hp color LaserJet
4650, 4650n, 4650dn,
4650dtn, 4650hdn

use

hp color LaserJet 4650 series printer

User Guide

hp customer care

Online services

For 24-hour access to information using a modem or Internet connection:

World Wide Web URL: for the HP Color LaserJet 4650 series printers, updated HP printer software, product and support information, and printer drivers in several languages can be obtained from http://www.hp.com/support/clj4650. (Sites are in English.)

Visit: http://www.hp.com/support/net_printing for information about the HP Jetdirect 4650 external print server.

HP Instant Support Professional Edition (ISPE) is a suite of Web-based troubleshooting tools for desktop computing and printing products. ISPE helps you quickly identify, diagnose, and resolve computing and printing problems. The ISPE tools may be be accesssed from http://instantsupport.hp.com.

Telephone support

HP provides free telephone support during the warranty period. When you call, you will be connected to a responsive team waiting to help you. For the telephone number for your country/region, see the flyer that shipped in the box with the product, or visit http://www.hp.com/support/callcenters. Before calling HP, have the following information ready: product name and serial number, date of purchase, and description of the problem.

You can also find support on the Internet at http://www.hp.com. Click the **support & drivers** block.

Software utilities, drivers, and electronic information

Visit: http://www.hp.com/go/clj4650_software for the HP Color LaserJet 4650 series printer. The Web page for the drivers might be in English, but you can download the drivers themselves in several languages.

Call: See the flyer that shipped in the box with the printer.

HP direct ordering for accessories or supplies

In the United States, supplies can be ordered from http://www.hp.com/sbso/product/supplies. In Canada, supplies can be ordered from http://www.hp.ca/catalog/supplies. In Europe, supplies can be ordered from http://www.hp.com/supplies. In Asia-Pacific, supplies can be ordered from http://www.hp.com/paper/.

Accessories can be ordered from http://www.hp.com/go/accessories.

Call: 1-800-538-8787 (U.S.) or 1-800-387-3154 (Canada).

HP service information

To locate HP-Authorized Dealers, call 1-800-243-9816 (U.S.) or 1-800-387-3867 (Canada). For service for your product, call the customer support number for your country/region. See the flyer that shipped in the box with the printer.

HP service agreements

Call: 1-800-835-4747 (U.S.) or 1-800-268-1221 (Canada).

Extended Service: 1-800-446-0522

HP toolbox

To check the printer status and settings and to view troubleshooting information and online documentation, use HP toolbox. You can view the HP toolbox when the printer is directly connected to your computer or when it is connected to a network. You must have performed a complete software installation to use the HP toolbox. See Using the hp toolbox.

HP support and information for Macintosh computers

Visit: http://www.hp.com/go/macosx for Macintosh OS X support information and HP subscription service for driver updates.

Visit: http://www.hp.com/go/mac-connect for products designed specifically for the Macintosh user.

Table of contents

3 I/O Configuration

4 Printing tasks

6 Color

7 Maintenance

8 Problem solving

Appendix A   Working with memory and print server cards

Appendix B   Supplies and accessories

Appendix C   Service and Support

Appendix D   Printer specifications

Appendix E   Regulatory information

Glossary

Index

1 Printer basics

This chapter contains information on setting up your printer and becoming familiar with its features. The following topics are covered:

- [Quick access to printer information](#)
- [Printer configurations](#)
- [Printer features](#)
- [Walk around](#)
- [Printer software](#)
- [Print media specifications](#)

Quick access to printer information

World Wide Web links

Printer drivers, updated HP printer software, and product information and support may be obtained from the following URLs:

● http://www.hp.com/support/lj4650

Printer drivers may be obtained from the following sites:

● In China: ftp://www.hp.com.cn/support/lj4650
● In Japan: ftp://www.jpn.hp.com/support/lj4650
● In Korea: http://www.hp.co.kr/support/lj4650
● In Taiwan: http://www.hp.com.tw/support/lj4650, or the local driver website: http://www.dds.com.tw

To order supplies:

● United States: http://www.hp.com/go/ljsupplies
● Worldwide: http://www.hp.com/ghp/buyonline.html

To order accessories:

● http://www.hp.com/go/accessories

User guide links

For the latest version of the HP Color LaserJet 4650 series printer, go to http://www.hp.com/support/lj4650.

Where to look for more information

Several references are available for use with this printer. See http://www.hp.com/support/lj4650.

Setting up the printer

Getting Started Guide

Provides step-by-step instructions for installing and setting up the printer.
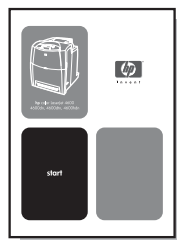
HP Jetdirect Print Server Administrator's Guide

Provides instructions to configure and troubleshoot the HP Jetdirect print server.

HP Driver Pre-Configuration Guide

For detailed information about configuring printer drivers, go to http://www.hp.com/go/hpdpc_sw.

HP Embedded Web Server User Guide

Information about using the embedded Web server is available on the CD-ROM that came with the printer.

Accessory and Consumable Installation Guides

Provides step-by-step instructions for installing the printer's accessories and consumables. Supplied with the printer's optional accessories and consumables.
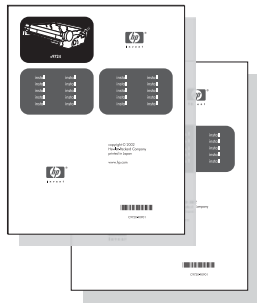
Using the printer

CD-ROM User Guide

Provides detailed information on using and troubleshooting the printer. Available on the CD-ROM included with the printer.

Online Help

Provides information on printer options that are available from within printer drivers. To view a Help file, access the online Help through the printer driver.

Printer configurations

Thank you for purchasing the HP Color LaserJet 4650 series printer. This printer is available in the configurations described below.

HP Color LaserJet 4650 (Part number Q3668A)

The HP Color LaserJet 4650 printer is a four-color, laser printer that prints 22 pages per minute (ppm) for letter-sized paper and 22 ppm for A4-size paper.

- **Trays**. The printer comes with a multipurpose tray (Tray 1) that holds up to 100 sheets of various print media or 20 envelopes, and a 500-sheet paper feeder (Tray 2) that supports letter, legal, executive, 8.5 by 13 in, JIS B5, executive (JIS), 16K, A4, and A5-sized and custom media. The printer supports an optional 500-sheet paper feeder (Tray 3) or an optional 2 x 500-sheet paper feeder (Tray 3 and Tray 4) that each support letter, legal, executive, JIS B5, executive (JIS), 16K, A4, and A5-sized and custom media.

- **Connectivity**. The printer provides parallel, network, and auxiliary ports for connectivity. The printer also contains three enhanced input/output (EIO) slots, wireless connectivity, an auxiliary port, a universal serial bus (USB) connection, and a standard bidirectional parallel cable interface (IEEE-1284-C compliant).

- **Memory**. 160 megabytes (MB) of memory: 128 MB of dual data-rate (DDR) synchronous dynamic random access memory (SDRAM), 32 MB of memory on the formatter board, and an open dual inline memory module (DIMM) slot.

Note To allow memory expansion, the printer has two 200-pin small outline dual inline memory module (SODIMM) slots that accept 128 or 256 MB RAM each. The printer can support up to 544 MB of memory: 512 MB of memory plus 32 MB additional memory on the formatter board. An optional hard disk drive is also available.

Note Memory specification: HP Color LaserJet 4650 series printers use 200-pin small outline dual inline memory modules (SODIMM) that support 128 or 256 MB of RAM.

HP Color LaserJet 4650n (Part number Q3669A)

The HP Color LaserJet 4650n printer includes the features of the 4650, plus an HP Jetdirect 620N printer server EIO network card.

HP Color LaserJet 4650dn (Part number Q3670A)

The HP Color LaserJet 4650dn printer includes the features of the 4650n, plus automatic two-sided printing.

HP Color LaserJet 4650dtn (Part number Q3671A)

The HP Color LaserJet 4650dtn includes the features of the 4650dn, an additional 500-sheet paper feeder (Tray 3), and a total of 288 MB of SDRAM.

288 MB of SDRAM: 256 MB of DDR, 32 MB of additional memory on the formatter board, and an additional DIMM slot. This printer has two 200-pin small outline dual inline memory module (SODIMM) slots that accept 128 or 256 MB of RAM each.

HP Color LaserJet 4650hdn (Part number Q3672A)
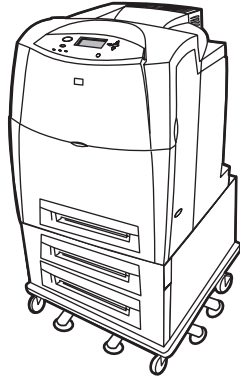
The HP Color LaserJet 4650hdn includes the features of the 4650dn, plus a 2 x 500-sheet paper feeder assembly (Tray 3 and Tray 4), and an optional hard disk.

288 MB of SDRAM: 256 MB of DDR, plus 32 MB of additional memory on the formatter board and an additional DIMM slot. This printer has two 200-pin small outline dual inline memory module (SODIMM) slots that accept 128 or 256 MB of RAM each.

Printer features

This printer combines the quality and reliability of Hewlett-Packard printing with the features listed below. For more information on printer features, see the Hewlett-Packard website at http://www.hp.com/support/lj4650.

Features

Performance	• 22 pages per minute (ppm) for letter-sized paper and 22 ppm for A4-sized paper. • Prints on transparencies and glossy paper.
Memory	• 160 megabytes (MB) of memory for the HP Color LaserJet 4650, 4650n, and 4650dn: 128 MB of dual data-rate (DDR) plus 32 MB of additional memory on the formatter board and an additional DDR slot. Memory specification: HP Color LaserJet 4650 series printers use 200-pin small outline dual inline memory modules (SODIMM) that support 128 or 256 MB of RAM. • 288 MB of memory for the HP Color LaserJet 4650dtn and 4650hdn: 256 MB DDR plus 32 MB of additional memory on the formatter board and an additional DDR slot. • Can be expanded to 544 MB: 512 MB of DDR memory plus 32 MB of memory on the formatter board. • Optional hard disk drive can be added via an EIO slot (included with the HP Color LaserJet 4650hdn printer).
User interface	• Graphic display on control panel. • Enhanced Help with animated graphics. • Embedded Web server to access support and order supplies (network-connected printers). • HP toolbox software to provide printer status and alerts, configure printer settings, view documentation and troubleshooting information, and print internal printer information pages.
Supported printer personalities	• HP PCL 6. • HP PCL 5c. • PostScript 3 emulation. • Portable document format (PDF).
Storage features	• Job Storage. For more information, see Job storage features. • Personal identification number (PIN) printing. • Fonts and forms.
Environmental features	• PowerSave setting. • High content of recyclable components and materials. • Energy Star compliant. • Blue Angel compliant.
Fonts	• 80 internal fonts available for both PCL and PostScript emulation. • 80 printer-matching screen fonts in TrueType™ format available with the software solution. • Supports forms and fonts on the disk using HP Web Jetadmin.

Features (continued)

Paper handling	• Prints on media from 77 mm by 127 (3 inches by 5 inches) up to legal size. • Prints on media with weights from 60 g/m^2 to 200 g/m^2 (16 lb bond to 53 lb bond). • Prints on a wide range of media types including glossy, labels, overhead transparencies, and envelopes. • Multiple gloss levels. • A 500-sheet paper feeder (Tray 2) that supports letter, legal, executive, 8.5 by 13, JIS B5, executive (JIS), 16K, A4, A5-sized, and custom media. • Optional 500-sheet paper feeder (Tray 3) that supports letter, legal, executive, JIS B5, executive (JIS), 16K, A4, A5-sized, and custom media; standard on HP Color LaserJet 4650dtn printer. • Optional 2 x 500-sheet paper feeder (Tray 3 and Tray 4) that supports letter, legal, executive, JIS B5, executive (JIS), 16K, A4, A5-sized, and custom media; standard on HP Color LaserJet 4650hdn printer. • Two-sided printing on HP Color LaserJet 4650dn, 4650dtn, and 4650hdn printers. • 250-sheet face-down output bin.
Accessories	• Printer hard disk, which provides storage for fonts and macros as well as additional features for Job Storage; standard on HP Color LaserJet 4650hdn printer. • Dual inline memory modules (DIMM). • CompactFlash slots for additional fonts and firmware upgrades. • Printer stand. • Optional 500-sheet paper feeder (Tray 3) that supports letter, legal, executive, JIS B5, A4, and A5-sized media; standard on HP Color LaserJet 4650dtn printer. • Optional 2 x 500-sheet paper feeder (Tray 3 and Tray 4) that supports letter, legal, executive, JIS B5, A4, A5-sized, and custom media; standard on HP Color LaserJet 4650hdn printer.
Connectivity	• Optional enhanced input/output (EIO) network card; standard on HP Color LaserJet 4650n, 4650dn, 4650dtn, and 4650hdn printers. • USB 1.1 connection. • HP Web Jetadmin software. • Standard bidirectional parallel cable interface (IEEE -1284-C compliant). • Auxiliary connector. • Both USB and parallel connections are supported, but cannot be used at the same time.
Supplies	• Supplies status page contains information on toner level, page count, and estimated pages remaining. • No-shake cartridge design. • Printer checks for authentic HP print cartridges at cartridge installation. • Internet-enabled supply-ordering capabilities (using the embedded Web server or HP toolbox software).

Walk around

The following illustrations identify the locations and names of key components of this printer.
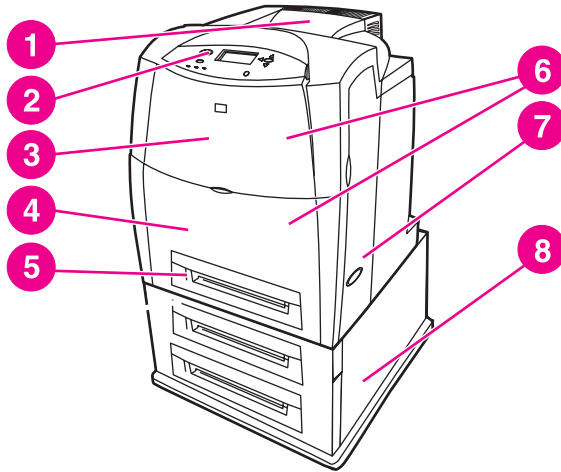
Front view (shown with 2 x 500-sheet input tray)

1   output bin
2   printer control panel
3   top cover
4   Tray 1
5   Tray 2
6   access to print cartridges, transfer unit, and fuser
7   on/off switch
8   Tray 3 and Tray 4 (optional)

The optional 500-sheet paper feeder (Tray 3) and the optional 2 x 500-sheet input tray (Tray 3 and Tray 4) cannot be combined with the printer at the same time.

Back/side view (shown with 2 x 500-sheet input tray)

1   output bin
2   auxiliary connector
3   parallel connection
4   on/off switch
5   EIO connection (quantity 3)
6   memory access
7   USB connection
8   Tray 3 and Tray 4 (optional)

Note The optional 500-sheet paper feeder (Tray 3) and the optional 2 x 500-sheet input tray (Tray 3 and Tray 4) cannot be combined with the printer at the same time.

Printer software

Included with the printer is a CD-ROM containing the printing system software. The software components and printer drivers on this CD-ROM help you use the printer to its fullest potential. See the Getting Started Guide for installation instructions.

For the latest information about the printing system software components, refer to the readme file on the Web at http://www.hp.com/support/lj4650. For information about installing the printer software, view the Install Notes on the CD-ROM included with the printer.

This section summarizes the software included on the CD-ROM. The printing system includes software for end users and network administrators operating in the following operating environments:

- Microsoft Windows 98, Me

- Microsoft Windows NT 4.0, 2000, XP (32-bit), and Server 2003 (32-bit)

- Apple Mac OS version 8.6 through 9.2.x, and Apple Mac OS version 10.1 and later

For a list of the network environments supported by the network administrator software components, see Network configuration.

For a list of printer drivers, updated HP printer software, and product support information, go to http://www.hp.com/support/lj4650.

Software features

Automatic configuration, Update Now, and Preconfiguration features are available with the HP Color LaserJet 4650 series printer.

Driver Autoconfiguration

The HP LaserJet PCL 6 and PCL 5c drivers for Windows and the PS drivers for Windows 2000 and Windows XP feature automatic discovery and driver configuration for printer accessories at the time of installation. Some accessories that the Driver Autoconfiguration supports are the duplexing unit, optional paper trays, and dual inline memory modules (DIMMs). If the environment supports bidirectional communication, the installer presents Driver Autoconfiguration as an installable component by default for a Typical Installation and for a Custom Installation.

Update Now

If you have modified the configuration of the HP Color LaserJet 4650 printer since installation, the driver can be automatically updated with the new configuration in environments that support bidirectional communication. Click the **Update Now** button to automatically reflect the new configuration in the driver.

The Update Now feature is not supported in environments where shared Windows NT 4.0, Windows 2000, or Windows XP clients are connected to Windows NT 4.0, Windows 2000, or Windows XP hosts.

HP Driver Preconfiguration

HP Driver Preconfiguration is a software architecture and set of tools that allows HP software to be customized and distributed in managed corporate printing environments. Using HP Driver Preconfiguration, information technology (IT) administrators can preconfigure the printing and device defaults for HP printer drivers before installing the drivers in the network environment. For more information, see the *HP Driver Preconfiguration Support Guide*, which is available at http://www.hp.com/support/lj4650.

Printer drivers

Printer drivers allow you to gain access to the printer features and allow the computer to communicate with the printer (using a printer language). Check the installation notes and readme files on the printer CD-ROM for additional software and languages.

The following printer drivers are included with the printer. The most recent drivers are available at http://www.hp.com/support/lj4650. Depending on the configuration of Windows-based computers, the installation program for the printer software automatically checks the computer for Internet access to obtain the latest drivers.

Operating system[1]	PCL 6	PCL 5c	PS	PPD[2]
Windows 98, Me	✔	Web only	✔	✔
Windows NT 4.0	✔	Web only	✔	✔
Windows 2000	✔	Web only	✔	✔
Windows XP	✔	Web only	✔	✔
Windows Server 2003	✔	Web only	✔	✔
Macintosh OS			✔	✔

[1] Not all printer features are available from all drivers or operating systems. See the online Help in your driver for available features.
[2] PostScript Printer Description files.

Note

If your system did not automatically check the Internet for the latest drivers during software installation, download them from http://www.hp.com/support/lj4650. Once connected, select **Downloads and Drivers** to find the driver you wish to download.

You can obtain Model Scripts for UNIX® and Linux by downloading them from the Internet or by requesting them from an HP-authorized service or support provider. See the support flyer that came in the printer box.

OS/2 drivers are available from IBM and are packaged with OS/2.

Note

If the printer driver you want is not on the printer CD-ROM or is not listed here, check the installation notes and Readme files to see if the printer driver is supported. If it is not supported, contact the manufacturer or distributor of the program you are using and request a driver for the printer.

Additional drivers

The following drivers are not included on the CD-ROM, but are available from the Internet or from HP Customer Care.

- PCL 5c printer drivers for Windows 98, Me, NT 4.0, 2000, XP, and Server 2003.
- OS/2 PCL 5c/6 printer driver.
- OS/2 PS printer driver.
- UNIX model scripts.
- Linux drivers.
- HP OpenVMS drivers.

Note   The OS/2 drivers are available from IBM and are packaged with OS/2. They are not available for Traditional Chinese, Simplified Chinese, Korean, or Japanese.

Select the right printer driver for your needs

Select a printer driver based on the way that you use the printer. Certain printer features are available only in the PCL 6 drivers. See the printer driver Help for available features.

- Use the PCL 6 driver to take full advantage of printer features. For general office printing, the PCL 6 driver is recommended to provide optimum performance and print quality.
- Use the PCL 5c driver (available on the Web only) if backward compatibility with previous PCL printer drivers or older printers is necessary.
- Use the PS driver if you are printing primarily from PostScript-specific programs such as Adobe and Corel, for compatibility with PostScript Level 3 needs, or for PS font DIMM support.

Note   The printer automatically switches between PS and PCL printer languages.

Printer driver Help

Each printer driver has Help screens that can be activated by using either the Help button, the F1 button on the computer keyboard, or a question-mark symbol in the upper right corner in the printer driver (depending on the Windows operating system used). These Help screens give detailed information about the specific driver. Printer driver Help is separate from your program Help.

Accessing the printer drivers

Use one of the following methods to access the printer drivers from your computer:

Operating System	To change settings for all immediate print jobs (until the application is closed)	To change print job default settings (For example, turn on Print on Both Sides by default.)	To change configuration settings (For example, add a physical option such as a tray or enable/disable a driver feature such as Allow Manual Duplexing.)
Windows 98, NT 4.0, and ME	From the **File** menu in the application, click **Print**. Select the printer, and then click **Properties**. (The steps may vary; this procedure is most common.)	Click **Start**, click **Settings**, and then click **Printers**. Right-click the printer icon, and choose **Properties** (Windows 98 and ME) or **Document Defaults** (NT 4.0).	Click **Start**, click **Settings**, and then click **Printers**. Right-click the printer icon, and choose **Properties**. Select the **Configure** tab.
Windows 2000 and XP	From the **File** menu in the application, click **Print**. Select the printer, and then click **Properties** or **Preferences**. (The steps may vary; this procedure is most common.)	Click **Start**, click **Settings**, and then click **Printers** or **Printers and Faxes**. Right-click the printer icon, and choose **Printing Preferences**.	Click **Start**, click **Settings**, and then click **Printers** or **Printers and Faxes**. Right-click the printer icon, and choose **Properties**. Select the **Device Settings** tab.
Macintosh OS 9.1	On the **File** menu, click **Print**. Change the settings that you want on the various pop-up menus.	On the **File** menu, click **Print**. As you change settings on the pop-up menu, click **Save Settings**.	Click the desktop printer icon. From the **Printing** menu, click **Change Setup**.
Macintosh OS X.1	On the **File** menu, click **Print**. Change settings that you want on the various pop-up menus.	On the **File** menu, click **Print**. Change settings that you want on the various pop-up menus, and then on the main pop-up menu, click **Save Custom Setting**. These settings are saved as the **Custom** option. To use the new settings, you must select the **Custom** option every time you open a program and print.	Delete the printer and reinstall. The driver will be auto-configured with the new options when it is reinstalled. (AppleTalk connections only) **Note** Configuration settings may not be available in Classic mode.

Operating System	To change settings for all immediate print jobs (until the application is closed)	To change print job default settings (For example, turn on Print on Both Sides by default.)	To change configuration settings (For example, add a physical option such as a tray or enable/disable a driver feature such as Allow Manual Duplexing.)
Macintosh OS X.2	On the **File** menu, click **Print**. Change settings that you want on the various pop-up menus.	On the **File** menu, click **Print**. Change settings that you want on the various pop-up menus, and then on the **Presets** pop-up menu, click **Save as** and enter a name for the preset. These settings are saved in the **Presets** menu. To use the new settings, you must select the saved preset option every time you open a program and print.	Open **Print Center**. (Select the hard drive, click **Applications**, click **Utilities**, then double-click **Print Center**.) Click on the print queue. On the **Printers** menu, click **Show Info**. Select the **Installable Options** menu. **Note** Configuration settings may not be available in Classic mode.
Macintosh OS X.3	On the **File** menu, click **Print**. Change settings that you want on the various pop-up menus.	On the **File** menu, click **Print**. Change settings that you want on the various pop-up menus, and then on the **Presets** pop-up menu, click **Save as** and enter a name for the preset. These settings are saved in the **Presets** menu. To use the new settings, you must select the saved preset option every time you open a program and print.	Open **Print Center**. (Select the hard drive, click **Applications**, click **Utilities**, then double-click **Print Center**.) Click on the print queue. On the **Printers** menu, click **Show Info**. Select the **Installable Options** menu. **Note** Configuration settings may not be available in Classic mode.

Software for Macintosh computers

The HP installer provides PostScript Printer Description (PPD) files, Printer Dialog Extensions (PDEs), and the HP LaserJet Utility for use with Macintosh computers.

The embedded Web server can be used by Macintosh computers if the printer is connected to a network.

PPDs

PPDs, in combination with the Apple PostScript drivers, allow you to gain access to the printer features and allow the computer to communicate with the printer. An installation program for the PPDs, PDEs, and other software is provided on the CD-ROM. Use the appropriate PS driver that comes with the operating system.

HP LaserJet Utility

Use the HP LaserJet Utility to control features that are not available in the driver. The illustrated screens make selecting printer features easier than ever. Use the HP LaserJet Utility to do the following:

● name the printer, assign it to a zone on the network, and download files and fonts.

● configure and set the printer for Internet protocol (IP) printing.

Note   The HP LaserJet Utility is not currently supported for OS X, but the utility is supported for the Classic environment.

Installing the printing system software

The following sections contain instructions for installing the printing system software.

The printer comes with printing system software and printer drivers on a CD-ROM. The printing system software on the CD-ROM must be installed to take full advantage of the printer features.

If you do not have access to a CD-ROM drive, you can download the printing system software from the Internet at http://www.hp.com/support/lj4650.

Note   Sample model scripts for UNIX® (HP-UX®, Sun Solaris) and Linux networks are available for download at http://www.hp.com/support.

You can download the latest software free of charge at http://www.hp.com/support/lj4650.

Installing Windows printing system software for direct connections

This section explains how to install the printing system software for Microsoft Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP.

When installing the printing software in a direct-connect environment, always install the software before connecting the parallel or USB cable. If the parallel or USB cable was connected before the software installation, see Installing the software after the parallel or USB cable has been connected.

Either a parallel or USB cable can be used for the direct connection. However, you cannot connect parallel and USB cables at the same time. Use an IEEE 1284-compatible cable or a standard 2-meter USB cable.

Note   NT 4.0 does not support USB cable connections.

To install the printing system software

1. Close all software programs that are open or running.

2. Insert the printer CD-ROM into the CD-ROM drive.

    If the welcome screen does not open, start it by using the following procedure:

    ●   On the **Start** menu, click **Run**.

    ●   Type the following: X:\setup (where X is the letter of the CD-ROM drive).

    ●   Click **OK**.

3. When prompted, click **Install Printer** and follow the instructions on the computer screen.

4. Click **Finish** when the installation has completed.

5. You might need to restart the computer.

6. Print a Test Page or a page from any software program to make sure that the software is correctly installed.

If installation fails, reinstall the software. If this fails, check the installation notes and readme files on the printer CD-ROM or the flyer that came in the printer box, or go to http://www.hp.com/support/lj4650 for help or more information.

Installing Windows printing system software for networks

The software on the printer CD-ROM supports network installation with a Microsoft network. For network installation on other operating systems, go to http://www.hp.com/support/lj4650.

The HP Jetdirect print server that is included with the HP LaserJet 4650n, HP LaserJet 4650dn printer, or HP LaserJet 4650dtn printer has a 10/100 Base-TX network port. If you need an HP Jetdirect print server with another type of network port, see Supplies and accessories or go to http://www.hp.com/support/lj4650.

The installer does not support printer installation or printer object creation on Novell servers. It supports only direct-mode network installations between Windows computers and a printer. To install your printer and create objects on a Novell server, use an HP utility (such as HP Web Jetadmin or HP Install Network Printer Wizard) or a Novell utility (such as NWadmin).

To install the printing system software

1. If you are installing the software on Windows NT 4.0, Windows 2000, or Windows XP, make sure that you have administrator privileges.

2. Make sure that the HP Jetdirect print server is configured correctly for the network by printing a configuration page (see Printer information pages). On the second page, locate the printer IP address. You might need this address to complete network installation.

3. Close all software programs that are open or running.

4. Insert the printer CD-ROM into the CD-ROM drive.

    If the welcome screen does not open, start it by using the following procedure:

    ●   On the **Start** menu, click **Run**.

    ●   Type the following: X:\setup (where X is the letter of the CD-ROM drive).

    ●   Click **OK**.

5. When prompted, click **Install Printer** and follow the instructions on the computer screen.

6. Click **Finish** when installation has completed.

7. You might need to restart the computer.

8. Print a Test Page or a page from any software program to make sure that the software is correctly installed.

   If installation fails, reinstall the software. If this fails, check the installation notes and readme files on the printer CD-ROM or the flyer that came in the printer box, or go to http://www.hp.com/support/lj4650 for help or more information.

To set up a Windows computer to use the network printer using Windows-sharing

If the printer is directly connected to a computer using a parallel cable, you can share the printer on the network so that other network users can print to it.

See your Windows documentation to enable Windows-sharing. After the printer is shared, install the printer software on all computers that share the printer.

Installing Macintosh printing system software for networks

This section describes how to install Macintosh printing system software. The printing system software supports Apple Mac OS version 8.6 through 9.2.x, Apple Mac OS version 10.1, and later.

The printing system software includes the following components:

- **PostScript® Printer Description (PPD) files**

  The PPDs, in combination with the Apple PostScript printer drivers, provide access to printer features. An installation program for the PPDs and other software is provided on the CD-ROM that came with the printer. Use the Apple LaserWriter 8 printer driver that comes with the computer.

- **HP LaserJet Utility**

  The HP LaserJet Utility provides access to features that are not available in the printer driver. Use the illustrated screens to select printer features and complete the following tasks with the printer:

  - Name the printer.
  - Assign the printer to a zone on the network.
  - Assign an IP to the printer.
  - Download files and fonts.
  - Configure and set the printer for IP or AppleTalk printing.

Note   The HP LaserJet Utility is not currently supported for OS X, but the utility is supported for the Classic environment.

To install printer drivers from Mac OS 8.6 to 9.2

1. Connect the network cable between the HP Jetdirect print server and a network port.

2. Insert the CD-ROM into the CD-ROM drive. The CD-ROM menu runs automatically. If the CD-ROM menu does not run automatically, double-click the CD-ROM icon on the desktop, and then double-click the Installer icon. This icon is located in the Installer/ <language> folder of the Starter CD-ROM (where <language> is your language preference). (For example, the Installer/English folder contains the Installer icon for the English printer software.)

3. Follow the instructions on the computer screen.

4. Open the Apple Desktop Printer Utility located in the {Startup Disk}: Applications: Utilities folder.

5. Double-click **Printer (AppleTalk)**.

6. Next to AppleTalk Printer Selection, click **Change**.

7. Select the printer, click **Auto Setup**, and then click **Create**.

8. On the **Printing** menu, click **Set Default Printer**.

<table>
<tr><td>Note</td><td>The icon on the desktop will appear to be generic. All the print panels will appear in the print dialog in an application.</td></tr>
</table>

To install printer drivers from Mac OS 10.1 and later

1. Connect the network cable between the HP Jetdirect print server and a network port.

2. Insert the CD-ROM into the CD-ROM drive. The CD-ROM menu runs automatically. If the CD-ROM menu does not run automatically, double-click the CD-ROM icon on the desktop, and then double-click the Installer icon. This icon is located in the Installer/ <language> folder of the Starter CD-ROM (where <language> is your language preference). (For example, the Installer/English folder contains the Installer icon for the English printer software.)

3. Double-click the **HP LaserJet Installers** folder.

4. Follow the instructions on the computer screen.

5. Double-click the Installer icon for the desired language.

6. On your computer hard drive, double-click **Applications**, **Utilities**, and then **Print Center**.

7. Click **Add Printer**.

8. Select the AppleTalk connection type on OS X 10.1 and the Rendezvous connection type on OS X 10.2.

9. Select the printer name.

10. Click **Add Printer**.

11. Close the Print Center by clicking the close button in the upper-left corner.

<table>
<tr><td>Note</td><td>Macintosh computers cannot be connected directly to the printer using a parallel port.</td></tr>
</table>

Installing Macintosh printing system software for direct connections (USB)

<table>
<tr><td>Note</td><td>Macintosh computers do not support parallel port connections.</td></tr>
</table>

This section explains how to install the printing system software for Mac OS 8.6 to 9.2.x and Mac OS X and later.

The Apple LaserWriter driver must be installed to use the PPD files. Use the Apple LaserWriter 8 driver that came with your Macintosh computer.

To install the printing system software

1. Connect a USB cable between the USB port on the printer and the USB port on the computer. Use a standard 2-meter USB cable.

2. Close all software programs that are open or running.

3. Insert the printer CD-ROM into the CD-ROM drive and run the installer.

   The CD-ROM menu runs automatically. If the CD-ROM menu does not run automatically, double-click the CD-ROM icon on the desktop, and then double-click the Installer icon. This icon is located in the Installer/<language> folder of the Starter CD-ROM (where <language> is your language preference).

4. Follow the instructions on the computer screen.

5. Restart the computer.

6. **For Mac OS 8.6 to 9.2.x**:

   - From HD/Applications/Utilities, open the Apple Desktop Printer Utility.
   - Double-click **Printer (USB)**.
   - Next to **USB Printer Selection**, click **Change**.
   - Select the printer, click **Auto Setup**, and then click **Create**.
   - Click on the Desktop Printer Icon that was just created.
   - On the **Printing** menu, click **Set Default Printer**.

   For Mac OS X: From HD/Applications/Utilities/Print Center, start the Print Center. If the printer does not set up automatically, do the following:

   - Click **Add Printer**.
   - From within the printer list, select USB as the connection type.
   - Select the printer and then click **Add** in the lower-left corner.

7. Print a Test Page or a page from any software program to make sure that the software is correctly installed.

   If installation fails, reinstall the software. If this fails, see the installation notes or readme files on the printer CD-ROM or the flyer that came in the printer box, or go to http://www.hp.com/support/lj4650 for help or more information.

Note   The icon on the desktop will appear to be generic. All the print panels will appear in the print dialog in an application.

Installing the software after the parallel or USB cable has been connected

If you have already connected a parallel or USB cable to a Windows computer, the **New Hardware Found** dialog box appears when you turn on the computer.

To install the software for Windows 98 or Windows Me

1. In the **New Hardware Found** dialog box, click **Search CD-ROM drive**.

2. Click **Next**.

3. Follow the instructions on the computer screen.

4. Print a Test Page or a page from any software program to make sure that the software is correctly installed.

   If installation fails, reinstall the software. If this fails, check the installation notes and readme files on the printer CD-ROM or the flyer that came in the printer box, or go to http://www.hp.com/support/lj4650 for help or more information.

To install the software for Windows 2000 or Windows XP

1. In the **New Hardware Found** dialog box, click **Search**.

2. On the **Locate Driver Files** screen, select the **Specify a Location** check box, clear all other check boxes, and then click **Next**.

3. Type the letter for the root directory. For example, X:\ (where "X:\" is the letter of the root directory on the CD-ROM drive).

4. Click **Next**.

5. Follow the instructions on the computer screen.

6. Click **Finish** when installation has completed.

7. Select a language and follow the instructions on the computer screen.

8. Print a Test Page or a page from any software program to make sure that the software is correctly installed.

   If installation fails, reinstall the software. If this fails, check the installation notes and readme files on the printer CD-ROM or the flyer that came in the printer box, or go to http://www.hp.com/support/lj4650 for help or more information.

Uninstalling the software

This section explains how to uninstall the printing system software.

To remove software from Windows operating systems

Use the Uninstaller in the HP LaserJet 4650/Tools program group to select and remove any or all of the Windows HP printing system components.

1. Click **Start** and then click **Programs**.

2. Point to **HP LaserJet 4650** and then click **Tools**.

3. Click **Uninstaller**.

4. Click **Next**.

5. Select the HP printing system components you want to uninstall.

6. Click **OK**.

7. Follow the instructions on the computer screen to complete the uninstallation.

To remove software from Macintosh operating systems

Drag the HP LaserJet folder and PPDs to the trash can.

Software for networks

For a summary of available HP network installation and configuration software solutions, see the *HP Jetdirect Print Server Administrator's Guide*. You can find this guide on the CD-ROM included with the printer.

HP Web Jetadmin

HP Web Jetadmin allows you to manage HP Jetdirect connected printers within your intranet using a browser. HP Web Jetadmin is a browser-based management tool, and should be installed only on a single network administration server. It can be installed and run on Red Hat Linux; Suse Linux; Windows NT 4.0 Server and Workstation; Windows 2000 Professional, Server, and Advanced Server; and Windows XP Professional Service Pack 1 systems.

To download a current version of HP Web Jetadmin and for the latest list of supported host systems, visit HP Customer Care Online at http://www.hp.com/go/webjetadmin.

When installed on a host server, HP Web Jetadmin can be accessed by any client through a supported web browser (such as Microsoft Internet Explorer 5.5 and 6.0 or Netscape Navigator 7.0).

HP Web Jetadmin has the following features:

- Task-oriented user interface provides configurable views, saving network managers significant time.

- Customizable user profiles let network administrators include only the function viewed or used.

- Instant e-mail notification of hardware failure, low supplies, and other printer problems now route to different people.

- Remote installation and management from anywhere using only a standard Web browser.

- Advanced autodiscovery locates peripherals on the network, without manually entering each printer into a database.

- Simple integration into enterprise management packages.

- Quickly find peripherals based on parameters such as IP address, color capability, and model name.

- Easily organize peripherals into logical groups, with virtual office maps for easy navigation.

- Manages and configures multiple printers at once.

For the latest information about HP Web Jetadmin go to http://www.hp.com/go/webjetadmin.

UNIX

The HP Jetdirect Printer Installer for UNIX is a simple printer installation utility for HP-UX and Solaris networks. It is available for download from HP Customer Care Online at http://www.hp.com/support/net_printing.

Utilities

The HP Color LaserJet 4650 series printer is equipped with several utilities, which make it easy to monitor and manage the printer on a network.

Embedded Web server

This printer is equipped with an embedded Web server, which allows access to information about printer and network activities. A Web server provides an environment in which web programs may run, much in the same way that an operating system, such as Windows, provides an environment for programs to run on your computer. The output from these programs can then be displayed by a Web browser, such as Microsoft Internet Explorer or Netscape Navigator.

When a Web server is "embedded", that means it resides on a hardware device (such as a printer) or in firmware, rather than as software that is loaded on a network server.

The advantage of an embedded Web server is that it provides an interface to the printer that anyone can access with a network-connected computer or a standard Web browser. There is no special software to install or configure. For more information about the HP embedded Web server, see the *Embedded Web Server User Guide*. You can find this guide on the CD-ROM included with the printer.

