



Reference Guide

Guide de référence

Guía de referencia

Guia de referència

Справочное Руководство

Referans Kılavuzu



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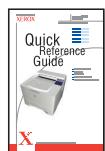


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Features

Printer Tour

Printer Features

The Phaser 3420 Laser Printer embodies many features to meet your printing needs:

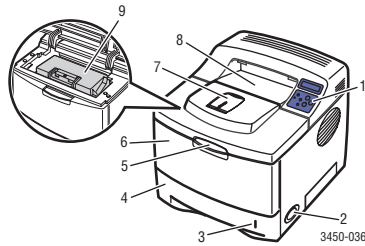
- Great performance and superior print quality
 - Letter: 21 pages per minute (ppm) with 600 dpi full speed resolution
 - A4: 20 ppm with 600 dpi full speed resolution
 - Up to 144 Mbytes RAM memory
- Flexible paper handling
 - Optional 500-Sheet Feeder (including tray)
 - Wide variety of productivity features
 - Easy to replace print cartridge
 - CentreWare IS provides an embedded web server to help manage, configure, and troubleshoot the printer from your computer
 - Status Monitor provides on-screen notification and guidance if the printer needs help

Available Configurations

The Phaser 3420 Laser Printer is available in three configurations:

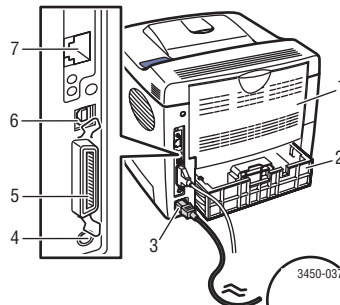
Features	Printer Configuration
Maximum Print Speed Monochrome	21
Memory (Standard) Up to 144 Mbytes Optional	16 Mbytes
PostScript Fonts	Optional
PCL Fonts	Yes
Automatic 2-Sided Printing	Yes
Default Resolutions (dpi)	600x600 dpi
500-Sheet Feeder	Optional
Network Interface	Standard

Front View



1. Front Panel
2. On/Off Switch
3. Paper Gauge
4. Tray 2
5. Tray 1 (MPT) Release
6. Tray 1 (MPT)
7. Paper Output Support
8. Output Tray
9. Print Cartridge

Rear View



1. Rear Door
2. Legal Paper Adjustment
3. Power cord receptacle
4. Optional Tray 3 Cable Connector
5. IEEE 1284 Parallel Port
6. USB Port
7. Network Port

Printer Options and Supplies

The following printer options and supplies are available for Phaser 3420 printers:

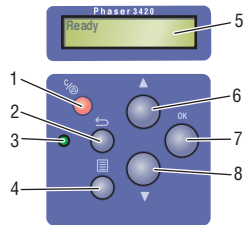
Options and Supplies

Item	Part Number
32 Mbytes additional RAM memory	097S03132
64 Mbytes additional RAM memory	097S03133
128 Mbytes additional RAM memory	097S03136
PostScript	097N01393
500-Sheet Feeder (includes tray)	097S03131
Standard-Capacity Print Cartridge (5,000 pages @ 5% area coverage)	106R01033
High-Capacity Print Cartridge (10,000 pages @ 5% area coverage)	106R01034

Front Panel Layout

The front panel on your printer has three components:

- Multi-colored Light Emitting Diode (LED) light
- Alphanumeric display
- Six button cluster.



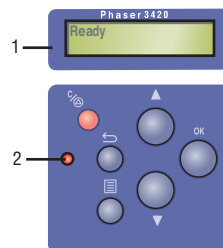
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1. **Cancel** button
2. **Return** button
3. **On-line/Data/Error LED**
4. **Menu** button
5. **Status/Error Messages and Menus**
6. **Up Arrow** button
7. **OK** button
8. **Down Arrow** button

The Alphanumeric Display displays status messages and front panel menus.

Error and Warning Messages

When there is a problem with the printer, the front panel LED (2) blinks red for an error and yellow for a warning. An error or warning message is displayed in the Alphanumeric Display (1).



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Menu Map

The “Menu Map” is a visual representation of the front panel settings and information pages. To print the “Menu Map”:

1. At the printer’s front panel, press the **Menu** button, then press the **OK** button.
2. Press the **OK** button to print the **Menu Map**.

Print Icon



There are a number of information pages accessible through the front panel. When the print icon appears before a title in the Menu Map:

1. Select that title at the front panel.
2. Press the **OK** button to print the page.

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, press the **Menu** button, then press the **OK** button.
2. Select **Info 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.

Printer Drivers

Printer drivers enable your computer and printer to communicate and provide access to your printer features. Install the printer driver from the Software and Documentation CD-ROM.

Available Printer Drivers

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

Driver	Source	Description
PCL6 Driver	CD-ROM	The Printer Command Language driver can be used for applications requiring PCL. (Default driver)
Windows PostScript Driver	CD-ROM	The PostScript driver is recommended to take full advantage of PostScript. Available for Windows 2000, Windows XP, and Windows Server 2003. (available with PS option only)
Macintosh OS Driver	CD-ROM	This driver enables printing from a Macintosh OS 9.x or higher. (available with PS option only)

Printer Driver Features

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

Feature	Windows 2000, Windows XP, Windows Server 2003	Windows 98 Windows Me	Mac OS 9	Mac OS X
Print-Quality Modes	Both	Both	PostScript	PostScript
2-Sided Printing	Both	Both	PostScript	PostScript
N-Up	Both	PCL6	PostScript	PostScript
Booklet	Both	PCL6	—	—
Poster Printing	PCL6	PCL6	—	—
Fit to Page	Both	Both	PostScript	PostScript
Mirrored Output	PostScript	PostScript	PostScript	—
Negative Output	PostScript	PostScript	PostScript	—
Scaling	Both	Both	PostScript	PostScript
Watermarks	PCL6	PCL6	—	—
Cover Page	PCL6	PCL6	PostScript	—

Remote Control Panel

The Remote Control Panel is a Windows utility that enables you to:

- Set printer-specific settings in the printer
- Download fonts and macros to your printer

The Remote Control Panel can be used for all Windows operating systems with a non-networked printer when connected with either the parallel interface or USB interface.

