path)

1. Launch your web browser.

2. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).

3. Select **Properties.**

4. Select the **Protocols** folder on the left sidebar.

5. Select **IPP**. The Network Path field on the IPP (Internet Printing Protocol) Settings page displays the printer's URL.

Creating an IPP Printer

1. On the desktop, click **Start**, click **Settings**, then click **Printers**.

2. Double-click **Add Printer** to launch the Microsoft Add Printer Wizard.

3. Select **Network Printer**, then click **Next**.

4. When prompted for **Network Path** (Windows 9x) or **URL** (Windows NT, Windows 2000, Windows XP), enter the printer's URL in the following format:

   http://*printer-ip-address/ipp*

5. Click **Next**.

6. Substitute your printer's IP address or DNS name for *printer-ip-address*. The printer's URL is displayed on the CentreWare IS IPP page in the Network Path field.

Windows 2000, Windows XP, Windows Server 2003 Troubleshooting (TCP/IP)

Note

> For Windows XP, select Classic Look or the Windows XP procedures will not match the steps below. To select Classic Look, click **Start**, then **Settings**, then **Taskbar and Start Menu**. Select the **Start Menu** tab, then select **Classic Start menu**. Click **OK**.

This troubleshooting section assumes you have completed the following tasks:

■ Loaded a Phaser printer PCL or PostScript printer driver.

■ Printed and kept a current copy of the "Configuration Page".

Printing the Configuration Page

You can print the "Configuration Page" to help you solve printing problems and obtain the best results from your printer. Access this page from the printer's front panel.

To print the "Configuration Page":

1. At the printer's front panel, select **Printer Setup**, then press the **OK** button.

2. Select **Configuration Page**, then press the **OK** button to print.

Note

> Print "Menu Map" to see other information pages available for printing.

Verifying Settings

1. Verify the settings on the "Configuration Page".

- **IP Address Source** is set to: **DHCP**, **Front Panel**, **BOOTP**, or **Auto IP** (depending on your network configuration).
- **Current IP Address** is set correctly. (Note this address if it is assigned by Auto IP, DHCP, or BOOTP.)
- **Subnet Mask** is set correctly (if used).
- **Default Gateway** is set correctly (if used).
- **LPR** is enabled. Verify that the LPR and AppSocket settings are set as desired.
- **Interpreters**: **Auto**, **PCL,** or **PostScript** (depending on your driver).

2. Verify that the client is logged into the network and printing to the correct print queue. The user should also have access to the Phaser printer queue.

Verifying Driver Installation

1. Right-click **My Network Places** on the desktop, then click **Properties**.

2. Right-click **Local Area Connection**, then click **Properties**.

3. Click the **General** tab. View the list of installed network protocols to verify that TCP/IP is installed. (For more information, contact your network administrator.)

4. Click **Install** to install any components not listed, then restart your computer.

5. Click **Start**, click **Settings**, then click **Printers**.

6. Right-click the printer icon, then click **Properties**.

7. Click the **Advanced** tab. Verify that the correct printer driver is installed.

8. Click the **Ports** tab. Verify that the IP Address in the **Print to the Following Ports** list is identical to the one on the "Configuration Page." You may need to click the **Configure Port** button to see the IP address. If necessary, re-select the TCP/IP number used for the printer.

Printing a Test Page

1. Click the **General** tab.

2. Click **Print Test Page**. If the printer does not print, do one of the following:

- Select **PhaserSMART Technical Support** on the **Troubleshooting** tab of your Windows printer driver to access PhaserSMART Technical Support.
- Go to www.xerox.com/office/support.

Windows NT 4.x

This topic includes:

- "Preliminary Steps" on page 3-20
- "Quick CD-ROM Install Steps" on page 3-20
- "Other Methods of Installation" on page 3-21
- "Windows NT 4.x Troubleshooting (TCP/IP)" on page 3-23

Preliminary Steps

These preliminary steps must be performed for all printers:

1. Verify that the printer is plugged in, turned on, and connected to an active network.
2. Verify that the printer is receiving network traffic by monitoring the LED's on the back of the printer or on the CentreDirect External Print Server. When the printer is connected to a functioning network and receiving traffic, its link LED is green, and its amber traffic LED is flashing rapidly.
3. Proceed to "Quick CD-ROM Install Steps" or "Other Methods of Installation" for the installation method desired.
4. Print a "Configuration Page" and keep it for reference.

Quick CD-ROM Install Steps

1. Insert the *Printer Installer and Utilities CD-ROM* into the computer's CD-ROM drive. If your PC is set to autorun, the installer launches automatically. If it does not launch, do the following:
   a. Click **Start**, then click **Run**.
   b. In the Run window, type: **<CD drive>:\INSTALL.EXE**.
2. Select your desired language from the list.
3. Select **Install Printer Driver**.
4. Click **I Agree** to accept the Xerox Software License Agreement.
5. In the Select Printer dialog box, the default **Use Walk-Up Technology (recommended for network printers)** is selected. Click **Next**.
6. Follow the **Use Walk-Up Technology** instructions displayed.
7. Click **Exit Program**.

   Note

   If the Walk-Up Technology dialog box remains onscreen after you have completed Steps 1–6, click the **Back** button, then click **Select from the following discovered printers**. Follow the onscreen prompts to complete the installation procedure.

Other Methods of Installation

Install your printer on a Windows NT network using one of these methods:

■ Microsoft TCP/IP protocol
■ Xerox TCP/IP Port Monitor

The following methods can also be used to monitor or configure your printer:

■ A web browser using CentreWare IS if your printer is connected to a Windows NT network with TCP/IP protocol enabled.
■ The Xerox CentreWare MC snap-in to Microsoft Management Console for installing or managing multiple printers on a Windows NT network with TCP/IP protocol enabled. See the *CentreWare MC User Guide* at www.xerox.com/office.

Note

> The CentreWare methods are not discussed in this section. For more information concerning CentreWare IS, or CentreWare MC, go to Reference/Connections & Networks/Printer Management Software on the *User Documentation CD-ROM*.

Quick Install Steps (Microsoft TCP/IP Protocol)

Note

> This procedure is only performed by the system administrator.

1. Right-click the **My Network Places** icon on the desktop, then click **Properties**.
2. Click the **Protocols** tab to verify that the TCP/IP protocol has been installed.
3. Select the **Services** tab and verify that Microsoft TCP/IP Printing software is installed. If it is not installed, install it, and then return to this document.

Adding the Printer

1. Open the **Control Panel**, then double-click the **Printers** icon.
2. Double-click **Add Printer** to launch the **Add Printer Wizard**, then click **Next**.
3. Verify that **My Computer** is selected, then click **Next**.
4. Click **Add Port**, then select the LPR Port from the list displayed.
5. Click **New Port**.
6. Enter the IP address for your printer and a printer name of 31 characters or less (no spaces).
7. Select **OK**.
8. Verify that the new IP address you entered is listed correctly. If the check box next to the IP address is not checked, select the check box, then click **Next**.

Configuring the Printer

1. Insert the *Printer Installer and Utilities CD-ROM* into the computer's CD-ROM drive, then click **Have Disk**.

2. Click the **Browse** button and select the directory containing the Windows NT drivers.

3. Select the ***.INF** file, then click **Open**. Verify that the path and filename are correct, then click **OK**.

4. Select the correct printer, then click **OK**.

5. Enter a name for the printer, select whether you want that printer to be the default, then click **OK**.

6. Select one of these options:
   - If the printer is not shared, click **Next**.
   - If the printer is shared, enter a Share Name, check the **Share** box, then click **Next**.

Printing a Test Page

You are prompted to print a test page.

1. Select one of these options:
   - Click **Yes** to print a test page, then click **Next**.
   - Click **No** if you do not want to print a test page, then click **Next**.

2. Select one of these options:
   - Click the **Finish** button if the data presented is correct. Proceed to step 3.
   - Click the **Back** button to correct the data if incorrect, then click **Finish** when the data is correct. Proceed to Step 3.

3. If you printed a test page, you are prompted to confirm that the test page printed:
   - Click **Yes** if the test page printed successfully.
   - Click **No** if the test page did not print or printed incorrectly. Proceed to step 4.

4. Note the print-quality of the print job. If print-quality problems exist or if the job does not print, go to Reference/Troubleshooting on the *User Documentation CD-ROM*.

Windows NT 4.x Troubleshooting (TCP/IP)

This troubleshooting section assumes you have completed the following tasks:

- Loaded a Phaser printer PCL or PostScript printer driver.
- Printed and kept a current copy of the "Configuration Page". For information about printing a "Configuration Page", go to Reference/Features/Front Panel on the *User Documentation CD-ROM*.

Verifying Settings

1. Verify the settings in the "Configuration Page."
    - **IP Address Source** is set to: **DHCP**, **Front Panel**, **BOOTP**, or **Auto IP** (depending on your network configuration).
    - **Current IP Address** is set correctly. (Note this address if it is assigned by Auto IP, DHCP, or BOOTP.)
    - **Subnet Mask** is set correctly (if used).
    - **Default Gateway** is set correctly (if used).
    - **LPR** is enabled. Verify that the LPR and AppSocket settings are set as desired.
    - **Interpreters**: **Auto**, **PCL,** or **PostScript** (depending on your driver).
2. Verify that the client is logged into the network and printing to the correct print queue. The user should also have access to the Phaser print queue.

Verifying Installation

1. Right-click the **My Network Places** icon on the desktop and select **Properties**.
2. Click the **Protocols** tab to verify that the TCP/IP protocol has been installed.
3. Click **Add** to install any components not listed, then restart your computer.
4. Click **Start**, click **Settings**, then click **Control Panel.**
5. Double-click **Services**.
6. Locate **TCP/IP Print Server**, then verify these column entries:
    - **Status** column: **Started**
    - **Startup** column: **Automatic**
7. Click **Start**, click **Settings**, then click **Printers**.
8. Right-click the printer icon, then select **Properties**. Verify that you have installed the correct driver for your printer.
9. Select the **Ports** tab. Verify that the IP Address in the **Print to the Following Port** list is identical to the one on the "Configuration Page." You may need to click the **Configure Port** button to view the IP address. If necessary, re-select the TCP/IP number used for your printer.

Printing a Test Page

1. Click the **General** tab.
2. Click **Print Test Page**. If the printer still does not print, do one of the following:
   - Access **PhaserSMART** Technical Support on the **Troubleshooting** tab of your printer driver.
   - Go to www.xerox.com/office/support.

Windows 98 and Windows Me

This topic includes:

Preliminary Steps

1. Verify that the printer is plugged in, turned on, and connected to an active network.
2. Verify that the printer is receiving network traffic by monitoring the LED's on the back of the printer or on the CentreDirect External Print Server. When the printer is connected to a functioning network and receiving traffic, its link LED is green, and its amber traffic LED is flashing rapidly.
3. Print a "Configuration Page" and verify that the desired protocol is enabled, then follow one of these options:
   - Proceed to Step 4 if you do not have a TCP/IP address configured for your printer.
   - Proceed to Step 5 if you do have a TCP/IP address configured for your printer.
4. Do one of the following if you *do not* have a TCP/IP address configured for your system:
   - Contact your system administrator to ensure that configuration is made according to your company guidelines.
   - Configure your PC with a unique address such as 192.1.1.1.
5. If you have a TCP/IP address, then follow these steps to verify the IP address for your PC:
   a. Click **Start**, then click **Run**.
   b. Enter **winipcfg** in the **Open** field. (If the file is not found, TCP/IP may not be installed.)
   c. Click **OK**.
   d. Select your network adapter from the list. The IP address is listed in the IP Address field.

   Note

   For more information about installing and configuring TCP/IP in Windows environments, go to your Microsoft Windows documentation.

6. Proceed to "Quick CD-ROM Install Steps" or "Other Methods of Installation" for the installation method desired.

Quick CD-ROM Install Steps

1. Insert the *Printer Installer and Utilities CD-ROM* into the computer's CD-ROM drive. If your PC is set to autorun, the installer launches automatically. If it does not launch, do the following:
   a. Click **Start**, then click **Run**.
   b. In the Run window, type: **<CD drive>:\INSTALL.EXE**.
2. Select your desired language from the list.
3. Select **Install Printer Driver**.
4. Click **I Agree** to accept the Xerox Software License Agreement.
5. In the Select Printer dialog box, the default **Use Walk-Up Technology (recommended for network printers)** is selected. Click **Next**.
6. Follow the **Use Walk-Up Technology** instructions displayed.
7. Click **Exit Program**.

   Note

   If the Walk-Up Technology dialog box remains onscreen after you have completed Steps 1–6, click the **Back** button, then click **Select from the following discovered printers**. Follow the onscreen prompts to complete the installation procedure.

Other Methods of Installation

Install your printer on a Windows 98 or Windows Me network using one of these methods:

- Xerox TCP/IP Port Monitor
- PhaserPort Software

Xerox TCP/IP Port Monitor

The Windows installer installs the Xerox TCP/IP Port Monitor. The Xerox TCP/IP Port Monitor can be used to add or remove TCP/IP ports.