Features

The HP embedded Web server allows you to view printer and network card status and manage printing functions from your computer. With the HP embedded Web server, you can do the following:

- view printer status information
- determine the remaining life on all supplies and order new ones
- view and change tray configurations
- view and change the printer control panel menu configuration
- view and print internal pages
- receive notification of printer and supplies events
- add or customize links to other Web sites
- select the language in which to display the embedded Web server pages
- view and change network configuration

For a complete explanation of the features and functionality of the embedded Web server, see Using the embedded Web server.

hp toolbox

The HP toolbox is a software application that can be used for the following tasks:

- check the printer status
- view troubleshooting information
- view online documentation
- print internal printer pages

You can view the HP toolbox when the printer is directly connected to your computer or when it is connected to a network. You must have performed a complete software installation before using the HP toolbox.

Other components and utilities

Several software applications are available for Windows and Macintosh OS users, as well as for network administrators. These programs are summarized below.

Windows	Macintosh OS	Network administrator
- Software installer — automates the printing system installation - Online Web registration - HP toolbox	- PostScript Printer Description files (PPDs) — for use with the Apple PostScript drivers that comes with the Mac OS - HP LaserJet Utility (available from the Internet) — a printer management utility for Mac OS users - HP toolbox (for Mac OS X v10.2 and later)	- HP Web Jetadmin — a browser-based system management tool. See http://www.hp.com/go/webjetadmin for the latest HP Web Jetadmin software - HP Jetdirect Printer Installer for UNIX — available for download from http://www.hp.com/support/net_printing

Print media specifications

For optimum results, use conventional 75 g/m^2 (20 lb) photocopy paper. Verify that the paper is of good quality and is free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, curls, or bent edges.

- To order supplies in the U.S., go to http://www.hp.com/go/ljsupplies.
- To order supplies worldwide, go to http://www.hp.com/ghp/buyonline.html.
- To order accessories, go to http://www.hp.com/go/accessories.
- For additional information about supported media weights and sizes, go to http://www.hp.com/support/ljpaperguide.

Supported media weights and sizes

Tray 1 media sizes

Tray 1	Dimensions	Weight or thickness	Capacity
Standard size paper/ cardstock (letter/A4, legal, executive, JIS B5, A5)		60 to 200 g/m^2 (16 to 53 lb bond)	100 sheets (75 g/m^2; 20 lb bond)
Minimum size paper/ cardstock	76.2 by 127 mm (3 by 5 in)	164 to 200 g/m^2 (43 to 53 lb bond)	100 sheets (75 g/m^2; 20 lb bond)
Maximum size paper/ cardstock	216 by 356 mm (8.5 by 14 in)	164 to 200 g/m^2 (43 to 53 lb bond)	100 sheets (75 g/m^2; 20 lb bond)
Standard size glossy paper (letter/A4, legal, executive, JIS B5, A5)		75 to 105 g/m^2 (20 to 28 lb bond)	Maximum stack height: 10 mm (0.6 in)
Minimum size glossy paper	76.2 by 127 mm (3 by 5 in)	75 to 200 g/m^2 (20 to 32 lb bond)	Maximum stack height: 10 mm (0.6 in)
Maximum size glossy paper	216 by 356 mm (8.5 by 14 in)	75 to 200 g/m^2 (20 to 32 lb bond)	Maximum stack height: 10 mm (0.6 in)
Heavy Glossy paper	216 by 356 mm (8.5 by 14 in)	106 to 120 g/m^2 (28 to 32 lb bond)	Maximum stack height: 10 mm (0.6 in)
Standard size transparencies (letter/ A4)		0.13 to 0.13 mm thick (5 to 5 mils thick)	60 sheets
Standard HP Tough Paper (letter/A4, legal, executive, JIS B5, A5)		0.13 to 0.13 mm thick (5 to 5 mils thick)	Maximum stack height: 10 mm (0.6 in)
Minimum size HP Tough Paper	76.2 by 127 mm (3 by 5 in)	0.13 to 0.13 mm thick (5 to 5 mils thick)	Maximum stack height: 10 mm (0.6 in)
Maximum size HP Tough Paper	216 by 356 mm (8.5 by 14 in)	0.13 to 0.13 mm thick (5 to 5 mils thick)	Maximum stack height: 10 mm (0.6 in)

Tray 1 media sizes (continued)

Tray 1	Dimensions	Weight or thickness	Capacity
Minimum size HP High Gloss Laser Paper	216 by 279 mm (8.5 by 11 in)	120 to 120 g/m² (32 to 32 lb bond)	200 sheets
Maximum size HP High Gloss Laser Paper	279 by 432 mm (11 by 17 in)	120 to 120 g/m² (32 to 32 lb bond)	200 sheets
Envelope (Com 10, Monarch, C5, DL, B5)		105 to 105 g/m² (43 to 28 lb bond)	20 envelopes
Standard size label (letter/A4, legal, executive, JIS B5, A5)		60 to 163 g/m² (16 to 47 lb bond)	Maximum stack height: 10 mm (0.6 in)
Minimum size label	76.2 by 127 mm (3 by 5 in)	60 to 163 g/m² (16 to 47 lb bond)	Maximum stack height: 10 mm (0.6 in)
Maximum size label	216 by 356 mm (8.5 by 14 in)	60 to 163 g/m² (16 to 47 lb bond)	Maximum stack height: 10 mm (0.6 in)

Tray 2 and optional Trays 3 and 4 media sizes[1]

Tray 2, optional Tray 3 and Tray 4	Dimensions	Weight or thickness	Capacity
Standard size letter (letter/A4, legal, executive, JIS B5, A5)		60 to 105 g/m² (16 to 28 lb bond)	500 sheets (75 g/m²; 20 lb bond)
Minimum size paper	148 by 210 mm (7.16 by 8.17 in)	60 to 105 g/m² (16 to 28 lb bond)	500 sheets (75 g/m²; 20 lb bond)
Maximum size paper	216 by 356 mm (8.5 by 14 in)	60 to 105 g/m² (16 to 28 lb bond)	500 sheets (75 g/m²; 20 lb bond)
Standard size glossy paper (letter/A4, legal, executive, JIS B5, A5)		75 to 120 g/m² (20 to 32 lb bond)	200 sheets
Minimum size glossy paper	182 by 210 mm (7.16 by 8.17 in)	75 to 120 g/m² (20 to 32 lb bond)	200 sheets
Maximum size glossy paper	216 by 356 mm (8.5 by 14 in)	75 to 120 g/m² (20 to 32 lb bond)	200 sheets
Standard size label (letter/A4, legal, executive, JIS B5, A5)		60 to 105 g/m² (16 to 28 lb bond)	Maximum stack height: 50 mm (2 in)
Minimum size label	182 by 210 mm (7.16 by 8.17 in)	75 to 120 g/m² (20 to 32 lb bond)	Maximum stack height: 50 mm (2 in)
Maximum size label	216 by 356 mm (8.5 by 14 in)	75 to 120 g/m² (20 to 32 lb bond)	Maximum stack height: 50 mm (2 in)
Transparencies (letter, A4)		0.13 to 0.13 mm thick (5 to 5 mils thick)	100 sheets (0.13 mm thick; 5 mils thick)

Tray 2 and optional Trays 3 and 4 media sizes[1] (continued)

Tray 2, optional Tray 3 and Tray 4	Dimensions	Weight or thickness	Capacity
Standard HP Tough Paper (letter/A4, legal, executive, JIS B5, A5)		0.13 to 0.13 mm thick (5 to 5 mils thick)	Maximum stack height: 10 mm (0.6 in)
Minimum size HP Tough Paper	76.2 by 127 mm (3 by 5 in)	0.13 to 0.13 mm thick (5 to 5 mils thick)	Maximum stack height: 10 mm (0.6 in)

[1] Trays 2, 3, and 4 use Custom size specifically for B5 ISO. Trays 2, 3, and 4 do not support the range of custom sizes available in Tray 1.

Automatic duplex printing (two-sided printing)

Automatic duplex printing	Dimensions	Weight or thickness	Capacity
Standard size media (A4/letter, legal, executive, JIS B5)		60 to 105 g/m^2 (16 to 28 lb bond)	200 sheets

2 Control panel

This chapter contains information on the printer control panel, which provides control of printer functions and communicates information about the printer and print jobs. The following topics are covered:

- Introduction
- Control panel buttons
- Interpreting control panel indicator lights
- Control panel menus
- Menu hierarchy
- Retrieve job menu
- Information menu
- Paper handling menu
- Configure device menu
- Diagnostics menu
- Changing printer control panel configuration settings
- Using the printer control panel in shared environments

Introduction

The control panel provides control of printer functions and communicates information about the printer and print jobs. Its display provides graphic information about printer and supplies status, making it easy to identify and correct problems.
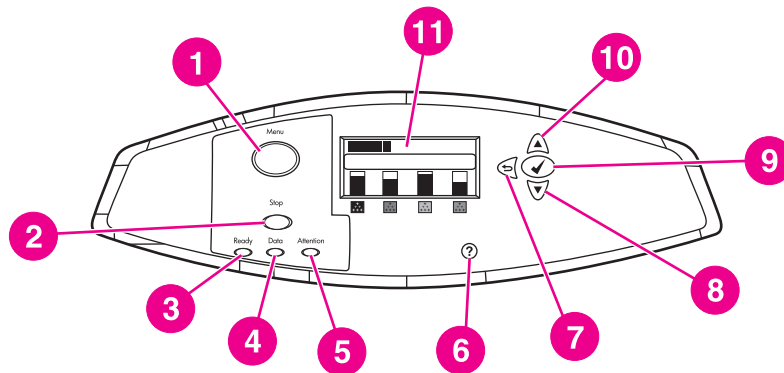
Control panel buttons and lights

1	MENU button
2	STOP button
3	READY light
4	DATA light
5	ATTENTION light
6	HELP (?) button
7	BACK/EXIT (⤺) button
8	DOWN ARROW (▼) button
9	SELECT (✔) button
10	UP ARROW (▲) button
11	Display

The printer communicates via the display and the lights on the lower left side of the control panel. The Ready, Data, and Attention lights provide at-a-glance information about the state of the printer and alert you to printing problems. The display shows more complete status information as well as menus, help information, animations, and error messages.

Display

The printer's display gives you complete, timely information about the printer and print jobs. Graphics illustrate levels of supplies, the locations of paper jams, and job status. Menus give access to printer functions and detailed information.

The top-level screen on the display has three areas:
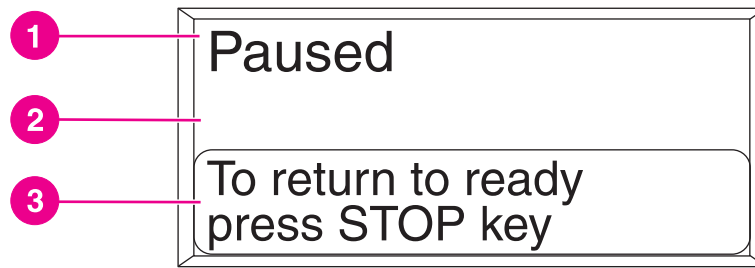
Printer display

1   Message area
2   Message area
3   Prompt area
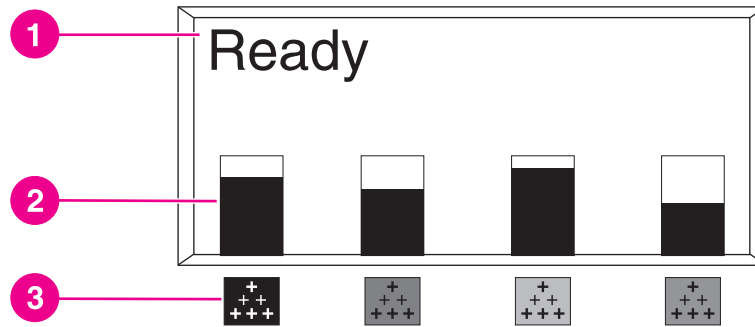
Printer display

1   Message area
2   Supplies gauge
3   Print cartridge colors are indicated from left to right: black, magenta, yellow, and cyan

The message and prompt areas of the display alert you to the state of the printer and tell you how to respond.

The supplies gauge shows the consumption levels of print cartridges (black, magenta, yellow, cyan). A ? appears instead of the consumption level when the level is not known. This can occur in the following circumstances:

● missing cartridges

● incorrectly placed cartridges

● cartridges with an error

● some non-HP cartridges

The supplies gauge appears whenever the printer shows the **Ready** state with no warnings. It will also appear when the printer shows a warning or error message concerning a print cartridge or multiple supplies.

Accessing the control panel from a computer

You can also access the printer control panel from a computer by using the Settings page of the embedded Web server.

The computer shows the same information that the control panel shows. From your computer, you can also perform control panel functions such as checking supplies status, viewing messages, or changing tray configuration. For more information, see Using the embedded Web server.

Control panel buttons

Use the buttons on the control panel to perform printer functions and to navigate and respond to menus and messages in the display.

Button name	Function
✔ SELECT	Makes selections and resumes printing after recovery errors.
▲ UP ARROW ▼ DOWN ARROW	Navigates menus and text, and increases or decreases the values of numerical items in the display.
↰ BACK/EXIT ARROW	Navigates backward in nested menus, or quits menus or help.
MENU	Accesses and exits the menus.
STOP	Pauses the current job and provides options to resume printing or to cancel the current job.
? HELP	Provides animated graphics and detailed information on printer messages or menus.

Interpreting control panel indicator lights
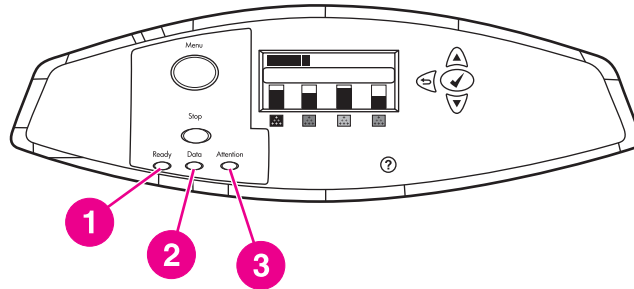
Control panel indicator lights

1 READY
2 DATA
3 ATTENTION

Indicator	On	Off	Flashing
READY (green)	Printer is online (able to accept and process data).	Printer is offline or is turned off.	Printer is attempting to stop printing and go offline.
DATA (green)	Processed data is present in the printer, but more data is needed to complete the job.	Printer is not processing or receiving data.	Printer is processing and receiving data.
ATTENTION (amber)	A critical error has occurred. Printer requires attention.	No conditions exist that require attention.	An error has occurred. Printer requires attention.

Control panel menus

You can perform most routine printing tasks from the computer through the printer driver or software application. This is the most convenient way to control the printer, and will override the printer control panel settings. See the help files associated with the software, or for more information on accessing the printer driver, see Printer software.

You can also control the printer by changing settings in the printer's control panel. Use the control panel to access printer features not supported by the printer driver or software application. Use the control panel to configure trays for paper size and type.

Getting started basics

- Enter the menus and activate any selection by pressing the MENU button.

- Use the Up or Down arrows (▲▼) to navigate through the menus. In addition to menu navigation, the Up and Down arrows can increase and decrease numerical value selections. Hold down the Up or Down arrows to scroll faster.

- The Back button (⇆) allows you to move back in menu selections as well as select numerical values when configuring the printer.

- Exit all menus by pressing MENU.

- If no key is pressed for 60 seconds, the printer will return to the **Ready** state.

- A lock symbol next to a menu item means a PIN number is needed to use that item. Typically, this number is obtained from your network administrator.

Menu hierarchy

The following tables list the menu hierarchies of each menu.

To enter the menus

Press M<small>ENU</small> to enter **MENUS**.

Press ▲ or ▼ to navigate the listings.

Press ✔ to select the appropriate option.

MENUS	RETRIEVE JOB
	INFORMATION
	PAPER HANDLING
	CONFIGURE DEVICE
	DIAGNOSTICS
	SERVICE

Retrieve job menu

See Retrieve job menu for more information.

RETRIEVE JOB	PRINT STORED JOB LIST
	A list of stored jobs appears
	NO STORED JOBS

Information menu

See Information menu for more information.

INFORMATION	PRINT MENU MAP
	PRINT CONFIGURATION
	PRINT SUPPLIES STATUS PAGE
	SUPPLIES STATUS
	PRINT USAGE PAGE
	PRINT DEMO
	PRINT RGB SAMPLES
	PRINT CMYK SAMPLES
	PRINT FILE DIRECTORY
	PRINT PCL FONT LIST
	PRINT PS FONT LIST

Paper handling menu

See Paper handling menu for more information.

PAPER HANDLING	TRAY 1 SIZE
	TRAY 1 TYPE
	Tray <N> Size
	N = 2, 3, or 4
	Tray <N> Type
	N = 2, 3, or 4

Configure device menu

See Configure device menu and Changing printer control panel configuration settings for more information.

CONFIGURE DEVICE	PRINTING	COPIES
		DEFAULT PAPER SIZE
		DEFAULT CUSTOM PAPER SIZE
		DUPLEX
		DUPLEX BINDING
		OVERRIDE A4/LETTER
		MANUAL FEED
		COURIER FONT
		WIDE A4
		PRINT PS ERRORS
		PCL

	PRINT QUALITY	ADJUST COLOR
		SET REGISTRATION
		PRINT MODES
		OPTIMIZE
		QUICK CALIBRATE NOW
		FULL CALIBRATE NOW
		COLOR RET
	SYSTEM SETUP	JOB STORAGE LIMIT
		JOB HELD TIMEOUT
		SHOW ADDRESS
		COLOR/BLACK MIX
		TRAY BEHAVIOR
		POWERSAVE TIME
		PERSONALITY
		CLEARABLE WARNINGS
		AUTO CONTINUE
		SUPPLIES LOW
		COLOR SUPPLY OUT
		JAM RECOVERY
		RAM DISK
		LANGUAGE
	I/O	I/O TIMEOUT
		PARALLEL INPUT
		EIO X JETDIRECT
		(Where **X**=1, 2, or 3.)
	RESETS	RESTORE FACTORY SETTINGS
		POWERSAVE
		RESET SUPPLIES

Diagnostics menu

See Diagnostics menu for more information.

DIAGNOSTICS	PRINT EVENT LOG
	SHOW EVENT LOG
	PQ TROUBLESHOOTING
	DISABLE CARTRIDGE CHECK
	PAPER PATH SENSORS
	PAPER PATH TEST
	MANUAL SENSOR TEST
	COMPONENT TEST
	PRINT/STOP TEST

Retrieve job menu

The retrieve job menu allows you to view listings of all stored jobs.

Menu item	Description
PRINT STORED JOB LIST	Prints a page that lists all jobs stored on the printer.
A list of stored jobs for each user appears.	Each person who has jobs stored on the printer is listed. The number in parentheses indicates how many jobs that person has stored.
NO STORED JOBS	If there are no stored jobs, this message appears in place of the list.

Information menu

Use the information menu to access and print specific printer information.

Menu item	Description
PRINT MENU MAP	Prints the control panel menu map, which shows the layout and current settings of the control panel menu items. See Printer information pages.
PRINT CONFIGURATION	Prints the printer configuration page.
PRINT SUPPLIES STATUS PAGE	Prints the estimated remaining life for the supplies; reports statistics on total number of pages and jobs processed, print cartridge manufacture date, serial number, page counts, and maintenance information.
SUPPLIES STATUS	Displays the supplies status in a scrollable list.
PRINT USAGE PAGE	Prints a count of all media sizes that have passed through the printer; lists whether they were simplex, duplex, monochrome, or color; and reports the page count.
PRINT DEMO	Prints a demonstration page.
PRINT RGB SAMPLES	Prints color samples for different RGB values. The samples act as a guide for color matching on the HP Color LaserJet 4650.
PRINT CMYK SAMPLES	Prints color samples for different CMYK values. The samples act as a guide for color matching on the HP Color LaserJet 4650.
PRINT FILE DIRECTORY	Prints the name and directory of files stored in the printer on an optional hard disk.
PRINT PCL FONT LIST	Prints the available PCL fonts.
PRINT PS FONT LIST	Prints the available PS (emulated PostScript) fonts.

Paper handling menu

The paper handling menu allows you to configure input trays by size and type. It is important to correctly configure the trays with this menu before you print for the first time.

If you have used other HP LaserJet printer models, you might be accustomed to configuring Tray 1 to first mode or cassette mode. On HP Color LaserJet 4650 series printers, setting Tray 1 size and type to **ANY SIZE** is equivalent to first mode. Setting size or type for Tray 1 to a setting other than **ANY SIZE** is equivalent to cassette mode.

Menu item	Value	Description
TRAY 1 SIZE	A list of available sizes appears.	Allows you to configure the media size for Tray 1. The default is **ANY SIZE**. See Supported media weights and sizes for a complete list of available sizes.
TRAY 1 TYPE	A list of available types appears.	Allows you to configure the media type for Tray 1. The default is **ANY TYPE**. See Supported media weights and sizes for a complete list of available types.
Tray \<N> Size N = 2, 3, or 4	A list of available sizes appears.	Allows you to configure the media size for Tray 2, Tray 3, or Tray 4. The default setting is the size detected by the guides in the tray. To use a custom size, move the switch in the tray to custom. See Supported media weights and sizes for a complete list of available sizes.
Tray \<N> Type N = 2, 3, or 4	A list of available types appears.	Allows you to configure the media type for Tray 2, Tray 3, or Tray 4. The default is **PLAIN**. See Supported media weights and sizes for a complete list of available types.

Configure device menu

The configure device menu allows you to change the printer's default printing settings, adjust the print quality, change the system's configuration and I/O options, and reset the printer's default settings.

Printing menu

These settings affect only jobs without identified properties. Most jobs identify all of the properties and override the values set from this menu. This menu can also be used to set default media size and type.

Menu item	Values	Description
COPIES	1-32000	Allows you to set the default number of copies. The default number is **1**.
DEFAULT PAPER SIZE	A list of available sizes appears.	Allows you to set the default media size.
DEFAULT CUSTOM PAPER SIZE	UNIT OF MEASURE X DIMENSION Y DIMENSION	Allows you to set the default size for any job without dimensions.
DUPLEX	OFF ON	Allows you to enable or disable the duplex function on models with duplexing capability. The default is **OFF**.
DUPLEX BINDING	LONG EDGE SHORT EDGE	This item appears only if the printer has a duplex unit and if **DUPLEX** is set to **ON**. It allows you to choose the edge of the paper to use for binding duplex jobs.
OVERRIDE A4/LETTER	NO YES	Allows you to set the printer to print an A4 job on letter-size paper when no A4 paper is loaded. The default is **NO**.
MANUAL FEED	OFF ON	Allows you to manually feed media. The default is **OFF**.
COURIER FONT	REGULAR DARK	Allows you to select a version of the Courier font. The default is **REGULAR**.
WIDE A4	NO YES	Allows you to change the printable area of A4 paper so that eighty 10-pitch characters may be printed on a single line. The default is **NO**.

Menu item	Values	Description
PRINT PS ERRORS	**OFF** **ON**	Allows you to select to print PS error pages. The default is **OFF**.
PRINT PDF ERRORS	**OFF** **ON**	Allows you to select to print PDF error pages. The default is **OFF**.
PCL	**FORM LENGTH** **ORIENTATION** **FONT SOURCE** **FONT NUMBER** **FONT PITCH** **SYMBOL SET** **APPEND CR TO LF** **SUPPRESS BLANK PAGES**	Allows you to configure settings for the printer control language.

Print quality menu

This menu allows you to adjust all aspects of print quality, including calibration, registration, and color halftone settings.

Menu item	Values	Description
ADJUST COLOR	**HIGHLIGHTS** **MIDTONES** **SHADOWS** **RESTORE DEFAULT VALUES**	Allows you to modify the half tone settings for each color. The default for each color is **0**.
SET REGISTRATION	**PRINT TEST PAGE** **Source** **ADJUST TRAY 1** **ADJUST TRAY 2** **ADJUST TRAY 3** **ADJUST TRAY 4**	Allows simplex and duplex image alignment. The default for the **Source** is **TRAY 2**. The default for the sub-items **ADJUST TRAY 1**, **ADJUST TRAY 2**, **ADJUST TRAY 3**, and **ADJUST TRAY 4** is **0**.
PRINT MODES	A list of available modes appears.	Allows you to associate each media type with a specific print mode.
OPTIMIZE	**REDUCE BACKGROUND** **TRANSFER** **RESTORE OPTIMIZE**	Allows you to optimize certain parameters for all jobs rather than optimizing by media type. The default for each item is **OFF**.

Menu item	Values	Description
QUICK CALIBRATE NOW		Performs partial printer calibrations. For more information, see Calibrating the printer.
FULL CALIBRATE NOW		Performs all printer calibrations. For more information, see Calibrating the printer.
COLOR RET	OFF ON	The **COLOR RET** menu item allows the user to either turn on or turn off a color printer's REt (Resolution Enhancement Technology) setting. The default is **ON**.

System setup menu

The system setup menu allows you to make changes to general printer configuration default settings such as PowerSave Time, printer personality (language), and jam recovery.

See Changing printer control panel configuration settings for more information.

Menu item	Values	Description
JOB STORAGE LIMIT	1-100	Sets the limit for the maximum number of jobs stored on the hard disk at the printer. The default is **32**.
JOB HELD TIMEOUT	OFF 1 HOUR 4 HOURS 1 DAY 1 WEEK	Sets the period of time that the system keeps files in job storage before deleting them from the queue. The default is **OFF**.
SHOW ADDRESS	AUTO OFF	This item determines whether the printer's IP address is shown on the display with the **Ready** message. If more than one EIO card is installed, the IP address of the card in the first slot is shown. The default is **OFF**.

Menu item	Values	Description
COLOR/BLACK MIX	AUTO MOSTLY COLOR PAGES MOSTLY BLACK PAGES	This menu item establishes how the printer switches from color to monochrome (black and white) mode for maximum performance and print cartridge life. **AUTO** will reset the printer to the factory default setting. The default is **AUTO**. Select **MOSTLY COLOR PAGES** if nearly all of your print jobs are color with high page coverage. Select **MOSTLY BLACK PAGES** if you print mostly monochrome print jobs, or a combination of color and monochrome print jobs.
TRAY BEHAVIOR	USE REQUESTED TRAY MANUALLY FEED PROMPT PS DEFER MEDIA	Allows you to specify settings for the tray selection behavior. (This setting allows you to configure the trays to behave like trays in some previous HP printers and to configure two-sided printing behavior for pre-printed paper.) The default for **USE REQUESTED TRAY** is **EXCLUSIVELY**. The default for **MANUALLY FEED PROMPT** is **ALWAYS**. **PS DEFER MEDIA** affects how paper is handled when printing from an Adobe PS print driver. **ENABLED** uses HP's paper handling. **Disabled** uses the Adobe PS paper handling. The default is **ENABLED**. See Changing printer control panel configuration settings for more information.
POWERSAVE TIME	1 MINUTE 15 MINUTES 30 MINUTES 60 MINUTES 90 MINUTES 2 HOURS 4 HOURS	Reduces power consumption when the printer has been inactive for the period of time specified by this item. The default is **30 MINUTES**.
PERSONALITY	AUTO PDF PCL PS MIME	Sets the default personality to automatic switching, PCL, PDF, or PostScript emulation. The default is **AUTO**.

Menu item	Values	Description
CLEARABLE WARNINGS	ON JOB	Sets whether a warning is cleared on the control panel or when another job is sent. The default is **JOB**.
AUTO CONTINUE	OFF ON	Determines printer behavior when the system generates an Auto Continuable error. The default is **ON**.
SUPPLIES LOW	STOP CONTINUE	Sets low supplies reporting options. The default is **CONTINUE**.
COLOR SUPPLY OUT	AUTOCONTINUE BLACK STOP	Sets the **COLOR SUPPLY OUT** printer behavior. When a color supply is empty and the printer is set to **AUTOCONTINUE BLACK**, the printer will continue printing using black toner only.
JAM RECOVERY	AUTO OFF ON	Sets whether the printer will attempt to reprint pages after a jam. The default is **AUTO**.
RAM DISK	AUTO OFF	Allows you to specify how the RAM disk is configured. When set to **AUTO**, the printer determines the optimal RAM disk size based on the amount of available memory. The default is **AUTO**. This message displays in models that have a hard disk installed.
LANGUAGE	A listing of available languages appears.	Sets the default language.

I/O menu

This menu allows you to configure the printer's I/O options.

See <u>Network configuration</u>.

Menu item	Values	Description
I/O TIMEOUT	**15 SECONDS** **Range:5 - 300** **Then press ✔**	Allows you to select the I/O timeout in seconds.

Menu item	Values	Description
PARALLEL INPUT	**HIGH SPEED** **ADVANCED FUNCTIONS**	Allows you to select the speed at which the parallel port communicates with the host and to enable or disable the bi-directional parallel communication. The default for **HIGH SPEED** is **YES**. The default for **ADVANCED FUNCTIONS** is **ON**.
EIO X (Where **X**=1, 2, or 3.)	The values may vary. Some examples of possible values are: **NOVELL** **DLC/LLC** **IPX/SPX** **TCP/IP** **APPLETALK**	Allows you to configure EIO devices installed in slot 1, 2, or 3.

Resets menu

The resets menu allows you to reset factory settings, disable and enable PowerSave, and update the printer after new supplies are installed.

Menu item	Values	Description
RESTORE FACTORY SETTINGS	None.	Allows you to clear the page buffer, remove all perishable personality data, reset the printing environment, and return all default settings to factory defaults.
POWERSAVE	**OFF** **ON**	Allows you to enable and disable PowerSave. The default is **ON**.
RESET SUPPLIES	**NEW TRANSFER KIT** **NEW FUSER KIT**	Allows you to inform the printer that a new transfer kit or new fuser kit has been installed.

Diagnostics menu

The diagnostics menu allows you to run tests that can help you identify and solve problems with the printer.

Menu item	Description
PRINT EVENT LOG	This item will print an event log that will display the last 50 entries in the printer's event log, starting with the most recent.
SHOW EVENT LOG	This item displays the last 50 events on the control panel display, starting with the most recent.
DISABLE CARTRIDGE CHECK	This item allows you to remove a print cartridge to help determine which cartridge is the source of the problem.
Paper Path SENSOR TEST	This item performs a test on each of the printer's sensors to determine if they are working correctly and displays the status of each sensor.
PAPER PATH TEST	This item is useful for testing the paper handling features of the printer, such as the configuration of the trays.
MANUAL SENSOR TEST	This item performs a test to determine whether the paper path sensors are operating correctly.
COMPONENT TEST	This item will activate individual parts independently to isolate noise, leaking, and other hardware issues.
PRINT/STOP TEST	This item isolates print quality faults more accurately by stopping the printer in mid-print cycle. Stopping the printer in mid-print cycle allows you to see where the image begins to degrade. Stopping the printer in mid-print cycle will cause a jam that may need to be manually removed. A service representative should perform this test.

Menu item	Description
COLOR BAND TEST (HP Color LaserJet 4650 models)	Use this item to print a color band test page that is used to identify arcing in the high-voltage power supply.

Changing printer control panel configuration settings

By using the printer control panel, you can make changes to general printer configuration default settings such as tray size and type, PowerSave time, printer personality (language), and jam recovery.

The printer control panel can also be accessed from a computer by using the Settings page of the embedded Web server. The computer shows the same information that the control panel shows. For more information, see Using the embedded Web server.

CAUTION   Configuration settings seldom need to be changed. Hewlett-Packard recommends that only the system administrator change configuration settings.

Job storage limit

This option sets the limit for the maximum number of jobs stored on the hard disk at the printer. The maximum number allowed is 100, and the default value is 32.

To set the job storage limit

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **SYSTEM SETUP**.
5. Press ✔ to select **SYSTEM SETUP**.
6. Press ✔ to select **JOB STORAGE LIMIT**.
7. Press ▲ or ▼ to change the value.
8. Press ✔ to set the value.
9. Press MENU.

Job held timeout

This option sets the period of time that the system keeps files in job storage before deleting them from the queue. The default setting for this option is **OFF**; the other available settings are **1 HOUR**, **4 HOURS**, **1 DAY**, and **1 WEEK**.

To set the job held timeout

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **JOB HELD TIMEOUT**.

7. Press ✔ to select **JOB HELD TIMEOUT**.

8. Press ▲ or ▼ to select the appropriate time period.

9. Press ✔ to set the time period.

10. Press MENU.

Show address

This item determines whether the printer's IP address is shown on the display with the **Ready** message. If more than one EIO card is installed, the IP address of the card installed in the first slot appears.

To show the IP address

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **SHOW ADDRESS**.

7. Press ✔ to select **SHOW ADDRESS**.

8. Press ▲ or ▼ to select the desired option.

9. Press ✔ to select the option.

10. Press MENU.

Color/black mix

This item allows you to configure printer settings to optimize printer and cartridge performance for the printing environment. If the printer is primarily used for black printing (over two-thirds of the pages are black only), change the printer settings to **MOSTLY BLACK PAGES**. If the printer is primarily used for color printing, change the printer settings to **MOSTLY COLOR PAGES**. If the printer is used for a mix of black-only and color print jobs, it is recommended that you use the printer default of **AUTO**. To determine the percentage of color pages, print a configuration page. See Printer information pages to learn how to print a configuration page. The configuration page shows the total number of pages printed and the number of color pages printed. To determine the percentage of color pages printed, divide the color page count by the total page count.

To set the color/black mix

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **COLOR/BLACK MIX**.

7. Press ✔ to select **COLOR/BLACK MIX**.

8. Press ▲ or ▼ to select the desired option.

9. Press ✔ to select the option.

10. Press MENU.

Tray behavior options

Tray behavior allows three user-defined options:

- **USE REQUESTED TRAY**. Selecting **EXCLUSIVELY** ensures that the printer will not automatically select another tray when you indicate that a specific tray should be used. Selecting **FIRST** allows the printer to pull from a second tray if the specified tray is empty or does not match the settings specified for the print job. **EXCLUSIVELY** is the default setting.

- **Manually Feed**. If you select **ALWAYS** (the default value), the system always displays a prompt before pulling from Tray 1 (multipurpose tray). If you select **UNLESS LOADED**, the system will only display the prompt if Tray 1 (multipurpose tray) is empty.

- **PS DEFER MEDIA**. This setting affects how non-HP PostScript drivers will behave with the device. There is no need to change this setting if using the drivers supplied by HP. If set to **ENABLED**, non-HP PostScript drivers will use the HP tray selection method as the HP drivers do. If set to **Disabled**, some non-HP PostScript drivers will use the PostScript tray selection method instead of the HP method.

To set the printer to use requested tray

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **TRAY BEHAVIOR**.

7. Press ✔ to select **TRAY BEHAVIOR**.

8. Press ✔ to select **USE REQUESTED TRAY**.

9. Press ▲ or ▼ to select **EXCLUSIVELY** or **FIRST**.

10. Press ✔ to set the behavior.

11. Press MENU.

To set manually feed prompt

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **TRAY BEHAVIOR**.

7. Press ✔ to select **TRAY BEHAVIOR**.

8. Press ▼ to highlight **MANUALLY FEED PROMPT**.

9. Press ✔ to select **MANUALLY FEED PROMPT**.

10. Press ▲ or ▼ to select **ALWAYS** or **UNLESS LOADED**.

11. Press ✔ to set the behavior.

12. Press MENU.

To set the printer default for PS Defer Media

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **TRAY BEHAVIOR**.

7. Press ✔ to select **TRAY BEHAVIOR**.

8. Press ✔ to select **PS DEFER MEDIA**.

9. Press or select **ENABLED** or **Disabled**.

10. Press ✔ to set the behavior.

11. Press MENU.

PowerSave Time

The adjustable PowerSave Time feature reduces power consumption when the printer has been inactive for an extended period. You can set the length of time before the printer goes into PowerSave mode to **1 MINUTE**, **15 MINUTES**, **30 MINUTES**, **60 MINUTES**, **90 MINUTES**, **2 HOURS**, or to **4 HOURS**. The default setting is **30 MINUTES**.

Note   The printer display dims when the printer is in PowerSave mode. PowerSave mode does not affect printer warm-up time.

To set PowerSave Time

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **SYSTEM SETUP**.
5. Press ✔ to select **SYSTEM SETUP**.
6. Press ▼ to highlight **POWERSAVE TIME**.
7. Press ✔ to select **POWERSAVE TIME**.
8. Press ▲ or ▼ to select the appropriate time period.
9. Press ✔ to set the time period.
10. Press MENU.

To disable/enable PowerSave

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **RESETS**.
5. Press ✔ to select **RESETS**.
6. Press ▼ to highlight **POWERSAVE**.
7. Press ✔ to select **POWERSAVE**.
8. Press ▲ or ▼ to select **ON** or **OFF**.
9. Press ✔ to set the selection.
10. Press MENU.

Personality

This printer features automatic personality (printer language) switching. **AUTO** is the default value.

- **AUTO** configures the printer to automatically detect the type of print job and configure its personality to accommodate that job.
- **PDF** configures the printer to print PDF files.
- **PCL** configures the printer to use Printer Control Language.
- **PS** configures the printer to use PostScript emulation.
- **MIME** configures the printer for use with hand-held devices such as cellular phones and personal digital assistants (PDAs).

To set the personality

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✓ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **SYSTEM SETUP**.
5. Press ✓ to select **SYSTEM SETUP**.
6. Press ▼ to highlight **PERSONALITY**.
7. Press ✓ to select **PERSONALITY**.
8. Press ▲ or ▼ to select the appropriate personality (**AUTO**, **PCL**, **PDF**, **PS**, **MIME**).
9. Press ✓ to set the personality.
10. Press MENU.

Clearable warnings

You can determine the display time of control panel clearable warnings with this option by selecting **ON** or **JOB**. The default value is **JOB**.

- **ON** displays clearable warnings until you press ✓.
- **JOB** displays clearable warnings until the end of the job in which it was generated.

To set the clearable warnings

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✓ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **SYSTEM SETUP**.
5. Press ✓ to select **SYSTEM SETUP**.
6. Press ▼ to highlight **CLEARABLE WARNINGS**.
7. Press ✓ to select **CLEARABLE WARNINGS**.
8. Press ▲ or ▼ to select the appropriate setting.
9. Press ✓ to set the selection.
10. Press MENU.