Installing the Remote Control Panel

The Remote Control Panel utility can be installed from the *Software and Documentation CD-ROM*.

Changing Settings with the Remote Control Panel

To change settings using the Remote Control Panel:

1. Click **Start**, select **Programs**, select **Xerox Phaser 3420**, then click **Remote Control Panel**.

2. Make changes to the Remote Control Panel settings on the **Printing, Config, Job, Test PCL, Flash Font and Macro, and PS 3** tabs.

Note

For information about the settings on these tabs, access the online help by clicking the **Help** button.

3. Send the settings to the printer by clicking the **Send** button.

Note

Settings selected in the printer driver override settings selected in the Remote Control Panel.

Managing Your Printer

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

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, press the **Menu** button, select **Information**, then press the **OK** button.
2. Select **Printer Ident**, then press the **OK** button.
3. Select **IP Address**, then press the **OK** button.

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:

- 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.

Status Monitor

Status Monitor, installed with your printer driver and available only with Windows on a network enabled printer, 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

Tray Settings

Tray Sequence

You can specify the sequence the printer uses to select trays containing the correct paper type and size for a print job. When a tray runs out of the correct paper during printing, the printer selects the next tray in the sequence containing the correct paper type and size to continue printing the job.

Changing Front Panel Language Display

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, press the **Menu** button, select **Printer Setup**, then press the **OK** button.
2. Select **General Setup**, then press the **OK** button.
3. Select **FP Language**, then press the **OK** button.
4. Select the desired language, then press the **OK** button.

Fonts

Your printer uses the following types of fonts:

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

Resident PostScript Fonts

Printer-resident fonts are always available for printing. All printers are shipped with PostScript resident Roman fonts. Print a sample of the resident PostScript fonts at the front panel.

Resident PCL6 Fonts

For PCL printing, the printer includes many typefaces, including Courier, Times, and Univers typefaces in medium, bold, italic medium, and italic bold. Print a sample of resident PCL6 fonts at the front panel.

Printing

Supported Papers

Follow the guidelines in these tables to ensure the best print quality and avoid printer jams.

Note

Xerox highly recommends that you print transparencies and other specialty media from Tray 1 (MPT) for best results.

Supported Papers, Transparencies, and Other Specialty Media

Paper Type/Size	Dimensions	Weight			
		Tray 1 (MPT)	Tray 2	Tray 3	2-Sided Printing
		Tray 1 (MPT) Weight: 60–163 g/m ² (16–43 lb.) Tray 2 and 3 Weight: 60–105 g/m ² (16–28 lb.) Duplex Weight: 75–90 g/m ² (20–24 lb.)			
Letter	8.5 x 11 in.	●	●	●	●
Legal	8.5 x 14 in.	●	●	●	●
US Folio	8.5 x 13 in.	●	●	●	●
A4	210 x 297 mm	●	●	●	●
B5-JIS	182 x 257 mm	●	●	●	
ISO-B5	176 x 250 mm	●	●	●	
A5	148 x 210 mm	●	●	●	
Executive	7.25 x 10.5 in.	●	●	●	
A6 Postcard	105 x 148 mm	●			
Envelopes					
Monarch	3.88 x 7.5 in.	●			
#10 Commercial	4.13 x 9.5 in.	●			
C5	162 x 229 mm	●			
C6	114 x 162 mm	●			
DL	110 x 220 mm	●			
Transparencies					
Letter	8.5 x 11 in.	●	●	●	
A4	210 x 297 mm	●	●	●	
Labels					
Letter	8.5 x 11 in.	●			
A4	210 x 297 mm	●			
Custom	Width = 76.2 ~ 215.9 mm (3 ~ 8.5 in.); Length = 127 ~ 355.6 mm (5 ~ 14 in.)	●			

Basic Printing

For information about how to load paper in Tray 1 (MPT), Tray 2, or Tray 3, see the *Quick Reference Guide* that came with your printer. The *Quick Reference Guide* can also be found on the *Software and Documentation CD-ROM* that came with your printer.

Note

A minimum clearance of 32 mm (12.6 in.) must be maintained at the rear of the printer. See the *Setup Guide* that came with your printer for minimum clearances.

Changing Paper Type and Size at the Front Panel

If you have changed the paper size, at the printer's front panel:

1. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
2. Select **Paper Handling**, then press the **OK** button.
3. Select **Tray Size**, then press the **OK** button.
4. Scroll to the paper size loaded, then press the **OK** button.
5. Press the **Cancel** button to return to the main menu.

If you have changed the paper type at the printer's front panel:

1. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
2. Select **Paper Handling**, then press the **OK** button.
3. Select **Tray Type**, then press the **OK** button.
4. Scroll to the paper type loaded, then press the **OK** button.
5. Press the **Cancel** button to return to the main menu.

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 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

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 “PCL Printer Driver Options for Windows Operating Systems” table or “PostScript Printer Driver Options for Windows Operating Systems” table for specific printing options.
5. Click the **OK** button to save your selections.

Selecting Properties for an Individual Job

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 the **1200 dpi Quality** mode for a particular graphic, select this setting in the driver before printing that job.

1. With the desired document or graphic open in your application, access the **Print** dialog box.
2. Select the Phaser 3420 printer and click the **Properties** button to open the printer driver.
3. Make selections from the driver tabs. See the following table for specific printing options.
4. Click the **OK** button to save your selections.
5. Print the job.