Adding a Port

1. Open **Printer Properties** for the printer you would like to attach to the new TCP/IP port.
2. Click **Start**, click **Settings**, then click **Printers**.
3. Right-click the printer to be attached to the new TCP/IP port, then click **Properties**.
4. Click the **Details** tab, then click the **Add Port** button.
5. Select **Other**.
6. From the list of available printer-port monitors, select the **Xerox TCP/IP Port**, then click **OK**.

Configuring a Port

The Xerox TCP/IP Printer Port Wizard guides you step-by-step through the following procedures:

- Choosing a name for the new port
- Identifying a printer by its DNS Name or IP Address
- (Alternatively) Identifying a printer using the automatic **Printer Discovery** feature

1. Click **Next** to proceed with the port installation. The wizard verifies the port name and printer address, then automatically configures the remaining port settings. Any errors detected in printer identification are displayed in a dialog box requesting Additional Information.

2. In the **Add Xerox TCP/IP Port** window:
   - Enter a unique name for the port being added in the **Enter a Port Name** section.
   - Enter the printer's host name or IP Address in the **Enter a Printer Name or IP Address** section.

3. Click **Next**.

Note

To locate Xerox printers on your local area network, select **Auto Printer Discovery**, then click **Refresh**. The Xerox TCP/IP Port Monitor searches the network for Xerox printers and displays them in a list. Select your desired printer from the list, then click **OK**.

Completing the Printer Port TCP/IP

After the port settings have been configured and verified, a **Completing** dialog box appears summarizing all the settings. You can change or select printer port settings.

1. Select one of these options:
   - Click **Finish** to complete the printer port setup.
   - Click **Back** to change the settings. When you have completed the changes, click **Finish** to complete the printer-port setup.

2. Click **OK** to exit **Printer Properties**.

PhaserPort Software

Note

PhaserPort is the preferred utility for PostScript installations. For PCL installations, go to "Xerox TCP/IP Port Monitor" in this section.

The Windows installer installs PhaserPort for Windows (for those installations using PostScript drivers). PhaserPort for Windows is a Xerox print monitor for printing over Windows 98 or Windows Me TCP/IP peer-to-peer networks.

Changing a PhaserPort IP Address

If the printer's IP address is changed, you must change the IP address for the printer's corresponding port:

1. Click **Start**, click **Settings**, then click **Printers**.
2. Right-click the printer to be changed to a new PhaserPort IP address, then click **Properties**.
3. Select the **Details** tab.
4. Verify that PhaserPort appears in the **Print to the Following Port** field.
5. Click **Port Settings**. The **Configure PhaserPort** dialog box appears.
6. Do one of the following:
   a. If you know the correct IP address or DNS name for the printer, enter that information.
   b. If you don't know the printer's IP address or DNS name, then click **Browse** to display a list of printers on the network.
   c. Double-click the appropriate printer. PhaserPort automatically enters the information into the **Configure PhaserPort** dialog box.

   Note

   To search the network again, click **Refresh.** To expand the search to other subnets, click **Advanced**.

7. Click **OK**.
8. Click **OK** again to apply the changes.

Windows 98 and Windows Me Troubleshooting

This troubleshooting section assumes you have completed the following tasks:

- Verified that the printer is plugged in, turned on, and connected to an active network.
- Installed a Phaser printer PCL or PostScript print driver.
- Verified that the printer is receiving network traffic by monitoring the LED's on the back of the printer or on the CentreDirect External Print Server. When the printer is connected to a functioning network and receiving traffic, its link LED is green, and its amber traffic LED is flashing rapidly.
- Printed and kept a current copy of the "Configuration Page". For information about using the front panel or printing a "Configuration Page", go to Reference/Features/Front Panel on the *User Documentation CD-ROM*.

Verifying Settings

1. Right-click **Network Neighborhood** on the desktop, then click **Properties**.
2. Click the **Configuration** tab. A list of installed network components appears for the following items:
   - Client for Microsoft networks
   - Xerox TCP/IP Port Monitor

3. If you are running CentreWare DP verify the following:

- Novell Networks: You are required to load Novell IntraNetWare Client or Microsoft Client for IPX networks.
- TCP/IP Networks: No additional software is required, but your printer must have a valid TCP/IP address assigned.

4. If any of the above protocols or services are not installed, install the necessary components and restart the system. When the system is restarted, return to this document.

5. Click **Start**, click **Settings**, then click **Printers**. The **Printers** window appears.

6. Right-click the printer icon, then click **Properties**.

7. Select the **Details** tab.

8. Verify the following:

a. The printer driver name in the **Print Using the Following Driver** list. If necessary, re-select or install a new printer driver.

b. The **Port** name in the **Print to the Following Port** list. If necessary, re-select the correct name.

9. Send a print job to the printer. If the printer does not print, access PhaserSMART Technical Support from the Troubleshooting tab of the Windows printer driver or go to www.xerox.com/office/support.

Macintosh

This topic includes:

- "Requirements" on page 3-30
- "Quick CD-ROM Install Steps" on page 3-30
- "Enabling and Using EtherTalk for Mac OS 9.x" on page 3-30
- "Enabling and Using TCP/IP for Mac OS 9.x" on page 3-31
- "Enabling or Using TCP/IP or AppleTalk for Mac OS X, Version 10.1 or Higher" on page 3-33
- "Macintosh Troubleshooting (Mac OS 9.x, Mac OS X, Versions 10.1 and 10.2)" on page 3-34

Requirements

- A workstation with the appropriate printer driver installed.
- A working knowledge of the operating system (System 9.0+ or higher) being used on the workstation.
- Proper cabling to connect the printer to the network.

Quick CD-ROM Install Steps

1. Insert the *Printer Installer and Utilities CD-ROM* into the computer's CD-ROM drive.
2. Double-click the installer on the *Printer Installer and Utilities CD-ROM* to install the printer driver.

Enabling and Using EtherTalk for Mac OS 9.x

If you use EtherTalk, Macintosh computers do not require IP addresses.

1. Open the **AppleTalk Control Panel**. Verify that the Ethernet port is the selected network port.
2. Open the **Chooser**, then click the **LaserWriter printer** driver.
3. Select the printer.
4. Click **Create** to create the desktop printer.

Enabling and Using TCP/IP for Mac OS 9.x

This section provides installation and troubleshooting steps for Macintosh OS 9.x.

Setting Up the Macintosh Ethernet Port for TCP/IP

Perform the following procedure to set up your Macintosh TCP/IP:

1. Click **Control Panels** from the Apple menu.
2. Click **TCP/IP**.
3. Click **Ethernet** from the **Connect via** menu.
4. Specify one of the following methods for the Macintosh to obtain its IP address:
   - Manually
   - DHCP

   ### Note
   > If you select to set up the printer manually, specify the IP address in the dialog box. You must also enter information for the Subnet Mask, Router Address, and Name Server Address, if needed

5. Close the dialog box.

Creating an LPR Printer with LaserWriter 8.5.1 or Higher

1. Open the **Desktop Printer Utility**. (This utility, or an alias to it, can be found in the PhaserTools folder.)
2. Click **Printer (LPR)** in **Create Desktop**, then click **OK**.
3. Click **Change** in the P**ostScript Printer Description (PPD)** file.
4. Select the appropriate PPD from the list, then click **Select**. If your printer's PPD is not listed, install it from the *Printer Installer and Utilities CD-ROM*.
5. Click **Change** in **LPR Printer Selection**.
6. Enter information in the following fields:
   - **Printer Address**: Enter the printer's IP address or domain name.
   - **Queue**: Enter **PS** (use upper-case), then click **OK**.
7. Close the dialog box. When prompted, click **Save**.
8. Enter a name for the desktop printer in **Save Desktop Printer As** field, then click **Save**.
9. Two methods are available for printing through LPR:
   - Use the new Desktop Printer (LPR)
   - Use the LaserWriter 8.5.1 printer driver (any printer can be selected). Click **File**, then click **Print** to select the appropriate LPR printer in the **Printer** drop-down list.

Creating an AppSocket Printer with LaserWriter 8.6

Xerox provides Macintosh AppSocket printing with PhaserPort for Mac OS on the printer's *Printer Installer and Utilities CD-ROM*. PhaserPort for Mac OS provides a bi-directional, high-speed communications channel using the new plug-in communication architecture of Apple LaserWriter version 8.6.

AppSocket provides feedback about print job status which is not available through LPR.

PhaserPort for Mac OS System Requirements

Note

PhaserPort is not supported under Mac OS X.

System requirements include:

■ A Phaser printer installed on a TCP/IP network
■ PowerPC-based Macintosh
■ Apple's LaserWriter version 8.6 or later, with Desktop Printing enabled
■ Open Transport version 1.1 or later networking. TCP/IP networking provided by MacTCP software is not supported. The Macintosh must be properly configured to communicate with the printer.

Creating a Desktop Printer with PhaserPort for Mac OS

1. Launch the **PhaserPort Printer Tool**.
2. Enter the printer's IP address or DNS name in the **Printer Internet Address** field.
3. Enter a name for the desktop printer in the **Desktop Printer Name** field.
4. Click **Verify** to contact the printer over the TCP/IP network, then verify its network configuration.
5. Click **Create** to create the desktop printer.
6. Click **Quit** to exit the **PhaserPort Printer Tool**.
7. In the **Finder**, click the newly created desktop printer icon.
8. Click **Change Setup** in the **Finder's Printing** menu.
9. Select the **PostScript Printer Description** file and provide configuration information. You can also select the **Auto Setup** button, then Macintosh automatically attempts to determine the correct settings for the Phaser printer.

Note

Certain utilities, such as Adobe Font Downloader, are not compatible with PhaserPort for Mac OS software because they attempt to directly communicate with the printer using the AppleTalk protocol. If you use Mac OS software, create an AppleTalk desktop printer, then delete this printer after running and exiting the non-compatible software.

Enabling or Using TCP/IP or AppleTalk for Mac OS X, Version 10.1 or Higher

Requirements

Verify that you are running Mac OS X, version 10.1. The previous versions of Mac OS X do not fully support PostScript printing and printer features.

Setting up the Macintosh Ethernet Port for TCP/IP or AppleTalk

Perform the following procedure to set up your Macintosh for TCP/IP:

1. Select **Network** from the System Preferences application, then select **TCP/IP**.
2. Select **Built-In Ethernet** from the **Active Ports** menu.
3. Specify how you will obtain the IP address from the **TCP/IP** tab:
   - **Manually**: Specify the IP address, **Subnet Mask**, **Router Address,** and **Name Server Address** in the dialog box.
   - **DHCP**: Automatically finds the IP address.
   - **AppleTalk**: Select the **AppleTalk** tab, then verify that the **Make AppleTalk Active** box is selected.
4. Close the dialog box.

Creating an LPR Printer with Mac OS X, Version 10.1 or Higher

1. Open the **Print Center** utility. (This utility is found in a directory called **Utilities** in the **Applications** directory.)
2. Select **Add Printer**, then select **LPR Printers Using IP** from the pull-down menu.
3. Enter the printer's IP address or host name in the **LPR Printer's Address** field.
4. Enter **PS** (use upper-case) in the **Queue** field, then click **OK**.
5. Select the appropriate **PPD** from the list in the **Printer Model** drop-down list. If your printer's PPD is not listed, install it from the *Printer Installer and Utilities CD-ROM*.
6. Click **Add** to complete the configuration.

Creating an AppleTalk Printer with Mac OS X, Version 10.1 or Higher

1. Verify that **AppleTalk** is enabled in **System Preferences**.
2. Open the **Print Center** utility. (This utility is found in a directory called **Utilities** in the **Applications**.)
3. Select **Add Printer**, then select **AppleTalk** from the pull-down list.
4. Select the appropriate zone.
5. Select your printer from the list provided.
6. Select the appropriate **PPD** from the list in the **Printer Model** drop-down list. If your printer's PPD is not listed, install it from the *Printer Installer and Utilities CD-ROM*.
7. Click **Add** to complete the configuration.

Creating a Rendezvous Printer with Mac OS X, Version 10.2 or Higher

1. Open the **Print Center** utility (located in **Utilities** in the **Applications** Directory).
2. Click **Add**.

   A list appears displaying your printer's name, followed by a series of numbers. For example, *Your Printer's Name xx:xx:xx*. Each numbered segment represents the last section of your printer's hardware address. Your PPD is automatically selected.

3. Click **Add** to complete the installation.

Macintosh Troubleshooting (Mac OS 9.x, Mac OS X, Versions 10.1 and 10.2)

The following procedure eliminates cabling, communication, and connection problems. Once you complete these steps, print a test page from your software application. If the job prints, no further system troubleshooting is necessary. If there are print quality problems, go to Reference/Troubleshooting on the *User Documentation CD-ROM*.