Auto continue

You can determine printer behavior when the system generates an Auto Continuable error. **ON** is the default setting.

- **ON** displays an error message for ten seconds before automatically continuing to print.
- **OFF** pauses printing any time the printer displays an error message and until you press ✓.

To set the auto continue

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **SYSTEM SETUP**.
5. Press ✔ to select **SYSTEM SETUP**.
6. Press ▼ to highlight **AUTO CONTINUE**.
7. Press ✔ to select **AUTO CONTINUE**.
8. Press ▲ or ▼ to select the appropriate setting.
9. Press ✔ to set the selection.
10. Press MENU.

Supplies low

The printer allows two options for reporting that supplies are low; **CONTINUE** is the default value.

- **CONTINUE** allows the printer to continue printing while displaying a warning until the supply is replaced.

- **STOP** causes the printer to pause printing until you replace the used supply or press ✔, which allows the printer to print while continuing to display the warning.

To set supplies low reporting

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **SYSTEM SETUP**.
5. Press ✔ to select **SYSTEM SETUP**.
6. Press ▼ to highlight **SUPPLIES LOW**.
7. Press ✔ to select **SUPPLIES LOW**.
8. Press ▲ or ▼ to select the appropriate setting.
9. Press ✔ to set the selection.
10. Press MENU.

Color supply out

There are two options for this menu item.

- **AUTOCONTINUE BLACK** allows the printer to continue printing using black toner only when a color supply is empty. A warning message displays on the control panel when the printer is in this mode. Printing in this mode is allowed only for a specific number of pages. After that, the printer will pause printing until you replace the empty color supply.

- **STOP** causes the printer to stop printing until the empty color supply is replaced.

To set color supply out response

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **COLOR SUPPLY OUT**.

7. Press ✔ to select **COLOR SUPPLY OUT**.

8. Press ▲ or ▼ to select the appropriate setting.

9. Press ✔ to set the selection.

10. Press MENU.

Jam recovery

This option allows you to configure the printer response to paper jams, including how it handles the pages involved. **AUTO** is the default value.

- **AUTO** — the printer automatically turns jam recovery on when sufficient memory is available.

- **ON**— the printer reprints any page involved in a paper jam. Additional memory is allocated to store the last few pages printed, and this may cause overall printer performance to suffer.

- **OFF** — the printer will not reprint any page that was involved in a paper jam. Since no memory is used to store the most recent pages, performance may be optimal.

To set jam recovery response

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **JAM RECOVERY**.

7. Press ✔ to select **JAM RECOVERY**.

8. Press ▲ or ▼ to select the appropriate setting.

9. Press ✔ to set the selection.

10. Press MENU.

Language

On some products, the option to set the default language appears when the printer is first initialized. Use the ▲ or ▼ arrow to scroll through the available options. When the desired language is highlighted, press the ✔ to set the default language. You may also change the language at any time by following these steps:

To select language

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight**CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **SYSTEM SETUP**.
5. Press ✔ to select **SYSTEM SETUP**.
6. Press ▼ to highlight **LANGUAGE**.
7. Press ✔ to select **LANGUAGE**.
8. Press ▲ or ▼ to select the appropriate language.
9. Press ✔ to set the selection.
10. Press MENU.

To select language if the display is in a language you do not understand

1. Turn the printer power off.
2. Hold down the ✔ key while turning the printer power on until all three lights stay on.
3. Press ✔ again.
4. Press ▲ or ▼ to scroll through the available languages.
5. Press ✔ to save the desired language as the new default.

Using the printer control panel in shared environments

Because your printer is shared with other users, adhere to the following guidelines to ensure successful printer operation:

- Consult your system administrator before making changes to control panel settings. Changing control panel settings could affect other print jobs.

- Coordinate with other users before changing the default printer font or downloading soft fonts. Coordinating these operations conserves memory and avoids unexpected printer output.

- Be aware that switching printer personalities, such as Emulated PostScript or PCL, affects the printed output of other users.

Note   Your network operating system may automatically protect each user's print job from the effects of other print jobs. Consult your system administrator for more information.

3 I/O Configuration

This chapter describes how to configure certain network parameters on the printer. The following topics are covered:

- [Network configuration](#)
- [Parallel configuration](#)
- [USB configuration](#)
- [Auxiliary connection configuration](#)
- [Enhanced I/O (EIO) configuration](#)
- [Wireless printing](#)

Network configuration

You might need to configure certain network parameters on the printer. You can configure these parameters from the printer control panel, the embedded Web server, or for most networks, from the HP Web Jetadmin software (or the HP LaserJet Utility for Macintosh).

Note
For more information about using the embedded Web server, see Using the embedded Web server. For more information about using the HP Toolbox, see Using the hp toolbox.

For a complete list of supported networks and for instructions on configuring network parameters from software, see the *HP Jetdirect Print Server Administrator's Guide*. The guide comes with printers in which an HP Jetdirect print server is installed.

This section contains the following instructions for configuring network parameters from the printer control panel:

- configuring TCP/IP parameters
- disabling unused network protocols
- configuring Novell NetWare frame type parameters

Configuring Novell NetWare frame type parameters

The HP Jetdirect print server automatically selects a NetWare frame type. Select a frame type manually only when the print server selects an incorrect frame type. To identify the frame type chosen by the HP Jetdirect print server, print a configuration page from the printer control panel. See Printer information pages.

To configure the Novell NetWare parameters from the printer control panel

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **I/O**.
5. Press ✔ to select **I/O**.
6. Press ▼ to highlight **EIO X** (where X = 1, 2, or 3).
7. Press ✔ to select **EIO X**.
8. Press ▼ to highlight **IPX/SPX**.
9. Press ✔ to select **IPX/SPX**.
10. Press ▼ to highlight **FRAME TYPE**.
11. Press ▼ to highlight the desired frame type.
12. Press ✔ to select the frame type.
13. Press the MENU button to return to the Ready state.

Configuring TCP/IP parameters

You can use the printer control panel to configure the following TCP/IP parameters:

- usage of the BOOTP file for configuration parameters (the default is to use the BOOTP file)
- IP address (4 bytes)
- subnet mask (4 bytes)
- default gateway (4 bytes)
- idle TCP/IP connection timeout (in seconds)

To automatically configure TCP/IP parameters from the printer control panel

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **I/O**.
5. Press ✔ to select **I/O**.
6. Press ▼ to highlight **EIO X** (where X = 1, 2, or 3).
7. Press ✔ to select **EIO X**.
8. Press ▼ to highlight **TCP/IP**.
9. Press ✔ to select **TCP/IP**.
10. Press ✔ to select **CONFIG METHOD**.
11. Press ▼ to highlight **AUTO IP**.
12. Press ✔ to select **AUTO IP**.
13. Press the MENU button to return to the **Ready** state.

To manually configure TCP/IP parameters from the printer control panel

Use manual configuration to set an IP address, subnet mask, and local and default gateway.

Setting an IP address

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **I/O**.
5. Press ✔ to select **I/O**.
6. Press ✔ to select **EIO X**.
7. Press ▼ to highlight **TCP/IP**.
8. Press ✔ to select **TCP/IP**.
9. Press ▼ to highlight **MANUAL SETTINGS**.

10. Press ✔ to select **MANUAL SETTINGS**.

11. Press ✖ to highlight **MANUAL**.

12. Press ✖ to highlight **IP Address:**.

13. Press ✔ to select **IP Address:**.

The first of three sets of numbers is highlighted. If a number is not highlighted, a highlighted empty underscore appears.

14. Press ▲ or ✖ to increase or decrease the number for configuring the IP address.

15. Press ✔ to move to the next set of numbers.

16. Repeat steps 15 and 16 until the correct IP address is entered.

17. Press the MENU button to return to the **Ready** state.

Setting the subnet mask

1. Press MENU to enter the **MENUS**.

2. Press ✖ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ✖ to highlight **I/O**.

5. Press ✔ to select **I/O**.

6. Press ✖ to highlight **EIO X** (where X = 1, 2, or 3).

7. Press ✔ to select **EIO X**.

8. Press ✖ to highlight **TCP/IP**.

9. Press ✔ to select **TCP/IP**.

10. Press ✖ to highlight **MANUAL SETTINGS**.

11. Press ✔ to select **MANUAL SETTINGS**.

12. Press ✖ to highlight **SUBNET MASK**.

13. Press ✔ to select **SUBNET MASK**.

The first of three sets of numbers is highlighted.

14. Press ▲ or ✖ to increase or decrease the number for configuring the subnet mask.

15. Press ✔ to move to the next set of numbers.

16. Repeat steps 14 and 15 until the correct subnet mask is entered.

17. Press the MENU button to return to the **Ready** state.

Setting the syslog server

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **I/O**.

5. Press ✔ to select **I/O**.

6. Press ▼ to highlight **EIO X** (where X = 1, 2, or 3).

7. Press ✔ to select **EIO X**.

8. Press ✔ to highlight **TCP/IP**.

9. Press ▼ to highlight **MANUAL SETTINGS**.

10. Press ✔ to select **MANUAL SETTINGS**.

11. Press ▼ to highlight **SYSLOG SERVER**.

12. Press ✔ to select **SYSLOG SERVER**.

Note | The first set of the four sets of numbers shows the default settings. Each set of numbers represents one byte of information and has a range from 0 to 255.

13. Press the ▲ or ▼ arrow to increase or decrease the number for the first byte of the default gateway.

14. Press ✔ to move to the next set of numbers. (Press ⇆ to move to the previous set of numbers.)

15. Repeat steps 13 and 14 until the correct subnet mask is entered.

16. Press ✔ to save the syslog server.

17. Press the MENU button to return to the **Ready** state.

Setting the local and default gateway

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **I/O**.

5. Press ✔ to select **I/O**.

6. Press ▼ to highlight **EIO X** (where X = 1, 2, or 3).

7. Press ✔ to select **EIO X**.

8. Press ▼ to highlight **TCP/IP**.

9. Press ✔ to select **TCP/IP**.

10. Press ▼ to highlight **MANUAL SETTINGS**.

11. Press ✔ to select **MANUAL SETTINGS**.

12. Press ▼ to highlight **LOCAL GATEWAY** or **DEFAULT GATEWAY**.

13. Press ✓ to select **LOCAL GATEWAY** or **DEFAULT GATEWAY**.

The first set of the three sets of numbers shows the default settings. If there is not a number highlighted, a highlighted empty underscore appears.

14. Press ▲ or ▼ to increase or decrease the number for configuring **LOCAL** or **DEFAULT GATEWAY**.

15. Press ✓ to move to the next set of numbers.

16. Repeat steps 15 and 16 until the correct subnet mask is entered.

17. Press the MENU button to return to the **Ready** state.

Disabling network protocols (optional)

By factory default, all supported network protocols are enabled. Disabling unused protocols has the following benefits:

- decreases printer-generated network traffic
- prevents unauthorized users from printing to the printer
- provides only pertinent information on the configuration page
- allows the printer control panel to display protocol-specific error and warning messages

TCP/IP configuration cannot be disabled on the HP Color LaserJet 5550 series printer.

To disable IPX/SPX

Do not disable this protocol if Windows 95/98, Windows NT, ME, 2000, and XP users will be printing to the printer.

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✓ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **I/O**.

5. Press ✓ to select **I/O**.

6. Press ▼ to highlight **EIO X** (where X = 1, 2, or 3).

7. Press ✓ to select **EIO X**.

8. Press ▼ to highlight **IPX/SPX**.

9. Press ✓ to select **IPX/SPX**.

10. Press ▼ to highlight **ENABLE**.

11. Press ✓ to select **ENABLE**

12. Press ▼ to highlight **ON** or **OFF**.

13. Press ✓ to select **ON** or **OFF**.

14. Press the MENU button to return to the **Ready** state.

To disable DLC/LLC

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **I/O**.

5. Press ✔ to select **I/O**.

6. Press ▼ to highlight **EIO X** (where X = 1, 2, or 3).

7. Press ✔ to select **EIO X**.

8. Press ▼ to highlight **DLC/LLC**.

9. Press ✔ to select **DLC/LLC**.

10. Press ▼ to highlight **ENABLE**.

11. Press ✔ to select **ENABLE**.

12. Press ▼ to highlight **ON** or **OFF**.

13. Press ✔ to select **ON** or **OFF**.

14. Press the MENU button to return to the **Ready** state.

Setting the idle timeout

1. Press ✔ to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **I/O**.

5. Press ✔ to select **I/O**.

6. Press ▼ to highlight **EIO X** (where X = 1, 2, or 3).

7. Press ✔ to select **EIO X**.

8. Press ✔ to highlight **TCP/IP**.

9. Press ▼ to highlight **MANUAL SETTINGS**.

10. Press ✔ to select **MANUAL SETTINGS**.

11. Press ▼ to highlight **IDLE TIMEOUT**.

12. Press ✔ to select **IDLE TIMEOUT**.

13. Press the ▲ or ▼ arrow to to increase or decrease the number of seconds for the idle timeout.

14. Press ✔ to save the idle timeout.

15. Press the MENU button to return to the **Ready** state.

Setting the link speed

By factory default, the link speed is set to **AUTO**. Use the following procedure to set a specific speed:

1. Press ✔ to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **I/O**.

5. Press ✔ to select **I/O**.

6. Press ▼ to highlight **EIO X** (where X = 1, 2, or 3).

7. Press ✔ to select **EIO X**.

8. Press ✔ to highlight **LINK SPEED**.

9. Press ▼ to select **LINK SPEED**.

10. Press ▼ to highlight the desired link speed.

11. Press ✔ to select the desired link speed.

12. Press the MENU button to return to the **Ready** state.

Parallel configuration

The HP Color LaserJet 4650 printer supports network and parallel connections at the same time. A parallel connection is made by connecting the printer to the computer using a bidirectional parallel cable (IEEE-1284-C compliant) with a c-connector plugged into the printer's parallel port. The cable can be a maximum of 10 meters (30 feet) long.

When used to describe a parallel interface, the term bidirectional indicates that the printer is able to both receive data from the computer and send data to the computer through the parallel port.
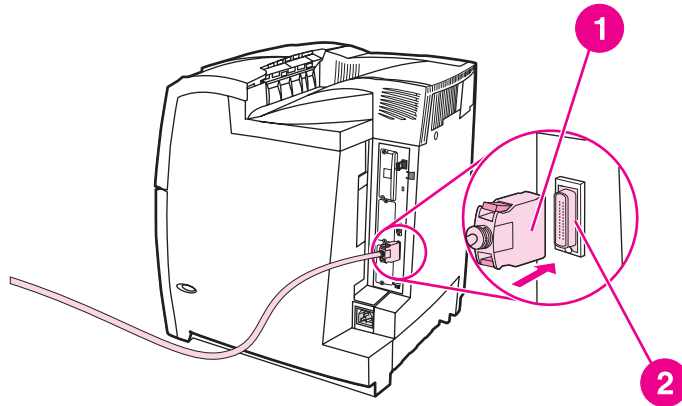
Parallel port connection

1   c-connector
2   parallel port

Note   To use the enhanced capabilities of the bidirectional parallel interface such as bidirectional communication between the computer and printer, faster transfer of data, and automatic configuration of printer drivers, ensure that the most recent printer driver is installed. For more information, see Printer drivers.

Note   Factory settings support automatic switching between the parallel port and one or more network connections on the printer. If you are experiencing problems, see Network configuration.

USB configuration

This printer supports a USB 1.1 connection. The port is located on the back of the printer, as shown in the figure below. You must use an A-to-B type USB cable.

Note   USB support is not available for computers running Windows 95 or Windows NT 4.0.
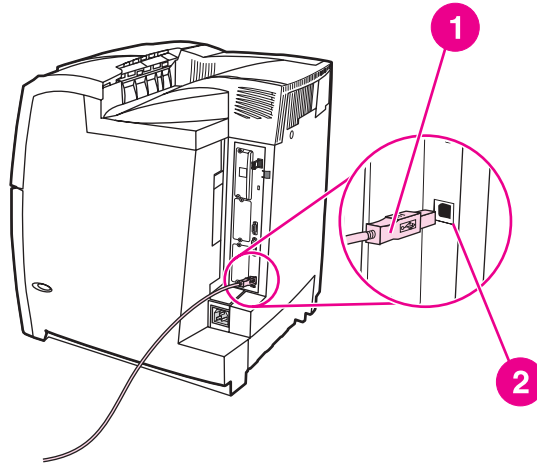
USB connection

1   USB connector
2   USB port

Auxiliary connection configuration

This printer supports an auxiliary connection for paper handling input devices. The port is located on the back of the printer, as shown in the figure below.

Auxiliary connection

1   Auxiliary connection port

Enhanced I/O (EIO) configuration

This printer comes equipped with three enhanced input/output (EIO) slots. The three EIO slots hold compatible external devices such as the HP Jetdirect print server network cards or other devices. Plugging EIO network cards into the slots increases the number of network interfaces available to the printer.

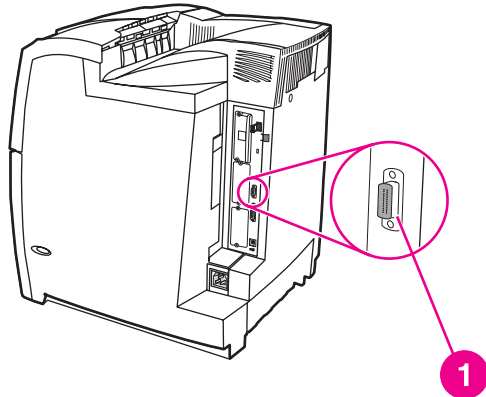EIO network cards can maximize printer performance when you are printing from a network. In addition they provide the ability to place the printer anywhere on a network. This eliminates the need to attach the printer directly to a server or a workstation and enables you to place the printer closer to the network users.

If the printer is configured through an EIO network card, configure that card through the control panel Configure device menu.

HP Jetdirect print servers

HP Jetdirect print servers (network cards) can be installed in one of the printer's EIO slots. These cards support multiple network protocols and operating systems. HP Jetdirect print servers facilitate network management by allowing you to connect a printer directly to your network at any location. HP Jetdirect print servers also support the Simple Network Management Protocol (SNMP), which provides network managers with remote printer management and troubleshooting through HP Web Jetadmin software.

Note Installation of these cards and network configuration should be performed by a network administrator. Configure the card either through the control panel or with HP Web Jetadmin software.

Note Refer to the HP Jetdirect print server documentation for information on which external devices or EIO network cards are supported.

Available enhanced I/O interfaces

HP Jetdirect print servers (network cards) provide software solutions for:

- Novell NetWare
- Microsoft Windows and Windows NT networks
- Apple Mac OS (LocalTalk)
- UNIX (HP-UX and Solaris)
- Linux (Red Hat and SuSE)
- Internet printing

For a summary of available network software solutions, refer to the *HP Jetdirect Print Server Administrator's Guide*, or visit HP Customer Care online at http://www.hp.com/support/net_printing.

NetWare networks

When using Novell NetWare products with an HP Jetdirect print server, Queue Server mode provides improved printing performance over Remote Printer mode. The HP Jetdirect print server supports Novell Directory Services (NDS) as well as bindery modes. For more information, see the *HP Jetdirect Print Server Administrator's Guide*.

For Windows 95, 98, ME, NT 4.0, 2000, and XP systems, use the printer installation utility for printer setup on a NetWare network.

Windows and Windows NT networks

For Windows 95, 98, ME, NT 4.0, 2000, and XP systems, use your printer installation utility for printer setup on a Microsoft Windows network. The utility supports printer setup for either peer-to-peer or client-server network operation.

AppleTalk networks

Use the HP LaserJet Utility to set up the printer on an EtherTalk or LocalTalk network. For more information, refer to the *HP Jetdirect Print Server Administrator's Guide* included with printers equipped with the HP Jetdirect print server.

UNIX/Linux networks

Use the HP Jetdirect printer installer for UNIX utility to set up the printer on HP-UX or Sun Solaris networks.

For setup and management on UNIX or Linux networks, use HP Web Jetadmin.

To obtain HP software for UNIX/Linux networks, visit HP Customer Care online at http://www.hp.com/support/net_printing. For other installation options supported by the HP Jetdirect print server, see the *HP Jetdirect Print Server Administrator's Guide* included with printers equipped with the HP Jetdirect print server.

Wireless printing

Wireless networks offer a safe, secure, and cost-effective alternative to traditional wired network connections. See Supplies and accessories for a list of available wireless print servers.

IEEE 802.11b standard

With the wireless HP Jetdirect 802.11b external print server, HP peripherals can be placed anywhere in the office or home and connected to a wireless network running Microsoft, Apple, Netware, UNIX, or Linux network operating systems. This wireless technology provides a high-quality printing solution without the physical constraints of wiring. Peripherals can be conveniently placed anywhere in an office or home and can be easily moved without changing network cables.

Installation is easy with the HP Install Network Printer Wizard.

HP Jetdirect 802.11b print servers are available for USB and parallel connections.

Bluetooth

Bluetooth wireless technology is a low-power, short-range radio technology that can be used to wirelessly connect computers, printers, personal digital assistants (PDAs), cell phones, and other devices.

Unlike infrared technology, Bluetooth's reliance on radio signals means that devices do not have to be in the same room, office, or cubicle with an unobstructed line of sight in order to communicate. This wireless technology increases portability and efficiency within business network applications.

The HP Color LaserJet 4650 series printer uses a Bluetooth adapter (hp bt1300) to incorporate Bluetooth wireless technology. The adapter is available for either USB or parallel connections. The adapter has a 10-meter, line-of-site operation range in the 2.5 GHz ISM band and can achieve data transfer rates up to 723 Kbps. The device supports the following Bluetooth profiles:

- Hardcopy Cable Replacement Profile (HCRP)
- Serial Port Profile (SPP)
- Object Push Profile (OPP)
- Basic Imaging Profile (BIP)
- Basic Printing Profile (BPP) with XHTML-Print

4 Printing tasks

This chapter describes how to perform basic printing tasks. The following topics are covered:

Controlling print jobs

In the Microsoft Windows operating system, three settings affect how the printer driver tries to pull paper when you send a print job. The **Source**, **Type**, and **Size** settings appear in the **Page Setup**, **Print**, or **Print Properties** dialog boxes in most software programs. If you do not change these settings, the printer automatically selects a tray using the default printer settings.

Source

Printing by **Source** means that you choose a specific tray from which you want the printer to pull paper. The printer tries to print from this tray, no matter what type or size is loaded. If you choose a tray that is configured for a type or size that does not match your print job, the printer does not print automatically. Instead, it waits for you to load the tray you chose with the type or size of print media for your print job. If you load the tray, the printer begins printing. If you press ✔, the printer displays options to print from another tray.

Type and Size

Printing by **Type** or **Size** means that you want the printer to pull paper or print media from the appropriate tray loaded with the correct type and size. Selecting media by type rather than source is similar to locking out trays and helps protect special media from accidental use. For example, if a tray is configured for letterhead and you specify the driver to print on plain paper, the printer will not pull the letterhead from that tray. Instead, it will pull paper from a tray that has plain paper loaded and is configured for plain paper on the printer control panel. Selecting media by Type and Size results in significantly better print quality for heavy paper, glossy paper, and transparencies. Using the wrong setting might result in unsatisfactory print quality. Always print by Type for special print media, such as labels or grayscale transparencies. Print by Size for envelopes, if possible.

- If you want to print by Type or Size, select the Type or Size from the **Page Setup** dialog box, the **Print** dialog box, or the **Print Properties** dialog box, depending on the application.
- If you often print on a certain type or size of media, the printer administrator (for a network printer) or you (for a local printer) can configure a tray for that type or size. Then, when you choose that type or size as you print a job, the printer pulls media from the tray configured for that type or size.

Print setting priorities

Changes made to print settings are prioritized according to where the changes are made as follows:

| Note | The names of commands and dialog boxes may vary depending on your program. |

- **Page Setup dialog box**. This dialog box opens when you click **Page Setup** or a similar command on the **File** menu of the program you are working in. Settings changed here override settings changed anywhere else.
- **Print dialog box**. This dialog box opens when you click **Print**, **Print Setup**, or a similar command on the **File** menu of the program you are working in. Settings changed in the **Print** dialog box have a lower priority and do not override changes made in the **Page Setup** dialog box.

- **Printer Properties dialog box (printer driver)**. The printer driver opens when you click **Properties** in the **Print** dialog box. Settings changed in the **Printer Properties** dialog box do not override settings available anywhere else.

- **Default printer settings**. The default printer settings determine settings used in all print jobs, **unless** settings are changed in the **Page Setup**, **Print**, or **Printer Properties** dialog boxes, as described above. There are two ways to change the default printer settings:

1. Click **Start**, **Settings**, **Printers**, and then right-click the printer icon, and click **Properties**.

2. Click **Start**, **Control Panel**, and then select the **Printers** folder, right-click the printer icon, and click **Properties**.

For more information about how to access the printer drivers, see <u>Accessing the printer drivers</u>.

CAUTION   To avoid affecting print jobs of other users, make printer setup changes through the software application or the printer driver whenever possible. Printer setup changes made through the control panel become default settings for subsequent jobs. Changes made through an application or the printer driver affect only that specific job.

Selecting print media

You can use many types of paper and other print media with this printer. This section provides guidelines and specifications for selecting and using different print media. For more information about supported print media, see Print media specifications.

Before purchasing any media or specialized forms in quantity, verify that your paper supplier obtains and understands the print media requirements specified in the *HP LaserJet Family Print Media Guide*.

See Supplies and accessories for *HP LaserJet Family Print Media Guide* ordering information. To download a copy of the *HP LaserJet Family Print Media Guide*, go to http://www.hp.com/support/ljpaperguide.

It is possible that media could meet all of the guidelines in this chapter and still not print satisfactorily. This may be due to abnormal characteristics of the printing environment or to other variables over which Hewlett-Packard has no control (for example, extremes in temperature and humidity).

Hewlett-Packard recommends testing any media before buying it in large quantities.

CAUTION   Using media that does not conform to the specifications listed here or in the paper specification guide can cause problems that require service. This service is not covered by the Hewlett-Packard warranty or service agreements.

Media to avoid

This printer can handle many types of media. Use of media outside the printer's specifications will cause a loss of print quality and increase the chance of paper jams.

- Do not use paper that is too rough.
- Do not use paper with cutouts or perforations other than standard 3-hole punched paper.
- Do not use multipart forms.
- Do not use paper that has already been printed on or that has been fed through a photocopier.
- Do not use paper with a watermark if you are printing solid patterns.

Paper that can damage the printer

In rare circumstances, paper can damage the printer. Avoid the following paper to prevent possible damage to the printer:

- Do not use paper with staples attached.
- Do not use transparencies designed for inkjet printers or other low-temperature printers, or transparencies designed for monochrome printing. Use only transparencies that are specified for use with HP Color LaserJet printers.
- Do not use photo paper intended for inkjet printers.
- Do not use paper that is embossed or coated and is not designed for the temperatures of the image fuser. Select media that can tolerate temperatures of 190° C (374° F) for 0.1 second.

- Do not use letterhead paper with low-temperature dyes or thermography. Preprinted forms or letterhead must use inks that can tolerate temperatures of 190° C (374° F) for 0.1 second.

- Do not use any media that produces hazardous emissions, or that melts, offsets, or discolors when exposed to 190° C (374° F) for 0.1 second.

To order HP Color LaserJet printing supplies, go to http://www.hp.com/go/ljsupplies in the United States or to http://www.hp.com/ghp/buyonline.html worldwide.

Configuring input trays

The printer allows you to configure input trays by type and size. You can load different media in the printer's input trays and then request media by type or size using the control panel.

Note If you have used other HP LaserJet printer models, you might be accustomed to configuring Tray 1 to first mode or cassette mode. On HP Color LaserJet 4650 series printers, setting Tray 1 size and type to **ANY SIZE** is equivalent to first mode. Setting size or type for Tray 1 to a setting other than **ANY SIZE** is equivalent to cassette mode.

Note If you are duplex printing, be sure that the media loaded meets the specifications for duplex printing. (See Supported media weights and sizes.)

Note The instructions below are to configure the trays at the printer control panel. You can also configure the trays from your computer by accessing the embedded Web server. See Using the embedded Web server.

Configuring trays when the printer gives a prompt

In the following situations, the printer automatically prompts you to configure the tray for type and size:

- when you load paper into the tray
- when you specify a particular tray or media type for a print job through the printer driver or a software application and the tray is not configured to match the print job's settings

The control panel displays this message: **LOAD TRAY XX: [TYPE] [SIZE]**, **To change type press** ✔. The instructions below explain how to configure the tray after the prompt appears.

Note The prompt does not appear if you are printing from Tray 1 and if Tray 1 is configured for **ANY SIZE** and **ANY TYPE**.

To configure a tray when loading paper

1. Load paper in the tray. (Close the tray if you are using Trays 2, 3, or 4.)

2. The printer displays the tray configuration message **TRAY X To change size or type press ✔**.

3. Press ✔ to display the **TRAY X SIZE=** menu.

4. To change the size, press ▼ or ▲ to highlight the correct size.

5. Press ✔ to select the size.

   Depending on the size setting, the printer might prompt you to move the CUSTOM/STANDARD switch in Tray 2, Tray 3, or Tray 4 to the other position. Follow the instructions in the prompt, and then close the tray.

   A **Setting saved** message appears, and then a prompt appears to configure the paper type.

6. To change the type, press ▼ or ▲ to highlight the correct paper type.

7. Press ✔ to select the paper type.

   A **Setting saved** message appears, and then the current type and size settings are displayed.

8. If size and type are now correct, press ⇋ to clear the message.

To configure a tray to match print job settings

1. In the software application, specify the source tray, the paper size, and the paper type.

2. Send the job to the printer.

   If the tray needs to be configured, the **LOAD TRAY X:** message appears.

3. Load the tray with the correct paper. When the tray is closed, the **TRAY X SIZE=** appears.

4. If the highlighted size is not correct, press ▼ or ▲ to highlight the correct size.

5. Press ✔ to select the correct size.

   Depending on the size setting, the printer might prompt you to move the CUSTOM/STANDARD switch in Tray 2, Tray 3, or Tray 4 to the other position. Follow the instructions in the prompt, and then close the tray.

   A **Setting saved** message appears, and then a prompt appears to configure the paper type.

6. If the highlighted paper type is not correct, press ▼ or ▲ to highlight the desired paper type.

7. Press ✔ to select the paper type.

   A **Setting saved** message appears, and then the current type and size settings are displayed.

Configuring trays using the Paper Handling menu

You can also configure the trays for type and size without a prompt from the printer. Use the paper handling menu to configure the trays as follows.

Configuring the paper size

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **PAPER HANDLING**.

3. Press ✔ to select **PAPER HANDLING**.

4. Press ▼ to highlight **Tray \<N\> Size**. (N represents the number of the tray you are configuring.)

5. Press ✔ to select **Tray \<N\> Size**.

6. Press ▼ or ▲ to highlight the correct size.

7. Press ✔ to select the correct size.

   Depending on the tray you are configuring and the size selected, the printer might prompt you to adjust the tray guides or to move the CUSTOM/STANDARD switch in the tray to the other position. Follow the instructions in the prompt, and then close the tray.

Configuring the paper type

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **PAPER HANDLING**.

3. Press ✔ to select **PAPER HANDLING**.

4. Press ▼ to highlight **Tray \<N\> Type**. (N represents the number of the tray you are configuring.)

5. Press ✔ to select **Tray \<N\> Type**.

6. Press ▼ or ▲ to highlight the correct paper type.

7. Press ✔ to select the correct paper type.

   A **Setting saved** message appears, and then the current type and size settings are displayed.

Configuring Tray 2, Tray 3, or Tray 4 for a custom paper size

The printer automatically detects many sizes of paper, but you can also configure trays for custom paper sizes. You must specify the following parameters:

- Unit of measure (millimeters or inches)
- X dimension (the width of the page as it feeds into the printer)
- Y dimension (the length of the page as it feeds into the printer)

You must also move the tray's CUSTOM/STANDARD switch to the CUSTOM position.
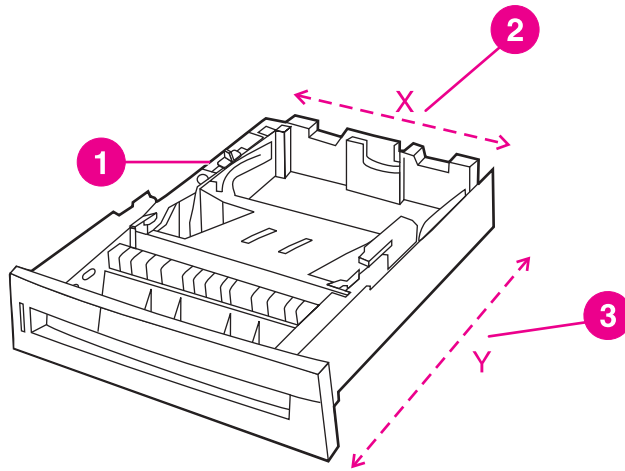
1   CUSTOM/STANDARD switch
2   Page width (X dimension)
3   Page length (Y dimension)

Use the following procedure to configure a tray for a custom size. Once a Custom size is set for a tray, it will be retained until the switch in the tray is moved back to STANDARD.

To set a custom size in Tray 2, Tray 3, or Tray 4

1. Open the tray and move the CUSTOM/STANDARD switch to the CUSTOM position. Close the tray.

2. When the tray configuration message appears, press ✔.

3. Press ▲ to change **ANY CUSTOM** to **custom**.

4. Press ✔ to select **custom**.

5. Press ▲ or ▼ to highlight the correct unit (either millimeters or inches).

6. Press ✔ to select the value.

   After the unit of measure is set properly, set the X dimension as follows:

7. Press ▲ or ▼ to highlight the correct value.

8. Press ✔ to select the value. If the value entered is outside the valid range, **Invalid value** will appear for two seconds. The display prompts you to enter another value.

   After the X dimension is set properly, set the Y dimension as follows:

9. Press ▲ or ▼ to highlight the correct value.

10. Press ✔ to select the value. If the value entered is outside the valid range, **Invalid value** will appear for two seconds. The display prompts you to enter another value. The printer displays a message indicating the dimensions for the custom size.

Printing from Tray 1 (multipurpose tray)

Tray 1 is a multipurpose tray that holds up to 100 sheets of paper or 20 envelopes. It provides a convenient way to print envelopes, transparencies, custom-size paper, heavy media greater than 32 lb, or other types of media without having to unload the other trays.
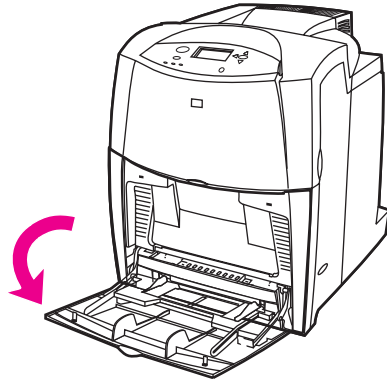
Note   Tray 1 does not have a CUSTOM/STANDARD switch, so all paper sizes for Tray 1 are undetectable.

Loading Tray 1
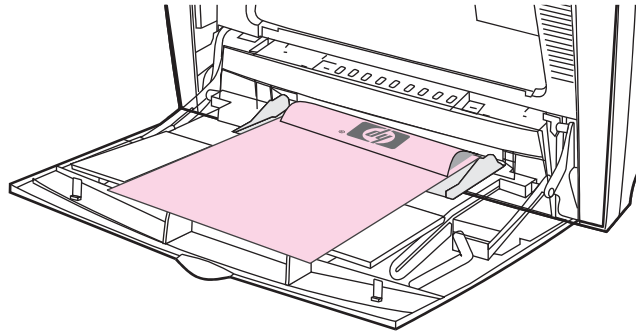
To avoid jams, never add or remove paper from Tray 1 during printing.

1. Open Tray 1.

2. Set the side guides to the desired width.

3. Load paper in the tray with the side to be printed on facing down.

Note For best performance, load the tray completely full without splitting the ream of paper. Splitting the ream might cause a multi-feed problem, which could result in a paper jam. The capacity of the paper tray can vary. For example, if you are using 75 g/m^2 (20 lb) paper, the tray holds a full ream of 500 sheets. If the media is heavier than 75 g/m^2 (20 lb), the tray will not hold a full ream, and you must reduce the number of sheets accordingly. Do not overfill the tray because the printer might not pick up the paper.

Note If you are duplex printing, see Two-sided (duplex) printing for loading instructions.

4. Adjust the side guides so that they lightly touch the paper stack but do not bend the paper.
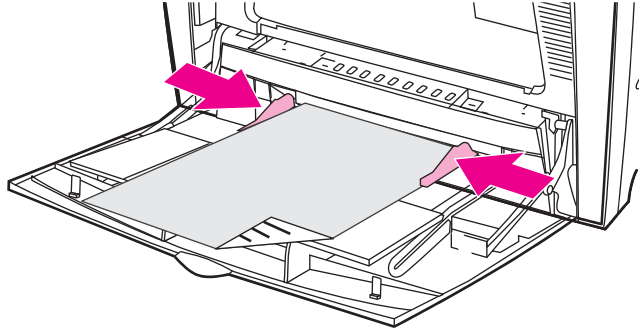
Make sure the paper fits under the tabs on the guides and not above the load level indicators.

Printing envelopes from Tray 1

Many types of envelopes can be printed from Tray 1. Up to 20 envelopes can be stacked in the tray. Printing performance depends on the construction of the envelope.

In the software, set margins at least 15 mm (0.6 inches) from the edge of the envelope.

CAUTION Envelopes with clasps, snaps, windows, coated linings, exposed self-stick adhesives, or other synthetic materials can severely damage the printer. To avoid jams and possible printer damage, never try to print on both sides of an envelope. Before you load envelopes, make sure they are flat, undamaged, and not stuck together. Do not use envelopes with pressure-sensitive adhesive.

To load envelopes into Tray 1

CAUTION To avoid jams, do not remove or insert envelopes during printing.