PCL6 Printer Driver Options for Windows Operating Systems

Operating System	Driver Tab	Printing Options
Windows 2000, Windows XP, or Windows Server 2003	Layout tab	<ul style="list-style-type: none"> ■ Orientation ■ 2-Sided Printing ■ Multiple Pages Per Sheet (N-Up) ■ Reduce/Enlarge
	Paper tab	<ul style="list-style-type: none"> ■ Paper Size ■ Custom Size ■ Paper Type ■ Paper Source ■ Cover Page
	Image Options tab	<ul style="list-style-type: none"> ■ Print Quality ■ Print All Text Black ■ TrueType Options
	Output Options tab	<ul style="list-style-type: none"> ■ Print Order ■ Use Printer Fonts
	Watermark tab	<ul style="list-style-type: none"> ■ Watermarks
	Troubleshooting tab	<ul style="list-style-type: none"> ■ Print Information Pages ■ Web Links

PostScript Printer Driver Options for Windows Operating Systems

Operating System	PostScript Driver Tab	Printing Options
Windows 2000, Windows XP, or Windows Server 2003	Layout tab	<ul style="list-style-type: none"> ■ Orientation ■ 2-Sided Printing ■ Page Order ■ Pages Per Sheet ■ Booklet
	Paper/Quality tab	<ul style="list-style-type: none"> ■ Tray Selection
	Advanced Options Dialog Box	<ul style="list-style-type: none"> ■ Paper Size ■ Scaling ■ Mirrored Output ■ Negative Output ■ Fit to Page ■ Paper Type ■ Print Quality
	Troubleshooting tab	<ul style="list-style-type: none"> ■ Web Links ■ Printer Information Pages

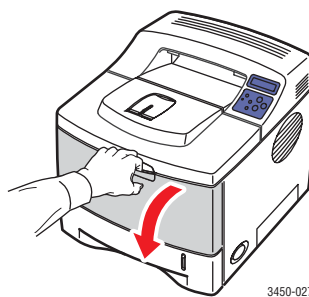
Note

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

Using the Manual Feed Mode

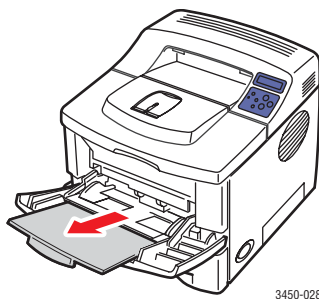
Follow these steps to print a manual print job from Tray 1 (MPT):

1. At your computer, select **Print**, select **Properties**, select **Paper**, select **Paper Source**, select **Manual**, then click **OK** to send the job to the printer.
2. Open Tray 1 (MPT) by pushing the handle down and out.

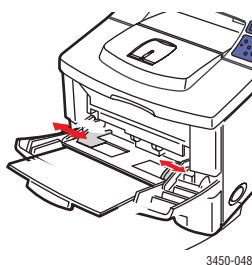


3450-027

3. Slide the extender toward you until it locks into place.



4. Adjust the paper guides to match the size of the paper, transparency, or other specialty media.



5. When prompted at the front panel, insert enough sheets of the paper, transparency, or other specialty media for your print job into the tray. Place the side to be printed **faceup** with the **top** of the page entering the printer first.
6. If necessary, press the guides inward to match the size of the paper.
7. Press the **OK** button.

Tray 1 (MPT) detects the paper and prints the page.

2-Sided Printing

Automatic 2-Sided Printing

Guidelines

- Use only letter, legal, A4, US Folio, or custom paper with dimensions and weights listed for automatic 2-sided printing in “Supported Papers” on page 9.
- Use paper with a weight range between 75–90 g/m² (20–24 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.

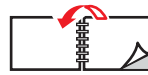
**Portrait
Flip on Long Edge**



**Portrait
Flip on Short Edge**



**Landscape
Flip on Short Edge**



**Landscape
Flip on Long Edge**



Printing 2-sided Jobs

To print on both sides of the sheet in a supported driver:

Windows 2000, Windows XP, and Windows Server 2003 PostScript driver:

1. Insert paper into the tray. For information see the *Quick Reference Guide* that came with your printer. The *Quick Reference Guide* can also be found on the *Software and Documentation CD-ROM* that came with your printer.
2. In the printer driver, under **Print on Both Sides (Duplex)**, select **Flip on Long Edge** or **Flip on Short Edge**.
3. Click **OK** to accept the printer driver settings, then click **OK** to print.

Windows 2000, Windows XP, or Windows Server 2003 PCL6 driver:

1. Insert paper into the tray. For information see the *Quick Reference Guide* that came with your printer. The *Quick Reference Guide* can also be found on the *Software and Documentation CD-ROM* that came with your printer.
2. In the printer driver, under 2-Sided Printing, select **None**, **Long Edge**, or **Short Edge**.

Mac OS 9.x PostScript driver:

1. Insert paper into the tray. For information about how to load paper, see the *Quick Reference Guide*.
2. Go to **Orientation** in **Page Setup** and select **Portrait, Landscape, or Rotated Landscape**.
3. Click **OK** to save your settings.
4. In the printer driver:
 - a. Click **Options**.
 - b. In the **Print Options** dialog box, click the pull-down menu for **Double-sided Printing** then select **Printer's Default, None, Long Edge, or Short Edge**.
5. Click **OK** to accept the Print Options settings, then click **Print** to print your job.

Mac OS X or Higher PostScript driver:

1. Insert paper into tray. For information about how to load paper, see the *Quick Reference Guide*.
2. Go to **Orientation** in **Page Setup** and select **Portrait, Landscape, or Rotated Landscape**.
3. Click **OK** to save your settings.
4. In the printer driver:
 - a. Click on the left pull-down menu and select **Duplex**.
 - b. Check the **Print on Both Sides** checkbox, then select **Long Edge** or **Short Edge Binding** option.
5. Click **Print** to print your job.