Macintosh Troubleshooting Step-By-Step

Mac OS 9.x

Perform these steps *only* for Mac OS 9:

1. Open the **Chooser**, then click the **LaserWriter** driver.
2. Do one of the following:
   - If the printer name appears, your printer is communicating through the network. You do not need to perform any additional steps.
   - If your printer name does not appear, proceed to Step 3.
3. Verify that the printer is plugged in, turned on, and connected to an active network.
4. Verify the cable connection from the network to the printer.
5. Follow these steps:
   a. From the printer's front panel, verify that **EtherTalk** is enabled. If it is not, enable it in the front panel, then reset the printer.
   b. Print the "Configuration Page" and verify that **EtherTalk** is enabled.
   c. From the "Configuration Page", verify the **Zone**. If you have multiple zones on your network, verify that your printer appears in the desired zone.
6. If you are still unable to print, go to www.xerox.com/office/support or access PhaserSMART Technical Support through CentreWare Internet Services:
   a. Launch your web browser.
   b. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
   c. Select **Support**.
   d. Click the **PhaserSMART Diagnostic Tool** link to access PhaserSMART.

Mac OS X, Versions 10.1 and 10.2

Perform these steps *only* for Mac OS X, versions 10.1 and 10.2:

1. Open the **Network Utility**, then click the **Ping** tab.
2. Enter your printer's IP address.
3. Click **Ping**. If you do *not* get a response, confirm that your TCP/IP settings are correct for both your printer and computer.
4. For **AppleTalk**, follow the steps below. For **TCP/IP** proceed to Step 5.
   a. From the printer's front panel, verify that **EtherTalk** is enabled. If it is not, enable it in the front panel, then reset the printer.
   b. Print the "Configuration Page" and verify that **EtherTalk** is enabled.
   c. From the "Configuration Page", verify the **Zone**. If you have multiple zones on your network, verify that your printer appears in the desired zone.
5. If you are still unable to print, go to www.xerox.com/office/support or access PhaserSMART Technical Support through CentreWare Internet Services:
   a. Launch your web browser.
   b. Enter your printer's IP address in the browser's **Address** field (http://xxx.xxx.xxx.xxx).
   c. Select **Support**.
   d. Click the **PhaserSMART Diagnostic Tool** link to access PhaserSMART.

Novell NetWare

This topic includes:

- "Configuration Software for NetWare Networks" on page 3-36
- "Quick Setup" on page 3-36
- "Advanced Setup" on page 3-36
- "NetWare 4.x, NetWare 5.x, and NetWare 6.x Print Server Setup" on page 3-37
- "Novell NetWare Troubleshooting" on page 3-37

Configuration Software for NetWare Networks

CentreWare DP configures the printer and the network when using NetWare 4.x, 5.x, and 6.x. CentreWare DP is a Novell Directory Service (NDS)/Bindery tool used only for Novell Distributed/Enterprise Print Services (NDPS).

Quick Setup

1. Print the "Configuration Page" and keep it for reference. For information about printing a "Configuration Page", go to Reference/Features/Front Panel on the *User Documentation CD-ROM*.
2. View the "Configuration Page", then verify the following:
   - **Novell enable** is **On**
   - **Frame Type** is correctly set.
3. Install CentreWare DP on a Windows-based workstation.
4. Run the CentreWare DP application, then click **Setup Wizard** on the **Printer** menu.
5. Select **NDS Install**, then follow the **Setup Wizard** steps.
6. Install printer drivers from the *Printer Installer and Utilities CD-ROM*.
7. Send a print job to the printer.
8. Verify the print-quality of the document. If print-quality problems exist, or if your document did not print, go to Reference/Troubleshooting on the *User Documentation CD-ROM* for more information.

Advanced Setup

The Advanced Setup option of CentreWare DP is a tool that allows you to control how your devices are configured in your Novell NetWare network environment. This tool is necessary for connecting your device to more than one file server or queue. For a connection to a single device and queue, use Setup Wizard.

NetWare 4.x, NetWare 5.x, and NetWare 6.x Print Server Setup

The Phaser printer defaults enable connection to Novell NetWare without adjustment. Review the "Configuration Page" and verify the following settings:

■ **NetWare** is enabled

■ **Frame Type** matches the frame type of the desired file server

■ **PDL** is set to your desired PDL (**PostScript** or **PCL**) or to **Auto**. You may wish to set PDL to the desired type if only one PDL is used

■ **Desired Novell mode** is set to either **NDS/BEM**, **NDS**, or **BEM (Bindery Emulation Mode)**

■ **Print Server Name**

Setting Up NetWare with CentreWare DP

The CentreWare DP software provides the quickest and easiest method for installing a printer on a network. For more information go to www.xerox.com/office for the *CentreWare DP User Guide* or see *CentreWare DP Online Help*.

Advanced Setup in Bindery Mode for Novell Directory Services (NDS)

The Advanced Setup option of CentreWare DP provides an additional tool to control how your printers are configured on a Novell NetWare network environment. This tool is necessary for connecting a printer to more than one file server or queue.

Novell Distributed/Enterprise Print Services (NDPS/NEPS)

To access Xerox printers in this environment, Xerox Gateway software must be installed on a system. The latest version of the Xerox Gateway Software is available on the Xerox web site at www.xerox.com/office. Instructions are available on the web site for installing a printer using NDPS. The web site also contains the *CentreWare for NDPS User Guide*.

Novell NetWare Troubleshooting

Troubleshooting for Windows-based computers includes both hardware and software solutions to eliminate cabling, communication, and connection problems associated with direct-connected ports. Complete one of the following procedures (based on the type of port being used), then print a test page from your software application. If the test page prints, no further system troubleshooting is necessary. For print-quality problems, go to Reference/Troubleshooting on the *User Documentation CD-ROM*.

Requirements

Verify that you:

■ Are operating a Windows-based system with CentreWare DP software installed and at least one printer driver installed

■ Are a NetWare Network Administrator, an administrative person with ADMIN/ SUPERVISOR, or ADMIN/SUPERVISOR EQUIVALENT within login rights to the NetWare Server(s) servicing the Phaser printer

■ Have a basic knowledge of NetWare

Novell NetWare Troubleshooting Quick Check

1. Verify that the printer is plugged in, turned on, and connected to an active network.

2. Verify that the printer is receiving network traffic by monitoring the LEDs on the back of the printer. When the printer is connected to a functioning network and receiving traffic, its link LED is green, and its amber traffic LED is flashing rapidly.

3. Verify that the client is logged into the network and printing to the correct print queue.

4. Verify that the user has access to the Phaser printer queue.

5. Verify that the Phaser printer NetWare print queue exists, is accepting jobs, and has a print server attached. If it does not, use the Setup Wizard in CentreWare DP to reconfigure the print queue.

6. Print the "Configuration Page". Verify that **Printer Server** is enabled. Set the frame type to the frame type your NetWare server is using.

   Note

   To determine your NetWare IPX frame type, type *config* at the Novell console screen. On networks using multiple IPX frame types, it is *critical* that the frame type be set correctly.

7. Verify that the **Primary Server** is set (NetWare 3.1x only). The primary server should have been set during initial queue setup and installed using CentreWare DP. If it is not set, use CentreWare DP to set it, then reset the printer.

   Note

   Setting the Primary Server is extremely important on large networks.

8. Go to www.xerox.com/office/support if the above steps fail to resolve the printing problem.

Novell NetWare Troubleshooting Step-By-Step

These procedures eliminate cabling, communication, and connection problems associated with network connected printers. The steps are divided into two groups:

■ Novell NetWare Hardware Step-by-Step
■ Novell NetWare Software Step-by-Step

Note

Novell NetWare Software Step-by-Step assumes that you are connected to a Novell NetWare network with a Windows OS installed on the client workstation. When both of these procedures are completed, print a test page from your software application. If the test page prints, no further system troubleshooting is necessary.

Novell NetWare Hardware Step-By-Step

Note the LED activity on the printer. The green link LED is ON whenever it is connected to an active network. The amber traffic LED is flickering when data is being received.

1. Verify the following:
   ■ The cable connections: Use a new cable or connectors if possible
   ■ Which port your printer is attached to. Connect a functioning network device to your printer to test the port.
2. Print the "Configuration Page" from your printer. For information about printing Configuration pages, go to Reference/Features/Front Panel.
3. Review the **Connectivity Settings** and verify these items:
   ■ **NetWare** is enabled
   ■ **Frame Type** matches the frame type of the desired file server

   Note

   To determine your NetWare IPX frame type, type *config* at the Novell console screen. On large networks, using multiple IPX frame types, it is *critical* that the frame type be set correctly.

   ■ **PDL** is set to your desired PDL (**PostScript** or **PCL**) or to **Auto**
   ■ **Primary Server** (for NetWare 3.x only) is set to the name of the server which serves the print queue you have assigned to the Phaser printer
   ■ **NDS Tree** (for NetWare 4.x NDS and later) is set for the correct NDS tree name
   ■ **NDS Context** (for NetWare 4.x NDS and later) is set for the correct NDS Context
   ■ **Print Server** (PServer) Name is set for the name selected for the Phaser printer to act as a print server
   ■ **Novell Mode** is correctly set
4. If changes are made, reset the printer. Once the printer has been reset, allow approximately two minutes for the printer to go through a self test, then log onto the network server.
5. Print out another copy of the "Configuration Page" to verify that the items you modified were set and kept.

Novell NetWare Software Step-By-Step

1. Verify that CentreWare DP and a Phaser printer driver have been loaded on the workstation.
2. Click **Start,** click **Settings,** then click **Printers** to verify that the printer is installed.

Launching CentreWare DP

1. Click **Start**, click **Programs,** then click **CentreWare DP**.
2. Select the desired printer. If a communications error message appears, your printer is not able to communicate with your workstation. Verify your printer's settings, then return to this document.
3. With the printer selected, click the **Printer** drop-down list, then select **Advanced Setup**.
4. Select one of the following connection methods:
   - **Novell Directory Services**
   - **Bindery**
5. Verify that the information displayed is also contained on the "Configuration Page". Verify these items:
   a. The queue name of the Phaser printer is set to **service**. If necessary, create a new queue to test the printer.
   b. The **Primary Server** lists the server name on the "Configuration Page"

Printing a Document

1. Click the **Tools** drop-down list.
2. Select the **Send File...** menu item, then select the appropriate directory and file for downloading. Verify that this is a valid file with no errors.
3. Click **OK**. The file is sent to the printer. If the document does not print, review the Novell Menu settings on the "Configuration Page".

Verifying the Network Settings

1. At the CentreWare DP main screen, click the **Printer** drop-down list, click **Properties,** then click **Connections**.
2. Click the **Network Card** tab. A new dialog box displays information about frame type and connectors.
3. Verify that the printer is enabled and the connector and frame type are correct. If changes are made, reset the printer from the front panel.
4. Re-print a test page. If the test print does not print, go to www.xerox.com/office/support.

UNIX (Linux)

This topic includes:

■ "Quick Install Steps" on page 3-41
■ "Additional Resources" on page 3-42

Your printer supports connection to a variety of UNIX platforms through the parallel and network interface. The workstations currently supported by CentreWare for UNIX/Linux to a network-connected printer are:

■ Sun Solaris
■ IMB AIX
■ Hewlett-Packard HP-UX
■ DEC UNIX
■ Linux (i386)
■ Linux (PPC)
■ SGI IRIX

The following procedures enable you to connect your printer using any of the supported versions of UNIX or Linux listed above.

Quick Install Steps

From the Printer

1. Verify that both TCP/IP protocol and the proper connector are enabled.
2. At the printer's front panel, select one of these IP address options:
   ■ Allow the printer to set up a DHCP address.
   ■ Enter the IP address manually.
3. Print the "Configuration Page" and keep it for reference. For information about printing Configuration pages, go to Reference/Features/Front Panel on the *User Documentation CD-ROM*.

From Your Computer

1. Access www.xerox.com/office/support, to select your printer type.
   - Operating system: **UNIX**
   - File type: **Drivers**

2. From the list of files provided, download the **PrinterPackageXPXX** and the file that matches your operating system

3. Print a test page.

4. Verify the print quality of the printed page.

Note

If print-quality problems exist, or if your job did not print, go to Reference/ Troubleshooting on the *User Documentation CD-ROM*. You can also access PhaserSMART Technical Support through CentreWare Internet Services.

Launch your web browser.

   a. Enter your printer's IP address in the browser's **Address** field (http:// xxx.xxx.xxx.xxx).
   b. Select **Support**.
   c. Click the **PhaserSMART Diagnostic Tool** link to access PhaserSMART.

Additional Resources

- Information about creating a generic print queue in a specific workstation environment can be found in the Xerox infoSMART Knowledge Base at www.xerox.com/office/ infoSMART.

- Access the Xerox web site for the latest CentreWare for UNIX drivers at www.xerox.com/ office/support.
   a. Select **Download Software Drivers & Utilities**.
   b. Select your printer, your platform (UNIX), and the printer driver files you want.
   c. Click **Go to Downloads**.
   d. Select the appropriate CentreWare printer driver for your platform.
   e. Also download the **PrinterPackage XPXX**. It provides the printer-specific features of CentreWare for UNIX driver.

4 Troubleshooting

This section includes:

- "Automatic Diagnostic Tools" on page 4-2
- "Paper Jams" on page 4-3
- "Print-Quality Problems" on page 4-24
- "Maintenance" on page 4-30
- "Front Panel Messages" on page 4-31
- "Moving and Repacking the Printer" on page 4-36
- "Additional Resources" on page 4-38

Note

For network troubleshooting, go to Reference/Connections & Networks on the *User Documentation CD-ROM*.