1. Open Tray 1.
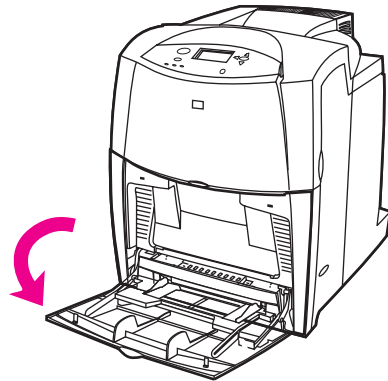
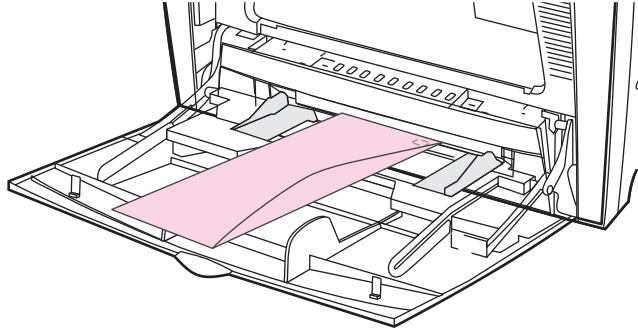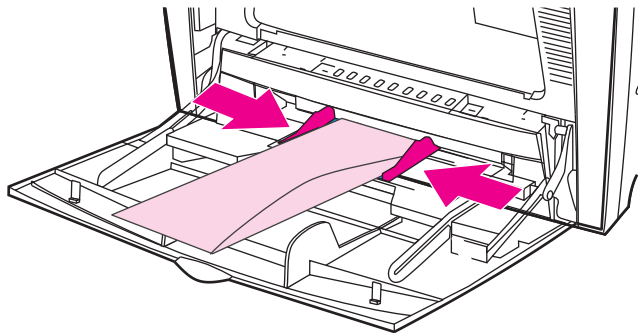2. Load up to 20 envelopes in the center of Tray 1 with the side to be printed facing down and the postage end toward the printer. Slide the envelopes into the printer as far as they will go without forcing them.

3. Adjust the guides to touch the envelope stack without bending the envelopes. Make sure the envelopes fit under the tabs on the guides.

Printing envelopes

1. Specify Tray 1 or select the media source by size in the printer driver.

2. If your software does not automatically format an envelope, specify Landscape for page orientation in your software application or printer driver. Use the following guidelines to set margins for return and destination addresses on Commercial #10 or DL envelopes.

Address type	Left margin	Top margin
Return	15 mm (0.6 inches)	15 mm (0.6 inches)
Destination	102 mm (4 inches)	51 mm (2 inches)

Note For envelopes of other sizes, adjust the margin settings appropriately.

3. Select Print from the software application or printer driver.

Printing from Tray 2, Tray 3, and Tray 4

Tray 2 and optional Tray 3 and Tray 4 each hold up to 500 sheets of standard paper or a 50.8 mm (2-inch) stack of labels. Tray 2 stacks above Tray 3, and Tray 4 is available when the optional 2 x 500-sheet paper feeder assembly is installed. When Tray 3 and Tray 4 are properly installed, the printer detects them and lists them as options in the control panel **CONFIGURE DEVICE** menu. Tray 2, Tray 3, and Tray 4 adjust for detectable media sizes; letter, legal, A4, A5, JIS B5, and executive; and undetectable media sizes: 8.5 by 13 and Executive (JIS), double Japan postcard, and custom. The printer automatically detects the media size in these trays based on the tray's paper guide configuration. (See Supported media weights and sizes.)

Note   When using undetectable standard-sized media, place the CUSTOM/STANDARD switch in the **CUSTOM** position.

CAUTION   The paper path for Tray 3 passes through Tray 2. If Tray 2 is partially pulled out or removed, paper from Tray 3 cannot feed into the printer. This causes the printer to stop and generate a message that Tray 2 must be installed. Similarly, both Tray 2 and Tray 3 must be closed for paper from Tray 4 to feed into the printer.

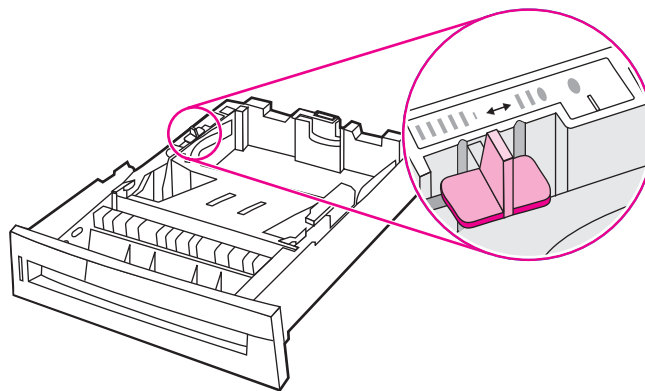## Loading detectable standard-sized media into Tray 2, Tray 3, and Tray 4

Detectable standard-sized media is detected in the printer when the CUSTOM/STANDARD switch is set to the **STANDARD** position, but can be manually set when the switch is set to the **CUSTOM** position. Detectable sizes are marked in the tray.

The following detectable standard-sized media is supported in Trays 2, 3, and 4: letter, legal, executive, A4, A5, and (JIS) B5.

CAUTION   Do not print cardstock, envelopes, heavy or extra heavy paper, or unsupported sizes of media from Tray 2, Tray 3, or Tray 4. Print on these types of media only from Tray 1. Do not overfill the input tray or open it while it is in use. Doing so can cause jams in the printer.

1. Remove the tray from the printer. Move the CUSTOM/STANDARD switch to the **STANDARD** position.

2. Adjust the rear media-length guide by squeezing the guide adjustment latch and sliding the back of the tray to the length of the media being used.

3. Push down the media lift plate until it locks.

4. Slide the media-width guides open to the size for the media you are using.

5. Load media face-up, making sure that the corners of the media fit under the front corner tabs.

Note   For best performance, load the tray completely full without splitting the ream of paper. Splitting the ream might cause a multi-feed problem, which could result in a paper jam. The capacity of the paper tray can vary. For example, if you are using 75 g/m^2 (20 lb) paper, the tray holds a full ream of 500 sheets. If the media is heavier than 75 g/m^2 (20 lb), the tray will not hold a full ream, and you must reduce the number of sheets accordingly. Do not overfill the tray because the printer might not pick up the paper.

Note   If the tray is not properly adjusted, the printer might display an error message or the media might jam.

Note   If you are duplex printing, see Two-sided (duplex) printing for loading instructions.

6. Insert the tray into the printer. The printer will display the tray's media type and size. If the configuration is not correct, press the ✔ key when the printer prompts you to configure the tray for type and size. (For more information see To configure a tray when loading paper.)

7. If the configuration is correct, press ⇆ to clear the message.

Loading undetectable standard-sized media into Tray 2, Tray 3, and Tray 4

Undetectable standard-sized media sizes are not marked in the tray, but are listed in the **Size** menu for the tray.

The following undetectable standard-sized media is supported in Trays 2, 3, and 4: executive (JIS), 8.5 by 13, double Japan postcard, and 16K.

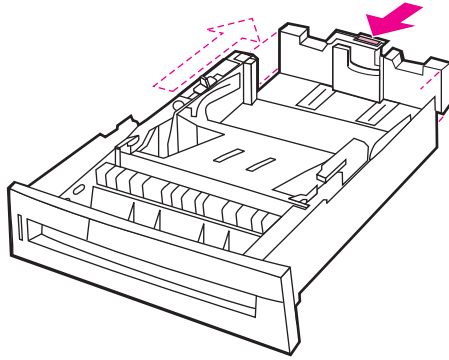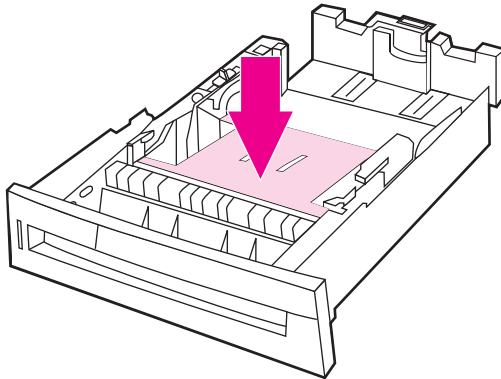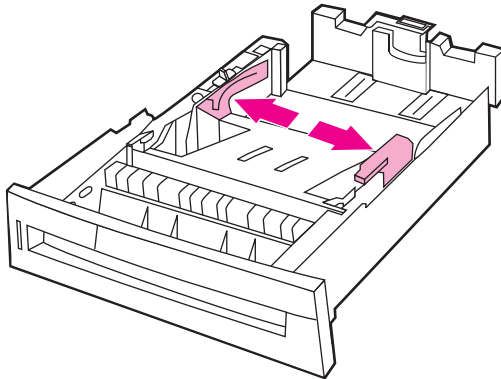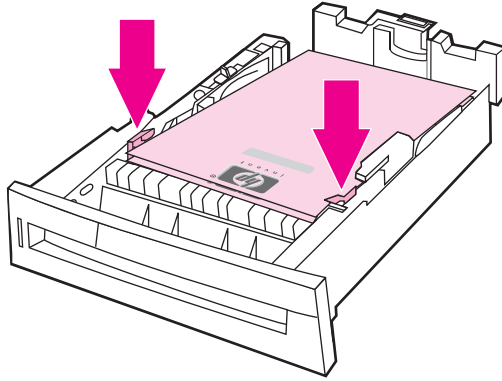**CAUTION**   Do not print cardstock, envelopes, or unsupported sizes of media from Tray 2, Tray 3, or Tray 4. Print on these types of media only from Tray 1. Do not overfill the input tray or open it while it is in use. Doing so can cause paper jams.

1. Remove the tray from the printer. Move the CUSTOM/STANDARD switch to the **CUSTOM** position.

2. Adjust the rear media-length guide by squeezing the guide adjustment latch and sliding the back of the tray to the length of the media being used.

3. Push down the media lift plate until it locks.

4. Slide the media-width guides open to the size for the media you are using.

5. Load media face-up, making sure that the corners of the media fit under the front corner tabs.

Note For best performance, load the tray completely full without splitting the ream of paper. Splitting the ream might cause a multi-feed problem, which could result in a paper jam. The capacity of the paper tray can vary. For example, if you are using 75 g/m^2 (20 lb) paper, the tray holds a full ream of 500 sheets. If the media is heavier than 75 g/m^2 (20 lb), the tray will not hold a full ream, and you must reduce the number of sheets accordingly. Do not overfill the tray because the printer might not pick up the paper.

Note If the tray is not properly adjusted, the printer might display an error message or the media might jam.

Note If you are duplex printing, see Two-sided (duplex) printing for loading instructions.

6. Insert the tray into the printer. The printer will display the tray's media type and size. If the configuration is not correct, press the ✔ key when the printer prompts you to configure the tray for type and size. (For more information, see To configure a tray when loading paper.)

7. If the configuration is correct, press ⇆ to clear the message.

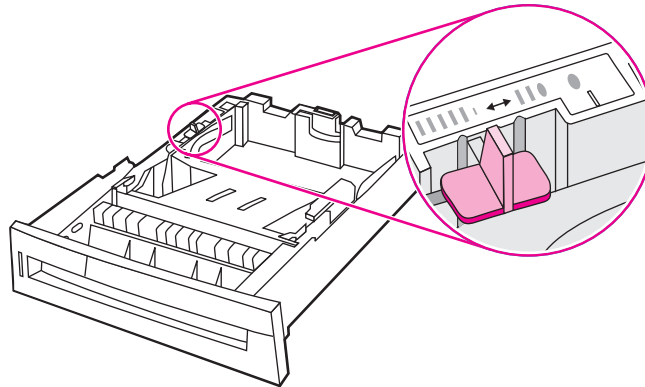## Loading custom-sized media into Tray 2, Tray 3, and Tray 4

The **Custom** media menu will be displayed when the Tray 2, Tray 3, or Tray 4 switch is in the **Custom** size position. You must also change the size setting on the control panel to **custom** and set the unit of measure, X dimension, and Y dimension. See To configure a tray to match print job settings for more information.

1. Remove tray from the printer.
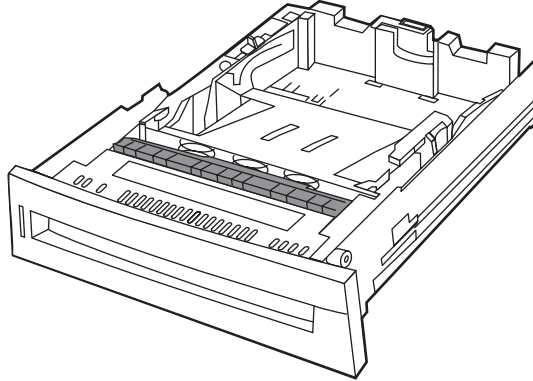
2. Move the tray switch to the CUSTOM size position. Once a custom size is set for a tray, it will be retained until the switch is moved back to STANDARD or until you manually change the configuration.
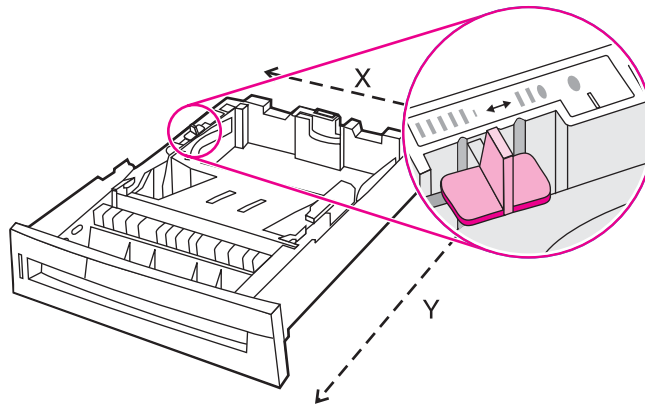
3. Slide the media width guides all the way open and adjust the rear media-length guide to the length of the paper being used.
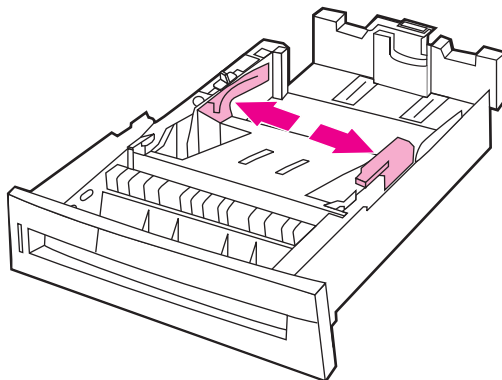
4. Push down the media lift plate until it locks.

5. Load media face-up, making sure that the corners of the media fit under the front tabs.
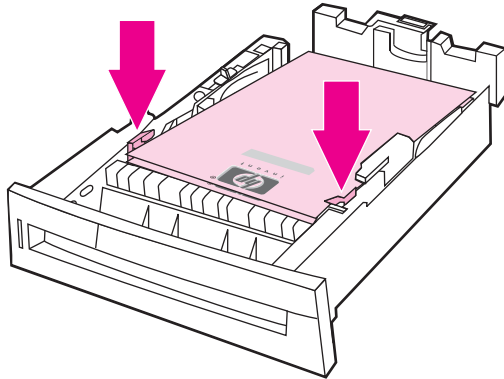
For best performance, load the tray completely full without splitting the ream of paper. Splitting the ream might cause a multi-feed problem, which could result in a paper jam. The capacity of the paper tray can vary. For example, if you are using 75 g/m^2 (20 lb) paper, the tray holds a full ream of 500 sheets. If the media is heavier than 75 g/m^2 (20 lb), the tray will not hold a full ream, and you must reduce the number of sheets accordingly. Do not overfill the tray because the printer might not pick up the paper.

Note If you are duplex printing, see Two-sided (duplex) printing for loading instructions.

6. Slide the media width guides in making sure that they gently touch the paper. Insert the tray into the printer.

7. Insert the tray into the printer. The printer will display the tray's type and size configuration. To specify specific custom dimensions, or if the type is not correct, **press** the ✔ key when the printer prompts **To change size or type press** ✔. To enter specific dimensions or change the size selection from **ANY CUSTOM** to **custom**, see To configure a tray to match print job settings.

8. If the configuration is correct, press ⇆ to clear the message.

Printing on special media

Use these guidelines when printing on special types of media.

Note	Special media such as envelopes, transparencies, custom-size paper, or heavy media greater than 120 g/m^2 is used in Tray 1.

To print on any special media, use the following procedure:

1. Load the media in the paper tray.

2. When the printer prompts you for the paper type, select the correct media type for the paper loaded in the tray. For example, select **HIGH GLOSS IMAGES** when loading HP High Gloss Laser Paper.

3. In the software application or the printer driver, set the media type to match the media type that is loaded in the paper tray.

Note	For the best print quality, always verify that the media type selected on the printer control panel and the media type selected in the application or printer driver match the type of media loaded in the tray.

Transparencies

When printing on transparencies, use the following guidelines:

- Handle transparencies using the edges. Oils from your fingers deposited on the transparency can cause print quality problems.

- Use only overhead transparencies recommended for use in this printer. Hewlett-Packard recommends using HP Color LaserJet Transparencies with this printer. HP products are designed to work together for optimum printing results.

- In either the software application or the driver, select **TRANSPARENCY** as the media type, or print from a tray that is configured for transparencies.

  For more information about how to access the printer drivers, see Accessing the printer drivers.

CAUTION	Transparencies not designed for LaserJet printing will melt in the printer, causing damage to the printer.

Glossy paper

- In either the software application or the driver, select **GLOSSY**, **HEAVY**, or **HIGH GLOSS IMAGES** as the media type, or print from a tray that is configured for glossy paper.

- Use the control panel to set the media type to **GLOSSY** for the input tray being used.

- Because this affects all print jobs, it is important to return the printer to its original settings once the job has printed. See Configuring input trays for more information.

Note	Hewlett-Packard recommends using HP Color LaserJet Soft Gloss paper with this printer. HP products are designed to work together for optimum printing results. If HP Color LaserJet Soft Gloss paper is not used with this printer, print quality may be compromised.

Colored paper

● Colored paper should be of the same high quality as white xerographic paper.

● Pigments used must be able to withstand the printer's fusing temperature of 190° C (374° F) for 0.1 second without deterioration.

● Do not use paper with a colored coating that was added after the paper was produced.

● The printer creates colors by printing patterns of dots, overlaying and varying their spacing to produce various colors. Varying the shade or color of the paper will affect the shades of the printed colors.

Printing images

To obtain the best print quality when printing images, use HP High Gloss Laser Paper (Q2420A) with the HP High Gloss (Images) media type setting.

● In either the software application or the printer driver, select **HIGH GLOSS IMAGES** as the media type, or print from a tray that is configured for glossy paper.

● You can also configure the printer using settings on the printer control panel. See Configuring input trays for more information.

Envelopes

Adhering to the following guidelines will help ensure proper printing on envelopes and help prevent printer jams:

● Do not load more than 20 envelopes into Tray 1.

● The weight rating of envelopes should not exceed 105 g/m^2 (28 lb bond).

● Envelopes should be flat.

● Do not use envelopes with windows or clasps.

● Envelopes must not be wrinkled, nicked, or otherwise damaged.

● Envelopes with peel-off adhesive strips must use adhesives that can withstand the heat and pressures of the printer's fusing process.

● Envelopes should be loaded face-down and with the postage end feeding into the printer first.

Labels

● Verify that the labels' adhesive material can tolerate temperatures of 190° C (374° F) for 0.1 second.

● Verify that there is no exposed adhesive material between the labels. Exposed areas can cause labels to peel off during printing, which can cause printer jams. Exposed adhesive can also cause damage to printer components.

- Do not re-feed a sheet of labels.
- Verify that the labels lie flat.
- Do not use labels that are wrinkled, bubbled, or otherwise damaged.

Heavy paper

The following heavy paper types can be used with the HP Color LaserJet 4650 series printer.

Paper type	Paper weight
Heavy	105-119 g/m^2 28-32 lb
Extra heavy	120-163 g/m^2 32-43 lb
Cardstock	164-200 g/m^2 43-53 lb
Intermediate	90-104 g/m^2 24-28 lb
Tough paper	5 mil 44 lb

When printing on heavy paper types, use the following guidelines:

- Use Tray 1 for paper that is heavier than 120 g/m^2 to 200 g/m^2 (32 lb bond up to 53 lb bond).
- For optimum results when printing on heavy paper, use the printer control panel to set the media type for the tray to **HEAVY**.
- In either the software application or the driver, select **Heavy** as the media type, or print from a tray that is configured for heavy paper.
- Because this setting affects all print jobs, it is important to return the printer back to its original settings once the job has printed. See Configuring input trays.

CAUTION   In general do not use paper that is heavier than the media specification recommended for this printer. Doing so can cause misfeeds, paper jams, reduced print quality, and excessive mechanical wear.

HP LaserJet Tough paper

When printing on HP LaserJet Tough paper, use the following guidelines:

- Handle HP LaserJet Tough paper using the edges. Oils from your fingers deposited on HP LaserJet Tough paper can cause print quality problems.

- Use only HP LaserJet Tough paper with this printer. HP products are designed to work together for optimum printing results.

- In either the software application or the driver, select **TOUGH PAPER** as the media type, or print from a tray that is configured for HP LaserJet Tough paper.

Preprinted forms and letterhead

Observe the following guidelines for best results with preprinted forms and letterhead:

- Forms and letterhead must be printed with heat-resistant inks that will not melt, vaporize, or release hazardous emissions when subjected to the printer's fusing temperature of approximately 190° C (374° F) for 0.1 second.

- Inks must be non-flammable and should not adversely affect any printer rollers.

- Forms and letterhead should be sealed in a moisture-proof wrapping to prevent changes during storage.

- Before loading preprinted paper such as forms and letterhead, verify that the ink on the paper is dry. During the fusing process, wet ink can come off of preprinted paper.

- When duplex printing, load pre-printed forms and letterhead into Tray 2 and Tray 3 with the front of the page facing down and the top edge of the page towards the back of the printer. To load pre-printed forms and letterhead into Tray 1, load them with the front of the page facing up and the bottom edge feeding into the printer first.

Recycled paper

This printer supports the use of recycled paper. Recycled paper must meet the same specifications as standard paper. See the *HP LaserJet Printer Family Print Media Guide*. Hewlett-Packard recommends that recycled paper contain no more than 5 percent ground wood.

Two-sided (duplex) printing

Some printer models are capable of duplex printing (printing on both sides of a page). To find out which models support automatic two-sided printing, see Printer configurations. All printer models support manual two-sided printing.

Note   You must specify two-sided printing options in your software application or in the printer driver in order to print on both sides of the page. If this option is not visible in the software application or printer driver, use the following information to make duplex printing options available.

To use two-sided printing:

- Verify that the printer driver is configured to show the two-sided printing options: automatic and/or manual. For instructions, see the online Help for the printer driver or for more information about how to access the printer drivers, see Accessing the printer drivers.

- Once the two-sided printing option is shown, select the appropriate two-sided printing options in the printer driver software. Two-sided printing options include page and binding orientation. For more information about options for binding 2-sided printing jobs, see Options for binding two-sided printing jobs.

- Automatic two-sided printing is not supported for certain media types, including transparencies, envelopes, labels, heavy, extra heavy, cardstock, and Tough paper. (The maximum weight paper for automatic duplex printing is 105 g/m^2 (28 lb) bond.)

- Automatic two-sided printing only supports letter, legal, and A4 paper sizes.

- Manual two-sided printing can support all sizes and more types of media. (Transparencies, envelopes, and labels are not supported.)

- If both automatic and manual two-sided printing are enabled, the printer will automatically print on two sides if the size and type are supported by the duplexer. Otherwise, it will manually duplex.

- For best results, avoid two-sided printing with rough-textured, heavy-weight media.
- When using special media such as letterhead or forms, place the media face down in Trays 2, 3, or 4. Place special media face up in Tray 1. (This is different than for one-sided printing.)
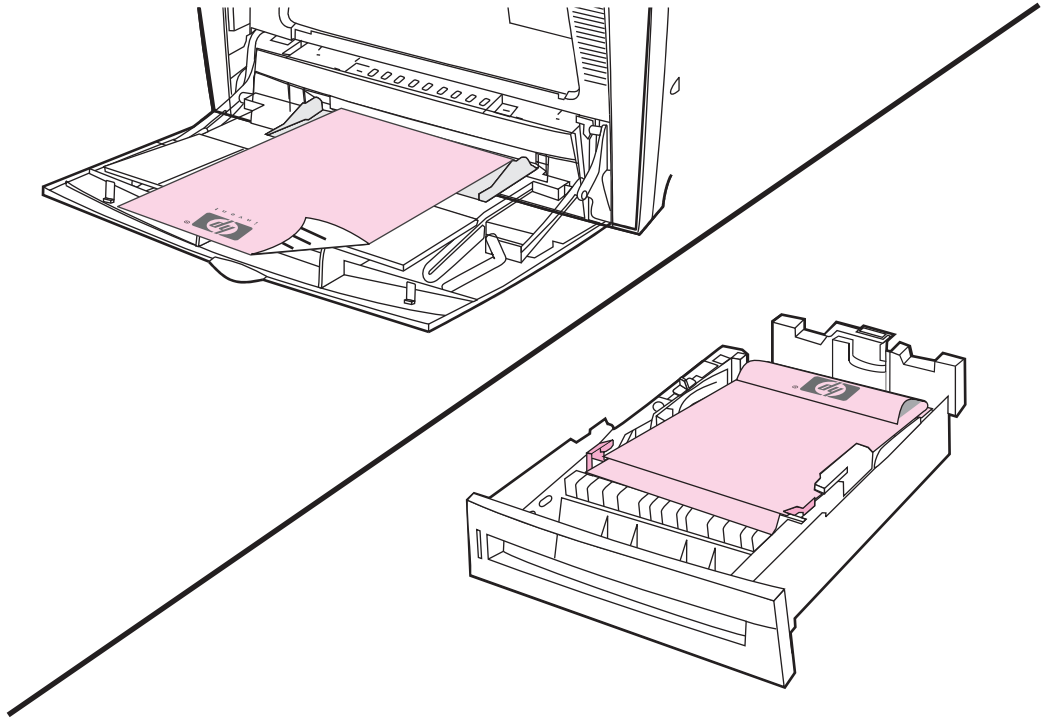
Control panel settings for automatic two-sided printing

Many software applications allow you to change two-sided print settings. If your software application or printer driver does not allow you to adjust two-sided printing settings, you can adjust these settings through the control panel. The factory default setting is **OFF**.

CAUTION   Do not use two-sided printing when printing on labels. Serious damage may result.

To enable or disable two-sided printing from the printer control panel

Note   Changing settings for two-sided printing through the printer control panel affects all print jobs. Whenever possible, change settings for two-sided printing through your software application or printer driver.

Note   Any changes made in the printer driver will override settings made using the printer control panel.

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ✔ to select **PRINTING**.
5. Press ▼ to highlight **DUPLEX**.
6. Press ✔ to select **DUPLEX**.

7. Press ▲ or ▼ to select **ON** to enable 2-sided printing or **OFF** to disable automatic 2-sided printing.

8. Press ✔ to set the value.

9. Press MENU.

10. Select two-sided printing from your software application or printer driver, if possible.

Duplexing blank pages

If selecting source or type in the software driver, the printer will not print blank second sides of duplexed pages, resulting in faster performance. However, if the paper type is set to **ANY TYPE**, **LETTERHEAD**, **PREPRINTED**, or **PREPUNCHED**, the blank second sides print to prevent text from printing on the wrong side of the page.

Options for binding two-sided printing jobs

Before printing a two-sided document, use the printer driver to choose the edge on which you will bind your finished document. Long-edge or book binding is the conventional layout used in book binding. Short-edge or tablet binding is the typical calendar binding.

Note   The default binding setting is to bind on the long edge when the page is set up for portrait orientation. To change to long-edge binding, click the **Flip Pages Up** check box.

Manual two-sided printing

If you want to print on two sides (duplex) on paper other than the supported sizes or weights (for example, paper heavier than 120 g/m^2 (32 lb) or very thin paper), or if your printer does not support automatic two-sided printing, you will have to go to the printer and reinsert the paper manually after the first side has printed.

Note   Damaged or previously used paper can cause paper jams and should not be used.

Note   Manual two-sided printing is not supported for Windows 98 and NT 4.0 systems that use the PS driver.

To manually print on two sides (duplex)

1. Ensure that the printer driver is configured to allow manual duplexing. In the printer driver, select **Allow Manual Duplex**. See .

2. From the application, open the printer driver.

3. Select the appropriate size and type.

4. On the **Finishing** tab, click **Print on Both Sides** or **Print on Both Sides (Manually)**.

5. The default binding option is to bind on the long edge of the paper in portrait layout. To change the setting, click the **Finishing** tab, and select the **Flip pages up** checkbox.

6. Click **OK**. The **Print on Both Sides** instructions will appear. Follow the instructions to finish printing your document.

If total sheets exceed the Tray 1 capacity for manual duplex jobs, feed the top 100 sheets and press ✔. When prompted, feed the next 100 sheets and press ✔. Repeat as necessary until all the sheets from the output stack have been loaded into Tray 1.

For more information about how to access the printer drivers, see Accessing the printer drivers.

Printing booklets

Some versions of the printer driver let you control the printing of booklets when duplexing. You can select binding on the left or right side on letter, legal, or A4 paper size. Windows 2000 and XP supports booklet printing for all paper sizes.

See the printer driver online Help for more information about the printing booklets feature.

Special printing situations

Use these guidelines when printing on special types of media.

Printing a different first page

Use the following procedure to print the first page of a document on a different media type than the rest of the document, for example, to print the first page of a document on letterhead paper and the rest on plain paper.

1. From your application or printer driver, specify a tray for the first page and another tray for the remaining pages.

   For more information about how to access the printer drivers, see [Accessing the printer drivers](#).

2. Load the special media into the tray that you specified in step 1.

3. Load the media for the remaining pages of the document into another tray.

You can also print on different media by using the printer control panel or printer driver to set the types of media that are loaded in the trays and then selecting the first and remaining pages by media type.

Printing a blank back cover

Use the following procedure to print a blank back cover. You can also select an alternate paper source or print on a different media type than the rest of the document.

1. On the printer driver's **Paper** tab, select **Use different paper**, then from the drop-down list, select **Back Cover**, check **Add a blank back cover**, and then click **OK**.

2. For more information about how to access the printer drivers, see [Accessing the printer drivers](#).

You can also select an alternate paper source or print a blank back cover on a different media type than the rest of the document. If desired, select a different source and type from the drop-down lists.

Printing on custom-size media

The printer supports single-sided printing on custom-size media. Tray 1 supports media sizes from 76 by 127 mm (3 by 5 inches) to 216 by 356 mm (8.5 by 14 inches). Tray 2 and optional Tray 3 and Tray 4 support media sizes from 182 by 210 mm (7.16 by 8.27 inches) to 216 by 356 mm (8.5 by 14 inches).

When printing on custom-size media, if Tray 1 is configured in the printer control panel as **TRAY X TYPE= ANY TYPE** and **TRAY X SIZE= ANY SIZE**, the printer will print on whatever media is loaded in the tray. When printing on custom-size media from Trays 2, 3, or 4, adjust the switch on the tray to the **custom** position, and from the control panel, set the media size to **custom** or **ANY CUSTOM**.

Some software applications and printer drivers allow you to specify custom paper-size dimensions. You can configure custom paper sizes from the printer driver's **Paper** tab or **Forms** tab (Windows 2000 and XP). Be sure to set the correct paper size in both the page setup and print dialog boxes.

For more information about how to access the printer drivers, see <u>Accessing the printer drivers</u>.

If your software application requires you to calculate margins for custom-size paper, see the online Help for that application.

Stopping a print request

You can stop a print request either from the printer control panel or from your software application. To stop a print request from a computer on a network, see the online Help for the specific network software.

<table>
<tr><td>Note</td><td>It may take some time for all printing to clear after you have canceled a print job.</td></tr>
</table>

To stop the current print job from the printer control panel

1. Press STOP on the printer control panel to pause the job that is currently printing. The control panel menu provides the option to resume printing or to cancel the current job.
2. Press MENU to exit the menu and resume printing.
3. Press ✔ to cancel the job.

Pressing STOP does not affect subsequent print jobs that are stored in the printer buffer.

To stop the current print job from your software application

A dialog box will appear briefly on the control panel display, giving you the option to cancel the print job.

If several requests have been sent to the printer through your software, they might be waiting in a print queue (for example, in Windows Print Manager). See the software documentation for specific instructions on canceling a print request from the computer.

If a print job is waiting in a print queue (computer memory) or print spooler (Windows 98, 2000, XP, or Me), delete the print job there.

For Windows 98, 2000, XP, or Me, go to **Start**, **Settings**, and then **Printers**. Double-click the **HP Color LaserJet 4650 series printer** icon to open the print spooler. Select the print job you want to cancel, and then press **Delete**. If the print job is not cancelled, you might need to shut down and restart the computer.

Job storage features

The HP Color LaserJet 4650 series printer lets you store a job in the printer's memory for printing at a later time. The job storage features use memory from both the hard disk and random access memory (RAM). These job storage features are described below.

To support job storage features for complex jobs, or if you often print complex graphics, print PostScript (PS) documents, or use many downloaded fonts, HP recommends that you install additional memory. Added memory also gives you more flexibility in supporting job-storage features, such as quick copying.

Note   To use the Private Job and Proof and Hold features, you must have a minimum of 192 MB of memory: 256 MB DDR plus 32 MB of additional memory on the formatter board. To use the quick copy and stored jobs features you must install an optional hard disk in the printer (HP Color LaserJet 4650, 4650n, 4650dn, 4650dtn models) and properly configure the drivers.

CAUTION   Make sure to uniquely identify jobs in the printer driver before printing. Using default names may override previous jobs with the same default name or cause the job to be deleted. For more information about how to access the printer drivers, see Accessing the printer drivers.

Storing a print job

You can download a print job to the printer without printing it. You can then print the job at any time through the printer control panel. For example, you may want to download a personnel form, calendar, time sheet, or accounting form that other users can access and print.

To store a print job permanently, select the **Stored Job** option in the driver when printing the job.

1. Press MENU to enter **MENUS**.
2. **RETRIEVE JOB** is highlighted.
3. Press ✔ to select **RETRIEVE JOB**.
4. Press ▼ to highlight your **USER NAME**.
5. Press ✔ to select your **USER NAME**.
6. Press ▼ to highlight a **JOB NAME**.
7. Press ✔ to select the **JOB NAME**.

    PRINT is highlighted.

8. Press ✔ to select **PRINT**.
9. Press ▲ or ▼ to select the first digit of the PIN.
10. Press ✔ to select the digit. The number changes to an asterisk.
11. Repeat steps 10 and 11 for the remaining three digits of the PIN.
12. Press ✔ when finished entering the PIN.
13. Press ▲ or ▼ to select the number of copies needed.
14. Press ✔ to print the job.

Quick copying a job

Quick Copy stores a copy of a printed job on the hard disk, and allows you to print additional copies of a print job using the control panel. The number of quick-copy print jobs that can be stored in the printer is set from the printer control panel.

This feature can be turned on or off from the driver.

1. Press MENU to enter **MENUS**.

2. **RETRIEVE JOB** is highlighted.

3. Press ✔ to select **RETRIEVE JOB**.

4. Press ▼ to highlight your **USER NAME**.

5. Press ✔ to select your **USER NAME**.

6. Press ▼ to highlight a **JOB NAME**.

7. Press ✔ to select the **JOB NAME**.

   PRINT is highlighted.

8. Press ✔ to select **PRINT**.

9. Press ▲ or ▼ to select the number of copies.

10. Press ✔ to print the job.

Proofing and holding a job

The proof and hold feature provides a quick and easy way to print and proof one copy of a job and then print addtional copies. This option stores the print job on the printer hard disk or in printer RAM memory, and prints only the first copy of the job, allowing you to check the first copy. If the document prints correctly, you can print the remaining copies of the print job from the printer control panel. The number of proof-and-hold print jobs that can be stored in the printer is set from the printer control panel.

To permanently store the job and prevent the printer from deleting it, select the **Stored Job** option in the driver.

Printing stored jobs

1. Press MENU to enter **MENUS**.

   RETRIEVE JOB is highlighted.

2. Press ✔ to select **RETRIEVE JOB**.

3. Press ▼ to highlight your **USER NAME**.

4. Press ✔ to select your **USER NAME**.

5. Press ▼ to highlight a **JOB NAME**.

6. Press ✔ to select the **JOB NAME**.

   PRINT is highlighted.

7. Press ✔ to select **PRINT**.

8. Press ▲ or ▼ to select the number of copies.

9. Press ✔ to print the job.

Deleting stored jobs

When you send a stored job, the printer overwrites any previous jobs with the same user and job name. If there is not a job already stored under the same user and job name, and the printer needs additional space, the printer may delete other stored jobs starting with the oldest. The default number of jobs that can be stored is 32. You can change the number of jobs that can be stored from the control panel. For more information about setting the job storage limit, see Configure device menu.

A job can be deleted from the control panel, from the embedded Web server, or from HP Web Jetadmin. To delete a job from the control panel, use the following procedure:

1. Press MENU to enter **MENUS**.

    RETRIEVE JOB is highlighted.

2. Press ✔ to select **RETRIEVE JOB**.

3. Press ▼ to highlight your **USER NAME**.

4. Press ✔ to select your **USER NAME**.

5. Press ▼ to highlight a **JOB NAME**.

6. Press ✔ to select the **JOB NAME**.

7. Press ▼ to highlight **DELETE**.

8. Press ✔ to select **DELETE**.

9. Press ✔ to delete the job.

Private jobs

This option allows you to send a print job directly to the printer memory. Selection of Private Job activates the PIN field. The print job can be printed only after you type a PIN in the printer control panel. After the job is printed, the printer removes the job from the printer memory. This feature is useful when you are printing sensitive or confidential documents that you do not want to leave in an output bin after printing. Private Job stores the print job on the hard disk or in printer RAM memory. After it is released for printing, the private job is immediately deleted from the printer. If more copies are needed, you have to reprint the job from the program. If you send a second private job to the printer with the same user name and job name as an existing private job (and you have not released the original job for printing), the job will overwrite the existing job, regardless of the PIN. Private jobs are deleted if power to the printer is turned off.