Manual 2-Sided Printing

Manual 2-sided printing is supported for paper with dimensions and weights listed in "Supported Papers" on page 1-9. Print manual 2-sided jobs from Tray 1 (MPT).

1. Load paper into Tray 1 (MPT).
2. At your computer, select odd numbered pages to print. Set the paper type and size according to the steps listed in "Changing Paper Type and Size at the Front Panel" on page 10.
3. Remove the pages from the output tray and place the **printed** side **facedown** in Tray 1 (MPT) with the **top** of the page entering the printer first.
4. At your computer, select even numbered pages to print. Set the paper type and size according to the steps listed in "Changing Paper Type and Size at the Front Panel" on page 10.

Transparencies

Transparencies can be printed from any tray; however, Tray 1 (MPT) is recommended.

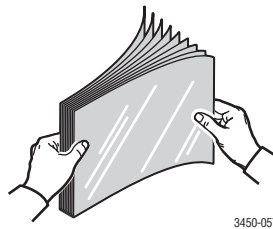
Guidelines

Place no more than 50 transparencies at one time in Tray 1 (MPT), Tray 2, or Try 3.

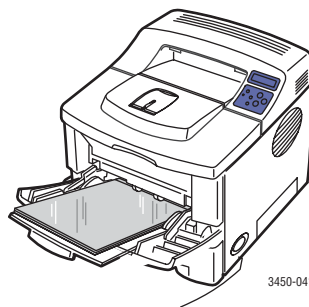
- Handle transparencies by the edges using both hands to avoid fingerprints and creases which can cause poor print quality.
- Use transparencies intended for monochrome laser printers.

Printing Transparencies from Tray 1 (MPT)

1. Fan the transparencies to release sheets that may stick together.



2. Insert the transparencies into Tray 1 (MPT). For information about how to load paper in Tray 1 (MPT), see the *Quick Reference Guide* that came with your printer. The *Quick Reference Guide* can also be found on the *Software and Documentation CD-ROM* that came with your printer.



3. At the printer's front panel:
 - a. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
 - b. Select **Paper Handling**, then press the **OK** button.
 - c. Select **Tray Size**, then press the **OK** button.
 - d. Select **Letter or A4**, then press the **OK** button.
 - e. Press the **Cancel** button to return to the main menu.

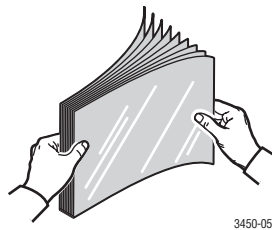
4. At the printer's front panel:
 - a. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
 - b. Select **Paper Handling**, then press the **OK** button.
 - c. Select **Tray Type**, then press the **OK** button.
 - d. Select **Transparency**, then press the **OK** button.
 - e. Press the **Cancel** button to return to the main menu.
5. In the printer driver, select **Tray 1 (MPT)** as the paper source.

Printing Transparencies from Trays 2 or 3

Note

Do not print paper-backed transparencies from Tray 3. Xerox highly recommends that you print transparencies and other specialty media from Tray 1 (MPT) for best results.

1. Remove all paper from the tray.
2. Fan the transparencies to release sheets that may stick together.



3. Insert the transparencies into the tray. For information about how to load paper in Trays 2 or 3, see the *Quick Reference Guide* that came with your printer. The *Quick Reference Guide* can also be found on the *Software and Documentation CD-ROM* that came with your printer.
4. At the printer's front panel:
 - a. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
 - b. Select **Paper Handling**, then press the **OK** button.
 - c. Select **[Tray Type]**, then press the **OK** button.
 - d. Select **Transparency**, then press the **OK** button.
 - e. Press the **Cancel** button to return to the main menu.
5. In the printer driver, select **Tray 2** or **Tray 3** as the paper source.

Envelopes

Guidelines

Buying and Storing Envelopes

- Use only paper envelopes specified in “Supported Papers” on page 9. 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.
- You may remove air “bubbles” from the envelopes before loading by setting a heavy book on top of the envelopes.

Preparing to Print

Follow these guidelines to prevent wrinkling problems:

- Use only Tray 1 (MPT) to print envelopes.
- Print only on the front of the envelope.
- Perform these steps when using an application that includes a tool for creating an envelope document:
 - Select **faceup**.
 - Select the feed method with the image centered.
 - Clear **Clockwise Rotation**.
 - Load a maximum of 10 envelopes at a time. This printer is not designed to handle high-capacity production envelope printing.

Caution

Never use envelopes with windows or metal clasps; they can damage the printer. Damage caused by using unsupported envelopes is not covered under the Xerox warranty, service agreement, or Total Satisfaction Guarantee.

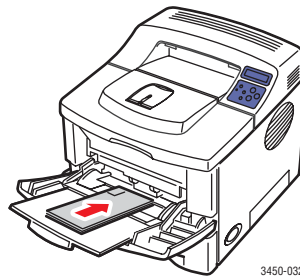
Caution

Printing Envelopes

Note

Some wrinkling or embossing may occur when printing envelopes.

1. Insert the envelopes **faceup** with the top of the envelope to the **left** as you view the front of the tray. Adjust the guides to match the size of the envelopes. **Maximum capacity is 10 envelopes.**



2. At the printer's front panel:
 - a. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
 - b. Select **Paper Handling**, then press the **OK** button.
 - c. Select **Tray Size**, then press the **OK** button.
 - d. Select envelope size, then press the **OK** button.
 - e. Press the **Cancel** button to return to the main menu.
3. At the printer's front panel:
 - a. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
 - b. Select **Paper Handling**, then press the **OK** button.
 - c. Select **Tray Type**, then press the **OK** button.
 - d. Select **Envelope**, then press the **OK** button.
 - e. Press the **Cancel** button to return to the main menu.
4. In the printer driver, select **Tray 1 (MPT)** as the paper source.
5. Print a test envelope from your application to confirm that the orientation of your envelope is correct.