Automatic Diagnostic Tools

This topic includes:

■ "PhaserSMART Technical Support" on page 4-2
■ "Front Panel i Button" on page 4-2
■ "PrintingScout" on page 4-2

Xerox provides several automatic diagnostic tools to help you produce and maintain print quality.

PhaserSMART Technical Support

PhaserSMART Technical Support is an automated, Internet-based support system. Use your default web browser to send diagnostic information from your printer to our web site for analysis. PhaserSMART Technical Support examines the information, diagnoses the problem, and proposes a solution. If the problem is not resolved with the solution, PhaserSMART Technical Support assists you in opening a Service Request with Xerox Customer Support.

To access PhaserSMART Technical Support:

1. Go to www.phaserSMART.com.
2. Enter your printer's IP address in the browser address window.

If you have other questions or problems, click the appropriate PhaserSMART Technical Support topic to continue.

Front Panel i Button

The front panel information button, **i** button, on your printer provides a wealth of information about your printer and how it works. You can press the **i** button at any time to get additional information about the messages displayed on the front panel.

PrintingScout

PrintingScout, installed with your printer driver and available only with Windows, automatically checks the printer status and sends instant notification to your computer if the printer needs attention.

Whenever the printer is unable to print your document, the printer automatically sends an on-screen message that provides helpful text and illustrations showing how to fix the printer.

Paper Jams

This topic includes:

- "Jam at the Exit and Jam at the Rear" on page 4-3
- "Jam at the Exit and Jam at the Rear (with Duplex Unit)" on page 4-5
- "Jam at the Exit - Open Top Cover to Clear" on page 4-7
- "Jam at the Tray" on page 4-10
- "Jam at the Top Cover" on page 4-14
- "Jam at the Duplex Unit" on page 4-18
- "Jam at the Stacker" on page 4-19
- "Paper Size Jam" on page 4-20

Jam at the Exit and Jam at the Rear

1. Open the rear cover.

Caution

Be careful, some components inside the rear cover may be hot.
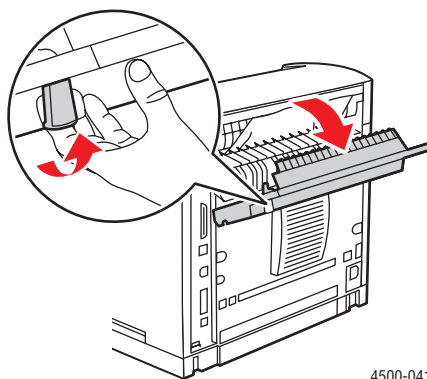
4500-041

2. Remove the jammed paper. Confirm that all paper fragments are removed.

4500-042
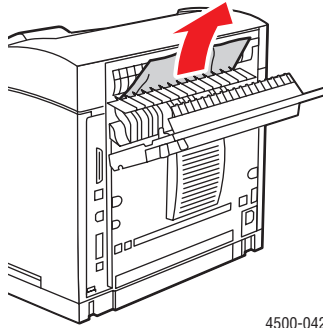
3. If you do not find jammed paper in Step 2, open the cover above the exit and pull the jammed paper completely out of the printer.
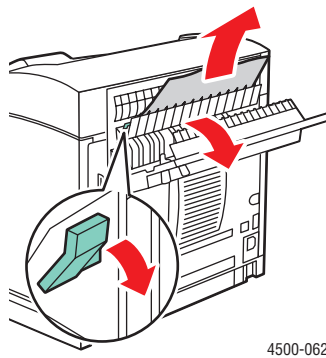
4500-062

4. Close the rear cover.

4500-043
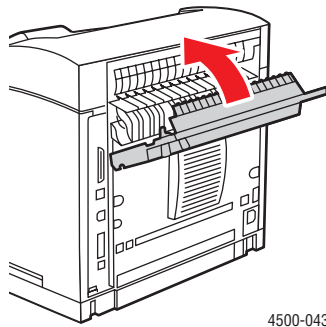
For additional information, go to www.phaserSMART.com.

PhaserSMART is a powerful, Internet-based diagnostic tool that automatically delivers the latest support solutions with a few mouse clicks. (English only)

Jam at the Exit and Jam at the Rear (with Duplex Unit)

1. Open the duplex unit cover.
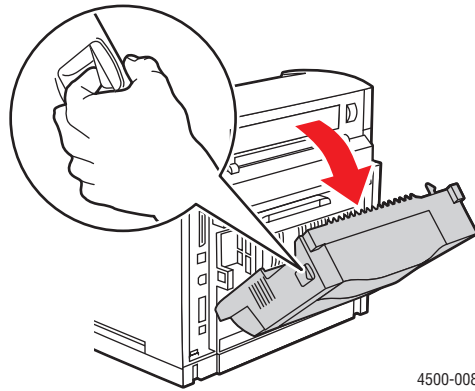
4500-008

2. Open the rear cover.

Caution

Be careful, some components inside the rear cover may be hot.

4500-011

3. Remove the jammed paper. Confirm that all paper fragments are removed.

4500-061
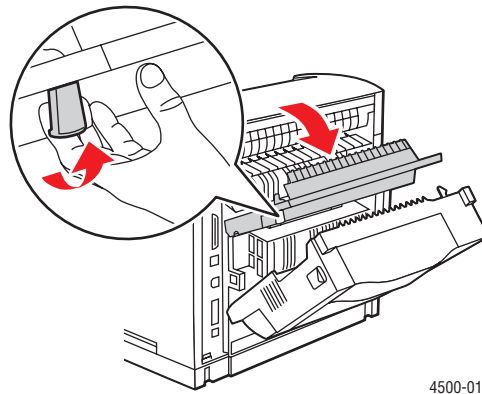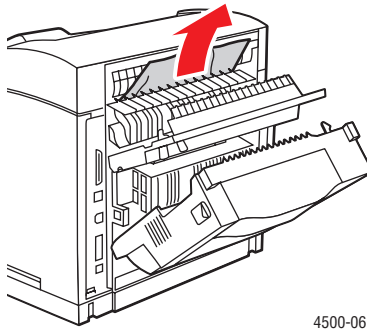
4. If you do not find jammed paper in Step 3, open the cover above the exit and pull the jammed paper completely out of the printer.

4500-062

5. Close the rear cover.

4500-012
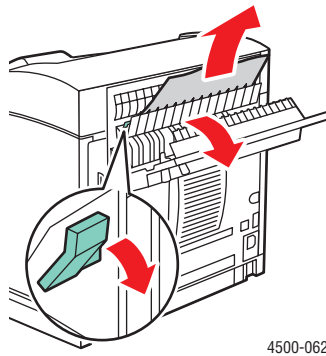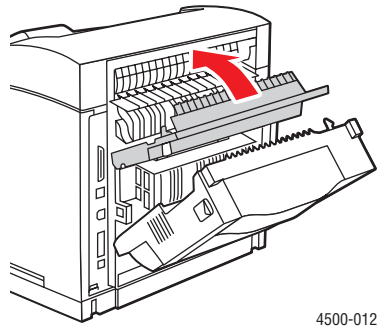
6. Close the duplex unit cover.
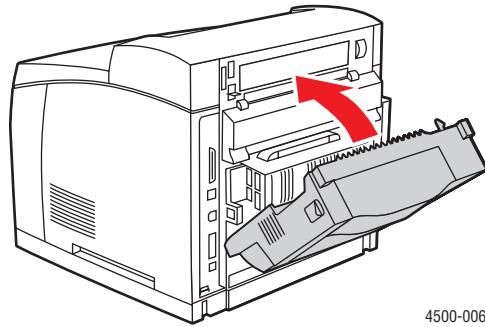
4500-006

For additional information, go to www.phaserSMART.com.

PhaserSMART is a powerful, Internet-based diagnostic tool that automatically delivers the latest support solutions with a few mouse clicks. (English only)

Jam at the Exit - Open Top Cover to Clear

1. If you have a stacker, remove the paper from the stacker, then lift the stacker.

4500-004

4500-017
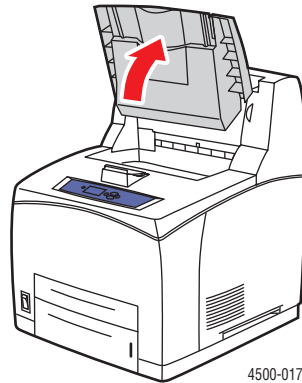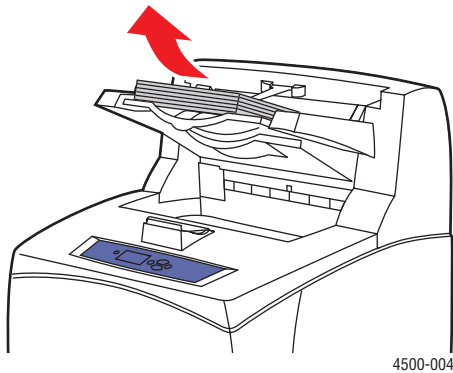
2. Remove the jammed paper from the exit. Confirm that all paper fragments are removed.

4500-065

3. Open the top cover.

4500-039

4. Close the top cover.

4500-002
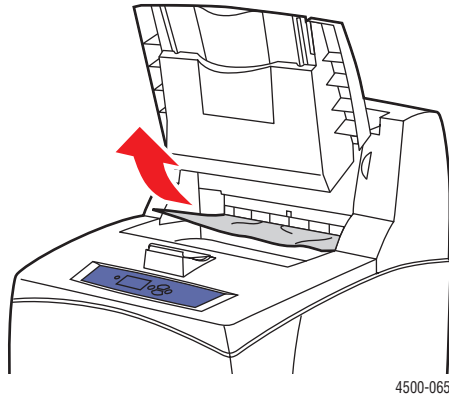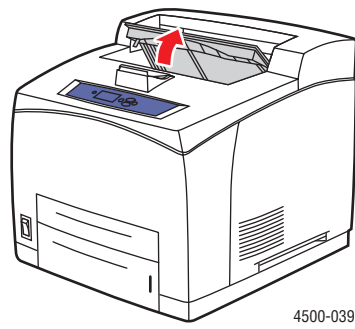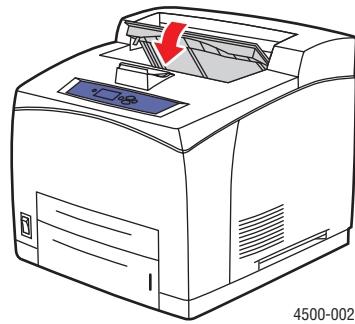
5. If you have a stacker, lower the stacker.

4500-019
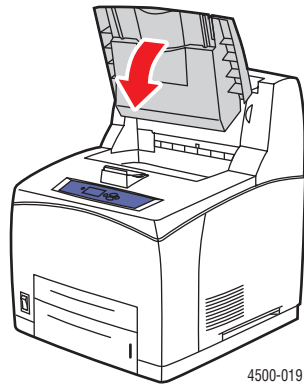
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Jam at the Tray

1. Pull the trays specified on the front panel completely out of the printer.
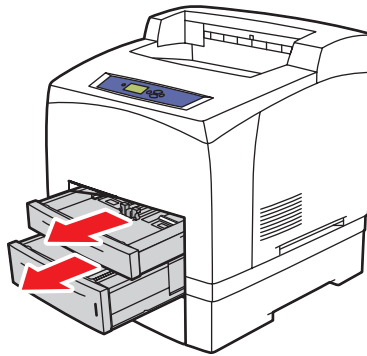
4500-099

Note

For all trays except Tray 2, pull out the specified tray and all trays above it. For example, if the jam is at Tray 3, pull out Trays 1, 2, and 3. If you have a jam at Tray 2, pull out Tray 2 only. It is not necessary to pull out all of the trays. If you have a jam at Tray 1, pull out Trays 1 and 2.
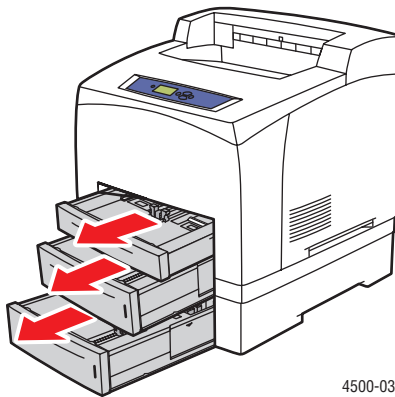
4500-033

2. Pull jammed paper from the printer tray slot.

4500-046
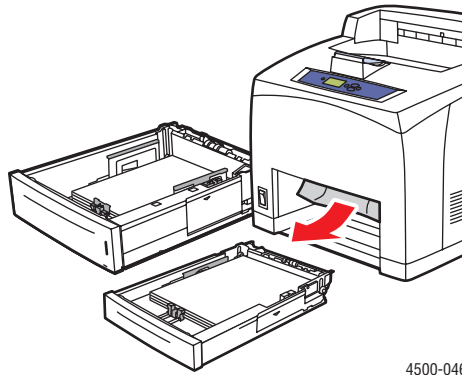
3. Remove crumpled paper from the tray.
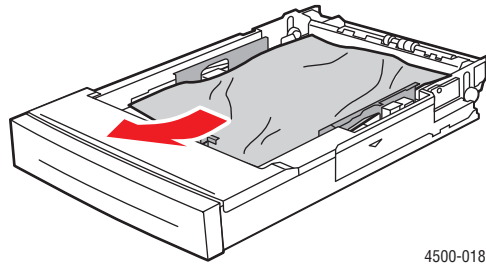
4500-018