Note   A lock symbol next to a job name indicates that the job is private.

Specify that a job is private from the driver. Select the **Private Job** option and type a 4-digit PIN. To avoid overwriting jobs with the same name, also specify a username and job name.

Printing a private job

1. Press MENU to enter **MENUS**.

    RETRIEVE JOB is highlighted.

2. Press ✔ to select **RETRIEVE JOB**.

3. Press ▼ to highlight your **USER NAME**.

4. Press ✔ to select your **USER NAME**.

5. Press ▼ to highlight a **JOB NAME**.

6. Press ✔ to select the **JOB NAME**.

   PRINT is highlighted.

7. Press ✔ to select **PRINT**.

8. Press ▲ or ▼ to select the first digit of the PIN.

9. Press ✔ to select the digit. The number changes to an asterisk.

10. Repeat steps 8 and 9 for the remaining three digits of the PIN.

11. Press ✔ when finished entering the PIN.

12. Press ▲ or ▼ to select the number of copies.

13. Press ✔ to print the job.

Deleting a private job

A private job can be deleted from the printer control panel. You can delete a job without printing it, or IT WILL BE AUTOMATICALLY DELETED after it is printed.

1. Press MENU to enter **MENUS**.

   RETRIEVE JOB is highlighted.

2. Press ✔ to select **RETRIEVE JOB**.

3. Press ▼ to highlight your **USER NAME**.

4. Press ✔ to select your **USER NAME**.

5. Press ▼ to highlight a **JOB NAME**.

6. Press ✔ to select the **JOB NAME**.

7. Press ▼ to highlight **DELETE**.

8. Press ✔ to select **DELETE**.

9. Press ▲ or ▼ to select the first digit of the PIN.

10. Press ✔ to select the digit. The number changes to an asterisk.

11. Repeat steps 9 and 10 for the remaining three digits of the PIN.

12. Press ✔ when finished entering PIN.

13. Press ✔ to delete the job.

Mopier mode

When Mopier Mode is enabled, the printer produces multiple, collated copies from a single print job. Multiple-original printing (mopying) increases printer performance and reduces network traffic by sending the job to the printer once, then storing it in the printer's RAM. The remainder of the copies are printed at the printer's fastest speed. All documents can be created, controlled, managed, and finished from the desktop, which eliminates the extra step of using a photocopier.

The HP Color LaserJet 4650 series printers support the mopying feature, provided they have enough total memory (at least 192 MB of total memory: 160 MB DDR plus 32 MB on the formatter board), and the mopying feature is enabled by default if the **Mopier Mode** setting is **Enabled** in the **Device Settings** tab.

Managing memory

This printer supports up to 544 MB of memory: 512 MB DDR plus 32 MB of additional memory on the formatter board. You can add additional memory by installing dual data-rate (DDR) memory. To allow for memory expansion, the printer has two DDR slots, which accept 128 or 256 MB of RAM each. For information about installing memory, see Working with memory and print server cards.

Note   Memory specification: HP Color LaserJet 4650 series printers use 200-pin small outline dual inline memory modules (SODIMM) that support 128 or 256 MB of RAM.

The printer features Memory Enhancement Technology (MEt), which automatically compresses page data to provide the most efficient use of the printer's RAM.

The printer uses DDR SODIMM. Extended data output (EDO) DIMMs are not supported.

Note   If memory problems occur when you are printing complex graphics, you can make more memory available by removing downloaded fonts, style sheets, and macros from printer memory. Reducing the complexity of a print job from within an application can help avoid memory problems.

5 Managing the printer

This chapter describes how to manage the printer. The following topics are covered:

- Printer information pages
- Using the embedded Web server
- Using the hp toolbox

Printer information pages

From the printer control panel, you can print pages that give details about the printer and its current configuration. The procedures for printing the following information pages are described here:

● menu map

● configuration page

● supplies status page

● usage page

● demo page

● print RGB samples

● print CMYK samples

● file directory

● PCL or PS font list

● event log

Menu map

To see the current settings for the menus and items available in the control panel, print a control panel menu map.

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **INFORMATION**.

3. Press ✔ to select **INFORMATION**.

4. If **PRINT MENU MAP** is not highlighted, press ▲ or ▼ until it is highlighted.

5. Press ✔ to select **PRINT MENU MAP**.

The message **Printing... MENU MAP** appears on the display until the printer finishes printing the menu map. The printer returns to the **Ready** state after printing the menu map.

You might want to store the menu map near the printer for reference. The content of the menu map varies, depending on the options currently installed in the printer. (Many of these values can be overridden from the printer driver or software application.)

For a complete list of control panel menus and possible values, see .

Configuration page

Use the configuration page to view current printer settings, to help troubleshoot printer problems, or to verify installation of optional accessories, such as memory (DIMMs), paper trays, and printer languages.

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **INFORMATION**.

3. Press ✔ to select **INFORMATION**.

4. Press ▼ to highlight **PRINT CONFIGURATION**.

5. Press ✔ to select **PRINT CONFIGURATION**.

The message **Printing... CONFIGURATION** appears on the display until the printer finishes printing the configuration page. The printer returns to the **Ready** state after printing the configuration page.

Note   If the printer is configured with EIO cards (for example, an HP Jetdirect print server) or an optional hard disk drive, an additional configuration page will print that provides information about those devices.

Supplies status page

The supplies status page illustrates the remaining life for the following printer supplies:

● print cartridges (all colors)

● transfer unit

● fuser

To print the supplies status page:

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **INFORMATION**.

3. Press ✔ to select **INFORMATION**.

4. Press ▼ to highlight **PRINT SUPPLIES STATUS PAGE**.

5. Press ✔ to select **PRINT SUPPLIES STATUS PAGE**.

The message **Printing... SUPPLIES STATUS** appears on the display until the printer finishes printing the supplies status page. The printer returns to the **Ready** state after printing the supplies status page.

Note   If you are using non-HP supplies, the supplies status page will not show the remaining life for those supplies. For more information, see Non-HP print cartridges.

Usage page

The usage page lists a page count for each size of media that has passed through the printer. This page count includes the number of pages that were printed on one side, the number that were printed on two sides (duplexed), and totals of the two printing methods for each media size. It also lists the average percentage of page coverage for each color.

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **INFORMATION**.

3. Press ✔ to select **INFORMATION**.

4. Press ▼ to highlight **PRINT USAGE PAGE**.

5. Press ✔ to select **PRINT USAGE PAGE**.

The message **Printing... USAGE PAGE** appears on the display until the printer finishes printing the usage page. The printer returns to the **Ready** state after printing the usage page.

Demo

A demo page is a color photograph that demonstrates print quality.

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **INFORMATION**.
3. Press ✔ to select **INFORMATION**.
4. Press ▼ to highlight **PRINT DEMO**.
5. Press ✔ to select **PRINT DEMO**.

The message **Printing... DEMO PAGE** appears on the display until the printer finishes printing the demo page. The printer returns to the **Ready** state after printing the demo page.

Print CMYK samples

Use the **PRINT CMYK SAMPLES** page to print CMYK color samples to match the color values in your application.

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **INFORMATION**.
3. Press ✔ to select **INFORMATION**.
4. Press ▼ to highlight **PRINT CMYK SAMPLES**.
5. Press ✔ to select **PRINT CMYK SAMPLES**.

The message **Printing... CMYK Samples** appears on the display until the printer finishes printing the demo page. The printer returns to the **Ready** state after printing the demo page.

Print RGB samples

Use the **PRINT RGB SAMPLES** page to print RGB color samples to match the color values in your application.

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **INFORMATION**.
3. Press ✔ to select **INFORMATION**.
4. Press ▼ to highlight **PRINT RGB SAMPLES**.
5. Press ✔ to select **PRINT RGB SAMPLES**.

The message **Printing... RGB Samples** appears on the display until the printer finishes printing the demo page. The printer returns to the **Ready** state after printing the demo page.

File directory

The file directory page contains information for all installed mass storage devices. This option does not appear if no mass storage devices are installed.

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **INFORMATION**.
3. Press ✔ to select **INFORMATION**.

4. Press ⏷ to highlight **PRINT FILE DIRECTORY**.

5. Press ✓ to select **PRINT FILE DIRECTORY**.

The message **Printing... FILE DIRECTORY** appears on the display until the printer finishes printing the file directory page. The printer returns to the **Ready** state after printing the file directory page.

PCL or PS font list

Use the font lists to see which fonts are currently installed in the printer. (The font lists also show which fonts are resident on an optional hard disk accessory or flash DIMM.)

1. Press MENU to enter the **MENUS**.

2. Press ⏷ to highlight **INFORMATION**.

3. Press ✓ to select **INFORMATION**.

4. Press ⏷ to highlight **PRINT PCL FONT LIST** or **PRINT PS FONT LIST**.

5. Press ✓ to select **PRINT PCL FONT LIST** or **PRINT PS FONT LIST**.

The message **Printing... FONT LIST** appears on the display until the printer finishes printing the font list page. The printer returns to the **Ready** state after printing the font list page.

Event log

The event log lists the printer events, including printer jams, service errors, and other printer conditions.

1. Press MENU to enter the **MENUS**.

2. Press ⏷ to highlight **DIAGNOSTICS**.

3. Press ✓ to select **DIAGNOSTICS**.

4. Press ⏷ to highlight **PRINT EVENT LOG**.

5. Press ✓ to select **PRINT EVENT LOG**.

The message **Printing... EVENT LOG** appears on the display until the printer finishes printing the event log. The printer returns to the **Ready** state after printing the event log.

Using the embedded Web server

When the printer is directly connected to a computer, the embedded Web server is supported for Windows 95 and later. In order to use the embedded Web server with a direct connection, you must choose the Custom installation option when you install the printer driver. Select the option to load Printer Status and Alerts. The proxy server is installed as part of the Printer Status and Alerts software.

When the printer is connected to the network, the embedded Web server is automatically available. You may access the embedded Web server from Windows 95 and later.

The embedded Web server allows you to view printer and network status and to manage printing functions from your computer instead of from the printer control panel. Below are examples of what you can do using the embedded Web server:

- view printer control status information
- set the type of paper loaded in each tray
- determine the remaining life on all supplies and order new ones
- view and change tray configurations
- view and change the printer control panel menu configuration
- view and print internal pages
- receive notification of printer and supplies events
- view and change network configuration

To use the embedded Web server, you must have Microsoft Internet Explorer 6.0 or later, or Netscape Navigator 6.2 or later. The embedded Web server works when the printer is connected to an IP-based network. The embedded Web server does not support IPX-based printer connections. You do not have to have Internet access to open and use the embedded Web server. For more information about the HP embedded Web server, see the *HP Embedded Web Server User Guide*. You can find this guide on the CD-ROM included with the printer.

To access the embedded Web server

In a supported Web browser on your computer, type the IP address for the printer. (To find the IP address, print a configuration page. For more information about printing a configuration page, see <u>Printer information pages</u>.)

Note   Once you open the URL, you can bookmark it so that you can return to it quickly in the future.

1. The embedded Web server has three tabs that contain settings and information about the printer: the **Information** tab, the **Settings** tab, and the **Network** tab. Click the tab that you want to view.
2. See the following sections for more information about each tab.

Information tab

The Information pages group consists of the following pages.

- **Device Status**. This page displays the printer status and shows the life remaining of HP supplies, with 0 percent representing that a supply is empty. The page also shows the type and size of print media set for each tray. To change the default settings, click **Change Settings**.

- **Configuration page**. This page shows the information found on the printer configuration page.

- **Supplies Status**. This page shows the life remaining of HP supplies, with 0 percent representing that a supply is empty. This page also provides supplies part numbers. To order new supplies, click **Order Supplies** in the **Other Links** area on the left side of the window. To visit any website, you must have Internet access.

- **Event log**. This page shows a list of all printer events and errors.

- **Usage page**. This page shows a summary of the number of pages the printer has printed, grouped by size and type.

- **Device Information**. This page also shows the printer network name, address, and model information. To change these entries, click **Device Information** on the **Settings** tab.

- **Control panel**. This page shows an image of the text currently appearing on the printer's control panel display.

Settings tab

This tab allows you to configure the printer from your computer. The **Settings** tab can be password protected. If this printer is networked, always consult with the printer administrator before changing settings on this tab.

The **Settings** tab contains the following pages.

- **Configure Device**. Configure all printer settings from this page. This page contains the traditional menus found on printers using a control panel display. These menus include **Information**, **Paper Handling**, and **Configure Device**.

- **Alerts**. Network only. Set up to receive e-mail alerts for various printer and supplies events. Alerts may also be sent to a URL.

- **E-mail**. Network only. Used in conjunction with the Alerts page to set up incoming and outgoing e-mail, as well as to set e-mail alerts.

- **Security**. Set a password that must be entered to gain access to the **Settings** and **Networking** tabs. Enable and disable certain features of the embedded Web server.

- **Other Links**. Add or customize a link to another website. This link is displayed in the **Other Links** area on all embedded Web server pages. These permanent links always appear in the **Other Links** area: **HP Instant Support™**, **Order Supplies**, and **Product Support**.

- **Device Information**. Name the printer and assign an asset number to it. Enter the name and e-mail address for the primary contact who will receive information about the printer.

- **Language**. Determine the language in which to display the embedded Web server information.

- **Time Services**. Configure the printer's time settings.

Networking tab

This tab allows the network administrator to control network-related settings for the printer when it is connected to an IP-based network. This tab will not appear if the printer is directly connected to a computer, or if the printer is connected to a network using anything other than an HP Jetdirect print server card.

Other links

This section contains links that connect you to the Internet to order supplies or obtain product support. You must have Internet access to use any of these links. If you use a dial-up connection and did not connect when you first opened the embedded Web server, you must connect before you can visit these websites. Connecting might require that you close the embedded Web server and reopen it.

- **HP Instant Support™**. Connects you to the HP website to help you find solutions. This service analyzes your printer error log and configuration information to provide diagnostic and support information specific to your printer.

- **Order Supplies**. Click this link to connect to the HP website and order genuine HP supplies, such as print cartridges and paper.

- **Product Support**. Connects to the support site for the HP Color LaserJet 4650 printer. Then, you can search for help regarding general topics.

Using the hp toolbox

The HP toolbox is a Web application that you can use for the following tasks:

● Check the printer status.

● Configure the printer settings (access device Web page settings).

● View troubleshooting information.

● View online documentation.

● Print internal printer information pages.

● Receive pop-up status messages.

You can view the HP toolbox when the printer is directly connected to your computer or when it is connected to a network. The HP toolbox software is automatically installed as part of the typical software installation.

Note   You do not have to have Internet access to open and use the HP toolbox. However, if you click a link in the **Other Links** area, you must have Internet access to go to the site associated with the link. See Other links for more information.

Supported operating systems

HP toolbox is supported for the following operating systems:

● Windows 98, 2000, Me, and XP

● Macintosh OS 10.2 or later

Supported browsers

To use the HP toolbox, you must have one of the following browsers:

● Microsoft Internet Explorer 5.5 or later (Internet Explorer 5.2 or later for Macintosh)

● Netscape Navigator 7.0 or later (Netscape Navigator 7.0 or later for Macintosh)

● Opera Software ASA Opera™ 7.0 for Windows

● Safari 1.0 software for Macintosh

All pages can be printed from the browser.

To view hp toolbox

On the **Start** menu, select **Programs**, select **HP Color LaserJet 4650**, and then select **HP LaserJet toolbox**.

Note   You can also view the HP toolbox by clicking the system tray icon or the desktop icon.

The HP toolbox opens in a Web browser.

Note   Once you open the URL, you can bookmark it so that you can return to it quickly in the future.

HP toolbox sections

The HP toolbox software contains the following sections:

- [Status tab](#)
- [Troubleshooting tab](#)
- [Alerts tab](#)
- [Documentation tab](#)
- [Device Settings button](#)

Other links

Each page in the HP toolbox contains links to the HP website for the following information:

- Product registration
- Product support
- Ordering supplies
- HP Instant support™

You must have Internet access to use any of these links. If you use a dial-up connection and did not connect when you first opened the HP toolbox, you must connect before you can visit these websites.

Status tab

The **Status** tab has links to the following main pages:

- **Device Status**. View printer status information. This page will indicate printer conditions such as a paper jam or an empty tray. Use the virtual control panel buttons on this page to change printer settings. After you correct a problem with the printer, click the **Refresh** button to update the device status.
- **Supplies Status**. View detailed supplies status such as the percent of toner remaining in the print cartridges and the number of pages printed with the current print cartridges. This page also has links to order supplies and to find recycling information.
- **Print Info Pages**. Print the configuration page and various other information pages that are available for the printer, such as the **Supplies Status** page, the **Demo** page, and **Menu Map**.

Troubleshooting tab

The **Troubleshooting** tab provides links to various printer troubleshooting information, such as how to clear a paper jam, how to resolve print quality problems, how to resolve other internal problems with the printer, and how to print some printer pages.

Alerts tab

The **Alerts** tab allows you to configure the printer to automatically notify you of printer alerts. The **Alerts** tab has links to the following main pages:

- Set up status alerts
- Administrative settings

Set up status alerts page

On the **Set up status alerts** page, you can choose to turn alerts on or off, specify when the printer should send an alert, and choose from two different types of alerts:

- a pop-up message
- a task bar icon

Click **Apply** to activate the settings.

Administrative settings page

On the **Administrative settings** page, you can set the frequency of how often the HP toolbox checks for printer alerts. Three settings are available:

- once per minute (every 60 seconds)
- twice per minute (every 30 seconds)
- twenty times per minute (every 3 seconds)

If you want to reduce network I/O traffic, reduce the frequency that the printer checks for alerts.

Documentation tab

The **Documentation** tab contains links to these information sources:

- **User Guide**. Contains the information about the printer usage, warranty, specifications, and support that you are currently reading. The user guide is available in both HTML and PDF format.
- **Install Notes**. Contains installation information about the printer.

Device Settings button

Clicking the **Device Settings** button connects you to the printer's embedded Web server. See Using the embedded Web server for more information.

HP toolbox links

The HP toolbox links at the left of the screen provide links to the following options:

- **Select a device**. Select from all HP toolbox-enabled devices.
- **View current alerts**. View the current alerts for all set up printers. (You must be printing to view current alerts.)
- **Text only page**. View HP toolbox as a site map linking to text-only pages.

6 Color

This chapter describes how the HP Color LaserJet 4650 series printer provides great color printing. This chapter also describes ways to produce the best possible color prints. The following topics are covered:

- Using color
- Managing printer color options
- Matching colors

Using color

The HP Color LaserJet 4650 series printer offers great color printing as soon as you set up the printer. It provides a combination of automatic color features to generate excellent color results for the general office user, plus sophisticated tools for the professional who is experienced with color use.

The HP Color LaserJet 4650 series printer provides carefully designed and tested color tables to provide a smooth, accurate color rendition of all printable colors.

HP ImageREt 3600

HP ImageREt 3600 print technology is a system of innovative technologies developed exclusively by HP to deliver superior print quality. The HP ImageREt system sets itself apart from the industry by integrating technology advancements and optimizing each element of the print system. Several categories of HP ImageREt have been developed for a variety of user needs.

The system's foundation is comprised of key color laser technologies, including image enhancements, smart supplies, and high-resolution imaging. As the level or category of ImageREt increases, these core technologies are refined for more advanced system usage, and additional technologies are integrated. The HP ImageREt 3600 is a complete HP proprietary printing solution developed and implemented for the first time in the HP Color LaserJet 4650 series printer. HP now offers superior image enhancements for general office documents and marketing collateral. HP Image REt 3600 does well in different environmental conditions and with a variety of media. The image mode of this print system is optimized for printing on HP High Gloss Laser Paper.

Best image printing

For the best image quality from the HP Color LaserJet 4650 series printer, use HP High Gloss Laser Paper in the special imaging mode. To select the image mode, set the media type to HP High Gloss (Images). See Printing on special media for more information.

Paper selection

For the best color and image quality, it is important to select the appropriate media type from the printer menu or from the front panel. See Selecting print media.

Color options

Color options enable optimal color output automatically for diverse types of documents.

Color options use object tagging, which allows optimal color and halftone settings to be used for different objects (text, graphics, and photos) on a page. The printer driver determines which objects are used on a page and uses halftone and color settings that provide the best print quality for each object. Object tagging, combined with optimized default settings, produces great color out of the box.

In the Windows environment, the **Automatic** and **Manual** color options are on the **Color** tab in the printer driver.

For more information about how to access the printer drivers, see Accessing the printer drivers.

sRGB

Standard red-green-blue (sRGB) is a world-wide color standard originally developed by HP and Microsoft as a common color language for monitors, input devices (scanners, digital cameras), and output devices (printers, plotters). It is the default color space used for HP products, Microsoft operating systems, the Web, and most office software sold today. sRGB is representative of the typical Windows computer monitor today and the convergence standard for high-definition television.

Note Factors such as the type of monitor you use and the room's lighting can affect the appearance of colors on your screen. For more information, see Matching colors.

The latest versions of Adobe PhotoShop, CorelDRAW™, Microsoft Office, and many other applications use sRGB to communicate color. Most importantly, as the default color space in Microsoft operating systems, sRGB has gained broad adoption as a means to exchange color information between applications and devices using a common definition that assures typical users will experience greatly improved color matching. sRGB improves your ability to match colors between the printer, the computer monitor and other input devices (scanner, digital camera) automatically, without the need to become a color expert.

Printing in four colors — CMYK

Cyan, magenta, yellow, and black (CMYK) are the inks used by a printing press. The process is often called four-color printing. CMYK data files are typically used by and originate from graphic arts (printing and publishing) environments. The printer will accept CMYK colors through the PS printer driver. The printer color-rendering of CMYK is designed to provide rich, saturated colors for text and graphics.

CMYK ink set emulation (PostScript only)

The printer's color rendering of CMYK can be made to emulate several standard Offset Press ink sets.

- **Default**. This selection is good for general purpose rendering of CMYK data. It is designed to render photographs well, while at the same time providing rich saturated colors for text and graphics.

- **Specification for Web Offset Publications (SWOP)**. Common ink standards in the United States and other locations.

- **Euroscale**. Common ink standard for Europe and other locations.

- **Dainippon Ink and Chemical (DIC)**. Common ink standard in Japan and other locations.

- **Device**. Emulation is turned off. To render photographs properly with this selection, images require color management in the application or operating system.

Managing printer color options

Setting color options to Automatic will typically produce the best possible print quality for color documents. However, there may be cases when you want to print a color document in grayscale (black and white) or wish to change one of the printer's color options.

- Using Windows, print in grayscale or change the color options using settings found on the **Color** tab in the printer driver.

- Using a Macintosh computer, print in grayscale or change the color options using the **Color Matching** pop-up menu in the **Print** dialog box.

For more information about how to access the printer drivers, see Accessing the printer drivers.

Print in Grayscale

Selecting the **Print in Grayscale** option from the printer driver prints a document in black and white. This option is useful for previewing preliminary copies of slides and hardcopy output, or for printing color documents that will be photocopied or faxed.

Automatic or manual color adjustment

The **Automatic** color adjustment option optimizes the neutral gray color treatment, halftones, and edge enhancements used for each element in a document. For more information, see your printer driver online Help.

Note   Automatic is the default setting and is recommended for printing all color documents.

The **Manual** color adjustment option allows you to adjust the neutral gray color treatment, halftones, and edge enhancements for text, graphics, and photographs. To access the Manual color options, from the **Color** tab, select **Manual**, then **Settings**.

Manual color options

Manual color adjustment allows you to adjust the **Color** (or **Color Map**) and **Halftoning** options individually for text, graphics, and photographs.

Halftone options

Halftone options affect the resolution and clarity of your color output. You can select halftone settings for text, graphics, and photographs independently. The two halftone options are **Smooth** and **Detail**.

- The **Smooth** option provides better results for large, solid-filled print areas. It also enhances photographs by smoothing out fine color gradations. Choose this option when uniform and smooth area fills are top priority.

- The **Detail** option is useful for text and graphics that require sharp distinctions among lines or colors, or images that contain a pattern or a high level of detail. Choose this option when sharp edges and details are top priority.

Note   Some applications convert text or graphics to raster images. In these cases, the **Photographs** settings will also control text and graphics.

Neutral Grays

The **Neutral Grays** setting determines the method used for creating gray colors used in text, graphics, and photographs.

Two values are available for the **Neutral Grays** setting:

- **Black Only** generates neutral colors (grays and black) using only black toner. This guarantees neutral colors without a color cast.

- **4-Color** generates neutral colors (grays and black) by combining all four toner colors. This method produces smoother gradients and transitions to non-neutral colors, and it produces the darkest black.

Some applications convert text or graphics to raster images. In these cases, the **Photographs** settings will also control text and graphics.

Edge Control

The **Edge Control** setting determines how edges are rendered. Edge control has three components: adaptive halftoning, REt, and trapping. Adaptive halftoning increases the edge sharpness. Trapping reduces the effect of color plane misregistration by slightly overlapping the edges of adjacent objects. The color REt option increases the apparent resolution by placing each dot for the smoothest edges.

Four levels of edge control are available:

- **Maximum** is the most aggressive trapping setting. Adaptive halftoning and color REt settings are on.

- **Normal** is the default trapping setting. Trapping is at a medium level. Adaptive halftoning and color REt settings are on.

- **Light** sets trapping at a minimal level. Adaptive halftoning and color REt settings are on.

- **Off** turns off trapping, adaptive halftoning, and color REt.

RGB Color

Three values are available for the **RGB Color** setting:

- **Default** instructs the printer to interpret RGB color as sRGB. sRGB is the accepted standard of Microsoft and the World Wide Web Organization (www).

- **Vivid** instructs the printer to increase the color saturation in the midtones so that colored objects appear more colorful. Printed blues and greens will likely appear darker than on your monitor. This option is good for business graphics or for producing colors similar to the HP Color LaserJet 4550.

- **Device** instructs the printer to print RGB data in raw device mode. To render photographs properly with this selection, you must manage image color in the application or operating system.

HP Color LaserJet 4650 series Color Emulation can be accessed though the Print Task Quick Sets in the printer driver.

Matching colors

The process of matching printer output color to your computer screen is quite complex because printers and computer monitors use different methods of producing color. Monitors **display** colors by light pixels using an RGB (red, green, blue) color process, but printers **print** colors using a CMYK (cyan, magenta, yellow, and black) process.

Several factors can influence your ability to match printed colors to those on your monitor. These factors include:

- print media
- printer colorants (inks or toners for example)
- printing process (inkjet, press, or laser technology for example)
- overhead lighting
- personal differences in perception of color
- software applications
- printer drivers
- computer operating system
- monitors
- video cards and drivers
- operating environment (humidity for example)

Keep the above factors in mind when colors on your screen do not perfectly match your printed colors.

For most users, the best method for matching colors on your screen to your printer is to print sRGB colors.

PANTONE® color matching

PANTONE® has multiple color matching systems. PANTONE® Matching System is very popular and uses solid inks to generate a wide range of color hues and tints. See http://www.hp.com/support/lj4650 for details on how to use PANTONE® Matching System with this printer.

Sample book color matching

The process for matching printer output to preprinted sample books and standard color references is complex. In general, you can obtain a reasonably good match to a sample book if the inks used to create the sample book are cyan, magenta, yellow, and black. These are usually referred to as process color sample books.

Some sample books are created from spot colors. Spot colors are specially created colorants. Many of these spot colors are outside of the range of the printer. Most spot color sample books have companion process sample books that provide CMYK approximations to the spot color.

Most process sample books will state which process standards were used to print the sample book. In most cases they will be SWOP, EURO, or DIC. To get optimal color matching to the process sample book, select the corresponding ink emulation from the printer menu. If you cannot identify the process standard, use SWOP ink emulation.

Printing color samples

To use the Color samples, select the Color sample that is the closest match to the desired color. Use the sample's color value in your application to describe the object you wish to match. Colors may vary depending on paper type and the software application used. For more details on how to use the Color Samples, go to http://www.hp.com/support/lj4650.

Use the following procedure to print color samples at the printer using the control panel:

1. Press MENU to enter the **MENUS**.

2. Press ▾ to highlight **INFORMATION**.

3. Press ✓ to select **INFORMATION**.

4. Press ▾ to highlight **PRINT CMYK SAMPLES** or **PRINT RGB SAMPLES**.

5. Press ✓ to select **PRINT CMYK SAMPLES** or **PRINT RGB SAMPLES**.

Color emulation of the hp color LaserJet 4550 printer

The PCL, PS, and HP Color LaserJet 4650 series printer drivers include a Print Task Quick Set called "HP Color LaserJet 4550 Color Emulation." This Print Task Quick Set allows you to easily set the printer to emulate the colors of the HP Color LaserJet 4550 printer. In general, the emulation color rendering has more contrast and is darker in appearance. This emulation works well with documents that contain graphics.

7 Maintenance

This chapter describes ways to maintain your printer. The following topics are covered:

Managing print cartridges

Be sure to use genuine HP print cartridges for the best printing results. This section provides information on proper use and storage of HP print cartridges. It also provides information about using non-HP print cartridges.

HP print cartridges

When you use a genuine new HP print cartridge (part number C9720A, C9721A, C9722A, C9723A), you can obtain the following supplies information:

- percentage of supplies remaining
- estimated number of pages remaining
- number of pages printed

Non-HP print cartridges

Hewlett-Packard Company cannot recommend use of non-HP print cartridges, either new or remanufactured. Because they are not genuine HP products, HP cannot influence their design or control their quality. Service or repair required as a result of using a non-HP print cartridge **will not** be covered under the printer warranty.

When you use a non-HP print cartridge, certain features, such as remaining toner volume data may not be available as a result of using this non-HP supply.

If the non-HP print cartridge was sold to you as a genuine HP product, see HP fraud hotline.

Print cartridge authentication

The HP Color LaserJet 4650 series printer automatically authenticates the print cartridges when the cartridges are inserted into the printer. During authentication, the printer will let you know if a cartridge is or is not a genuine HP print cartridge.

If the printer control panel message states that this is not a genuine HP print cartridge and you believe you purchased an HP print cartridge, call the HP fraud hotline.

To override a non-HP print cartridge error message, press the ✔ button.

HP fraud hotline

Call the HP fraud hotline (1-877-219-3183, toll-free in North America) when you install an HP print cartridge and the printer message says the cartridge is non-HP. HP will help determine if the product is genuine and take steps to resolve the problem.

Your print cartridge might not be a genuine HP print cartridge if you notice the following:

- You are experiencing a high number of problems with the print cartridge.
- The cartridge does not look like it usually does (for example, the orange pull tab is missing, or the packaging differs from HP packaging).

Print cartridge storage

Do not remove the print cartridge from its package until you are ready to use it.

CAUTION To prevent damage to the print cartridge, do not expose it to light for more than a few minutes.

Print cartridge life expectancy

The life of the print cartridge depends on usage patterns and the amount of toner that print jobs require. An HP color print cartridge lasts an average of 8,000 pages and an HP black print cartridge lasts an average of 9,000 pages when printing on letter or A4-size paper at 5 percent coverage for each print cartridge. Usage conditions and print patterns may cause actual results to vary.

At any time, you can verify the life expectancy by checking the toner level, as described below.

Checking the print cartridge life

You can check the print cartridge life using the printer control panel, the embedded Web server, printer software, or HP Web Jetadmin software.

Using the printer control panel

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **INFORMATION**.
3. Press ✔ to select **INFORMATION**.
4. Press ▼ to highlight **PRINT SUPPLIES STATUS PAGE**.
5. Press ✔ to print the supplies status page.

Using the embedded Web server

1. In your browser, enter the IP address for the printer home page. This takes you to the printer status page. See Using the embedded Web server.
2. On the left side of the screen, click **Supplies Status**. This takes you to the supplies status page, which provides print cartridge information.

Using printer software

To use this feature, the HP toolbox software must be installed on your computer. This software is automatically installed as part of the typical software installation. In addition, you must have access to the World Wide Web.

1. On the **Start** menu, select **Programs**, and then click **HP toolbox**.

   The HP toolbox opens in a Web browser.

2. On the left side of the window, click the **Status** tab, and then click **Supplies Status**.

If you want to order supplies, click **Order Supplies**. This opens a browser that produces a URL from which to purchase supplies. Select the supplies you wish to order and follow the directions accordingly.

Using HP Web Jetadmin

In HP Web Jetadmin, select the printer device. The device status page shows print cartridge information.

Changing print cartridges

When a print cartridge approaches the end of its useful life, the control panel displays a message recommending that you order a replacement. The printer can continue to print using the current print cartridge until the control panel displays a message instructing you to replace the cartridge.

The printer uses four colors and has a different print cartridge for each color: black (K), magenta (M), cyan (C), and yellow (Y).

Replace a print cartridge when the printer control panel displays a **REPLACE <COLOR> CARTRIDGE** message. The control panel display will also indicate the color that should be replaced (if a genuine HP cartridge is currently installed).

CAUTION   If toner gets on clothing, wipe it off with a dry cloth and wash the clothes in cold water. Hot water sets toner into fabric.

Note   For information about recycling used print cartridges, see HP Printing Supplies Returns and Recycling Program Information, or visit the HP LaserJet Supplies website at http://www.hp.com/go/recycle.

To replace the print cartridge

1. Lift the top cover of the printer.
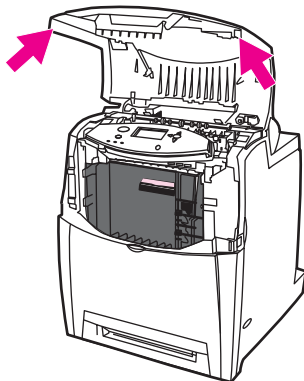
CAUTION   The fuser might be hot.

2. Pull down the front cover and transfer unit.
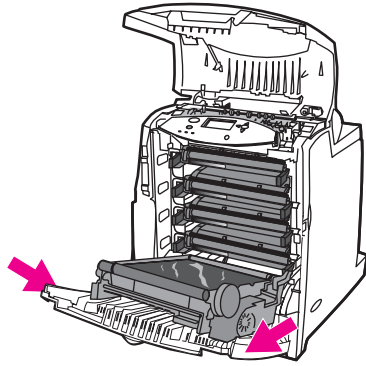
CAUTION Do not place any item on the transfer unit while it is open. If the transfer unit is punctured, print quality problems may result.
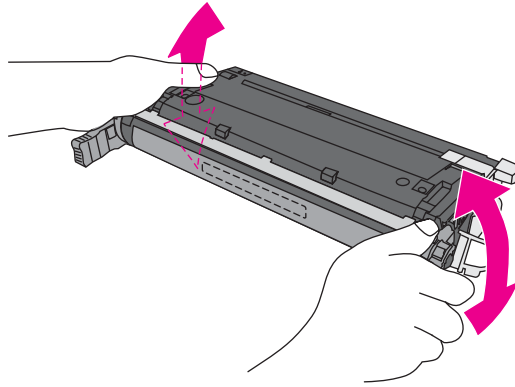
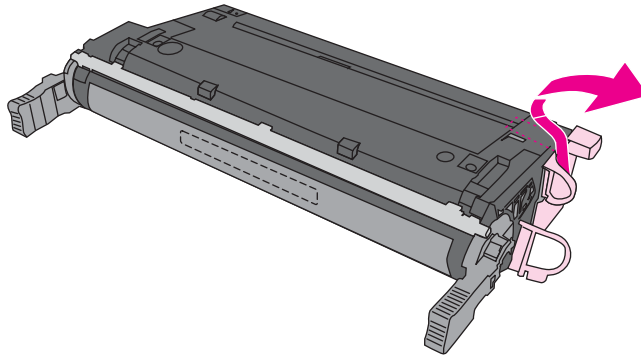3. Remove the used print cartridge from the printer.
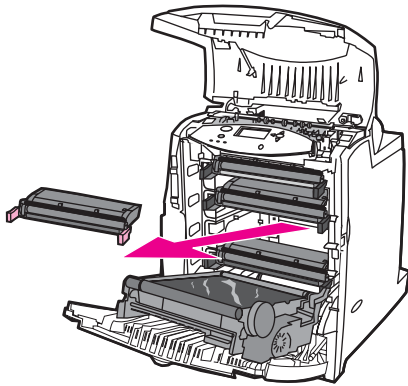
4. Remove the new print cartridge from the bag. Place the used print cartridge in the bag for recycling.
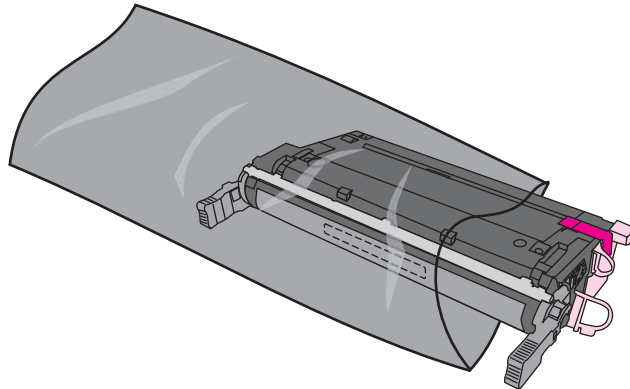
5. Grasp both sides of the cartridge and distribute the toner by gently rocking the cartridge from side to side.