For information, see the *Quick Reference Guide* that came with your printer. The *Quick Reference Guide* can also be found on the *Software and Documentation CD-ROM* that came with your printer.

Labels

Labels can be printed only from Tray 1 (MPT). The maximum number of sheets that can be loaded in Tray 1 (MPT) is 25.

Guidelines

- Use only labels recommended for laser printers.
- Do not use vinyl labels.
- Verify that the labels' adhesive material can tolerate fusing temperature of 200° C (392° F) for 0.1 second.
- Do not use any sheets where labels are missing; it may damage printer components.
- Store unused labels flat in their original packaging. Leave the labels inside the original packaging until ready to use. Return any unused labels to the original packaging and reseal it for protection.
- Do not store labels 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 to curl and jam the printer.
- Print only on one side of the sheet of labels.

Printing Labels

If your application has a setting for labels, use it as a template.

1. Insert the labels into Tray 1 (MPT). Place the labels **faceup** with the **top** of the sheet entering the printer first. Adjust the guides to match the size of the labels.



2. At the printer's front panel:
 - a. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
 - b. Select **Paper Handling**, then press the **OK** button.
 - c. Select **Tray Size**, then press the **OK** button.
 - d. Select **Letter or A4**, then press the **OK** button.
 - e. Press the **Cancel** button to return to the main menu.

3. At the printer's front panel:
 - a. Press the **Menu** button, select **Printer Setup**, then press the **OK** button.
 - b. Select **Paper Handling**, then press the **OK** button.
 - c. Select **Tray Type**, then press the **OK** button.
 - d. Select **Labels**, then press the **OK** button.
 - e. Press the **Cancel** button to return to the main menu.
4. In the printer driver, select **Tray 1 (MPT)** as the paper source.

Custom Size Paper

Print custom size paper or specialty media in Tray 1 (MPT).

You can print on custom size paper within these dimensions:

1-sided

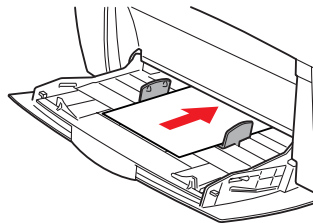
- Width = 76.2~215.9 mm (3~8.5 in.)
- Length = 127~355.6 mm (5~14 in.)

Manual 2-sided

- Width = 76.2~215.9 mm (3~8.5 in.)
- Length = 127~355.6 mm (5~14 in.)

Loading Custom Size Paper in Tray 1 (MPT)

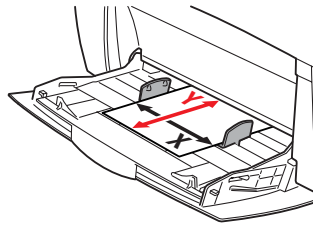
1. Insert the custom size paper into Tray 1 (MPT). Adjust the guides to match the size of the paper. Place the side to be printed **faceup** with the **top** of the page entering the printer first.



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2. At the printer's front panel:
 - a. Press the **Menu** button, then select **Printer Setup**.
 - b. Select **Paper Handling**, then press the **OK** button.
 - c. Select **Tray Size**, then press the **OK** button.
 - d. Select **Custom**, then press the **OK** button.

- e. Select **Custom X**, then press the **OK** button.



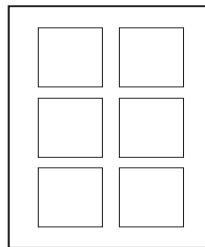
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- f. Press the **Down Arrow** or **Up Arrow** buttons to set the paper size, then press the **OK** button.
 - g. Select **Custom Y**, then press the **OK** button.
 - h. Press the **Down Arrow** or **Up Arrow** buttons to set the paper size, then press the **OK** button.
 - i. Press the **Cancel** button to return to the main menu.
3. In the printer driver, select **Tray 1 (MPT)** as the paper source.

Advanced Options

Printing Multiple Pages to 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 sheet.



6100-060

To print multiple pages on a single sheet of paper in a supported driver:

- **Windows 2000, or Windows XP, or Windows Server 2003 PostScript driver:**
On the **Layout** tab, select **Pages Per Sheet** from the drop-down list, then click the **OK** button to save your choice.
- **Windows 2000, Windows XP, or Windows Server 2003 PCL6 driver:**
On the **Layout** tab, click the **More Layout Options** button, select **Multiple Pages per Side**, select **Pages per Side** from the drop-down list, then click the **OK** button to save your choices.

- **Mac OS 9.x PostScript driver:**

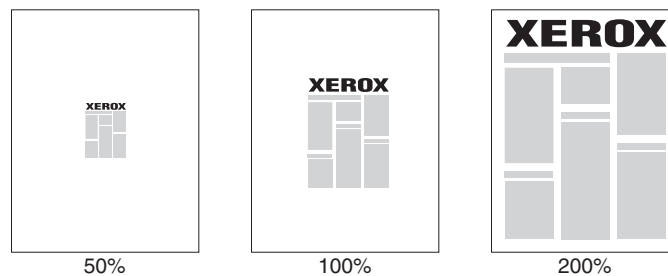
In Page Setup, click the pull-down menu for **Layout** and select the number of pages per sheet.

- **Mac OS X or Higher PostScript driver:**

In the printer driver, click on the left pull-down menu and select **Layout**. Click the Pages per Sheet pull-down menu and select the number of pages per sheet. Click the Border pull-down menu and select the type of border desired for each page on the sheet.

Scaling

You can reduce or enlarge your page images when they are printed by selecting a scaling value. The default is 100 percent. To select scaling in a supported driver:



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

On the **Layout** tab, click the **Advanced** button, select **Scaling**, select a percentage between 1 and 1000 for your print job, then click the **OK** button to save your choices.