4. If you have a stacker, remove paper from the stacker, then lift the stacker.
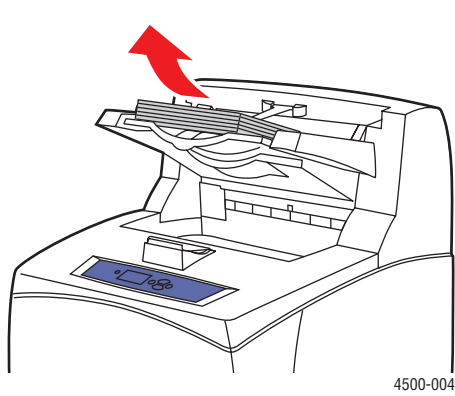
4500-004

4500-100

5. Open the top cover.

4500-101

6. Remove the print cartridge.

4500-036

7. Remove the jammed paper. Confirm that all paper fragments are removed.

4500-009

8. Insert the print cartridge.

4500-035

9. Insert the trays into the printer slot and push them completely to the back of the printer.

4500-034
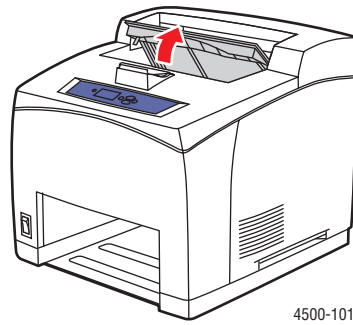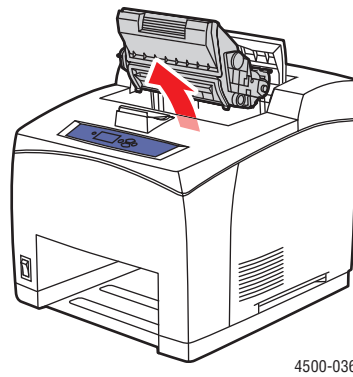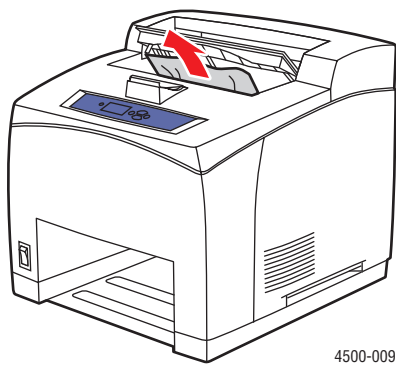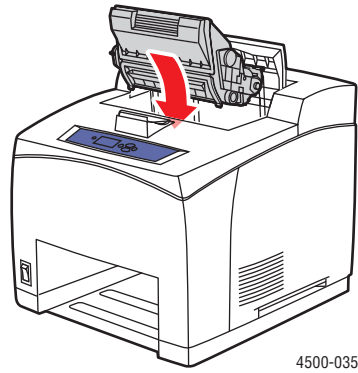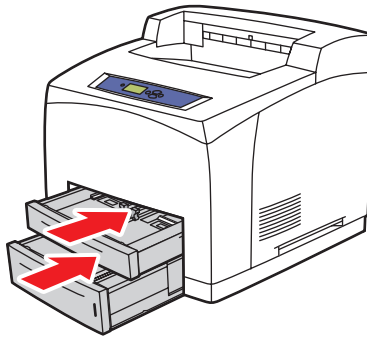
10. Close the top cover.

4500-002
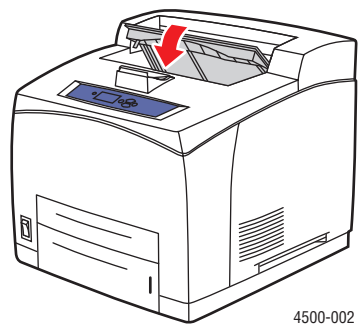
11. If you have a stacker, lower the stacker.

4500-019
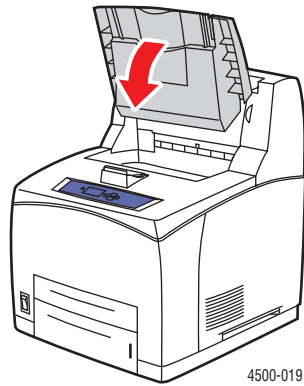
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Jam at the Top Cover

1. If you have a stacker, remove paper from the stacker, then raise the stacker.

4500-004

4500-017
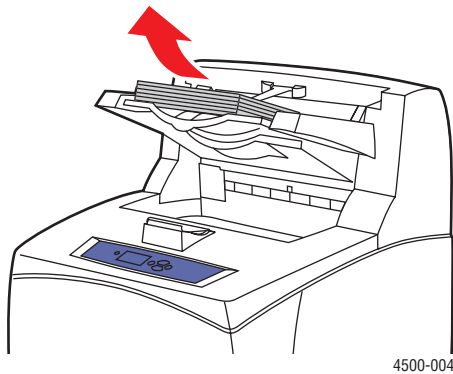
2. Open the top cover.
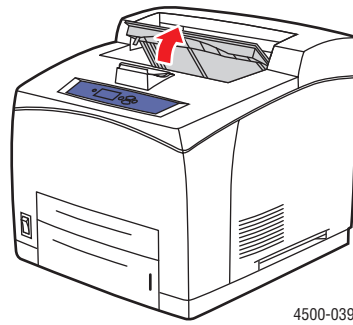
4500-039

3. Remove the print cartridge.
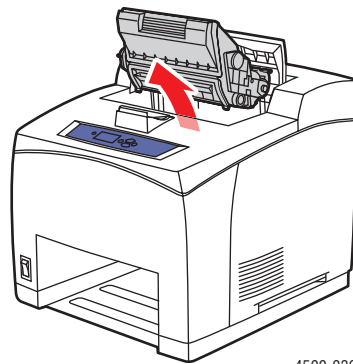
4500-036

4. Turn the green rollers to move the jammed paper out of the rollers, then gently pull the jammed paper out of the rollers.
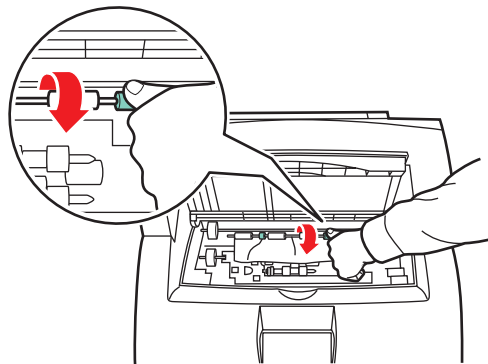
4500-037

5. If you cannot move the jammed paper, pull Trays 1 and 2 completely out of the printer.
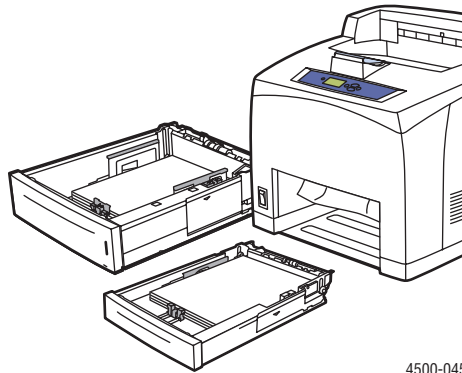
4500-045

6. Turn the green rollers and remove the jammed paper. Confirm that all paper fragments are removed.
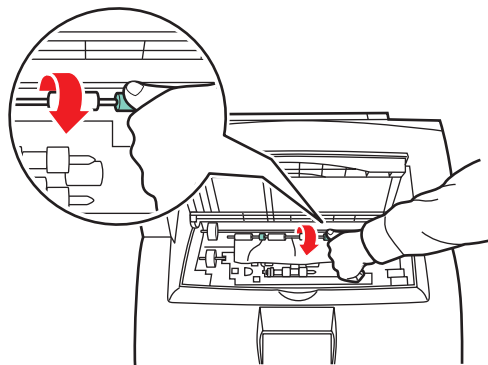
4500-037

7. Insert the trays into the printer slot and push them completely to the back of the printer.
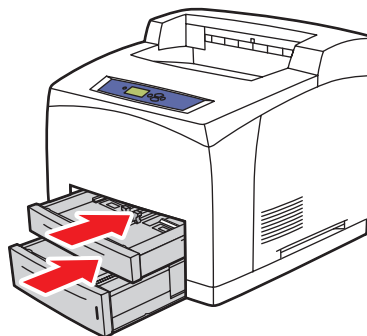
4500-034

8. Insert the print cartridge.

4500-035

9. Close the top cover.

4500-002
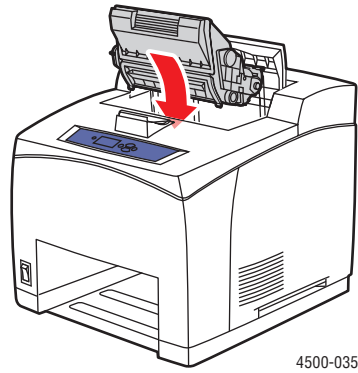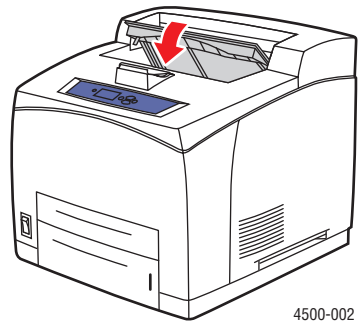
10. If you have a stacker, lower the stacker.
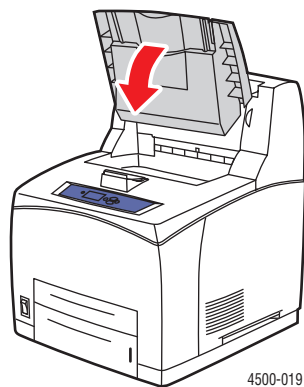
4500-019

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Jam at the Duplex Unit

1. Open the duplex unit cover.

4500-008

2. Remove the jammed paper. Confirm that all paper fragments are removed.

4500-010
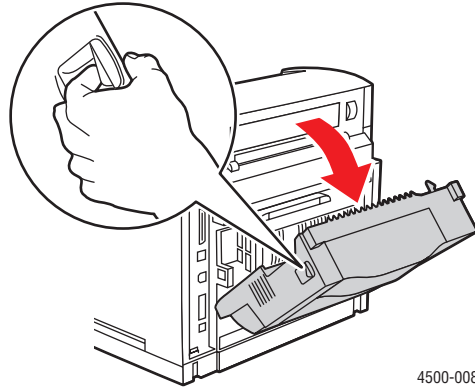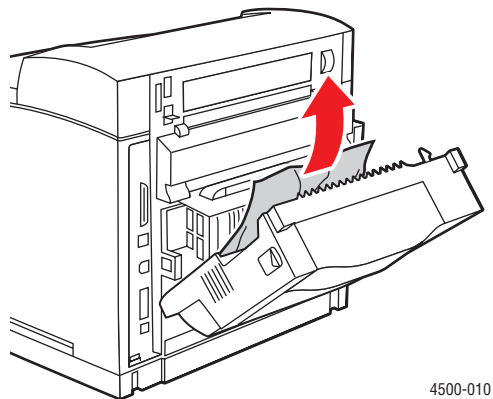
3. Close the duplex unit cover.
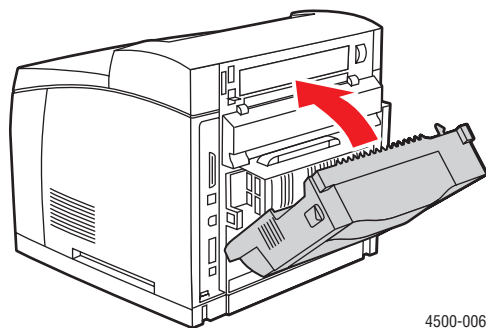
4500-006

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Jam at the Stacker

1. Open the rear stacker cover.
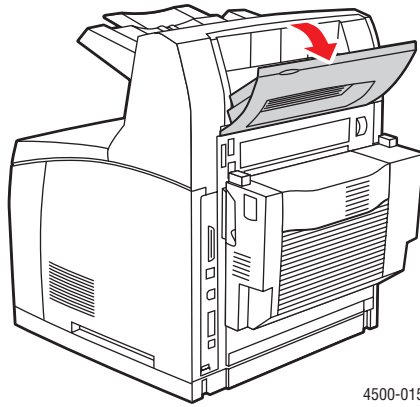
4500-015

2. Remove the jammed paper. Confirm that all paper fragments are removed.

4500-048

3. Close the rear stacker cover.

4500-014
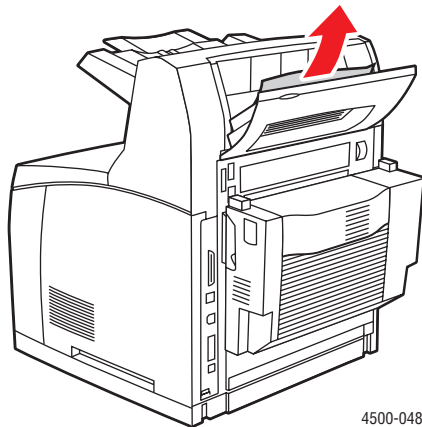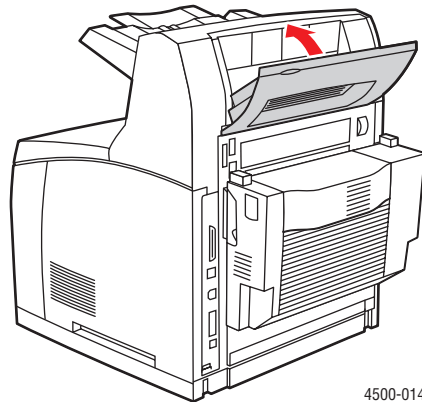
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Paper Size Jam

1. Pull the tray completely out of the printer.

4500-030
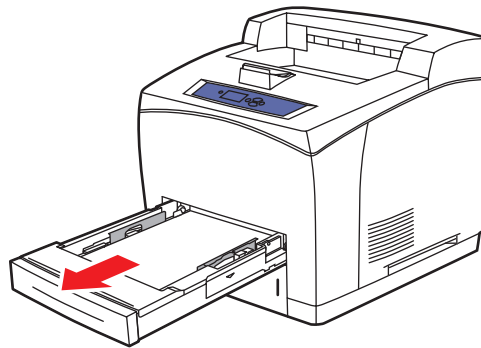
2. Confirm that the paper tray guides are pressed firmly against the paper.