6. Remove the orange shipping lock from the new print cartridge. Discard the lock.

7. Remove the inside sealing tape by grasping the orange tab on the end of the new print cartridge and pulling the tape completely out. Discard the tape.
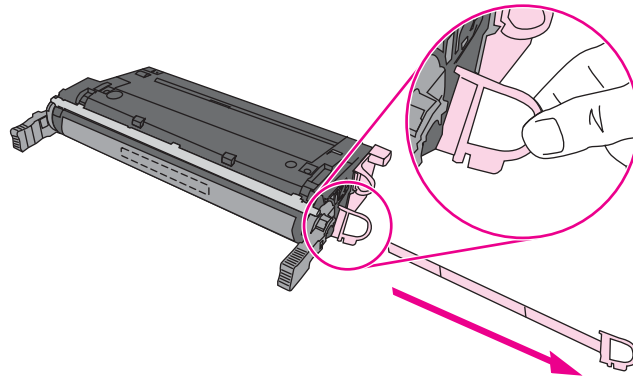
8. Align the print cartridge with the tracks inside the printer and insert the cartridge until it is completely seated.
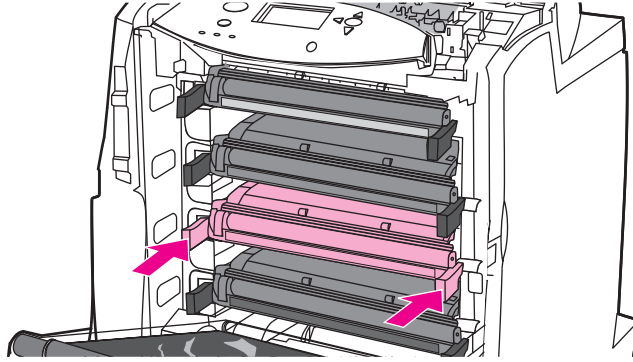
If a cartridge is in the wrong slot, the control panel will display the message **INCORRECT <COLOR> CARTRIDGE**.

9. Close the front cover and then close the top cover. After a short while, the control panel should display **Ready**.

10. Installation is complete. Place the used print cartridge in the box in which the new cartridge arrived. See the enclosed recycling guide for recycling instructions.

11. If you are using a non-HP print cartridge, check the control panel for further instructions.

For additional help, go to http://www.hp.com/support/lj4650.

Replacing supplies

When you use genuine HP supplies, the printer automatically notifies you when supplies are nearly depleted. The notification to order supplies allows ample time to order new supplies before they need to be replaced.

Locating supplies

Supplies are identified by their labeling and their blue plastic handles.

The following figure illustrates the location of each supply item.
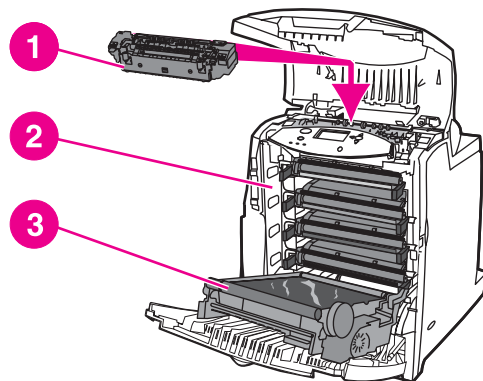
Supply item locations

1   fuser
2   print cartridges
3   transfer unit

Supply replacement guidelines

To facilitate the replacement of supplies, keep the following guidelines in mind when setting up the printer.

- Sufficient space is required above and in the front of the printer for removing supplies.
- The printer should be located on a flat, sturdy surface.

For instructions on installing supplies, see the installation guides provided with each supply item or see more information at http://www.hp.com/support/lj4650. When you connect, select **Solve a Problem**.

CAUTION   Hewlett-Packard recommends the use of Genuine HP products in this printer. Use of non-HP products may cause problems requiring service that is not covered by the Hewlett-Packard warranty or service agreements.

Making room around the printer for replacing supplies

The following illustration shows the clearance necessary in front of, above, and to the side of the printer for replacing supplies.
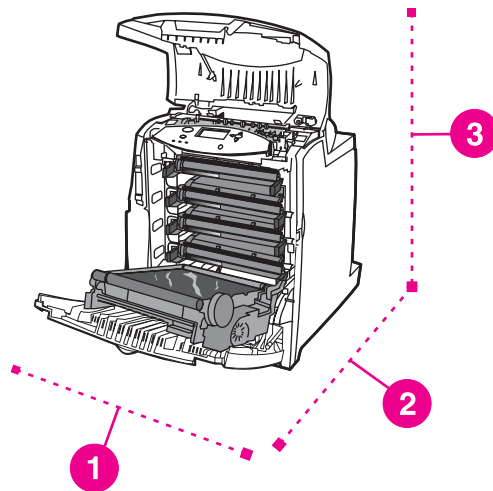
Supplies replacement clearance diagram

1   530 mm (20.9 inches)
2   1294 mm (50 inches)
3   804 mm (31.7 inches)

Approximate replacement intervals for supplies

The following table lists the estimated replacement intervals for supplies and the control panel messages that prompt when to replace each item. Usage conditions and print patterns may cause results to vary.

Item	Printer message	Page count	Approximate time period[2]
Black cartridges	**REPLACE BLACK CARTRIDGE**	9,000 pages[1]	3 months
Color cartridges	**REPLACE <COLOR> CARTRIDGE**	8,000 pages[1]	2.7 months
Image Transfer kit	**REPLACE TRANSFER KIT**	120,000 pages	41 months
Image Fuser kit	**REPLACE FUSER KIT**	150,000 pages	50 months

[1] Approximate average A4-/letter-size page count based on 5 percent coverage of individual colors.
[2] Approximate life is based on 3,000 pages per month.

You can use the HP toolbox software or the embedded Web server to order supplies. For more information, see Using the hp toolbox or Using the embedded Web server.

Configuring alerts

You can use HP Web Jetadmin or the printer's embedded Web server to configure the system to alert you of problems with the printer. The alerts take the form of e-mail messages to the e-mail account or accounts that you specify.

You can configure the following:

- the printer(s) you want to monitor
- what alerts are to be received (for example, alerts for paper jams, paper out, supplies status, and cover open)
- the e-mail account to which the alerts should be forwarded

Software	Information location
HP Web Jetadmin	See HP Web Jetadmin for general information about HP Web Jetadmin. See the HP Web Jetadmin Help system for details on alerts and how to set them up.
Embedded Web server	See Using the embedded Web server for general information about the embedded Web server. See the embedded Web server Help system for details on alerts and how to set them up.

You can also receive alerts through the HP toolbox software. These alerts display as either a pop-up window or an animated taskbar icon. The HP toolbox software does not send alerts in the form of an e-mail message. You can configure the HP toolbox software to deliver only the alerts you want to receive, and you can also specify how often the software checks the printer's status. See Using the hp toolbox for more information.

8 Problem solving

This chapter describes what to do if problems arise with your printer. The following topics are covered:

Basic troubleshooting checklist

If you are experiencing problems with the printer, this checklist may help identify the cause of the problem.

- Is the printer connected to power?
- Is the printer in the **Ready** state?
- Are all necessary cables connected?
- Are any messages displayed on the control panel?
- Was a genuine HP supply installed?
- Were recently replaced print cartridges installed correctly? Was the pull tab on the cartridge removed?
- Were recently installed supply items (image fuser kit, image transfer kit) installed correctly?
- Is the on/off switch in the on position?

If you cannot find solutions to printer problems in this guide, see http://www.hp.com/supplies/lj4650.

For additional information on installation and setup of the printer, see the getting started guide for this printer.

Factors affecting printer performance

Several factors affect the time it takes to print a job. Among these is maximum printer speed, measured in pages per minute (ppm). Other factors that affect printing speed include the use of special media (such as transparencies, glossy media, heavy media, and custom-size media), printer processing time, and download time.

The time required to download a print job from the computer and to process the job depends on the following variables:

- the complexity and size of graphics
- the printer's I/O configuration (network versus parallel)
- the speed of the computer you are using
- the amount of printer memory installed
- the network operating system and configuration (if applicable)
- printer personality (PCL or PostScript 3 emulation)

Note   Adding additional printer memory might resolve memory problems, improve how the printer handles complex graphics, and improve download times, but it will not increase maximum printer speed (ppm rating).

Troubleshooting information pages

From the printer control panel, you can print pages that can help diagnose printer problems. The procedures for printing the following information pages are described here:

- paper path test page
- registration page
- event log

Paper path test page

The **paper path test** page is useful for testing the paper handling features of the printer. You can define the paper path you want to test by selecting the source, destination, and other options available on the printer.

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **DIAGNOSTICS**.
3. Press ✔ to select **DIAGNOSTICS**.
4. Press ▼ to highlight **PAPER PATH TEST**.
5. Press ✔ to select **PAPER PATH TEST**.

The message **Performing... PAPER PATH TEST** appears on the display until the printer finishes the paper path test. The printer returns to the **Ready** state after printing the paper path test page.

Registration page

The **registration** page prints a horizontal arrow and a vertical arrow that show how far from center an image can be printed on the page. You can set registration values for a tray so that an image on the back and front of a page is centered. Setting the registration also allows edge-to-edge printing to be set to within approximately 2 mm (0.08 inch) of all edges of the paper. Image placement varies slightly for each tray. Perform the registration procedure for each tray.

1. Press MENU to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **PRINT QUALITY**.
5. Press ✔ to select **PRINT QUALITY**.
6. Press ▼ to highlight **SET REGISTRATION**.
7. Press ✔ to select **SET REGISTRATION**.

Note   You can select a tray by specifying a **Source**. The default **Source** is Tray 2. To set the registration for Tray 2, go to step 12. Otherwise, proceed to the next step.

8. Press ▼ to highlight **Source**.
9. Press ✔ to select **Source**.
10. Press ▼ or ▲ to highlight a tray.

11. Press ✔ to select the tray.

   After selecting the tray, the printer control panel returns to the **SET REGISTRATION** menu.

12. Press ▼ to highlight **PRINT TEST PAGE**.

13. Press ✔ to select **PRINT TEST PAGE**.

14. Follow the instructions on the printed page.

Event log

The event log lists the printer events, including printer jams, service errors, and other printer conditions.

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **DIAGNOSTICS**.

3. Press ✔ to select **DIAGNOSTICS**.

4. Press ▼ to highlight **PRINT EVENT LOG**.

5. Press ✔ to select **PRINT EVENT LOG**.

The message **Printing... EVENT LOG** appears on the display until the printer finishes printing the event log. The printer returns to the **Ready** state after printing the event log.

Control panel message types

Control panel messages are divided into three types, depending on their severity.

- Status messages
- Warning messages
- Error messages

Within the error message category, some messages are ranked as **Critical** error messages. This section explains the differences between the control panel message types.

Status messages

Status messages reflect the current state of the printer. They inform you of normal printer operation and require no interaction to clear them. They change as the state of the printer changes. Whenever the printer is ready, not busy, and has no pending warning messages, the status message **Ready** is displayed if the printer is online.

Warning messages

Warning messages inform you of data and print errors. These messages typically alternate with the **Ready** or **Status** messages and remain displayed until the ✔ button is pressed. If **CLEARABLE WARNINGS** is set to **JOB** in the printer's configuration menu, these messages are cleared by the next print job.

Error messages

Error messages communicate that some action must be performed, such as adding paper or clearing a paper jam.

Some error messages are auto-continuable; if **AUTO CONTINUE=ON** the printer will continue normal operation after displaying an auto-continuable error message for 10 seconds.

Note   Any button pressed during the 10-second display of an auto-continuable error message will override the auto-continue feature and the function of the button pressed will take precedence. For example, pressing the MENU button will display the main menu.

Critical error messages

Critical error messages inform you of a device failure. Some of these messages can be cleared by turning the printer off and then on. These messages are not affected by the **AUTO CONTINUE** setting. If a critical error persists, service is required.

The following table lists and describes control panel messages, in alphabetical order.

Control panel messages

Control panel messages

Control panel message	Description	Recommended action
10.X.X SUPPLY **MEMORY ERROR** alternates with **For help press** **?** The supplies gauge will display the consumption levels of print cartridges.	The printer cannot read or write to at least one print cartridge memory tag or at least one memory tag is missing. The following control panel messages correspond to the color of the print cartridge: 10.00.00 = black print cartridge 10.00.01 = cyan print cartridge 10.00.02 = magenta print cartridge 10.00.03 = yellow print cartridge	1. Turn the printer off and then back on. 2. Press **?** for more information. 3. If the error persists, contact HP Support at http://www.hp.com/support/lj4650.
13.12.00 JAM IN **DUPLEX PATH** **For help press** **?**	There is a jam in the duplex path.	1. Press **?** for detailed information about clearing the jam. 2. Press ▲ and ▼ to step through the instructions. 3. If the message persists after clearing all pages, contact HP Support at http://www.hp.com/support/lj4650.
13.XX.Y2 MULTIPLE **JAMS IN DUPLEX PATH** **For help press** **?**	There is a jam in the duplex path.	1. Press **?** for detailed information about clearing the jam. 2. Press ▲ and ▼ to step through the instructions. 3. If the message persists after clearing all pages, contact HP Support at http://www.hp.com/support/lj4650.
13.XX.Y2 MULTIPLE **JAMS IN PAPER PATH** **For help press** **?**	There are multple jams in the paper path.	1. Press **?** for detailed information about clearing the jam. 2. Press ▲ and ▼ to step through the instructions. 3. If the message persists after clearing all pages, contact HP Support at http://www.hp.com/support/lj4650.

Control panel messages (continued)

Control panel message	Description	Recommended action
13.XX.YY JAM IN **PAPER PATH** **Clear jam then** **press** ✔ alternates with **13.XX.YY JAM IN** **PAPER PATH** **For help press** ?	A page is jammed in the multi-purpose tray.	1. Press ? for detailed information about clearing the jam. 2. Press ▲ and ▼ to step through the instructions. 3. If the message persists after clearing all pages, contact HP Support at http://www.hp.com/ support/lj4650.
13.XX.YY JAM IN **PAPER PATH** **For help press** ?	There is a jam in the media path.	1. Press ? for detailed information about clearing the jam. 2. Press ▲ and ▼ to step through the instructions. 3. If the message persists after clearing all pages, contact HP Support at http://www.hp.com/ support/lj4650.
13.XX.YY JAM IN **TOP COVER AREA** **For help press** ?	There is a jam in the top cover area.	1. Press ? for detailed information about clearing the jam. 2. Press ▲ and ▼ to step through the instructions. 3. If the message persists after clearing all pages, contact HP Support at http://www.hp.com/ support/lj4650.
13.XX.YY JAM IN **TRAY X** **For help press** ?	A page is jammed in Tray 2, Tray 3, Tray 4 or multiple trays.	1. Press ? for detailed information about clearing the jam. 2. Press ▲ and ▼ to step through the instructions. 3. If the message persists after clearing all pages, contact HP Support at http://www.hp.com/ support/lj4650.
20 INSUFFICIENT MEMORY **For help press** ? alternates with **20 INSUFFICIENT MEMORY** **To continue press** ✔	The printer has received more data from the computer than fits in available memory.	1. Press ✔ to continue printing. **Note** A loss of data will occur. 2. Reduce the complexity of the print job to avoid this error in the future. 3. Adding memory to the printer may allow printing of more complex pages.

Control panel message	Description	Recommended action
22 EIO X **BUFFER OVERFLOW** **To continue press ✔**	The printer's EIO card in slot X has overflowed its I/O buffer during a busy state.	1. Press ✔ to continue printing. **Note** A loss of data will occur. 2. If the message persists, contact HP Support at http://www.hp.com/support/lj4650.
22 PARALLEL I/O **BUFFER OVERFLOW** **For help press ?** alternates with **22 PARALLEL I/O** **BUFFER OVERFLOW** **To continue press ✔**	The printer's parallel buffer has overflowed during a busy state.	1. Press ✔ to resume printing. **Note** A loss of data will occur. 2. If the message persists, disconnect the parallel cable at both ends and reconnect. 3. If the message still persists, contact HP Support at http://www.hp.com/support/lj4650.
22 SERIAL I/O **BUFFER OVERFLOW** **To continue press ✔**	The printer's serial buffer has overflowed during a busy state.	1. Press ✔ to continue printing. **Note** A loss of data will occur. 2. If the message persists, contact HP Support at http://www.hp.com/support/lj4650.
22 USB I/O **BUFFER OVERFLOW** **To continue press ✔**	The printer's USB buffer has overflowed during a busy state.	1. Press ✔ to continue printing. **Note** Loss of data will occur. 2. If the message persists, contact HP Support at http://www.hp.com/support/lj4650.
40 BAD SERIAL **TRANSMISSION** **To continue press✔**	A serial data error (parity, framing, or line overrun) has occurred while the printer was receiving data.	1. Press ✔ to continue printing. **Note** A loss of data will occur. 2. If the message persists, contact HP Support at http://www.hp.com/support/lj4650.
40 EIO X BAD **TRANSMISSION** **To continue press ✔**	A connection with the card in EIO slot X has been abnormally broken.	1. Press ✔ to continue printing. **Note** A loss of data will occur. 2. If the message persists, contact HP Support at http://www.hp.com/support/lj4650.

Control panel message	Description	Recommended action
41.3 UNEXPECTED **SIZE IN TRAY X** **For help press** ? alternates with **LOAD TRAY XX** **[TYPE] [SIZE]** **To use another** **tray press** ✔	Media is loaded that is longer or shorter in the feed direction than the size configured for the tray.	1. If the incorrect size was selected, cancel the job or press ? to access help. OR 2. Press ✔ to select another tray. 3. Press ▲ and ▼ to step through the instructions.
41.5 UNEXPECTED **TYPE IN TRAY X** **For help press** ? alternates with **LOAD TRAY XX** **[TYPE] [SIZE]** **To use another** **tray press** ✔	The printer senses a different media type in the media path than configured in the tray.	1. If the incorrect size was selected, cancel the job or press ? to access help. OR 2. Press ✔ to select another tray. 3. Press ▲ and ▼ to step through the instructions.
41.X **PRINTER ERROR** **For help press** ? alternates with **41.X** **PRINTER ERROR** **To continue press** ✔	A printer error has occurred.	1. Press ✔ to continue or press ? for more information. 2. If the message persists, turn the printer off and then back on. 3. If the message still persists, contact HP Support at http://www.hp.com/support/lj4650.
49.XXXX **PRINTER ERROR** **To continue** **turn off then on**	A critical firmware error has occurred.	1. Turn the printer off and then back on. 2. If the message persists, contact HP Support at http://www.hp.com/support/lj4650.

Control panel message	Description	Recommended action
50.X FUSER ERROR **For help press** ?	A fuser error has occurred. The following are specific fuser errors: 50.1 - A low fuser temperature error has occurred in the main thermistor. 50.2 - A fuser warm-up service error has occurred. 50.3 - A high fuser temperature error has occurred in the main thermistor. 50.4 - A faulty fuser error has occurred. 50.8 - A low fuser temperature error has occurred in the sub-thermistor. 50.9 - A high fuser temperature error has occurred in the sub-thermistor. These errors may be due to an inadequate power supply, inadequate line voltage, or a problem with the fuser.	1. Turn the printer off and then back on. 2. If the message persists, contact HP Support at http://www.hp.com/support/lj4650.
51.2Y **PRINTER ERROR** **For help press** ? alternates with **51.2Y** **PRINTER ERROR** To continue **turn off then on**	Either a beam detects an error, or a laser error has occured. The values of Y are: **Y Description** 0 - Black 1 - Cyan 2 - Magenta 3 - Yellow	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
53.XY.ZZ CHECK RAM **DIMM SLOT X**	An error occurred on some memory of the printer. Values of X, Y, and ZZ are: **X Device Location** 1 Slot 1 2 Slot 2 **Y Bank Number** 1 Bank number 1 2 Bank number 2 3 Bank number 3 4 Bank number 4 **ZZ Error Number** 01 Unsupported memory 02 Unrecognized memory 03 Under minimum memory limit 04 Exceeded maximum memory limit 05 Failed RAM test	If prompted to do so, press ✔ to continue. The printer should come to the **Ready** state, but will not make full use of all memory installed. Otherwise: 1. Turn the printer off. 2. Verify that all DDR SDRAM meets specifications and is correctly seated. 3. Turn the printer on. 4. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.

Control panel message	Description	Recommended action
54.01 PRINTER **ERROR** **To continue** **turn off then on**	Printing cannot continue. The humidity environmental sensor is abnormal.	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
54.X PRINTER **ERROR** **To continue** **turn off then on**	Printing cannot continue. There is a toner remaining sensor malfunction. Values of X are: 15 - Yellow 16 - Magenta 17 - Cyan 18 - Black	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
55.0X.YY DC **CONTROLLER ERROR** **For help press** ? alternates with **55.0X.YY** **PRINTER ERROR** **To continue** **turn off then on**	A printer command error has occurred.	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
56.XX **PRINTER ERROR** **To continue** **turn off then on**	A printer error has occurred.	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
57.0X **PRINTER ERROR** **To continue** **turn off then on**	A printer fan error has occurred.	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
58.0X **PRINTER ERROR** **For help press** ? alternates with **58.0X** **PRINTER ERROR** **To continue** **turn off then on**	A memory tag error was detected.	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.

Control panel message	Description	Recommended action
59.XY **PRINTER ERROR** **For help press** ? alternates with **59.XY** **PRINTER ERROR** **To continue** **turn off then on**	A printer motor error has occurred.	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650. Note: This message might also appear if the transfer unit is missing or incorrectly installed. Ensure that the transfer unit is correctly installed.
62 NO SYSTEM **To continue** **turn off then on**	No system was found.	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
68.X PERMANENT **STORAGE FULL** **For help press** ? alternates with **68.X PERMANENT** **STORAGE FULL** **To continue press** ✔	A non-volatile storage device is full. Pressing the ✔ button should clear the message. Printing can continue, but there may be unexpected behavior. **X Description** 0 for onboard NVRAM 1 for removable disk (flash or hard)	1. Press ✔ to continue. 2. For **68.0** errors, turn the printer off and then back on. 3. If a **68.0** error persists, contact HP Support. 4. For **68.1** errors, use the HP Web Jetadmin software to delete files from the disk drive. 5. For **68.1** errors that persist, contact HP Support.
68.X PERMANENT **STORAGE WRITE FAIL** **To continue press** ✔	A non-volatile storage device is full. Pressing the ✔ button should clear the message. Printing can continue, but there may be unexpected behavior. **X Description** 0 for onboard NVRAM 1 for removable disk (flash or hard)	1. Press ✔ to continue. 2. If the message persists, turn the printer off and then back on. 3. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
68.X STORAGE ERROR **SETTINGS CHANGED** **For help press** ? alternates with **68.X STORAGE ERROR** **SETTINGS CHANGED** **To continue press** ✔	One or more printer settings saved in the non-volatile storage device is invalid and has been reset to its factory default. Pressing the ✔ button should clear the message. Printing can continue, but there may be unexpected behavior.	1. Press ✔ to continue. 2. If the message persists, turn the printer off and then back on. 3. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
79.XXXX **PRINTER ERROR** **To continue** **turn off then on**	A critical hardware error has occurred.	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.

Control panel message	Description	Recommended action
8X.YYYY **EIO X ERROR**	The EIO accessory card in slot X has encountered a critical error. **X Description** 1: error in slot 1 2: error in slot 2	1. Turn the printer off and then back on. 2. If the problem persists, contact HP Support at http://www.hp.com/support/lj4650.
Access Denied **MENUS LOCKED**	An attempt has been made to modify a menu item while the control panel security mechanism is enabled by the printer administrator. The message will disappear shortly, and the printer will return to **Ready** or **BUSY** state.	Contact the printer administrator to change settings.
BAD OPTIONAL TRAY **CONNECTION**	The 500-sheet input tray is not making proper connection with the printer.	1. Verify that the printer is on a level surface. 2. Turn the printer off. 3. Reseat the printer on the 500-sheet input tray. 4. If the printer is on the optional printer stand, make sure that the support straps are attached to the rear of the stand and printer. 5. Turn the printer on after reseating the 500-sheet input tray.
Calibrating...	The printer is calibrating.	No action necessary.
Canceling...	The printer is in the process of canceling a job. The message will continue to be displayed while the job is stopped, the paper path flushed, and any remaining incoming data on the active data channel is received and discarded.	No action necessary.
CARD SLOT X NOT **FUNCTIONAL**	The flash card in slot X is not working correctly.	1. Turn the printer off. 2. Remove the card from the slot indicated and replace with a new card.
Checking paper path	The engine is turning its rollers to check for possible paper jams.	No action necessary.
Checking printer	The engine is doing an internal test.	No action necessary.
CHOSEN PERSONALITY **NOT AVAILABLE** To continue press ✔ alternates with **CHOSEN PERSONALITY** **NOT AVAILABLE** **For help press** ?	PJL encountered a request for a personality that did not exist in the printer. The job is aborted and no pages will be printed.	1. Press ? for detailed information. 2. Press ▲ and ▼ to step through the instructions. 3. Reprint using the correct driver for the device.

Control panel message	Description	Recommended action
Clearing event log	This message is displayed while the event log is cleared. The printer will exit the **MENUS** once the event log has been cleared.	No action necessary.
Clearing paper path	The printer jammed or detected misplaced paper when turned on. The printer is attempting to eject jammed pages automatically.	No action necessary.
CLOSE FRONT COVERS **For help press ?**	The covers need to be closed.	Close front covers. **Note** This message might also appear if the fuser is missing or incorrectly installed. Ensure that the fuser is correctly installed.
DATA RECEIVED **To print last page press ✔** alternates with **Ready** **To print last page press ✔**	The printer received data and is waiting for a form feed. When the printer receives another file, the message should disappear.	Press ✔ to continue printing.
Deleting...	The printer is currently deleting the stored job.	No action necessary.
DISK DEVICE **FAILURE** **To clear press ✔** alternates with **Ready**	A device failure has occurred on the specified drive. Printing may continue for jobs that do not require access to the disk drive.	1. To clear the message, press the ✔ key. 2. If the message persists, remove and re-install the EIO disk drive. 3. Turn the printer back on. 4. If the message still persists, replace the EIO disk drive.
DISK FILE **OPERATION FAILED** **To clear press ✔** alternates with **Ready**	The printer received a PJL file system command that attempted to perform an illogical operation (for example, to download a file to a non-existent directory). Printing may continue.	1. To clear the message, press the ✔ key. 2. If the message persists, turn the printer off and then back on. 3. If the message reappears, there may be a problem with the software application.
DISK FILE **SYSTEM IS FULL** **To clear press ✔** alternates with **Ready**	The printer received a PJL file system command that attempted to store something on the file system but was unsuccessful because the file system is full.	1. Use the HP Web Jetadmin software to delete files from the EIO disk drive, or delete the stored job from the printer control panel. 2. To clear the message, press the ✔ key. 3. If the message persists, turn the printer off and then back on.

Control panel messages (continued)

Control panel message	Description	Recommended action
DISK IS **WRITE PROTECTED** **To clear press** ✔ alternates with **Ready**	The file system device is protected and no new files can be written to it.	1. To enable writing to the disk, turn off write protection, using HP Web Jetadmin. 2. To clear the message, press the ✔ key. 3. If the message persists, turn the printer off and then back on.
EIO DISK X **NOT FUNCTIONAL** **For help press** ?	The EIO disk in slot X is not working correctly.	1. Turn the printer off. 2. Remove the EIO disk from the slot indicated and replace with a new EIO disk drive.
EIO X disk **initializing**	The EIO disk device in slot X is initializing.	No action necessary.
EIO X disk **spinning up**	The EIO disk device in slot X is spinning up its platter.	No action necessary.
Event Log Empty	SHOW EVENT LOG was selected from the control panel, and the event log is empty.	No action necessary.
FLASH DEVICE **FAILURE** **To clear press** ✔ alternates with **Ready**	A device failure has occurred on the specified drive. Printing may continue for jobs that do not require the Flash DIMM.	1. To clear the message, press the ✔ key. 2. If the message persists, remove and re-install the EIO disk drive. 3. Turn the printer back on. 4. If the message still persists, replace the Flash DIMM.
FLASH FILE **OPERATION FAILED** **To clear press** ✔ alternates with **Ready**	The printer received a PJL file system command that attempted to perform an illogical operation (for example, to download a file to a non-existent directory).	1. To clear the message, press the ✔ key. 2. If the message persists, turn the printer off and then back on. 3. If the message reappears, there may be a problem with the software application.
FLASH FILE **SYSTEM IS FULL** **To clear press** ✔ alternates with **Ready**	The printer received a PJL file system command that attempted to store something on the file system but was unsuccessful because the file system is full.	1. Use HP Web Jetadmin software to delete files from the Flash Memory and try again. 2. To clear the message, press the ✔ key. 3. If the message persists, turn the printer off and then back on.

Control panel message	Description	Recommended action
FLASH IS **WRITE PROTECTED** **To clear press** ✔ alternates with **Ready**	The file system device is protected and no new files can be written to it.	1. To enable writing to the Flash Memory, turn off write protection, using HP Web Jetadmin. 2. To clear the message, press the ✔ key. 3. If the message persists, turn the printer off and then back on.
Genuine HP supplies installed	A new HP cartridge has been installed. The printer returns to the **Ready** state after approximately 10 seconds.	No action necessary.
If no paper in tray: **Manually Feed** **<TYPE> <SIZE>** **For help press** ? alternates with **Manually Feed** **<TYPE> <SIZE>** **To use another** **tray press** ✔	A job was sent that specified **MANUAL FEED** and Tray 1 is empty.	Load Tray 1 with the specified media. OR To use media from another tray, press ✔ and select the tray from the list.
INCORRECT <COLOR> CARTRIDGE alternates with **For help press** ? The supplies gauge will display the consumption levels of print cartridges.	A cartridge is installed in the wrong slot and the cover is closed.	1. Open the top cover and image transfer unit. **CAUTION** The image transfer unit can be easily damaged. 2. Remove the incorrect print cartridge. 3. Install the correct print cartridge. 4. Close the front cover.
Incorrect PIN	The wrong PIN was entered. After three incorrect PIN entries, the printer will return to **Ready**	Re-enter PIN correctly.
INCORRECT SUPPLIES **For status press** ✔ The supplies gauge will display the consumption levels of print cartridges.	At least one supply item is incorrectly positioned in the printer and another supply item is missing, incorrectly placed, out, or low.	1. Press ✔ to access the SUPPLIES STATUS menu. 2. Press ▲ and ▼ to highlight the specific supply that has a problem. 3. Press ? to view help for the supply. 4. Press ▲ and ▼ to step through the instructions.
Initializing **permanent storage**	Displayed when the printer is turned on to show that permanent storage is being initialized.	No action necessary.
Initializing...	This message is displayed when the printer is turned on, as soon as the individual tasks begin initialization.	No action necessary.

Control panel message	Description	Recommended action
INSERT OR CLOSE **TRAY X** **For help press** ?	Tray XX must be inserted or closed before the current job can be printed.	Close the tray indicated.
INSTALL <COLOR> **CARTRIDGE** alternates with **For help press** ? The supplies gauge will display the consumption levels of print cartridges.	The cartridge is either not installed or not correctly installed in the printer.	1. Open the top cover and image transfer unit. **CAUTION** The image transfer unit can be easily damaged. 2. Insert the print cartridge and make sure that it is fully seated. 3. Close the front cover. 4. If the error persists, contact HP support at http://www.hp.com/support/lj4650.
INSTALL SUPPLIES **For status press** ✔ The supplies gauge will display the consumption levels of print cartridges.	At least one supply item is missing or is not correctly seated in the printer and another supply item is missing, incorrectly placed, out, or low. Insert the supply item or make sure the installed supply item is fully seated.	1. Press ✔ to access the SUPPLIES STATUS menu. 2. Press ▲ and ▼ to highlight the specific supply that has a problem. 3. Press ? to view help for the supply. 4. Press ▲ and ▼ to step through the instructions.
INSUFFICIENT MEMORY **TO LOAD FONTS/DATA** **For help press** ? alternates with **Device** **To continue press** ✔	The device does not have enough memory to load the data, such as fonts or macros from the location specified. **Device** can be one of the following: INTERNAL = ROM directly on the formatter board CARD SLOT X = font card in slot X DIMMS EIO X DISK = removable hard disk installed in EIO slot X	1. To use the device without the data, press ✔. 2. To solve the problem, add more memory to the device. DDR SDRAM Memory: 128MB, (Q2630A) or 256MB (Q2631A).
LOAD TRAY 1: **<TYPE> <SIZE>** **For help press** ? alternates with **LOAD TRAY 1:** **<TYPE> <SIZE>** **To continue press** ✔	Tray 1 is loaded and configured for a type and size other than the one specified in the job.	1. If the correct paper is loaded, press ✔. 2. Otherwise, remove the incorrect paper and load Tray 1 with the specified paper. 3. Confirm that the media guides are in the correct position. 4. Verify that the tray switch is in the correct position. 5. To use another tray, remove paper from Tray 1 and then press ✔.

Control panel message	Description	Recommended action
LOAD TRAY XX **[TYPE] [SIZE]** **For help press** ?	Tray XX is either empty or configured for a type and size other than specified in the job. No other tray is available.	1. Load the paper tray with the specified media. 2. Confirm that the media guides are in the correct position. 3. Verify that the tray switch is in the correct position.
LOAD TRAY XX **[TYPE] [SIZE]** **For help press** ? alternates with **LOAD TRAY XX** **[TYPE] [SIZE]** **To use another tray press** ✔	Tray XX is either empty or configured for a type and size other than specified in the job.	1. Load the paper tray with the specified media. 2. Confirm that the media guides are in the correct position. 3. Verify that the tray switch is in the correct position. 4. To use another tray, press ✔.
LOAD TRAY XX **[TYPE] [SIZE]** **Move tray switch to CUSTOM.** alternates with **LOAD TRAY XX** **[TYPE] [SIZE]** **For help press** ?	Tray XX is either empty or configured for a type and size other than specified in the job. Tray XX is either empty or configured for a type and size other than specified in the job. The size specified in the job requires that the tray switch be in the **custom** position. No other tray is available.	1. Load the paper tray with the specified media. 2. Confirm that the media guides are in the correct position. 3. Verify that the tray switch is in the **custom** position.
LOAD TRAY XX **[TYPE] [SIZE]** **Move tray switch to CUSTOM.** alternates with **LOAD TRAY XX** **[TYPE] [SIZE]** **To use another tray press** ✔	Tray XX is either empty or configured for a type and size other than specified in the job. The size specified in the job requires that the tray switch be in the **custom** position.	1. Load the paper tray with the specified media. 2. Confirm that the media guides are in the correct position. 3. Verify that the tray switch is in the **custom** position. 4. To use another tray, press ✔.
LOAD TRAY XX **[TYPE] [SIZE]** **Recommend move tray switch to STANDARD. Then close tray** alternates with **LOAD TRAY XX** **[TYPE] [SIZE]** **For help press** ?	Tray XX is either empty or configured for a type and size other than specified in the job. The size specified in the job is a detectable size. No other tray is available.	1. Load the paper tray with the specified media. 2. Confirm that the media guides are in the correct position. 3. Verify that the tray switch is in the **STANDARD** position so the printer will automatically detect the size.

Control panel message	Description	Recommended action
LOAD TRAY XX **[TYPE] [SIZE]** **Recommend move tray switch to STANDARD. Then close tray** alternates with **LOAD TRAY XX** **[TYPE] [SIZE]** **To use another tray press ✔**	Tray XX is either empty or configured for a type and size other than specified in the job. The size specified in the job is a detectable size.	1. Load the paper tray with the specified media. 2. Confirm that the media guides are in the correct position. 3. Verify that the tray switch is in the **STANDARD** position so the printer will automatically detect the size.
Loading **program X** **DO NOT POWER OFF**	Programs and fonts can be stored on the printer's file system and are loaded into RAM when the printer is turned on. The number XX specifies a sequence number indicating the current program being loaded.	No action necessary. Do not turn the printer off.
MANUALLY FEED **OUTPUT STACK**	The even-numbered pages of a manual two-sided document have been printed and the printer is waiting for the output stack to be inserted for the odd-numbered pages to be printed.	Follow the instructions on the **Print on Both Sides** instruction dialog box at the computer. OR Press **?** for help at the printer.
Manually Feed **<TYPE> <SIZE>** **For help press ?**	A job was sent specifying **MANUAL FEED** and Tray 1 is empty. No other tray is available.	Load Tray 1 with the specified media.
Manually Feed **<TYPE> <SIZE>** **For help press ?** alternates with **Manually Feed** **<TYPE> <SIZE>** **To continue press ✔**	A job was sent that specified **Manually Feed**. Tray 1 is already loaded.	Load Tray 1 with the specified media. OR If the corrected paper is loaded in Tray 1, press ✔ to print. To use media from another tray, clear the media from Tray 1, and then press ✔.
Moving solenoid **To exit press** **STOP KEY**	The printer is executing a Component Test and the component selected is a solenoid.	No action necessary.
NO STORED JOBS	No jobs stored on the EIO disk. This message is displayed when the user enters the **RETRIEVE JOB** menu and there are no jobs to retrieve.	No action necessary.

Control panel message	Description	Recommended action
NON HP SUPPLY **DETECTED** The supplies gauge will display the consumption levels of print cartridges.	A new cartridge has been installed that is not made by HP. This message is displayed until an HP cartridge is installed or the ✔ button is pressed.	If you believe you purchased an HP cartridge, please call the HP fraud hotline at (1-877-219-3183, toll-free in North America). **CAUTION** Any printer repair required as a result of using non-HP cartridges is not covered under HP warranty. To continue printing, press ✔.
NON HP SUPPLY **IN USE** alternates with **Ready** The supplies gauge will display the consumption levels of print cartridges, but the level of any refilled cartridge will not be shown.	The printer has detected that a non-HP print cartridge is currently installed.	If you believe you purchased an HP cartridge, please call the HP fraud hotline. **CAUTION** Any printer repair required as a result of using non-HP cartridges is not covered under HP warranty.
ORDER <COLOR> **CARTRIDGE** The supplies gauge will display the consumption levels of print cartridges. alternates with **Ready** The supplies gauge will display the consumption levels of print cartridges.	The identified print cartridge is nearing the end of its useful life. The printer is ready and will continue for the estimated number of pages indicated. Estimated pages remaining is based upon the historical page coverage of this printer. Printing will continue until a supply needs to be replaced.	1. Press **?** to view help for the message. 2. Obtain the part number for the print cartridge indicated. 3. Order a print cartridge **Note** Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information.
ORDER FUSER KIT **LESS THAN XXX PAGES** **For help press ?** alternates with **Ready**	The fuser is near end of life. The printer is ready and will continue for the estimated number of pages indicated. Printing will continue until a supply needs to be replaced.	1. Press **?** to view help for the message. 2. Obtain the part number for the fuser kit. 3. Order the fuser kit. **Note** Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information.