- **Windows 2000, Windows XP, or Windows Server 2003 PCL6 driver:**

Fit to Page:

On the **Layout** tab, click the **More Layout Options** button, select **Fit to Page**, then set the size of the **Target Page** from the drop-down list, then click the **OK** button to save your choices.

Reduce/Enlarge:

On the **Layout** tab, click the **More Layout Options** button, select **Reduce/Enlarge**, then specify a percentage between **25** and **400** for your print job, then click the **OK** button to save your choices.

- **Mac OS 9.x PostScript Driver:**

In Page Setup, select **Enlarge/Reduce**, then specify a percentage for your print job.

Printing Booklets

With two-sided printing, you can print a document in the form of a small book. Create booklets for any paper size that is supported for 2-sided (duplex) printing. For more information on paper types, weights, and sizes, see “Supported Papers” on page 9.

To print booklets in a supported driver:

- **Windows 2000, or Windows XP, or Windows Server 2003 PostScript driver:**
On the **Layout** tab, select **Portrait** or **Landscape**, select **Flip on Long Edge** or **Flip on Short Edge**, select **Front to Back** or **Back to Front**, then click the **OK** button to save your choices.
- **Windows 2000, Windows XP, or Windows Server 2003 PCL6 driver:**
On the **Layout** tab, click the **More Layout Options** button, select **Booklet Printing**, then click the **OK** button to save your choice.

Printing Posters

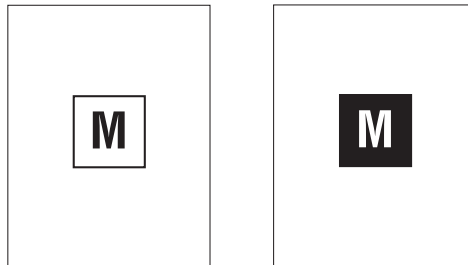
Poster printing allows you to print large, multiple-sheet versions of your page.

To print posters in a supported driver:

- **Windows 2000, Windows XP, or Windows Server 2003 PCL6 driver:**
On the **Layout** tab, click the **More Layout Options** button, select **Poster**, set the **Page Layout** and **Overlap** values, then click the **OK** button to save your choices.

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 print negative images or mirror images in a supported driver:

- **Windows 2000, Windows XP, or Windows Server 2003 PostScript driver:**
On the **Layout** tab, click the **Advanced** button, select **Document Options**, select **PostScript Options**, select **Yes** or **No** for **Mirrored Output** or **Negative Output**, then click the **OK** button to save your choice.
- **Mac OS 9.x PostScript driver:**
 - In Page Setup, click **Options**.
 - In the PSPrinter Options dialog box, under Visual Effects, select **Flip Horizontal**, **Flip Vertical**, or **Invert Image**.

Cover Pages

A cover page is the first 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 or colored paper for the first page of a document or report.

Guidelines

- Use any paper tray, within the weight ranges listed in “Supported Papers” on page 9, 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 prints on the same paper as the rest of your document.

Printing Cover Pages

To print cover pages in a supported driver:

- **Windows 98, Windows 2000, Windows XP, or Windows Server 2003 PCL6 driver:**
On the **Paper** tab, under **Cover Page**, select **Tray 1 (MPT)**, **Tray 2**, or **Tray 3** from the drop-down list, then click the **OK** button to save your choice.

- **Mac OS 9.x PostScript driver:**
 - Click **Options**.
 - In the **Print Options** dialog box, under **Cover Page**, select **None**, **Before**, or **After Document**, then click the **OK** button to save your choice.
 - Under **Paper Source**, select **First from:**, then click the pull-down menu and select the paper source for the cover page. Select **Remaining from:**, then click the pull-down menu and select the paper source for the remaining pages.

Supplies and Recycling

Supplies

The printer's front panel displays status messages and warnings as the print cartridge nears its replacement time. When the front panel prompts that toner is low or needs to be replaced, verify that you have replacements on hand.

Configuration Page

The "Configuration Page" shows the status of the remaining toner in the print cartridge. To print the "Configuration Page":

1. At the front panel, press the **Menu** button, select **Information**, then press the **OK** button.
2. Select **Info Pages**, then press the **OK** button.
3. Select **Config Page**, then press the **OK** button to print the page.

Connections and Networks

Choosing a Connection

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. See “Setting an IP Address.”

Direct Connection

Connect your printer directly to a computer using the USB cable provided or an IEEE 1284 parallel cable. For more information see the *Setup Guide* that came with your printer. You can also view it on the *Software and Documentation CD-ROM*.

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.

Automatically Setting the Printer's IP Address

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

Note

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

Manually Setting the Printer's IP Address

1. At the printer's front panel, press the **Menu** button, select **Connection**, then press the **OK** button.
2. Select **Network Setup**, then press the **OK** button.
3. Select **TCP/IP Setup**, then press the **OK** button.
4. Select **BootP/DHCP**, select **Off**, press the **OK** button, then press the **Back** button.
5. Select **IP Address**, then enter each of the four groups of numbers in your printer's IP Address, pressing the **OK** button after each group.
6. Select **Network Mask**, then enter each of the four groups of numbers in your printer's Network Mask, pressing the **OK** button after each group.
7. Select **Gateway**, then enter each of the four groups of numbers in your printer's Gateway, pressing the **OK** button after each group.
8. Press the **Back** button four (4) times to return to **Ready**.
9. Reboot your printer by cycling on the power.

USB Connection

The USB connection requires a standard USB cable. This cable is included with your printer. Verify that you are using the correct USB cable for your connection.

Windows 98 and Me

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 *Software and Documentation CD-ROM*.

Parallel Connection

Use an IEEE 1284 parallel printer cable—maximum length 3 meters (10 feet)—to connect your computer's and printer's parallel ports. The parallel cable is not included with your printer and must be purchased separately. Install the printer driver from the *Software and Documentation CD-ROM*. Select the appropriate LPT parallel port.