4500-023   4500-024
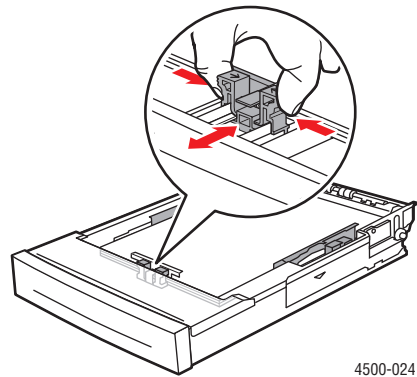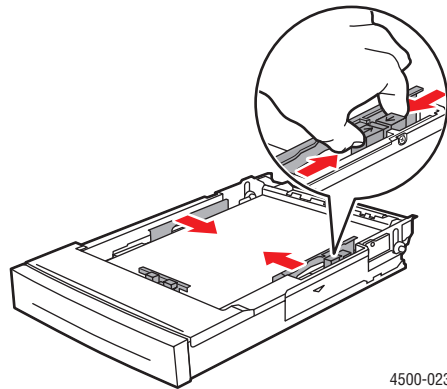
3. Insert the tray into the printer slot and push it completely to the back of the printer.

4500-040
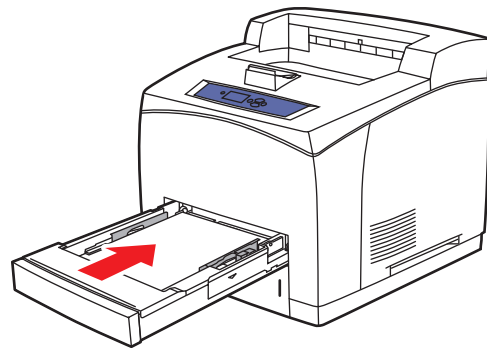
4. When the **Confirm Tray # Paper** (where # is the number of the tray specified on the front panel) message displays, verify that the paper size and type match the size and type of the paper in the tray.

- If the paper size and type in the message match the size and type of the paper in the tray, press the **OK** button.
- If the paper size and type in the message do not match the size and type of the paper in the tray, select the correct size and type at the front panel.

5. If you have a duplex unit, open the duplex unit cover.
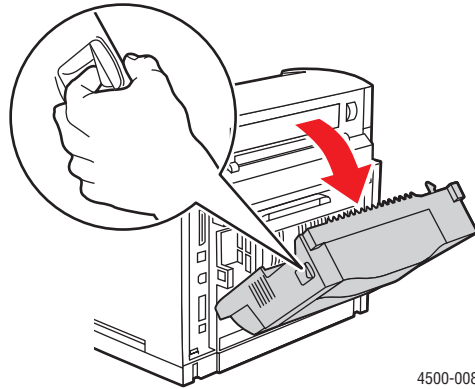
4500-008

6. Open the rear cover.

Caution

Be careful, some components inside the rear cover may be hot.
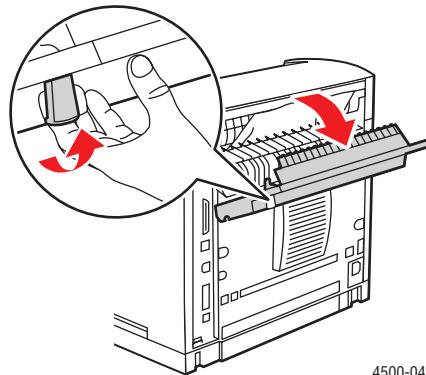
4500-041

7. Remove the jammed paper. Confirm that all paper fragments are removed.

4500-042
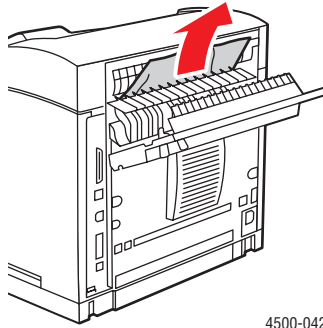
8. Close the rear cover.

4500-043
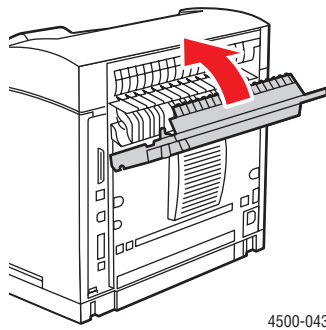
9. If you have a duplex unit, close the duplex unit cover.
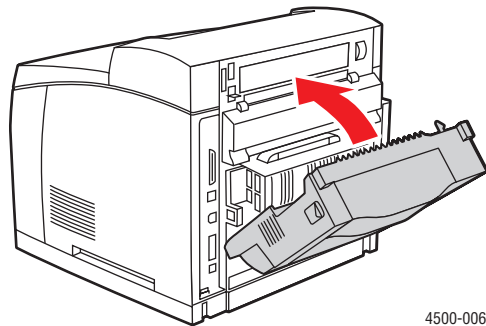
4500-006

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Print-Quality Problems

This topic includes:

■ "Diagnosing Print-Quality Problems" on page 4-24
■ "Repeating Defects" on page 4-29

Your printer is designed to produce consistently high-quality prints. If you observe print-quality problems, use the information on these pages to troubleshoot them.

For detailed, online support information, go to www.xerox.com/office/infoSMART.

Caution

If you change the type of paper in a tray, you **must** change the paper type and size on the front panel to match the paper that you loaded. **If you fail to do this, print-quality problems can occur and the fuser can be damaged**.

Diagnosing Print-Quality Problems

Caution

Damage caused by using unsupported paper, transparencies, and other specialty media is not covered by the Xerox warranty, service agreement, or Total Satisfaction Guarantee. The Total Satisfaction Guarantee is available in the United States and Canada. Coverage may vary outside these areas; please contact your local representative for details.
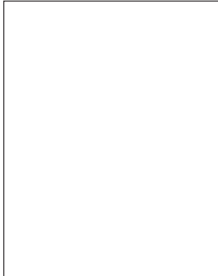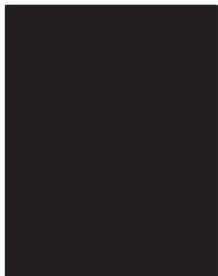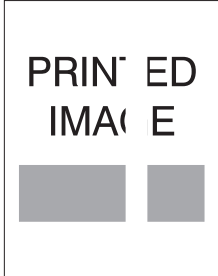
Use the following table to find specific solutions to print-quality problems.

Diagnosing Print-Quality Problems
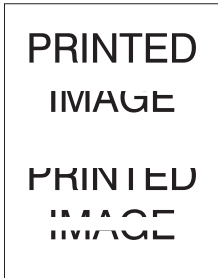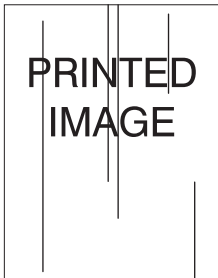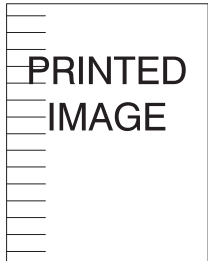
Problem	Causes	Solutions
Light Prints The overall image is lighter than normal. 	1. The paper may be damp. 2. You may be using Draft mode. 3. The toner level may be low.	1. Replace the paper. 2. Turn off Draft mode. 3. If the print cartridge is low on toner, replace it.
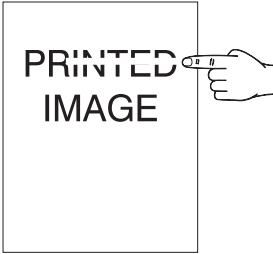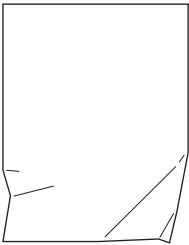
Diagnosing Print-Quality Problems (Continued)

Problem	Causes	Solutions
Blank Prints The entire printed page is blank with no visible print.	1. If you just installed a new print cartridge, the yellow sealing tape may still be in place. 2. Multiple sheets may have been fed from the paper tray at the same time. 3. Printable data may not have been received from the computer.	1. Remove the tape. 2. Remove the paper from the paper tray and fan it. Also, ensure that the paper is correctly loaded in the tray. 3. To test this, print a Configuration Page. If the Configuration Page is normal, check the interface cable between the computer and printer, the printer setup, and application software. If the Configuration Page is blank, replace the print cartridge and reprint the Configuration Page. If the Configuration Page still is blank, contact your Customer Support Center.
Black Prints The entire printed page is black.	1. The print cartridge may be defective. 2. Printable data from the computer may be corrupted.	1. Replace the print cartridge. 2. To test this, print a Configuration Page. If the Configuration Page is normal, check the interface cable between the computer and the printer, and the application software. If the connections appear normal, contact your Customer Support Center.
Vertical Line Deletions There are localized print deletions forming narrow lines.	1. The print cartridge may not be installed correctly. 2. The print cartridge may be defective or at the end of its life. 3. The transfer roller may be defective.	1. Remove and re-install the print cartridge. 2. Replace the print cartridge. 3. Replace the transfer roller (in the maintenance kit).

Diagnosing Print-Quality Problems (Continued)

Problem	Causes	Solutions
Horizontal Line Deletions There are localized print deletions appearing as bands running across the paper. PRINTED IMAGE PRINTED IMAGE	1. The paper may be defective with creases, folds, etc. 2. The print cartridge may be defective or at the end of its life. 3. The transfer roller may be defective.	1. Replace the paper. 2. Replace the print cartridge. 3. Replace the transfer roller (in the maintenance kit).
Vertical Dark Streaks There are black lines running across the print. PRINTED IMAGE	1. The print cartridge may be defective or at the end of its life. 2. The paper path may be contaminated with toner. 3. The fuser may be defective.	1. Replace the print cartridge. 2. Print several blank sheets of paper to remove the toner accumulations. 3. Replace the fuser (in the maintenance kit).
Repetitive Horizontal Dark Streaks There are black lines running across the page. For more information, see "Repeating Defects" on page 4-29. PRINTED IMAGE	1. The paper path may be contaminated with toner. 2. The print cartridge may be defective or at the end of its life. 3. The fuser may be defective. 4. The transfer roller may be defective.	1. Print several blank sheets of paper to remove the toner accumulations. 2. Replace the print cartridge. 3. Replace the fuser (in the maintenance kit). 4. Replace the transfer roller (in the maintenance kit).

Diagnosing Print-Quality Problems (Continued)

Problem	Causes	Solutions
Dark Spots or Marks There are dark spots or marks on the page in a random pattern. PRINTED IMAGE	1. The paper path may be contaminated with toner. 2. The print cartridge may be defective. 3. The fuser may be defective. 4. The transfer roller may be defective.	1. Print several blank sheets of paper to remove the toner accumulations. 2. Replace the print cartridge. 3. Replace the fuser (in the maintenance kit). 4. Replace the transfer roller (in the maintenance kit).
Unfused or Partially Fused Image The printed image is not fully fused to the paper and easily rubs off. PRINTED IMAGE	1. The paper may be damp. 2. Heavy or unusual paper may be in the tray. 3. The printer may be located in an environment with extreme temperature or humidity. 4. The fuser may be defective.	1. Replace the paper. 2. Replace that paper with approved paper. Make sure that the fuser temperature is set correctly for the paper type. 3. Make sure that the printer is located in an environment with the temperature between 5° and 35° C (41° and 95° F) and the relative humidity between 15% and 85%. Move the printer to a suitable area, away from air conditioning vents, open loading docks, etc. 4. Replace the fuser (in the maintenance kit).
Wrinkled Prints The prints are wrinkled, creased, or torn.	1. The paper is not loaded correctly in the appropriate tray. 2. The paper may be in poor condition. 3. The paper may be damp. 4. The fuser may be at the end of its life.	1. Verify that the paper is correctly loaded in the appropriate tray. 2. Replace the paper. 3. Replace the paper. 4. Replace the fuser (contained in the maintenance kit).