Control panel message	Description	Recommended action
ORDER SUPPLIES alternates with **Ready** **For help press?** The supplies gauge will display the consumption levels of print cartridges.	More than one supply item is low. Printing will continue until a supply needs to be replaced.	1. Press MENU to access the menus. 2. Press ▲ or ▼ to highlight **INFORMATION**, and then press ✔. 3. Press ▲ or ▼ to highlight **SUPPLIES STATUS**, and then press ✔. 4. Press ▲ or ▼ to highlight a supply that needs to be ordered. 5. Press **?** to access help for the supply. 6. Obtain a part number from help. 7. Order the supply. 8. Repeat the previous steps as necessary for each supply that needs to be ordered. 9. Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information.
ORDER TRANSFER KIT **LESS THAN XXX PAGES** **For help press ?** alternates with **Ready**	The transfer unit is near end of life. Printing can continue until transfer unit life ends.	1. Press **?** to view help for the message. 2. Obtain the transfer kit part number from help. 3. Order the transfer kit. **Note** Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information.
Output Bin Full **Remove all paper** **from bin**	The output bin is full and must be emptied for printing to continue.	Remove media from the output bin.
Paused **To return to Ready** **press RESUME key**	The printer is paused, and there are no error messages pending at the display. The I/O continues receiving data until memory is full.	Press the STOP key.
Performing **PRINT/STOP TEST**	The printer is performing a Print/Stop Test.	No action necessary.
Performing **upgrade**	A firmware upgrade is in process.	Do not turn the printer off until the printer returns to **Ready**.
Performing... **PAPER PATH TEST**	The printer is performing a Paper Path Test.	No action necessary.

Control panel message	Description	Recommended action
Please wait	The printer is in the process of clearing data.	No action necessary.
Powersave on	The printer is in the power save mode. Any button press, an error condition, or the receipt of printable data may clear this message.	No action necessary.
PRINTING STOPPED **To continue press** ✔	This message is displayed when a Print/Stop Test is run and time expires.	Press ✔ to continue printing.
Printing... **CMYK Samples**	This message displays while the printer CMYK samples page is being generated.	No action necessary.
Printing... **CONFIGURATION**	The printer is generating the configuration page. The printer will return to the online **Ready** state when the page is completed.	No action necessary.
Printing... **DEMO PAGE**	The printer is generating the demo page. The printer will return to the online **Ready** state when the page is completed.	No action necessary.
Printing... **Event Log**	The printer is generating the event log page. The printer will return to the online **Ready** state when the page is completed.	No action necessary.
Printing... **FILE DIRECTORY**	The printer is generating the mass storage directory page. The printer will return to the **Ready** state when the page is completed.	No action necessary.
Printing... **FONT LIST**	The printer is generating either the PCL or PS personality typeface list. The printer will return to the **Ready** state when the page is completed.	No action necessary.
Printing... **MENU MAP**	The printer is generating the printer menu map. The printer will return to the **Ready** state when the page is completed.	No action necessary.
Printing... **PQ TROUBLESHOOTING**	The printer is generating the print quality troubleshooting pages. The printer will return to the **Ready** state when the pages are printed.	Follow the instructions on the printed pages.
Printing... **REGISTRATION PAGE**	The printer is generating the registration page. The printer will return to the **SET REGISTRATION** menu when the page is completed.	Follow the instructions on the printed pages.
Printing... **RGB Samples**	This message displays while the printer RGB samples page is being generated.	No action necessary.
Printing... **SUPPLIES STATUS**	The printer is generating the supplies status page. The printer will return to the online **Ready** state when the page is completed.	No action necessary.

Control panel message	Description	Recommended action
Printing... **Usage Page**	The printer is generating the usage page. The printer will return to the online **Ready** state when the page is completed.	No action necessary.
Processing duplex **job** **Do not grab paper** **until job completes**	Paper temporarily comes into the output bin while printing a duplex job. Do not attempt to remove the pages until the job is complete.	Do not grab paper as it temporarily comes into the output bin. The message will disappear when the job is finished.
Processing...	The printer is currently processing a job but is not yet picking pages. When paper motion begins, this message will be replaced by a message that indicates which tray the job is being printed from.	No action necessary.
Processing... **copy <X> of <Y>**	The printer is currently processing or printing collated copies. The message indicates that copy X of Y total copies is currently being processed.	No action necessary.
Processing... **from tray xx**	The printer is actively processing a job from the designated tray.	No action necessary.
RAM DISK **SYSTEM IS FULL** **To clear press ✔** alternates with **Ready**	The printer received a PJL file system command that attempted to store something on the file system but was unsuccessful because the file system is full.	• To clear the message, press the ✔ key. • If the message persists, turn the printer off and then back on. **Note** This will also delete any files saved in RAM.
RAM DISK DEVICE **FAILURE** **To clear press ✔** alternates with **Ready**	A device failure has occurred on the specified drive.	1. To clear the message, press the ✔ key. 2. If the message persists, turn the printer off and then back on. 3. If the message still persists, contact HP Support.
RAM DISK FILE **OPERATION FAILED** **To clear press ✔** alternates with **Ready**	The printer received a PJL file system command that attempted to perform an illogical operation (for example, to download a file to a non-existent directory). Printing may continue.	1. To clear the message, press the ✔ key. 2. If the message persists, turn the printer off and then back on. 3. If the message reappears, there may be a problem with the software application.
RAM DISK IS **WRITE PROTECTED** **To clear press ✔** alternates with **Ready**	The file system device is protected and no new files can be written to it.	1. To enable writing to the RAM disk, turn off write protection, using HP Web Jetadmin software. 2. To clear the message, press the ✔ key. 3. If the message persists, turn the printer off and then back on.

Control panel message	Description	Recommended action
Ready The supplies gauge will display the consumption levels of print cartridges.	The printer is online and ready for data. No status or device attendance messages are pending at the display.	No action necessary.
Ready **Diagnostics mode** **To exit press STOP KEY**	The printer is in a special diagnostics mode.	Press the Sᴛᴏᴘ key to exit the special diagnostics mode. OR No action is necessary.
Receiving **upgrade**	A firmware upgrade is in progress.	Do not turn the printer off until the printer returns to **Ready**.
REMOVE ALL **PRINT CARTRIDGES** **To exit press STOP KEY**	The printer is executing a Component Test and the component selected is Belt Only.	Remove all print cartridges.
Remove at least one **print cartridge.** **To exit press STOP KEY**	The printer is executing a Disable Cartridge Check or Component Test where the component selected is Cartridge Motor.	Remove one print cartridge.
REPLACE <COLOR> **CARTRIDGE** The supplies gauge will display the consumption levels of print cartridges. alternates with **For help press ?** The supplies gauge will display the consumption levels of print cartridges.	The identified print cartridge has reached the end of life and the **COLOR SUPPLY OUT** setting in **SYSTEM SETUP** is set to **STOP**. Printing will not continue until the cartridge is replaced.	1. Open the top cover and image transfer unit. --- **CAUTION** The image transfer unit can be easily damaged. --- 2. Remove the identified print cartridge. 3. Install a new print cartridge. 4. Close the top and front covers. 5. Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information.

Control panel message	Description	Recommended action
REPLACE <COLOR> CARTRIDGE The supplies gauge will display the consumption levels of print cartridges. alternates with **To continue press ✔** The supplies gauge will display the consumption levels of print cartridges.	The identified print cartridge is nearing the end of its useful life and the **SUPPLIES LOW** setting in **SYSTEM SETUP** is set to **STOP**.	1. Order the identified print cartridge. 2. To continue printing, press ✔. 3. To replace the cartridge, perform the following steps: • Open the top cover and image transfer unit. **CAUTION** The image transfer unit can be easily damaged. • Remove the identified print cartridge. • Install a new print cartridge. • Close the top and front covers. • Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information.

Control panel message	Description	Recommended action
REPLACE FUSER KIT **For help press** ?	The fuser kit has reached the end of its life. Printing will not continue until the fuser has been replaced.	1. Open the top cover. 2. Loosen the blue thumb screws. 3. Remove the old fuser unit. 4. Install a new fuser unit and secure with thumb screws. 5. Close the top cover. 6. Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information. **Note** If you want to continue printing past the end-of-life message, the fuser kit count must be reset using the printer control panel. Please note that the end-of-life message is provided as a customer service, and printing past it is likely to result in print quality degradation in the near future. Once the fuser kit count has been reset after an end-of-life message, feedback on the kit's remaining life will be incorrect until the kit is replaced and the count is reset again. To reset the fuser count 1. Press MENU to enter the **MENUS**. 2. Press ▲ and ▼ to highlight **CONFIGURE DEVICE**. 3. Press ✔ to select **CONFIGURE DEVICE**. 4. Press ▲ and ▼ to highlight **RESETS**. 5. Press ✔ to select **RESETS**. 6. Press ▲ and ▼ to highlight **RESET SUPPLIES**. 7. Press ✔ to select **RESET SUPPLIES**. 8. Press ▲ and ▼ to highlight **NEW FUSER KIT**. 9. Press ✔ to select **NEW FUSER KIT**. 10. Press ▲ and ▼ to highlight **YES**. 11. Press ✔ to select **YES**. The fuser count is reset and the printer is ready to use.

Control panel message	Description	Recommended action
REPLACE FUSER KIT **For help press** ? alternates with **REPLACE FUSER KIT** **To continue press** ✔	The fuser is nearing the end of its useful life and the **SUPPLIES LOW** setting in **SYSTEM SETUP** is set to **STOP**.	1. Order the fuser kit. 2. To continue printing, press ✔. 3. To replace the fuser kit, perform the following steps: ● Open the top cover. ● Loosen the blue thumb screws. ● Remove the old fuser unit. ● Install a new fuser unit and secure with thumb screws. ● Close the top cover. ● Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information. **Note** If you want to continue printing past the end-of-life message, the fuser kit count must be reset using the printer control panel. Please note that the end-of-life message is provided as a customer service, and printing past it is likely to result in print quality degradation in the near future. Once the fuser kit count has been reset after an end-of-life message, feedback on the kit's remaining life will be incorrect until the kit is replaced and the count is reset again. To reset the fuser count 1. Press MENU to enter the **MENUS**. 2. Press ▲ and ▼ to highlight **CONFIGURE DEVICE**. 3. Press ✔ to select **CONFIGURE DEVICE**. 4. Press ▲ and ▼ to highlight **RESETS**. 5. Press ✔ to select **RESETS**. 6. Press ▲ and ▼ to highlight **RESET SUPPLIES**. 7. Press ✔ to select **RESET SUPPLIES**. 8. Press ▲ and ▼ to highlight **NEW FUSER KIT**. 9. Press ✔ to select **NEW FUSER KIT**. 10. Press ▲ and ▼ to highlight **YES**. 11. Press ✔ to select **YES**. The fuser count is reset and the printer is ready to use.

Control panel message	Description	Recommended action
REPLACE SUPPLIES **For status press** ✔ The supplies gauge will display the consumption levels of print cartridges.	Multiple supplies are at the end of their useful life. If the supplies affected are cartridges only, printing has stopped because the **COLOR SUPPLY OUT** setting in **SYSTEM SETUP** is set to **STOP**. If the fuser or transfer kit is affected, then printing always stops.	1. Press ✔ to access the **SUPPLIES STATUS** menu. 2. Press ▲ and ▼ to highlight the specific supply that has a problem. 3. Press **?** to view help for the supply. 4. Press ▲ and ▼ to step through the instructions. 5. Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information.
REPLACE SUPPLIES **To continue press** ✔ The supplies gauge will display the consumption levels of print cartridges.	Multiple supplies are at the end of their useful life and the **SUPPLIES LOW** setting in **SYSTEM SETUP** is set to **STOP**.	1. Press ✔ to access the **SUPPLIES STATUS** menu. 2. Press ▲ and ▼ to highlight the specific supply that has a problem. 3. Press **?** to view help for the supply. 4. Press ▲ and ▼ to step through the instructions. 5. Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information.
REPLACE SUPPLIES **Using black only** The supplies gauge will display the consumption levels of print cartridges. alternates with **Ready** **For help press** **?** The supplies gauge will display the consumption levels of print cartridges.	At least one color cartridge is at the end of its useful life and the **COLOR SUPPLY OUT** setting in **SYSTEM SETUP** is set to **AUTOCONTINUE BLACK**. Printing will continue using black toner only.	Press ✔ to identify which supplies should be replaced. Replace identified supplies to continue printing in color.

Control panel message	Description	Recommended action
REPLACE TRANSFER KIT **For help press** ?	The transfer unit is at end of life. Printing will not continue until the transfer kit has been replaced.	1. Open the top and front cover. 2. Remove the old unit by pressing the blue buttons on either side of the unit. 3. Slide the old unit out of the printer. 4. Install a new transfer unit. 5. Close the front and top covers. 6. Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information. **Note** If the old transfer unit was not at end-of-life when it was replaced (for example, if it was damaged), or if you want to continue printing past the end-of-life message, the transfer unit count must be reset using the printer control panel. Please note that the end-of-life message is provided as a customer service, and printing past it is likely to result in print quality degradation in the near future. Once the transfer kit count has been reset after an end-of-life message, feedback on the kit's remaining life will be incorrect until the kit is replaced and the count is reset again. To reset the transfer unit count 1. Press MENU to enter the **MENUS**. 2. Press ▲ and ▼ to highlight **CONFIGURE DEVICE**. 3. Press ✔ to select **CONFIGURE DEVICE**. 4. Press ▲ and ▼ to highlight **RESETS**. 5. Press ✔ to select **RESETS**. 6. Press ▲ and ▼ to highlight **RESET SUPPLIES**. 7. Press ✔ to select **RESET SUPPLIES**. 8. Press ▲ and ▼ to highlight **NEW TRANSFER KIT**. 9. Press ✔ to select **NEW TRANSFER KIT**. 10. Press ▲ and ▼ to highlight **YES**. 11. Press ✔ to select **YES**. The transfer unit count is reset and the printer is ready to use.

Control panel message	Description	Recommended action
REPLACE TRANSFER KIT **For help press** ? alternates with **REPLACE TRANSFER KIT** **To continue press** ✔	The transfer unit is nearing the end of its useful life and the **SUPPLIES LOW** setting in **SYSTEM SETUP** is set to **STOP**.	1. Order the transfer kit. 2. To continue printing, press ✔. 3. To replace the transfer kit, perform the following steps: ● Open the top and front cover. ● Remove the old unit by pressing the blue buttons on either side of the unit. ● Slide the old unit out of the printer. ● Install a new transfer unit. ● Close the front and top covers. ● Supplies ordering information is also available from the embedded Web server. See Using the embedded Web server for more information. **Note** If the old transfer unit was not at end-of-life when it was replaced (for example, if it was damaged), or if you want to continue printing past the end-of-life message, the transfer unit count must be reset using the printer control panel. Please note that the end-of-life message is provided as a customer service, and printing past it is likely to result in print quality degradation in the near future. Once the transfer kit count has been reset after an end-of-life message, feedback on the kit's remaining life will be incorrect until the kit is replaced and the count is reset again.

Control panel message	Description	Recommended action
REPLACE TRANSFER KIT **For help press ?** alternates with **REPLACE TRANSFER KIT** **To continue press ✔**	The transfer unit is nearing the end of its useful life and the **SUPPLIES LOW** setting in **SYSTEM SETUP** is set to **STOP**.	Continued To reset the transfer unit count 1. Press MENU to enter the **MENUS**. 2. Press ▲ and ▼ to highlight **CONFIGURE DEVICE**. 3. Press ✔ to select **CONFIGURE DEVICE**. 4. Press ▲ and ▼ to highlight **RESETS**. 5. Press ✔ to select **RESETS**. 6. Press ▲ and ▼ to highlight **RESET SUPPLIES**. 7. Press ✔ to select **RESET SUPPLIES**. 8. Press ▲ and ▼ to highlight **NEW TRANSFER KIT**. 9. Press ✔ to select **NEW TRANSFER KIT**. 10. Press ▲ and ▼ to highlight **YES**. 11. Press ✔ to select **YES**. The transfer unit count is reset and the printer is ready to use.
Request accepted **please wait**	The printer has accepted a request to print an internal page, but the current job must finish printing before the internal page will print.	No action necessary.
Resend **upgrade**	The firmware upgrade was not completed successfully.	Attempt upgrade again.
Resetting Kit Count	YES is selected in the Reset Supplies menu, to reset the counts for any of the supplies that cannot be detected as new.	No action necessary.
Restoring...	The printer is restoring settings.	No action necessary.
Restoring... **factory settings**	The printer is restoring factory settings.	No action necessary.
Rotating <COLOR> **motor** **To exit press** STOP key	A component test is in progress; the component selected is the <color> Cartridge motor.	Press STOP when ready to stop this test.
Rotating motor **To exit press** STOP key	The printer is executing a Component Test and the component selected is a motor.	Press STOP when ready to stop this test.
Setting saved	A menu selection has been saved.	No action necessary.

Control panel message	Description	Recommended action
SIZE MISMATCH **TRAY XX=[SIZE]** **For help press ?** alternates with **Ready**	The tray is loaded with media longer or shorter in the feed direction than the size configured for the tray.	1. Adjust the side and rear media guides against the paper. 2. If the media used is letter, A4, executive, JIS B5, A5, or legal, the tray switch should be set to STANDARD. Set the tray switch to CUSTOM for all other media sizes. The tray switch must be set before the size can be selected from the control panel. 3. If necessary, press ✔ after the tray is closed to reset the paper size or type.
Tray X **[TYPE] [SIZE]** **Size detected by tray** alternates with **Tray X** **[TYPE] [SIZE]** **To change size or type** **press ✔**	The printer is reporting the current configuration of tray X. The tray switch is in the STANDARD position.	1. If the configuration of the size and type is correct, press ⇆ to clear the message. 2. To change media size or type, press ✔. Use ▲ and ▼ to highlight the size or type, and then press ✔ to select. 3. If action is required to change the size, a message with instructions will appear after the selection is attempted.
Tray X **[TYPE] [SIZE]** **Size specified by user** alternates with **TRAY XX [TYPE] [SIZE]** **To change size or type** **press✔**	The printer is reporting the current configuration of tray X. The tray switch is in the CUSTOM position.	1. If the configuration of the size and type is correct, press ⇆ to clear the message. 2. To change media size or type, press ✔. Use ▲ and ▼ to highlight the size or type, and then press ✔ to select. 3. If action is required to change the size, a message with instructions will appear after the selection is attempted. 4. See Configuring input trays for more details.
TRAY X EMPTY **[TYPE] [SIZE]** alternates with **Ready**	The specified tray is empty and the current job does not currently need this tray to print.	Refill the tray at a convenient time.
TRAY X OPEN **For help press ?** alternates with **Ready**	The specified tray is open or not closed completely.	Close the tray.

Control panel message	Description	Recommended action
TRAY XX SIZE= \<SIZE> **Recommend move tray switch to STANDARD. Then close tray** alternates with **TRAY XX SIZE= \<SIZE>** **then close tray**	A detectable media size was selected from the menu and the tray is open. Although not required, the size selected can be automatically sensed if the tray switch is moved to STANDARD.	1. Adjust the side and rear media guides against the paper. 2. If the media used is letter, A4, executive, JIS B5, A5, or legal, the tray switch should be set to STANDARD. Set the tray switch to CUSTOM for all other media sizes. The tray switch must be set before the size can be selected from the control panel.
TRAY XX SIZE= \<SIZE> **Setting not saved** alternates with **TRAY XX SIZE= \<SIZE>** **To change move tray switch to CUSTOM**	A non-detectable media size was selected from the menu and the tray switch is set to STANDARD. In order to change the tray size to the size selected, the tray switch must first be in the **custom** position.	1. Adjust the side and rear media guides against the paper. 2. If the media used is letter, A4, executive, JIS B5, A5, or legal, the tray switch should be set to STANDARD. Set the tray switch to CUSTOM for all other media sizes. The tray switch must be set before the size can be selected from the control panel. 3. Reset the paper size in the paper handling menu or the tray size pop-up menu.
TRAY XX SIZE= \<SIZE> **Setting not saved** alternates with **TRAY XX SIZE= \<SIZE>** **To change, move guide in tray X**	A detectable media size was selected from the menu, but the tray guide sensors detect a different size. The size selected from the menu does not match the size detected by the tray. Size detection occurs when the tray switch is set to the STANDARD position. The tray switch is already in the correct position for the size selected.	1. Adjust the side and rear media guides against the paper. 2. If the media used is letter, A4, executive, JIS B5, A5, or legal, the tray switch should be set to STANDARD. Set the tray switch to CUSTOM for all other media sizes. The tray switch must be set before the size can be selected from the control panel. 3. If necessary, reset the paper size again.
TRAY XX SIZE= \<SIZE> **Setting saved**	The size selected from the menu has been saved.	No action is necessary.
TRAY XX SIZE= \<SIZE> **Setting saved** alternates with **TRAY XX SIZE= \<SIZE>** **Recommend move tray switch to STANDARD. Then close tray**	A detectable media size was selected from the menu and the tray switch is set to CUSTOM. Although not required, the size selected can be automatically sensed if the tray switch is moved to STANDARD.	1. Adjust the side and rear media guides against the paper. 2. If the media used is letter, A4, executive, JIS B5, A5, or legal, the tray switch should be set to STANDARD. Set the tray switch to CUSTOM for all other media sizes. The tray switch must be set before the size can be selected from the control panel. 3. Reset the paper size in the paper handling menu or tray size pop-up menu.

Control panel messages (continued)

Control panel message	Description	Recommended action
TRAY XX SIZE= <SIZE> **Verify tray switch set to CUSTOM** alternates with **TRAY XX SIZE= <SIZE>** **then close tray**	A non-detectable media size was selected from the menu and the tray is open. The selected size requires that the tray switch be set to CUSTOM, otherwise when the tray is closed, the tray size will change.	1. Adjust the side and rear media guides against the paper. 2. If the media used is letter, A4, executive, JIS B5, A5, or legal, the tray switch should be set to STANDARD. Set the tray switch to CUSTOM for all other media sizes. The tray switch must be set before the size can be selected from the control panel. 3. Close the tray.
TYPE MISMATCH **TRAY XX=[TYPE]** **For help press ?** alternates with **Ready**	The media type loaded in the tray does not match the media type configured for the tray.	1. Adjust the side and rear guides against the paper. 2. If size is a detectable size, set the tray switch to STANDARD, otherwise set the tray switch to CUSTOM. 3. If necessary, press ✔ after the tray is closed to change the paper size or type.
Unable to mopy job alternates with **Processing...**	A Mopy job cannot be mopied because of a memory, disk, or configuration problem. Only one copy will be produced.	Install additional memory in the printer or install a disk drive in the printer.
Unable to Store Job alternates with **Processing...**	A job cannot be stored because of a memory, disk, or configuration problem.	Install additional memory in the printer, or install a disk drive into the printer. If a disk drive is installed, delete previously stored print jobs.
USE TRAY XX **[TYPE] [SIZE]** **To change press ▲ / ▼** **To use press✔**	The printer is offering a selection of alternate media to use for the print job.	1. View tray configurations (type and size) using ▲ and ▼. 2. Press ✔ to select a tray to use.
Wait for printer **to reinitialize**	RAM disk settings have been changed before the printer automatically restarts, or external device modes have changed or the printer is coming out of the diagnostics mode and will automatically restart.	No action necessary.
Warming up	The printer is coming out of PowerSave mode. Printing will continue as soon as warmup is completed.	No action necessary.

Paper jams

Use this illustration to troubleshoot paper jams in the printer. For instructions on clearing paper jams, see Clearing jams.
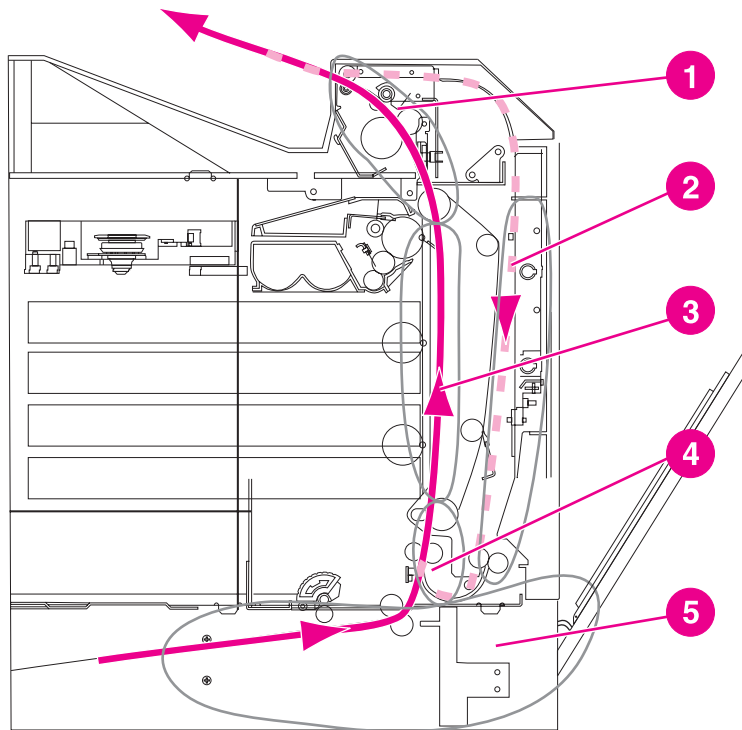
Paper jam locations

1   top cover area
2   duplex path
3   paper path
4   input path
5   trays

Paper jam recovery

This printer automatically provides paper jam recovery, a feature that allows you to set whether the printer should attempt to automatically reprint jammed pages. The options are:

- **AUTO** — Printer will attempt to reprint jammed pages.

- **OFF** — Printer will not attempt to reprint jammed pages.

Note   During the recovery process, the printer may reprint several good pages that were printed before the paper jam occurred. Be sure to remove any duplicated pages.

To disable paper jam recovery

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **CONFIGURE DEVICE**.

3. Press ✔ to select **CONFIGURE DEVICE**.

4. Press ▼ to highlight **SYSTEM SETUP**.

5. Press ✔ to select **SYSTEM SETUP**.

6. Press ▼ to highlight **JAM RECOVERY**.

7. Press ✔ to select **JAM RECOVERY**.

8. Press ▼ to highlight **OFF**.

9. Press ✔ to select **OFF**.

10. Press the MENU button to return to the **Ready** state.

To improve print speed and increase memory resources, you may want to disable paper jam recovery. If paper jam recovery is disabled, the pages involved in a jam will not be reprinted.

Common causes of paper jams

The following table lists common causes of paper jams and suggested solutions for resolving them.

Cause	Solution
Print media does not meet HP-recommended media specifications.	Use only media that meets HP specifications. See Supported media weights and sizes.
A supply item is installed incorrectly, causing repeated jams.	Verify that all print cartridges, the transfer unit, and the fuser are correctly installed.
You are reloading paper that has already passed through a printer or copier.	Do not use media that has been previously printed on or copied.
An input tray is loaded incorrectly.	Remove any excess media from the input tray. Press media down in the input tray so it fits below the tabs, and within the media width guides. See Configuring input trays.
Print media is skewed.	Input tray guides are not adjusted correctly. Adjust input tray guides so they hold media firmly in place without bending it. If media heavier than 105 g/m^2 (28 lb) is loaded into Tray 2, Tray 3, or Tray 4, the media might skew.
Print media is binding or sticking together.	Remove media, flex it, rotate it 180 degrees, or flip it over. Reload media into the input tray. Do not fan media.
Print media is removed before it settles into the output bin.	Reset the printer. Wait until the page completely settles in the output bin before removing it.
When duplexing, the print media is removed before the second side of the document is printed.	Reset the printer and print the document again. Wait until the page completely settles in the output bin before removing it.
Print media is in poor condition.	Replace the print media.
Print media is not picked up by the internal rollers from Tray 2 or Tray 3.	Remove the top sheet of media. If the media is heavier than 105 g/m^2 (28 lb), it may not be picked from the tray.
Print media has rough or jagged edges.	Replace the media.
Print media is perforated or embossed.	This media does not separate easily. You might need to feed single sheets from Tray 1.
Printer supply items have reached the end of their useful life.	Check the printer control panel for messages prompting you to replace supplies, or print a supplies status page to verify the remaining life of the supplies. See Replacing supplies for more information.

Cause	Solution
Media was not stored correctly.	Replace the print media. Media should be stored in the original packaging in a controlled environment.
	Note
	If the printer continues to jam, contact HP Customer Support or your authorized HP service provider. For more information, see http://www.hp.com/support/lj4650.

Clearing jams

Each section below corresponds with a jam message that might appear on the control panel. Use these procedures to clear the jam.

Jam in Tray 1

1. Open Tray 1.
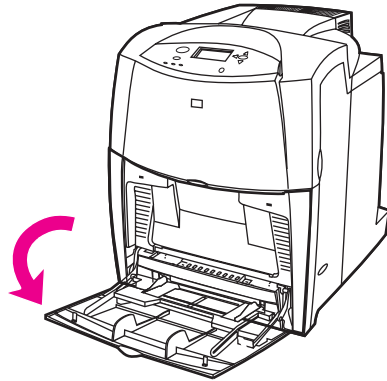
2. Remove any jammed paper from Tray 1.

3. Reload paper in Tray 1 and check to make sure the media is located correctly.

<table>
<tr><td>Note</td><td>Do not load media above the fill tabs.</td></tr>
</table>

4. Confirm that the guides are in the correct position.
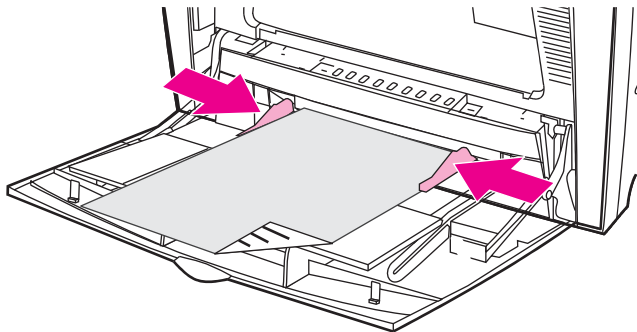
5. Close Tray 1.

6. To continue printing, press **?**, and then press ✔.

Jam in Tray 2, Tray 3, or Tray 4

1. Pull out the tray indicated and place it on a flat surface. Make sure that the paper guides are in the correct position.
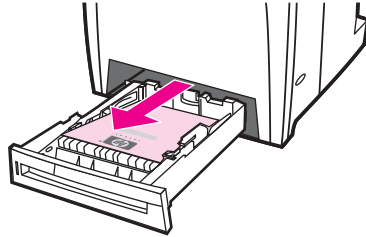
2. Remove any partially fed media. Grasp the media by both corners and pull down.

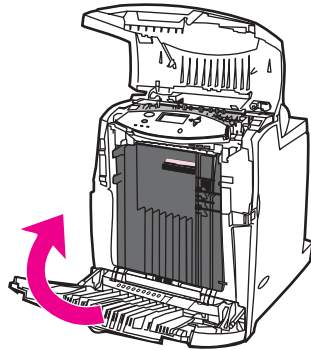Use Tray 1 to avoid jams with heavier paper.

3. Inspect the media path to ensure that it is clear.
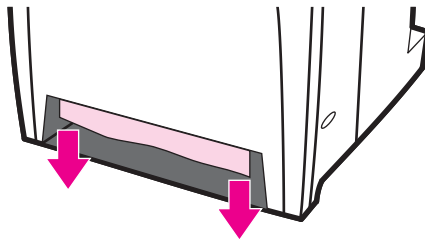
If the media tears, make sure that all media fragments are removed from the paper path before resuming printing.

4. For jams that occur in either Tray 3 or Tray 4, check the trays above for jams as well. For example, if the jam occurs in Tray 4, also open Tray 2 and Tray 3 and remove any jammed paper.

5. Check to make sure the media is located correctly and underneath the front corner tabs. Insert the tray into the printer. Make sure all trays are completely closed.
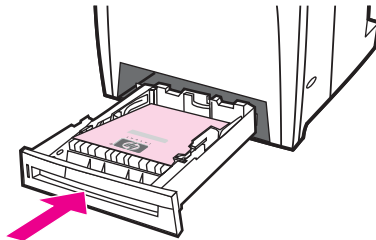
Jams in the top cover

Jams in the top cover occur in of the areas indicated in the figures below. Use the procedures in this section to clear a jam in this area.
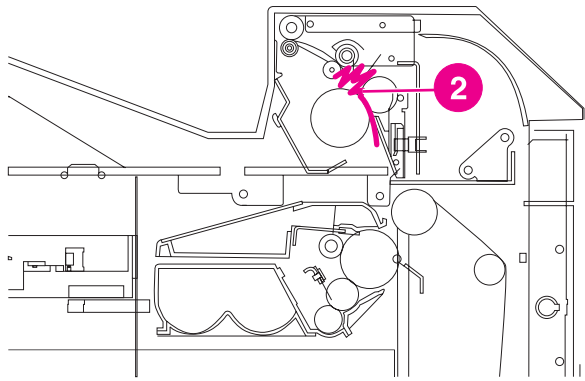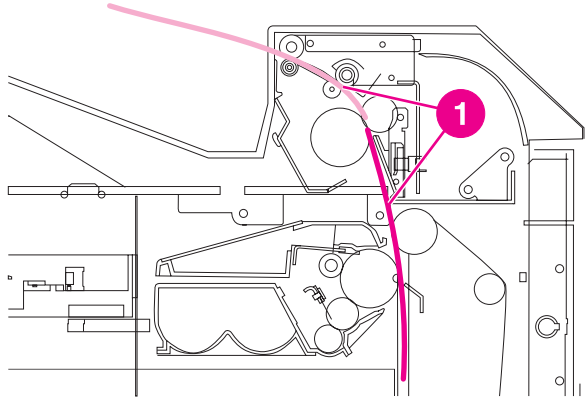
1 Jammed paper
2 Crumpled paper in the fuser

To clear a jam in the top cover area

Do not touch the fuser. It is hot and could cause burns! The fuser's operating temperature is 190°C (374° F). Wait ten minutes to allow the fuser to cool before touching the fuser.

1. Using the side handles, open the top cover.
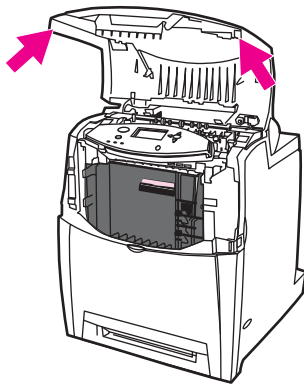
2. Firmly lift the two green handles on either side of the fuser to disengage the fuser rollers.
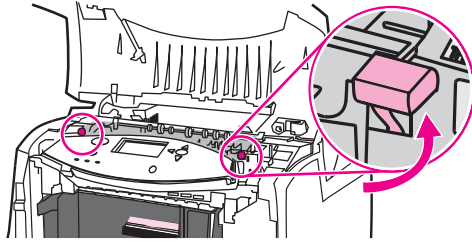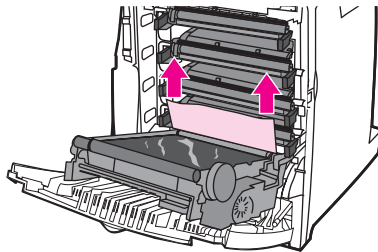
3. Grasp the media by both corners and pull to remove it.
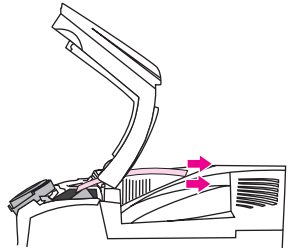
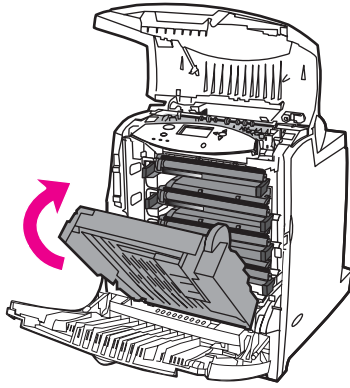If the media tears, make sure that all media fragments are removed from the paper path before resuming printing. Do not reach into the fuser until it has cooled.

4. Grasp the green handles on the transfer unit and pull down. The front cover will open as the transfer unit is pulled down.
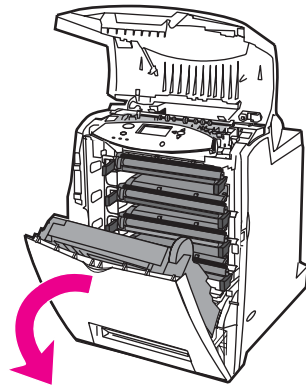
CAUTION Do not place anything on the transfer unit while it is open. If the transfer unit is punctured, print quality problems may result.

5. Grasp the media by both corners and pull down. If the media appears to be crumpled in the fuser, go to step 6.
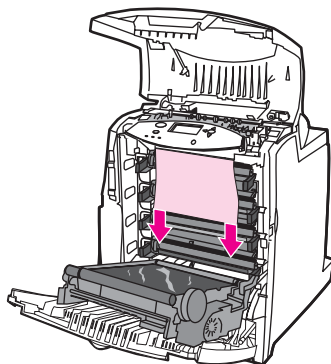
6. Open the fuser cover and remove any media that is crumpled in the fuser.
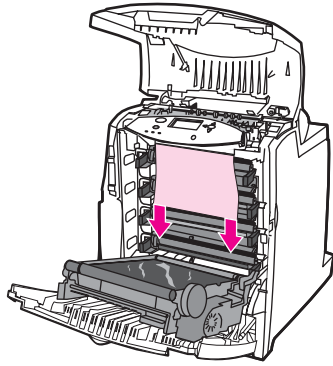
Note   If the media tears, make sure that all media fragments are removed from the paper path before resuming printing. Do not reach into the fuser until it has cooled.

7. Firmly press down on the two green handles on either side of the fuser to re-engage the fuser rollers.
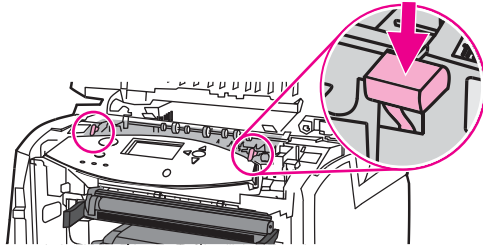
8. Close the transfer unit and front cover.
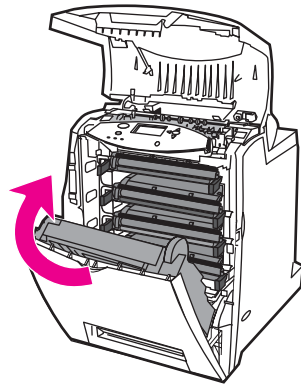
9. Close the top cover.