Installing the Printer Driver

Install the printer driver from the *Software and Documentation CD-ROM*. The *Software and Documentation CD-ROM* automatically installs and identifies the printer during the installation process.

Troubleshooting

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.

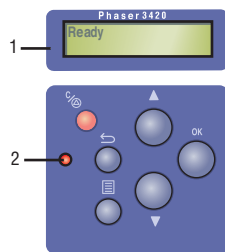
Warning

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

Your printer's front panel provides you with information and troubleshooting help.



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1. **Alphanumeric** display
2. **On-line/Data/Error LED**

The front panel is divided into two sections. The upper section (1) displays printer menu and error messages; the lower section (2) controls the front panel.

Some of the LED descriptions and error messages that appear in the front panel are listed below.

LED Descriptions

The LED indicates the different functioning states of the printer:

LED Behavior	Description
Green Blinking	<ul style="list-style-type: none"> ■ Warming up ■ Power Saver mode ■ Displaying menus ■ Canceling a job ■ Waiting for more data ■ Processing data ■ Printing pages
Steady Green	Ready to print
Blinking Yellow	Warning exists but printing can proceed
Blinking Red	Error exists that prevents further printing without user attention
LED is off	<ul style="list-style-type: none"> ■ Power is off ■ Intermittently during the startup sequence

Errors 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 errors. When the printer's front panel displays an error message, the LED blinks red. An error message replaces the status lines.

When an error occurs, Status Monitor, available only with Windows on a network enabled printer, displays an instant notification on your computer screen that the printer needs attention.

Moving and Repacking the Printer

Warning

Follow these guidelines to avoid injuring yourself or damaging the printer.

For safety information, go to “Appendices A—User Safety” in this guide.

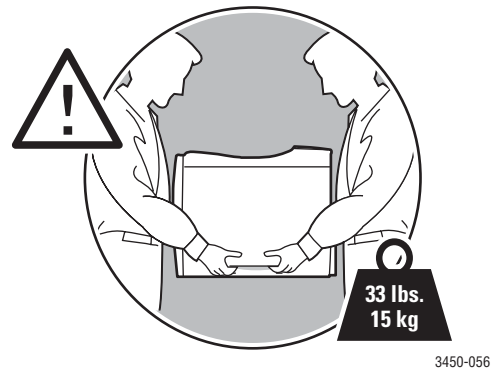
Follow these guidelines to move the printer within the office or to prepare the printer for shipment.

Precautions for Moving the Printer

Caution

Remove the print cartridge prior to moving the printer. Failure to do so can result in damage to the printer.

- Use one or two people to lift the printer.
- Always turn off the printer using the power switch and unplug all cables and cords.
- Disconnect and remove the optional 500-Sheet Feeder if present.
- 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.
- Damage to the printer caused by improper moving is not covered by the Xerox warranty, service agreement, or Total Satisfaction Guarantee.



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.

Caution

Remove the print cartridge prior to moving the printer. Failure to do so can result in damage to the printer.

Appendices

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 of the supplies (such as a toner cartridge, fuser, or transfer roller).

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 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.

Printer Location

- Place the printer in a dust-free area where the temperature range is 50 degrees F to 86 degrees F (10 degrees C to 30 degrees C) and the relative humidity range of 20 percent to 80 percent.
- Place the printer in an area where there is adequate space for ventilation, operation, and servicing. The recommended minimal spacing is 32 cm (12.6 in.) behind and 10 cm (4 in.) on each side of the printer.
- Do not block or cover the slots and openings on the printer. The printer may overheat without adequate ventilation.
- For altitudes under 2,050 meters (6,726), use the **Low** Altitude setting. For altitudes over 2,050 meters (6,726), use the **High** Altitude setting.
- 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 surface with adequate strength for the weight of the printer. The base printer weight without any packaging materials is approximately 15 kg (33.1 lbs.).

Moving the Printer

Refer to "Moving and Repacking the Printer" on page 1-33.

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 the Product

Hot surface on or in the printer. Use caution to avoid personal injury.



Use caution (or draws attention to a particular component).



B-Warranty

For warranty information regarding your Xerox Phaser 3420 Laser Printer, see the *Warranty* booklet in the World Kit that came with your printer.

C-Printer Specifications (English Only)

Physical Specifications

Width: 380 mm (14.96 in.)

Depth: 447 mm (17.6 in.)

Height: 320 mm (12.6 in.)

Top Clearance: 254 mm (10 in.)

Weight: 15 kg (33.1 lbs.)

Environmental Specifications

Temperature

- Storage (in original packaging): -20° to 40° C / -4° to 104° F
- Operating: 10° to 32° C / 50° to 89° F

Relative Humidity

- Storage (in original packaging): 10% to 90%
- Operating: 20% to 80%

Electrical Specifications

Available in two models:

- 110-127 VAC, 50/60 Hz
- 220-240 VAC, 50/60 Hz

ENERGY STAR qualified printer

Performance Specifications

Resolution

- 300 x 300 dpi
- 600 x 600 dpi
- 1200 dpi Image Quality

Print Speed

- Up to 21 pages per minute (ppm)

Controller Specifications

- 166 MHz processor

Memory

- 16Mbytes standard on all printers

Page Description Languages (PDL)

- PCL6
- PostScript

Resident Fonts

- PostScript Type 1
- PCL6

Interfaces

- USB
- IEEE 1284 parallel
- Ethernet 10BaseT and 100BaseTx

D–Regulatory (English Only)

United States

The equipment described in this manual generates and uses radio frequency energy. If it is not installed properly in strict accordance with Xerox's 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.

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.