Diagnosing Print-Quality Problems (Continued)

Problem	Causes	Solutions
Blurred Prints The image is blurred at the edges.	1. The paper may be in poor condition. 2. The paper may be damp. 3. The print cartridge may be defective.	1. Replace the paper. 2. Replace the paper. 3. Replace the print cartridge.
Random or Spot Deletions Areas of the print are extremely light or missing.	1. The paper may be in poor condition. 2. The paper may be damp. 3. The print cartridge may be defective or at the end of its life.	1. Replace the paper. 2. Replace the paper. 3. Replace the print cartridge.

Repeating Defects

Refer to the table below if you observe a repeating defect, appearing multiple times at regular intervals on the page, on your print jobs.

Recurring Marks, Spots, Lines, or Voids

Replace this Supply...	if the defect occurs every:
Print Cartridge	38 mm (1.5 in.)
	52 mm (2.0 in.)
	94.4 mm (3.72 in.)
Transfer Roller	51 mm (2.0 in.)
Fuser	94.2 mm (3.7 in.)

Different supplies may create print defects with similar measurements. To identify the faulty supply:

1. Replace the print cartridge (do not discard the packaging).
2. If the problem continues, then remove and repackage the new print cartridge.
3. Reinstall the original print cartridge, then replace the maintenance kit (fuser and transfer roller).
4. If the problem continues, contact your Customer Support Center.

Maintenance
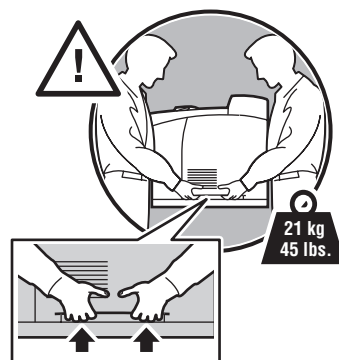
For safety information, go to Reference/Troubleshooting/User Safety on the *User Documentation CD-ROM*.

Your printer needs little maintenance to keep it producing quality prints. Certain routine maintenance items need to be ordered occasionally:

Maintenance Kit

Access the "Supplies Usage Page" from the printer's front panel, from CentreWare IS, or print the "Usage Profile" at the printer's front panel.

Order extra printer supplies when the printer's front panel displays a warning that the supply is low or near the end of life. You must replace the supply when the front panel displays an error message that the supply is empty or at the end of its life.

For information about supplies, go to www.xerox.com/office/4500supplies. Each supply includes installation instructions with the packaging.

Caution

If you attempt to use a non-Xerox print cartridge, it may not fit properly in the printer. If the cartridge does not fit properly, the printer will not function.

Cleaning the Outside of the Printer

You can clean the outside of the printer with a soft, damp, cloth. You can use a cloth moistened with a mild neutral detergent to remove stains; do not spray detergent directly onto the printer.

Warning

To prevent electric shock, turn the printer off and unplug the power cord from the electrical outlet before cleaning the printer.

Do not use a vacuum cleaner to clean the printer. Do not lubricate the printer with oil.

Front Panel Messages

This topic includes:

■ "Status Messages" on page 4-31
■ "Error and Warnings" on page 4-31

Your printer's front panel provides you with information and troubleshooting help.
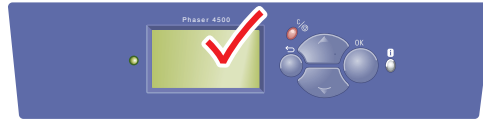
4500-020

The front panel is divided into two sections. The upper section displays printer status messages; the lower section displays menu lists.

Some of the status messages that appear in the front panel are listed below:

Status Messages

Status Message	Description
Ready to Print	The printer is ready to receive print jobs.
Processing data - Please wait	The printer is processing data; wait until **Ready to Print** or **Printing** is displayed.
Receiving data - Please wait	The printer is receiving data; wait until **Ready to Print** or **Printing** is displayed.
Printing page x of y	A print job is printing; wait until **Ready to Print** is displayed.
Warming up - Please wait	The printer is warming up. Print jobs can be processed but not printed.

Error and Warnings

The printer displays error or warning messages in the front panel display.

Hardware or software failures that may require service support are presented as fatal errors. When the printer's front panel displays a fatal error message, the LED blinks red. A fatal error message replaces the status lines.

When an error occurs, PrintingScout displays an instant notification on your computer screen that the printer needs attention.

The front panel **i** button also provides valuable information about errors and warnings.

Error or Warning Messages

Message	Description
Close Rear Cover	Close the rear cover to continue printing.
Close Front Cover	Close the front cover to continue printing.
Close Top Cover	Close the top cover to continue printing.
Close Duplex Unit Cover	Close the Duplex Unit Cover to continue printing.
Close Stacker Cover	Close the Stacker Cover to continue printing.
Jam at Exit; Open Rear Cover to Clear	1. Open the Rear Cover. 2. Remove the jammed paper. 3. Close the Rear Cover.
Jam At Exit; Open Duplex And Rear Cover To Clear	1. Open Duplex. 2. Open the Rear Cover. 3. Removed the jammed paper. 4. Close the Rear Cover. 5. Close Duplex.
Jam At Exit; Open Top Cover To Clear	1. Remove the jammed paper from exit. 2. Open the Top Cover. 3. Close the Top Cover.
Jam At Tray 1; Remove Trays and Open Top Cover To Clear	1. Remove Trays 1 and 2. 2. Open the Top Cover. 3. Remove the Print Cartridge. 4. Remove the jammed paper. 5. Reinsert the Print Cartridge. 6. Reinsert trays. 7. Close the Top Cover.
Jam At Tray 1; Remove Trays and Open Top Cover To Clear	1. Remove Trays 1 and 2. 2. Remove paper from the Stacker and raise output tray. 3. Open the Top Cover. 4. Remove the Print Cartridge. 5. Remove the jammed paper. 6. Reinsert the Print Cartridge. 7. Reinsert trays. 8. Close the Top Cover. 9. Lower the Stacker tray and replace its contents.

Error or Warning Messages (Continued)

Message	Description
Jam At Tray [2/3/4]; Remove Tray and Open Top Cover To Clear	1. Remove Tray [2/3/4]. 2. Open the Top Cover. 3. Remove the Print Cartridge. 4. Remove the jammed paper. 5. Reinsert the Print Cartridge. 6. Reinsert Tray [2/3/4]. 7. Close the Top Cover.
Jam At Tray [2/3/4]; Remove Trays and Open Top Cover To Clear	1. Remove Tray [2/3/4]. 2. Remove paper from the Stacker and raise output tray. 3. Open the Top Cover. 4. Remove the Print Cartridge. 5. Remove the jammed paper. 6. Reinsert the Print Cartridge. 7. Reinsert Tray [2/3/4]. 8. Close the Top Cover. 9. Lower the Stacker tray and replace its contents.
Jam At Top; Open Top Cover To Clear	1. Open the Top Cover. 2. Remove the Print Cartridge. 3. Turn the green rollers. 4. If jam doesn't move, remove Trays 1 & 2. 5. Remove the jammed paper. 6. Reinsert trays. 7. Reinsert the Print Cartridge. 8. Close the Top Cover.
Jam At Top; Open Top Cover To Clear	1. Remove paper from the Stacker and raise output tray. 2. Open the Top Cover. 3. Remove the Print Cartridge. 4. Turn the green rollers. 5. If jam doesn't move, remove Trays 1 & 2. 6. Remove the jammed paper. 7. Reinsert trays. 8. Reinsert the Print Cartridge. 9. Close the Top Cover. 10. Lower the Stacker tray and replace its contents.
Jam At Duplex; Open Duplex To Clear	1. Open Duplex. 2. Remove the jammed paper. 3. Close Duplex.

Error or Warning Messages (Continued)

Message	Description
Jam At Rear; Open Duplex And Rear Cover To Clear	1. Open Duplex. 2. Open the Rear Cover. 3. Remove the jammed paper. 4. Close the Rear Cover. 5. Close Duplex.
Jam At Rear; Open Duplex To Clear	1. Open Duplex. 2. Remove the jammed paper. 3. Close Duplex.
Jam At Rear; Open Rear Cover To Clear	1. Open the Rear Cover. 2. Remove the jammed paper. 3. Close the Rear Cover.
Jam At Stacker; Open Rear Stacker Cover To Clear	1. Open the Rear Stacker Cover. 2. Remove the jammed paper. 3. Close the Rear Stacker Cover.
Paper Size Jam; Check Size And Open Rear Cover To Clear	1. Check the paper tray guides. 2. Check the tray paper size menus. 3. Open the Rear Cover. 4. Remove the jammed paper. 5. Close the Rear Cover.
Paper Size Jam; Check Size And Open Duplex And Rear Cover To Clear	1. Check the paper tray guides. 2. Check the tray paper size menus. 3. Open Duplex. 4. Open the Rear Cover. 5. Remove the jammed paper. 6. Close the Rear Cover. 7. Close Duplex.
Paper Size Jam; Check Paper Tray Guides And Open Rear Cover To Clear	1. Check the paper tray guides. 2. Open the Rear Cover. 3. Remove the jammed paper. 4. Close the Rear Cover.
Paper Size Jam; Check Paper Tray Guides And Open Duplex And Rear Cover To Clear	1. Check the paper tray guides. 2. Open Duplex. 3. Open the Rear Cover. 4. Remove the jammed paper. 5. Close the Rear Cover. 6. Close Duplex.
Insert Tray [1/2/3/4]	Reinsert the indicated tray to continue printing.
Tray [1/2/3/4] Is Missing	Reinstall the indicated tray.
No Paper in Tray [1/2/3/4]	Load paper in the indicated tray.

Error or Warning Messages (Continued)

Message	Description
Tray {2/3/4} Paper Is Low	The indicated tray is nearly emplty. Reload the same size and type of paper soon.
Out Of Paper; Load Tray [1/2/3/4] with [size][type]	Load the indicated paper size and type into the indicated tray.
Wrong Paper Size; Load Tray [1/2/3/4] with [size][type]	Replace the paper in the indicated tray with paper of the indicated size and type.
Paper Not Available; Load Tray [1/2/3/4] with {size][type}	Replace the paper in the indicated tray with paper of the indicated size and type. Or select Print with Available Paper to use a paper size and type currently in the printer.
Standard Output Tray is Full. Unload Paper.	Remove the paper from the indicated output tray.
Stacker Is Full. Unload Paper.	Remove the paper from the indicated output tray.
Toner Is Low.	The Print Cartridge is almost empty. Order replacement.
Maintenace Kit Is Near End Of Life.	The Maintenance Kit (Fuser, Bias Transfer Roller, and feed rollers) is near the enod of its life. Warning - when the Fuser is replaced, use caution, some components inside the rear cover may be hot. Order replacement.
Replace Print Cartridge	**1.** Open the Top Cover. **2.** Replace Print Cartridge. **3.** Refer to the pictorial installation instructions on the Print Cartridge itself. **4.** Close the Top Cover.

Moving and Repacking the Printer

This topic includes:

■ "Precautions for Moving the Printer" on page 4-36
■ "Moving the Printer Within the Office" on page 4-37
■ "Preparing the Printer for Shipment" on page 4-37

For safety information, go to Reference/Troubleshooting/User Safety on the *User Documentation CD-ROM*.

Precautions for Moving the Printer

Warning

Follow these guidelines to avoid injuring yourself or damaging the printer.

■ Always use two people to lift the printer.
■ Always turn off the printer using the power switch and unplug all cables and cords.
■ Always lift the printer from the designated lift points.
■ Do not place any food or liquids on the printer.
■ Failure to repackage the printer properly for shipment can result in damage to the printer not covered by the warranty, service agreement, or Total Satisfaction Guarantee. The Total Satisfaction Guarantee is available in the United States and Canada. Coverage may vary outside these areas; please contact your local representative for details.
■ Damage to the printer caused by improper moving is not covered by the Xerox warranty, service agreement, or Total Satisfaction Guarantee. The Total Satisfaction Guarantee is available in the United States and Canada. Coverage may vary outside these areas; please contact your local representative for details.

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Moving the Printer Within the Office

The printer can be safely moved from one location within an office to another as long as it travels in an upright position, gently over smooth surfaces. Any jarring movement, such as pushing the printer over a raised door threshold or across a parking lot, can damage the printer.

Preparing the Printer for Shipment

To transport the printer by vehicle, the printer must be repackaged in the original packaging or a repackaging kit.

If you do not have all of the original packaging, order the repackaging kit from www.xerox.com/office/4500supplies. Additional instructions for repackaging the printer are provided at www.xerox.com/office/4500support.

Additional Resources

This topic includes:

- "Support" on page 4-38
- "infoSMART" on page 4-38
- "Web Links" on page 4-38

Support

There is additional help available at www.xerox.com/office/support. You can access infoSMART Knowledge Base, PhaserSMART Technical Support, Technical Support via email, driver downloads, and much more.