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 limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère 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"
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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, 3V/m, 80% AM @ 1 KHz
Fast Burst Transients	IEC 61000-4-4:1995	5/50 Tr/Th ns, 5kHz 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
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 (English Only)

Section I—Product Identification

Product Names Part Numbers

Phaser ® 3420 Black Toner Cartridges

Standard Capacity 106R01033

High Capacity 106R01034

Product Use: XEROX Phaser ® 3420 Laser printers

SECTION 2 - INFORMATION ON INGREDIENTS

Ingredients (% by weight) CAS number

Polyester resin (>81%) 186397-54-6

Carbon Black (<8%) 1333-86-4

Iron oxide (<4%) 1309-38-2

Wax (<3%) 9010-79-1

Amorphous silica (<2%) 68909-20-6

Charge control resin (<2%) 51121-85-8

SECTION 3 - HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE: Toner powders are encased in a cartridge. Minimal exposure through inhalation or skin contact is expected when used as intended.

POTENTIAL HEALTH EFFECTS: Health effects from this product are expected to be negligible, when product is used as intended. See Section 11, Toxicology Information.

Immediate Effects:

Inhalation: Minimal irritation to respiratory tract, as for any non-toxic dust

Skin: Not expected to cause skin irritation

Eye: Not expected to cause eye irritation

Ingestion: Not an expected route of exposure

Chronic Effects: None known

SIGNS AND SYMPTOMS OF EXPOSURE: Minor irritation to respiratory tract.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove person to fresh air. Seek medical attention if symptoms occur.

EYES: If particles get into eye, flush thoroughly with water. Seek medical attention if symptoms occur.

SKIN: Wash thoroughly with soap and water. Seek medical attention if symptoms occur.

INGESTION: Dilute stomach contents with several glasses of water. Seek medical attention if symptoms occur.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: Not applicable

FIRE & EXPLOSION HAZARDS: Toner is a combustible powder. Like most organic powders, it can form explosive mixtures when dispersed in air.

EXTINGUISHING MEDIA: Water, dry chemical, carbon dioxide, or foam.

FIRE FIGHTING INSTRUCTIONS: Avoid inhalation of smoke. As for any fire, wear protective clothing and self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK: Sweep up or vacuum spilled materials and carefully transfer into sealable waste container. Sweep slowly to minimize generation of dust during clean up. If a vacuum is used, the motor must be rated as dust tight. A conductive hose bonded to the machine should be used to reduce static buildup. Clean up residue if necessary with soap and cold water. Wash or dry clean garments after removing loose toner.

SECTION 7 - HANDLING AND STORAGE

HANDLING: No special precautions, when used as intended.

STORAGE: Avoid high temperatures.

SECTION 8 - EXPOSURE CONTROL - PERSONAL PROTECTION

No special personal protection indicated, when used as intended in Xerox Phaser Ô laser printers.

THRESHOLD LIMIT VALUE (TLV): 10 mg/m³ (total dust)

PERMISSIBLE EXPOSURE LIMIT (PEL): 15 mg/m³ (total dust); 5 mg/m³ (respirable dust)

SHORT TERM EXPOSURE LIMIT (STEL): None established

CEILING LIMIT: None established

XEROX EXPOSURE LIMIT (XEL): 2.5 mg/m³ (total dust); 0.4 mg/m³ (respirable dust)

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/ODOR: Black powder/faint odor

BOILING POINT: Not applicable

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: Not applicable

VAPOR DENSITY (Air = 1): Not applicable

VOLATILE: Not applicable

SOFTENING RANGE: Not available

MELTING POINT: Not available

SPECIFIC GRAVITY (Water = 1): Approximately 1.2

VAPOR PRESSURE (mm Hg): Not applicable

pH: Not applicable

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers

HAZARDOUS POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION PRODUCTS: During a fire, toxic gases may be generated by thermal decomposition or combustion. Avoid breathing smoke.

SECTION 11 - TOXICOLOGICAL INFORMATION

This material has been evaluated by Xerox Corporation. The toxicity data noted below is based on test results of similar toners.

Oral LD50: >5 g/kg (rats), practically non-toxic

Dermal LD50: > 5 g/kg (rabbits), practically non-toxic

Inhalation LC50: > 2 mg/l (rats; 4 hour exposure), practically non-toxic

Eye Irritation: Not an irritant

Skin sensitization: Not a sensitizer

Skin irritation: Not an irritant

Human Patch: Non-irritating, non-sensitizing

Mutagenicity: No mutagenicity detected in Ames assay

Carcinogens: None present

Additional Information: The results obtained from a Xerox sponsored Chronic Toner Inhalation Study demonstrated no lung changes in rats for the lowest (1 mg/m³) exposure level (ie., the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4 mg/m³) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16 mg/m³) exposure level. The findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner and would not be functionally suitable for Xerox equipment.

SECTION 12 - ECOLOGICAL INFORMATION

Aquatic LC50: > 1000 mg/l (fathead minnows); non-toxic

SECTION 13 - DISPOSAL CONSIDERATIONS

This material is not a RCRA hazardous waste as specified in 40 CFR 261. State and local waste disposal requirements, however, may be more restrictive. Dispose in accordance with all federal, state, and local regulations. Incinerate only in a closed container.

SECTION 14 - TRANSPORTATION INFORMATION

DOT: Not regulated.

SECTION 15 - REGULATORY INFORMATION

TSCA: All components of these toners have been manufactured in compliance with TSCA.

RCRA: TCLP metals below hazardous waste levels set by EPA.

CANADIAN WHMIS: These toners are not regulated as controlled products under the Workplace Hazardous Material Information System (WHMIS).

SECTION 16 - OTHER INFORMATION

NFPA 704: Health-0, Fire-1, Reactivity-0

Original preparation date: 6/13/03

Xerox Corporation

Office Group

Environmental, Health & Safety

P.O. Box 1000

Mail Stop 7063-512

Wilsonville, Oregon 97070

Safety Information: 503-685-4093

Health Emergency: 585-422-2177

Transportation Emergency (Chemtrec): 800-424-9300

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