A set of Xerox links is installed in your web browser's Favorites folder when you install the printer drivers on your computer. The Troubleshooting tab in your Windows printer driver also includes useful links.

infoSMART

This is the same troubleshooting knowledge base used by Xerox Customer Support. infoSMART Knowledge Base provides solutions for printer issues such as error codes, print quality, media jams, software installation, networking, and more. Go to www.xerox.com/office/infoSMART.

Web Links

Xerox provides many resources to help you learn more about your Xerox Phaser™ 4500 Laser Printer. Use these web sites to obtain information about your printer:

Resource	Link
To link to product and supplies information, download printer drivers, view documents, and access support information:	www.xerox.com/office/
To access the troubleshooting knowledge base used by Xerox Customer Support staff:	www.xerox.com/office/infoSMART
To view technical support information:	www.xerox.com/office/4500support
To order Xerox supplies:	www.xerox.com/office/4500supplies
To find your local sales and support center:	www.xerox.com/office/contacts

A User Safety

Your printer and the recommended supplies have been designed and tested to meet strict safety requirements. Attention to the following information will ensure the continued safe operation of your printer.

Electrical Safety

- Use the power cord supplied with your printer.
- Plug the power cord directly into a properly grounded electrical outlet. If you do not know if an outlet is grounded, ask an electrician to check the outlet.
- Do not use a ground adapter plug to connect the printer to an electrical outlet that does not have a ground connection terminal.
- Do not use an extension cord or power strip.

Warning

Avoid the potential of electrical shock by ensuring that the printer is properly grounded. Electrical products may be hazardous if misused.

- Do not place the printer in an area where people might step on the power cord.
- Do not place objects on the power cord.
- Do not block the ventilation openings. These openings are provided to prevent overheating of the printer.
- Do not drop paper clips or staples into the printer.

Warning

Do not push objects into slots or openings on the printer. Making contact with a voltage point or shorting out a part could result in fire or electrical shock.

If you notice unusual noises or odors:

1. Turn off the printer immediately
2. Disconnect the power cord from the electrical outlet
3. Call an authorized service representative to correct the problem.

The power cord is attached to the printer as a plug-in device at the back of the printer. If it is necessary to disconnect all electrical power from the printer, disconnect the power cord from the electrical outlet.

Warning

Do not remove the covers or guards that are fastened with screws unless you are installing optional equipment and are specifically instructed to do so. Power should be OFF when performing these installations. Except for user-installable options, there are no parts that you can maintain or service behind these covers.

Note

Leave the printer on for optimum performance; it does not pose a safety hazard.

The following are hazards to your safety:

■ The power cord is damaged or frayed.
■ Liquid is spilled into the printer.
■ The printer is exposed to water.

If any of these conditions occur:

1. Turn off the printer immediately.
2. Disconnect the power cord from the electrical outlet.
3. Call an authorized service representative.

Laser Safety

With specific regard to lasers, this printer complies with laser product performance standards set by governmental, national, and international agencies and is certified as a Class 1 Laser Product. The printer does not emit hazardous light because the beam is totally enclosed during all modes of customer operation and maintenance.

Maintenance Safety

■ Do not attempt any maintenance procedure that is not specifically described in the documentation supplied with your printer.

■ Do not use aerosol cleaners. The use of supplies that are not approved may cause poor performance and could create a hazardous condition.

■ Do not burn any consumables or routine maintenance items. For information on Xerox supplies recycling programs, go to www.xerox.com/office/recycle.

Operational Safety

Your printer and supplies were designed and tested to meet strict safety requirements. These include safety agency examination, approval, and compliance with established environmental standards.

Your attention to the following safety guidelines helps to ensure the continued, safe operation of your printer.

Printer Location

Place the printer in a dust-free area within a temperature range of 41 degrees F to 95 degrees F (5 degrees C to 35 degrees C) and a relative humidity range of 15 percent to 85 percent.

Printer Clearance

Place the printer in an area where there is adequate space for ventilation, operation, and servicing. The recommended minimal spacing is:

Overhead Clearance:

■ 40 cm (16 in.) above the printer without the 500-Sheet stacker
■ 28 cm (11 in.) above the printer with the 500-Sheet stacker

Total Height Requirements:

■ Printer with Trays 1 and 2: 82 cm (32 in.)
■ Add an additional 9.6 cm (3.75 in.) for each optional 550-Sheet feeder

Other Clearances:

■ 16 cm (6 in.) behind the printer
■ 23 cm (9 in.) behind the printer when the duplex unit is installed
■ 48 cm (19 in.) in front of the printer
■ 21 cm (8 in.) on the left side of the printer
■ 30 cm (12 in.) on the right side of the printer

Operational Guidelines

■ Do not block or cover the slots and openings on the printer. The printer may overheat without adequate ventilation.

■ For optimum performance, use the printer at elevations below 3,000 m (11,480 ft.).

■ Do not place the printer near a heat source.

■ Do not place the printer in direct sunlight.

- Do not place the printer in line with the cold air flow from an air conditioning system.
- Place the printer on a level, solid non-vibrating surface with adequate strength for the weight of the printer. It should be within 2 degrees of horizontal with all four feet in solid contact with the surface. The base printer weight without any packaging materials is approximately 20.5 kg (45.2 lbs.).

Printer Supplies

- Use the supplies specifically designed for your printer. The use of unsuitable materials may cause poor performance and a possible safety hazard.
- Follow all warnings and instructions marked on, or supplied with, the printer, options and supplies.

Caution

If you attempt to use a non-Xerox print cartridge, it may not fit properly in the printer. If the cartridge does not fit properly, the printer will not function.

Moving the Printer

- Always use two people to lift the printer.
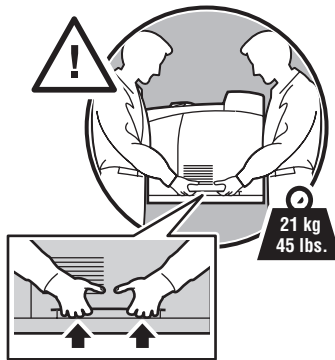
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- Always turn off the printer using the power switch and unplug all cables and cords.
- Always lift the printer from the designated lift points.
- Do not place any food or liquids on the printer.
- Failure to repackage the printer properly for shipment can result in damage to the printer not covered by the warranty, service agreement, or Total Satisfaction Guarantee. The Total Satisfaction Guarantee is available in the United States and Canada. Coverage may vary outside these areas; please contact your local representative for details.

■ Damage to the printer caused by improper moving is not covered by the Xerox warranty, service agreement, or Total Satisfaction Guarantee. The Total Satisfaction Guarantee is available in the United States and Canada. Coverage may vary outside these areas; please contact your local representative for details.

Warning

Avoid touching areas inside the printer that are labeled with a warning symbol. These areas may be very hot and can cause personal injury.

Printing Safety Guidelines

■ Wait 10-15 seconds between turning the printer off and on.
■ Keep hands, hair, neckties, etc., away from the exit and feed rollers.
■ Do not remove the paper source tray that you selected in either the printer driver or front panel.
■ Do not open the doors.
■ Do not move the printer.

Symbols Marked on Product

	Use caution (or draws attention to a particular component). See the manual(s) for information.
	Avoid pinching fingers in the printer. Use caution to avoid personal injury.
	Hot surface on or in the printer. Use caution to avoid personal injury.
	Do not expose the imaging unit to light for more than 15 minutes.
	Do not touch.

B Warranty

For warranty information regarding your Xerox printer, go to www.xerox.com/office/4500warranty.

C Printer Specifications

Physical Specifications

Width: 422 mm (16.6 in.)

Height: 404 mm (15.9 in.)

Depth: 465 mm (18.3 in.)

Weight (with 10K cartridge): 21 KG (45 lbs.)

Environmental Specifications

Temperature

- Storage: -20° to 40° C / -4° to 104° F
- Operating: 5° to 35° C / 41° to 95° F

Relative Humidity

- Storage: 15% to 85%
- Operating: 15% to 85%

Electrical Specifications

Available in two (2) models:

- 110-120 VAC, 60 Hz
- 220 VAC, 50 Hz

ENERGY STAR qualified printer

Performance Specifications

Resolution

- 600 x 600 dpi
- True 1200 x 1200 dpi

Print Speed

- Up to 36 pages per minute (ppm)

Controller Specifications

400 MHz processor

Memory

- 64 MB PC133 DRAM standard
- Upgradable to a maximum of 256 MB

Page Description Languages (PDL)

- PCL
- Adobe PostScript 3

Fonts

- PostScript
- PCL

Interfaces

- IEEE 1284 parallel
- Ethernet 10BaseT and 100BaseTx (only for N, DT, and DX configurations)
- USB

D Regulatory Information

The equipment described in this manual generates and uses radio frequency energy. If it is not installed properly in strict accordance with Xerox' instructions, it may cause interference with radio and television reception or may not function properly due to interference from another device. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiver (device being interfered with).
- Increase the separation between the printer and the receiver.
- Connect the printer into an outlet on a circuit different from that which the receiver is connected.
- Route the interface cables on the printer away from the receiver
- Consult the dealer, Xerox service, or an experienced radio/television technician for help.

Changes or modifications not expressly approved by Xerox can affect the emission and immunity compliance and could void the user's authority to operate this product. To ensure compliance, use shielded interface cables. A shielded parallel cable can be purchased directly from Xerox at www.xerox.com/office/supplies.

Xerox has tested this product to internationally accepted electromagnetic emission and immunity standards. These standards are designed to mitigate interference caused or received by this product in a normal office environment. This product is also suitable for use in a residential environment based on the levels tested.

In the United States this product complies with the requirements of an unintentional radiator in part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference; (2) this device must accept any interference received, including interference that may cause undesired operation.

United States

In the United States this product complies with the requirements of an unintentional radiator in part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference; (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications, ICES-003.

Le présent appareil numérique n'émet pas de bruits radioélectrique dépassant les limits applicables aux appareils numériques de la classe B prescrites dans le Réglement sur le brouillage radioélectrique édicté par le ministere des Communications du Canada, NMB-003.

European Union

Xerox Corporation declares, under our sole responsibility, that the printer to which this declaration relates is in conformity with the following standards and other normative documents:

Following the provisions of the Low Voltage Directive 73/23/EEC and its amendments:

EN 60950 (IEC 60950)	"Safety of Information Technology Equipment including Electrical Business Equipment"

Following the provisions of the Electromagnetic Compatibility Directive 89/336/EEC and its amendments:

EN 55022:1998 (CISPR 22)	"Limits and Methods of measurement of radio interference characteristics of Information Technology Equipment." Class B.
EN 61000-3-2:1995 +A1:1998+A2:1998 (IEC61000-3-2)	"Part 3: Limits - Section 2: Limits for harmonic current emissions (equipment input current less than or equal to 16A per phase)."
EN 61000-3-3:1995 (IEC61000-3-3)	"Part 3: Limits - Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current less than or equal to 16A."
EN 55024:1998 (CISPR 24)	"Information technology equipment - Immunity characteristics - Limits and methods of measurement. "

CISPR 24 Immunity Phenomena	Basic Standard	Test Specification
Electrostatic Discharge	IEC 61000-4-2:1995	6 kV Contact, 10 kV Air
Radio-Frequency Electromagnetic Field (radiated)	IEC 61000-4-3:1995	80-1000 MHz, 3 V/m, 80% AM @ 1 KHz
Fast Burst Transients	IEC 61000-4-4:1995	5/50 Tr/Th ns, 5 kHz Rep. Freq 0.5 kV Signal Lines 1 kV AC Mains
Line Surge	IEC 61000-4-5:1995	Combination wave 2.0 kV Common mode 2.0 kV Differential mode
Radio-Frequency Electromagnetic Field (Conducted)	IEC 61000-4-6:1996	0.15 - 80 MHz, 3 V, 80% AM @ 1 kHz

CISPR 24 Immunity Phenomena	Basic Standard	Test Specification
Line voltage dips	IEC 61000-4-11:1994	>95% dip for ½ cycle @ 50 Hz
		30% dip for 25 cycles @ 50 Hz
Line voltage drop-out	IEC 61000-4-11:1994	>95% dropout for 250 cycles @ 50 Hz

This product, if used properly in accordance with the user's instructions, is neither dangerous for the consumer nor for the environment.

A signed copy of the Declaration of Conformity for this product can be obtained from Xerox.

E Material Safety Data Sheet

For Material Safety Data information regarding your Phaser 4500 printer, go to www.xerox.com/office/4500msds. For the Customer Support Center phone numbers, see the information booklet entitled *Total Satisfaction Services* that came with your printer.

F Product Recycling and Disposal

Xerox operates a worldwide equipment takeback and reuse/recycle program. Contact your Xerox sales representative (1-800-ASK-XEROX) to determine whether this Xerox product is part of the program. For more information about Xerox environmental programs, visit www.xerox.com/environment.html.

If your product is not part of the Xerox program and you are managing its disposal, please note that the product may contain lead and other materials whose disposal may be regulated due to environmental considerations. For recycling and disposal information, contact your local authorities. In the United States, you may also refer to the Electronic Industries Alliance at www.eiae.org.

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