Jam in paper path

1. Using the side handles, open the top cover.
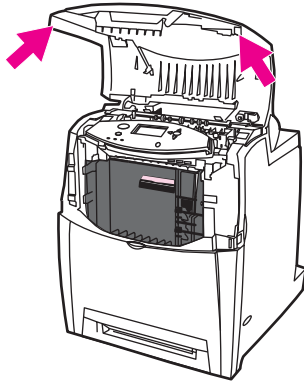
2. Grasp the green handle on the transfer unit and pull down. The front cover will open as the transfer unit is pulled down.
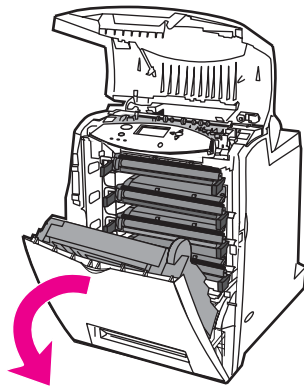
CAUTION   Do not place anything on the transfer unit while it is open. If the transfer unit is punctured, print quality problems may result.

3. Grasp the media by both corners and pull up.
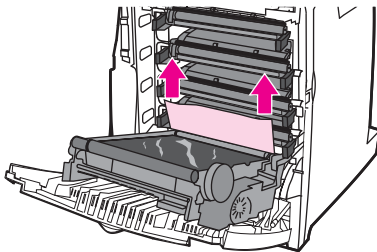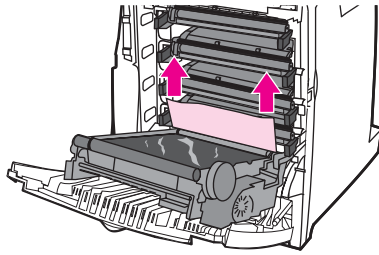
4. Inspect the media path to ensure that it is clear.

Note   If the media tears, make sure that all media fragments are removed from the paper path before resuming printing.

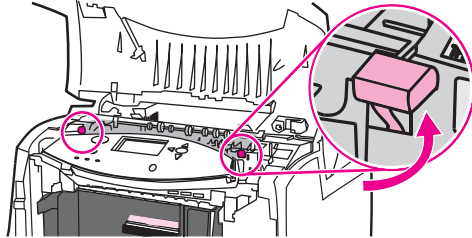5. Close the transfer unit and front cover.
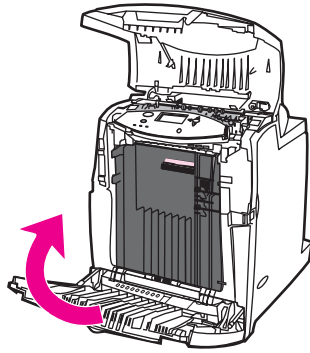
6. Close the top cover.

Multiple jams in paper path

1. Using the side handles, open the top cover.
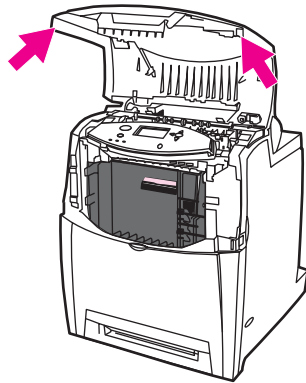
2. Grasp the green handle on the transfer unit and pull down. The front cover will open as the transfer unit is pulled down.
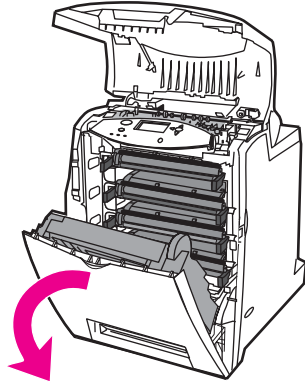
CAUTION Do not place anything on the transfer unit while it is open. If the transfer unit is punctured, print quality problems may result.

3. Grasp the media by both corners and pull up.
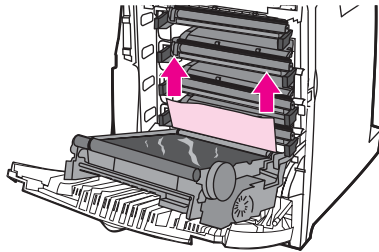
4. Inspect the media path to ensure that it is clear.

Note If the media tears, make sure that all media fragments are removed from the paper path before resuming printing.

5. Firmly lift the two green handles on either side of the fuser to disengage the fuser rollers.
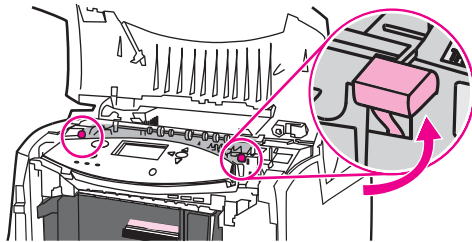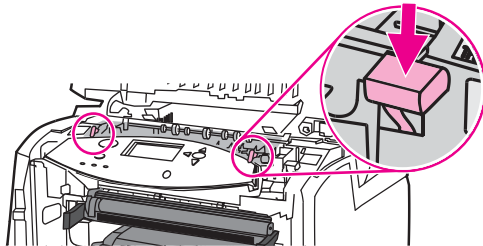
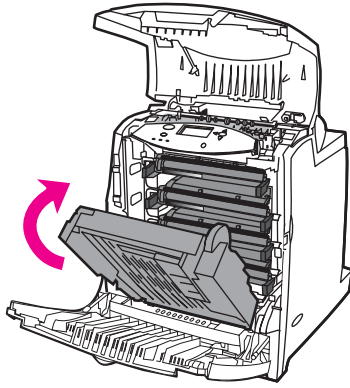6. Grasp the media by both corners and pull to remove it.
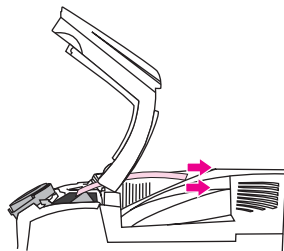
Note If the media tears, make sure that all media fragments are removed from the paper path before resuming printing. Do not reach into the fuser until it has cooled.

7. Firmly press down on the two green handles on either side of the fuser to re-engage the fuser rollers.
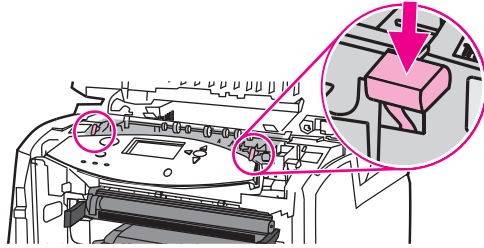
8. Close the transfer unit and front cover.

9. Close the top cover.

Jam in duplex path

1. Using the side handles, open the top cover.
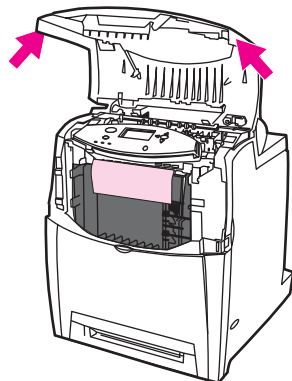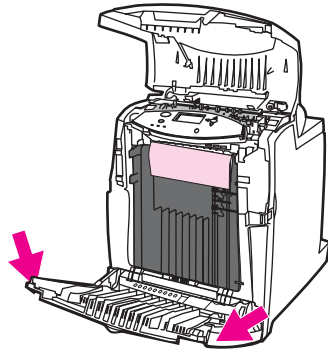
2. Open the front cover.

3. Grasp the media by both corners and pull down.
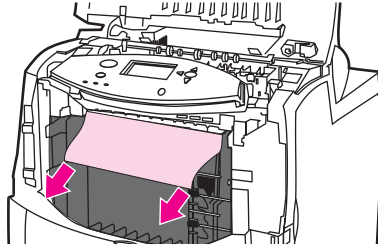
Note   If the media tears, make sure that all media fragments are removed from the paper path before resuming printing.

4. Grasp the green handle on the transfer unit and pull down.
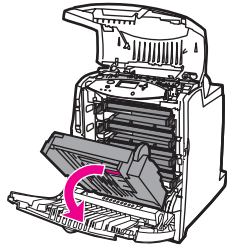
5. Grasp the media by both corners and pull up.

6. If the media cannot be accessed from this location, close the transfer unit.

7. Grasp the media by both corners and pull.
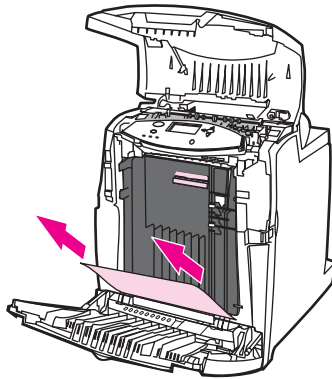
8. Close the front cover.
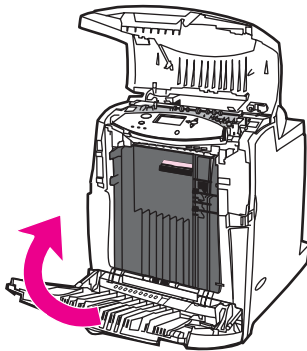
9. Close the top cover.

Multiple jams in duplex path

1. Using the side handles, open the top cover.
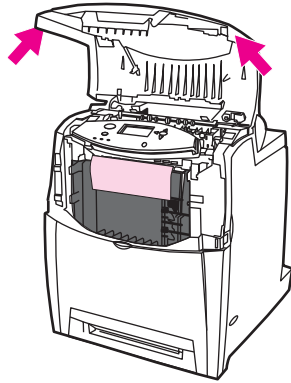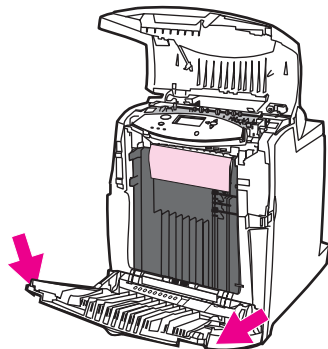
2. Open the front cover.

3. Grasp the media by both corners and pull down.
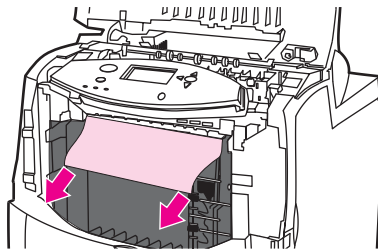
Note If the media tears, make sure that all media fragments are removed from the paper path before resuming printing.

4. Grasp the green handle on the transfer unit and pull down.
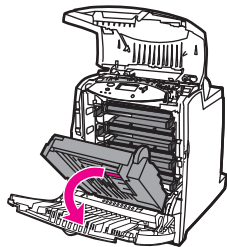
5. Grasp the media by both corners and pull up.

6. Firmly lift the two green handles on either side of the fuser to disengage the fuser rollers.

7. Grasp the media by both corners and pull to remove it.
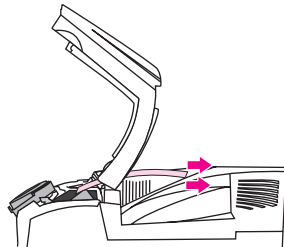
If the media tears, make sure that all media fragments are removed from the paper path before resuming printing. Do not reach into the fuser until it has cooled.

8. Firmly press down on the two green handles on either side of the fuser to re-engage the fuser rollers.

9. If the media cannot be accessed from this location, close the transfer unit.

10. Grasp the media by both corners and pull.
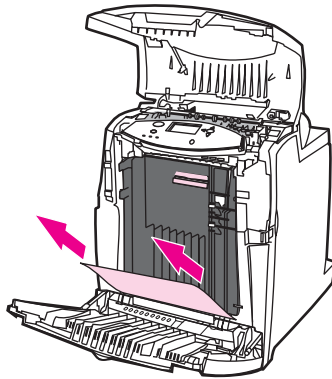
11. Close the front cover.
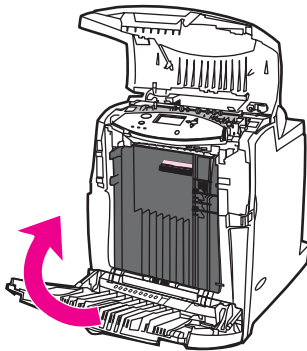
12. Close the top cover.
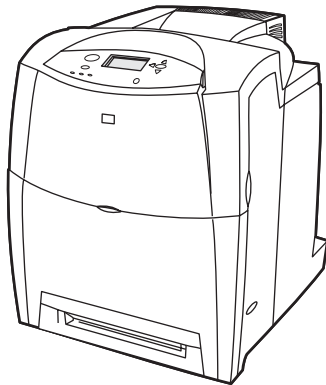
Media-handling problems

Use only media that meets the specifications outlined in the *HP LaserJet Printer Family Print Media Guide*. For ordering information, see Supplies and accessories.

For paper specifications for this printer, see Supported media weights and sizes.

Printer feeds multiple sheets

Cause	Solution
The input tray is overfilled.	Remove excess media from the input tray.
The media is not under the tabs in the input tray (Trays 2, 3, and 4).	Open the input tray and verify that the media is seated under the metal tabs.
Print media is sticking together.	Remove media, flex it, rotate it 180 degrees or flip it over, and then reload it into the tray. **Note** Do not fan media. Fanning can cause static electricity, which can cause media to stick together.
Media does not meet the specifications for this printer.	Use only media that meets HP media specifications for this printer. See Supported media weights and sizes.
Media lift plate is not locked down before the tray is inserted back into the printer.	Lock down media lift plate before inserting the tray into the printer.
Trays are not properly adjusted.	Make sure that the rear media-length guide indicates the length of media being used.

Printer feeds incorrect page size

Cause	Solution
The correct size media is not loaded in the input tray.	Load the correct size media in the input tray.
The correct size media is not selected in the software application or printer driver.	Confirm that the settings in the application and printer driver are appropriate, since the application settings override the printer driver and control panel settings, and the printer driver settings override the control panel settings. For more information about how to access the printer drivers, see Accessing the printer drivers.
The correct size media for Tray 1 is not selected in the printer control panel.	From the control panel, select the correct size media for Tray 1.
The media size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the media size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the rear and width media guides are touching the paper.

Printer feeds incorrect page size (continued)

Cause	Solution
The Custom/Standard switch in the tray is not in the correct position.	Verify that the switch is in the correct position for the media size.

Printer pulls from incorrect tray

Cause	Solution
You are using a driver for a different printer. For more information about how to access the printer drivers, see Accessing the printer drivers.	Use a driver for this printer.
The specified tray is empty.	Load media in the specified tray.
Tray behavior for the requested tray is set to **FIRST** in the system setup submenu of the configure device menu.	Change the setting to **EXCLUSIVELY**.
The media size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the media size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the guides are touching the paper.
The Custom/Standard switch in the tray is not in the correct position.	Verify that the switch is in the correct position for the media size.

Media does not feed automatically

Cause	Solution
Manual feed is selected in the software application.	Load Tray 1 with media, or, if the media is loaded, press ✔.
The correct size media is not loaded.	Load the correct size media.
The input tray is empty.	Load media into the input tray.
Media from a previous jam has not been completely removed.	Open the printer and remove any media in the paper path. Closely inspect the fuser area for jams. See Paper jams.
The media size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the media size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the rear and width media guides are touching the paper.
The custom/standard switch in the tray is not in the correct position.	Verify that the switch is in the correct position for the media size.

Media does not feed from input Trays 2, 3, or 4

Cause	Solution
Manual feed is selected in the software application.	Load Tray 1 with media, or, if the media is loaded, press ✔.

Media does not feed from input Trays 2, 3, or 4 (continued)

Cause	Solution
The correct size media is not loaded.	Load the correct size media.
The input tray is empty.	Load media in the input tray.
The correct media type for the input tray is not selected in the printer control panel.	From the printer control panel, select the correct media type for the input tray.
Media from a previous jam has not been completely removed.	Open the printer and remove any media in the paper path. Closely inspect the fuser area for jams. See Paper jams.
Tray 3 or Tray 4 does not appear as an input tray option.	Tray 3 and Tray 4 only display as an option if they are installed. Verify that Tray 3 and Tray 4 are correctly installed. Verify that the printer driver has been configured to recognize Tray 3 and Tray 4. For more information about how to access the printer drivers, see Accessing the printer drivers.
Tray 3 or Tray 4 is incorrectly installed.	Print a configuration page to confirm that Tray 3 or Tray 4 is installed. If not, verify that the optional installed 500-sheet feeder assembly or 2 x 500-sheet feeder assembly is correctly attached to the printer.
The media size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the media size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the guides are touching the paper.
The custom/standard switch in the tray is not in the correct position.	Verify that the switch is in the correct position for the media size.

Transparencies or glossy paper will not feed

Cause	Solution
The correct media type is not specified in the software or printer driver.	Verify that the correct media type is selected in the software or printer driver.
The input tray is overfilled.	Remove excess media from the input tray. Do not load more than 200 sheets of glossy paper or glossy film, or more than 100 transparencies in Tray 2, Tray 3, or Tray 4. Do not exceed the maximum stack height for Tray 1.
Media in another input tray is the same size as the transparencies, and the printer is defaulting to the other tray.	Make sure that the input tray containing the transparencies or glossy paper is selected in the software application or printer driver. Use the printer control panel to configure the tray to the media type loaded. For more information about how to access the printer drivers, see Accessing the printer drivers.

Transparencies or glossy paper will not feed (continued)

Cause	Solution
The tray containing the transparencies or glossy paper is not configured correctly for type.	Make sure that the input tray containing the transparencies or glossy paper is selected in the software application or printer driver. Use the printer control panel to configure the tray to the media type loaded. See Configuring input trays. For more information about how to access the printer drivers, see Accessing the printer drivers.
Transparencies or glossy paper may not meet supported media specifications.	Use only media that meets the HP media specifications for this printer. See Supported media weights and sizes.

Envelopes jam or will not feed in the printer

Cause	Solution
Envelopes are loaded in an unsupported tray. Only Tray 1 can feed envelopes.	Load envelopes into Tray 1.
Envelopes are curled or damaged.	Try using different envelopes. Store envelopes in a controlled environment.
Envelopes are sealing because the moisture content is too high.	Try using different envelopes. Store envelopes in a controlled environment.
Envelope orientation is incorrect.	Verify that the envelope is loaded correctly. See Configuring input trays.
This printer does not support the envelopes being used.	See Supported media weights and sizes or the *HP LaserJet Printer Family Print Media Guide*.
Tray 1 is configured for a size other than envelopes.	Configure Tray 1 size for envelopes.

Output is curled or wrinkled

Cause	Solution
Media does not meet the specifications for this printer.	Use only media that meets the HP media specifications for this printer. See Supported media weights and sizes.
Media is damaged or in poor condition.	Remove media from the input tray and load media that is in good condition.
Printer is operating in an excessively humid environment.	Verify that the printing environment is within humidity specifications. See Printer specifications.
You are printing large, solid-filled areas.	Large, solid-filled areas can cause excessive curl. Try using a different pattern.
Media used was not stored correctly and may have absorbed moisture.	Remove media and replace it with media from a fresh, unopened package.
Media has poorly cut edges.	Remove media, flex it, rotate it 180 degrees or turn it over, and then reload it into the input tray. Do not fan media. If the problem persists, replace the media.

Output is curled or wrinkled (continued)

Cause	Solution
The specific media type was not configured for the tray or selected in the software.	Configure the software for the media (see the software documentation). Configure the tray for the media, see Configuring input trays.

Printer will not duplex or duplexes incorrectly

Cause	Solution
You are trying to duplex on unsupported media.	Verify that the media is supported for duplex printing. See Supported media weights and sizes.
The printer driver is not set up for duplex printing.	Set up the printer driver to enable duplex printing.
The first page is printing on the back of preprinted forms or letterhead.	Load preprinted forms and letterhead in Tray 1 with the letterhead or printed side up and the bottom of the page feeding into the printer. For Tray 2, Tray 3, or Tray 4, load these media printed side down with the top of the page toward the back of the printer.

Printer response problems

No display message

Cause	Solution
The printer's on/off button is in the standby position.	Verify that the printer is on. Fans may run while the printer is in standby mode (off).
The printer's memory DIMMs are defective or installed incorrectly.	Verify that the printer's memory DIMMs are correctly installed and are not defective.
The power cord is not firmly plugged into both the printer and the power receptacle.	Turn off the printer and then disconnect and reconnect the power cord. Turn the printer back on.
The line voltage is incorrect for the printer power configuration.	Connect the printer to a proper voltage source, as specified on the Power Rating Label on the back of the printer.
The power cord is damaged or excessively worn.	Replace the power cord.
The power source receptacle is not working correctly.	Connect the printer to a different power receptacle.

Printer is on, but nothing prints

Cause	Solution
The printer's **Ready** indicator light is not lit.	Press STOP to return the printer to the **Ready** state.
The top cover is not closed properly.	Close the top cover firmly.
The **Data** indicator light is flashing.	The printer is probably still receiving data. Wait for the **Data** indicator to stop flashing.
REPLACE <COLOR> CARTRIDGE appears on the printer display.	Replace the print cartridge specified on the printer display.
A printer message other than **Ready** appears on the printer control panel.	See Control panel messages.
The parallel port may have a DOS timeout error.	Add a MODE command to the AUTOEXEC.BAT file. See the DOS manual for additional information.
The PS (PostScript Emulation) personality is not selected.	Select **PS** or **AUTO** for the printer language. For more information, see Changing printer control panel configuration settings.
The correct driver is not selected in the software application or printer driver.	Select the driver for PostScript Emulation for this printer in the software application or printer driver. For more information about how to access the printer drivers, see Accessing the printer drivers.
The printer is not properly configured.	See Changing printer control panel configuration settings.

Printer is on, but nothing prints (continued)

Cause	Solution
The computer port is not configured or is not working properly.	Run another peripheral connected to this port to verify that the port is working properly.
The printer has not been correctly named for the network or for a Macintosh computer.	Use the appropriate utility to name the printer on the network. For Macintosh OS 9.x computers, select the printer from within the Chooser. For Macintosh OS X.1 and later, open the Print Center Application, select the connection type, and then select the printer.

Printer is on, but is not receiving data

Cause	Solution
The printer's **Ready** indicator light is not lit.	Press STOP to return the printer to the **Ready** state.
The top cover is not closed properly.	Close the top cover firmly.
A printer message other than **Ready** appears on the printer control panel.	See Control panel messages.
The interface cable is not correct for this configuration.	Select the correct interface cable for your configuration. See Parallel configuration, Enhanced I/O (EIO) configuration, or USB configuration.
The interface cable is not securely connected to both the printer and the computer.	Disconnect and reconnect the interface cable.
The printer is not configured correctly.	See Changing printer control panel configuration settings for configuration information.
The interface configurations on the printer's configuration page do not match the configurations on the host computer.	Configure the printer to match the computer configuration.
The computer is not working properly.	Try using an application that you know works properly to check the computer, or, in DOS, type Dir>Prn at the DOS prompt.
The computer port that the printer is connected to is not configured or is not working properly.	Run another peripheral connected to this port to verify that the port is working properly.
The printer has not been correctly named for the network or Macintosh computer.	Use the appropriate utility to name the printer on the network. For Macintosh OS 9.x computers, select the printer from within the Chooser. For Macintosh OS X.1 and later, open the Print Center Application, select the connection type, and select the printer.

Unable to select the printer from the computer

Cause	Solution
If you are using a switch box, the printer may not be selected for the computer.	Select the correct printer through the switch box.

Unable to select the printer from the computer (continued)

Cause	Solution
The printer's **Ready** indicator light is not lit.	Press STOP to return the printer to the **Ready** state.
A printer message other than **Ready** appears on the printer control panel.	See Control panel messages.
The correct printer driver is not installed in the computer.	Install the correct printer driver. For more information about how to access the printer drivers, see Accessing the printer drivers.
The correct printer and port are not selected on the computer.	Select the correct printer and port.
The network is not configured properly for this printer.	Use the network software to verify the printer's network configuration, or consult with the network administrator.
The power source receptacle is not working correctly.	Connect the printer to a different power receptacle.

Printer control panel problems

Control panel settings work incorrectly

Cause	Solution
The printer control panel display is blank or is not lit, even when the fan is running.	Fans may run while the printer is in standby mode (off). Press the printer's on/off button to turn the printer on.
Printer settings in the printing software application or printer driver differ from the printer control panel settings.	Confirm that the settings in the application and printer driver are appropriate, since the application settings override the printer driver and control panel settings, and the printer driver settings override the control panel settings. For more information about how to access the printer drivers, see Accessing the printer drivers.
Control panel settings were not correctly saved after they were changed.	Reselect the control panel settings and then press ✔. An asterisk (*) should appear to the right of the setting.
The **Data** indicator light is lit, and there are no pages printing.	Buffered data exists in the printer. Press ✔ to print the buffered data using current control panel settings and activate the new control panel settings.
If the printer is on a network, another user may have changed printer control panel settings.	Consult the network administrator to coordinate changes to printer control panel settings.

Unable to select Tray 3 or Tray 4

Cause	Solution
Tray 3 does not appear as an input tray option on the configuration page or on the control panel.	Tray 3 only displays as an option if it is installed. Verify that Tray 3 is correctly installed.
Tray 3 or Tray 4 does not appear as an option in the printer driver.	Verify that the printer driver configuration recognizes Tray 3 or Tray 4. For more information about how to access the printer drivers, see Accessing the printer drivers.

Incorrect printer output

Incorrect fonts are printed

Cause	Solution
The font has not been correctly selected in the software application.	Re-select the font in the software application.
The font is not available to the printer.	Download the font to the printer or use another font. (In Windows, the driver does this automatically.)
The correct printer driver is not selected.	Select the correct printer driver. For more information about how to access the printer drivers, see Accessing the printer drivers.

Unable to print all characters in a symbol set

Cause	Solution
The correct font is not selected.	Select the correct font.
The correct symbol set is not selected.	Select the correct symbol set.
The selected character or symbol is not supported by the software application.	Use a font that supports the selected character or symbol.

Drifting text between printouts

Cause	Solution
Your software application is not resetting the printer to the top of the page.	See the documentation for the software or the PCL/PJL Technical Reference Package for specific information.

Erratic, missing characters or interrupted printout

Cause	Solution
The interface cable is of poor quality.	Try using a different, higher-quality, IEEE-compliant cable. Parallel cables can be no longer than 10 meters (30 feet).
The interface cable is loose.	Disconnect and reconnect the interface cable.
The interface cable is damaged or bad.	Try using a different interface cable.
The power cable is loose.	Disconnect and reconnect the power cable.
You are attempting to print a PCL job with the printer configured for PostScript Emulation.	From the printer control panel, select the correct printer personality, and then resend the print job.
You are attempting to print a PostScript job with the printer configured for PCL.	From the printer control panel, select the correct printer personality, and then resend the print job.

Partial printout

Cause	Solution
A memory error message appears on the printer control panel.	1. Free up printer memory by deleting unneeded downloaded fonts, style sheets, and macros from printer memory; or 2. Add more memory to the printer.
The file you are printing contains errors.	Check the software application verify that the file does not contain errors. To do so: 1. Print another file that you know is error-free from within the same application; or 2. Print the file from another application.

Guidelines for printing with different fonts

- The 80 internal fonts are available in PostScript Emulation (PS) and PCL mode.
- To conserve printer memory, download only those fonts that are needed.
- If you require several downloaded fonts, consider installing additional printer memory.

Some software applications automatically download fonts at the beginning of each print job. It might be possible to configure those applications to download only soft fonts that are not already resident in the printer.

Software application problems

Unable to change system selections through software

Cause	Solution
System software changes are locked out by the printer control panel.	Consult with your network administrator.
The software application does not support system changes.	See the software application documentation.
The correct printer driver is not loaded.	Load the correct printer driver. For more information about how to access the printer drivers, see Accessing the printer drivers.
The correct application driver is not loaded.	Load the correct application driver.

Unable to select a font from the software

Cause	Solution
The font is not available to the software application.	See the software application documentation.

Unable to select colors from the software

Cause	Solution
The software application does not support color.	See the documentation for the software application.
Color mode is not selected in the software application or printer driver.	Select **color** mode instead of grayscale or monochrome mode.
The correct printer driver is not loaded.	Load the correct printer driver.

Printer driver does not recognize Tray 3, Tray 4, or the duplex printing accessory

Cause	Solution
The printer driver has not been configured to recognize Tray 3, Tray 4, or the duplex printing accessory. For more information about how to access the printer drivers, see Accessing the printer drivers.	See the printer driver's online Help for instructions on how to configure the driver to recognize printer accessories. For more information about how to access the printer drivers, see Accessing the printer drivers.
The accessory may not be installed.	Verify that the accessory is properly installed.

Color printing problems

Printing black instead of color

Cause	Solution
Color mode is not selected in the software application or printer driver.	Select **color** mode instead of grayscale or monochrome mode in the software application or printer driver, see Printer information pages to learn how to print a configuration page.
The correct printer driver is not selected in your software application.	Select the correct printer driver.
No color appears on the configuration page.	Consult your service representative.

Incorrect shade

Cause	Solution
The sealing tape has not been removed from the print cartridge.	Remove the sealing tape from the print cartridge for the color that is missing. See Changing print cartridges.
The media does not meet the specifications for this printer.	See the *HP LaserJet Printer Family Print Media Guide*. Go to http://www.hp.com/ support/lj4650 for HP LaserJet Family Paper Specification Guide ordering information. When you connect, select **Manuals**. Or go to http://www.hp.com/support/ ljpaperguide to download the guide in PDF format.
You are operating the printer in excessively humid conditions.	Verify that the printer's environment is within humidity specifications. See Environmental specifications. **Note** For more information about color quality problems, see Print quality troubleshooting.

Missing color

Cause	Solution
Defective HP print cartridge.	Replace the cartridge.
A non-HP cartridge might be installed.	Ensure that you are using a genuine HP print cartridge.

Inconsistent colors after installing a print cartridge

Cause	Solution
The sealing tape has not been removed from the print cartridge.	Remove the sealing tape from the print cartridge for the color that is missing. See Changing print cartridges.
Another print cartridge may be low.	Check the supplies gauge on the control panel or print a supplies status page. See Printer information pages.
Print cartridges may be improperly installed.	Verify that each print cartridge is installed properly.
A non-HP cartridge might be installed.	Ensure that you are using a genuine HP print cartridge.

Printed colors do not match screen colors

Cause	Solution
Extremely light screen colors are not being printed.	The software application may interpret extremely light colors as white. If so, avoid using extremely light colors.
Extremely dark screen colors are being printed in black.	The software application may interpret extremely dark colors as black. If so, avoid using extremely dark colors.
The colors on the computer screen differ from the printer output.	On the printer driver's **Color Control** tab, select **Screen Match**.
	Note
	Several factors can influence your ability to match printed colors to those on your screen. These factors include print media, overhead lighting, software applications, operating system palettes, monitors, and video cards and drivers.

Print quality troubleshooting

When occasional print quality problems occur, use the information in this section to help solve the problem.

Print quality problems associated with media

Some print quality problems arise from use of inappropriate media.

- Use paper that meets HP paper specifications. See Supported media weights and sizes.
- The surface of the media is too smooth. Use media that meets HP paper specifications. See Supported media weights and sizes.
- The driver setting is incorrect. Change the paper type setting to **glossy** for Trays 2, 3, or 4, or **heavy** or **heavy glossy** for Tray 1.
- The media you are using is too heavy for the printer, and the toner is not fusing to the media.
- The transparencies you are using are not designed for proper toner adhesion. Use only transparencies designed for HP Color LaserJet printers.
- The moisture content of the paper is uneven, too high, or too low. Use paper from a different source or from an unopened ream of paper.
- Some areas of the paper reject toner. Use paper from a different source or from an unopened ream of paper.
- The letterhead you are using is printed on rough paper. Use a smoother, xerographic paper. If this solves your problem, consult with the printer of your letterhead to verify that the paper used meets the specifications for this printer. See Supported media weights and sizes.
- The paper is excessively rough. Use a smoother, xerographic paper.

Overhead transparency defects

Overhead transparencies may display any of the image quality problems that any other type of media will cause, as well as defects specific to printing transparencies. In addition, because transparencies are pliable while in the print path, they are subject to being marked by the media-handling components.

Note   Allow transparencies to cool at least 30 seconds before handling them.

- On the printer driver's **Paper** tab, select **Transparency** as the media type. Also, make sure that the tray is correctly configured for transparencies.
- Check that the transparencies meet the specifications for this printer. See Supported media weights and sizes. For more information, consult the *HP LaserJet Family Print Media Guide*.

  See http://www.hp.com/support/lj4650 for *HP LaserJet Family Print Media Guide* ordering information.

  For downloadable manuals, go to http://www.hp.com/support/lj4650. When you connect, select **Manuals**. Or go to http://www.hp.com/supportljpaperguide to download the guide in PDF format.

- Handle transparencies by the edges. Skin oil on the surface of transparencies can cause spots and smudges.

- Small, random dark areas on the trailing edge of solid fill pages may be caused by transparencies sticking together in the output bin. Try printing the job in smaller batches.

- The selected colors are undesirable when printed. Select different colors in the software application or printer driver.

- If you are using a reflective overhead projector, use a standard overhead projector instead.

Print quality problems associated with the environment

The printer is operating in excessively humid or dry conditions. Verify that the printing environment is within specifications. See Environmental specifications.

Print quality problems associated with jams

- Make sure that all media is cleared from the paper path. See Paper jam recovery.

- The printer recently jammed. Print two to three pages to clean the printer.

- The media does not pass through the fuser causing image defects to appear on subsequent documents. Print two to three pages to clean the printer. However, if the problem persists see the next section.

Print quality troubleshooting pages

The print quality troubleshooting pages provide information on aspects of the printer that affect print quality.

1. Press MENU to enter the **MENUS**.

2. Press ▼ to highlight **DIAGNOSTICS**.

3. Press ✔ to select **DIAGNOSTICS**.

4. Press ▼ to highlight **PQ TROUBLESHOOTING**.

5. Press ✔ to select **PQ TROUBLESHOOTING**.

The message **Printing... PQ troubleshooting** appears on the display until the printer finishes printing the print quality troubleshooting information. The printer returns to the **Ready** state after printing the print quality troubleshooting information.

The print quality troubleshooting information includes one page for each color (cyan, magenta, yellow, and black), printer statistics related to print quality, instructions on interpreting the information, and procedures to solve print quality problems.

If following the procedures recommended by the print quality troubleshooting pages do not improve print quality, go to http://www.hp.com/support/lj4650.

Print quality troubleshooting tool

The print quality troubleshooting tool helps you identify and troubleshoot print quality issues for the HP Color LaserJet 4650 printer. The tool includes solutions for many print quality issues, using standard images to provide a common diagnostic environment. It is designed to provide intuitive, step-by-step directions for printing troubleshooting pages that are used to isolate print quality problems and provide possible solutions.

To find the print quality troubleshooting tool, go to the following quick URL: http://www.hp.com/go/printquality/clj4650

Calibrating the printer

The HP Color LaserJet 4650 printer automatically calibrates and cleans at various times to maintain the highest level of print quality. The user may also request the printer to calibrate via the printer's control panel, using **QUICK CALIBRATE NOW** or **FULL CALIBRATE NOW** located in the **CALIBRATION** and **PRINT QUALITY** menu. **QUICK CALIBRATE NOW** is used for color tone calibration (D-Max & D-Half) and takes about 86 seconds. If color density or tone seems wrong, Quick Calibration can be run. Full Calibration includes the Quick Calibrate routines and adds Drum Phase Calibration and Color Plane Registration (CPR). This takes about 3 minutes and 15 seconds. If color layers (cyan, magenta, yellow, black) on the printed page seem to be shifted from one another, Full Calibration should be run.

The HP Color LaserJet 4650 printer incorporates a new feature to skip calibration when appropriate, thereby making the printer available more quickly. For example, if the printer is powered off and on quickly (within 20 seconds) then calibration is not needed and will be skipped. This saves approximately one minute in time to be ready.

While the printer is calibrating and cleaning, the printer will pause printing for the amount of time it takes to complete the calibration or cleaning. For most calibrations and cleaning, the printer will not interrupt a print job, but will wait for the job to complete before calibrating or cleaning.

1. Press Menu to enter the **MENUS**.
2. Press ▼ to highlight **CONFIGURE DEVICE**.
3. Press ✔ to select **CONFIGURE DEVICE**.
4. Press ▼ to highlight **PRINT QUALITY**.
5. Press ✔ to select **PRINT QUALITY**.
6. Press ▼ to highlight **QUICK CALIBRATE NOW**.
7. Press ✔ to select **QUICK CALIBRATE NOW**.

OR

To perform a full calibration, use **FULL CALIBRATE NOW** instead of **QUICK CALIBRATE NOW** in steps 6 and 7.

Print quality defect chart

Use the examples in the print quality defect chart to determine which print-quality problem you are experiencing, and then see the corresponding pages to find information that can help you troubleshoot the problem. For the latest information and problem-solving procedures, go to http://www.hp.com/support/lj4650.

The print-quality defect chart assumes the use of letter- or A4-size media that has moved through the printer short-edge first (portrait orientation).

An image with no defects

	Horizontal lines or streaks		Misaligned colors
	● Make sure that the operation and location requirements of the printer are met. ● Print the Print Quality Troubleshooting Pages (see Print quality troubleshooting) and follow the diagnostic procedure listed on the first page to help isolate the defect to a particular component.		● Calibrate the printer.
	Vertical lines		**Repetitive defects**
	● Print the Print Quality Troubleshooting Pages (see Print quality troubleshooting) and follow the diagnostic procedure listed on the first page to help isolate the defect to a particular component.		● Make sure that the operation and location requirements of the printer are met. ● Print the Print Quality Troubleshooting Pages (see Print quality troubleshooting) and follow the diagnostic procedure listed on the first page to help isolate the defect to a particular component.

	Color fade in all colors		**Color fade in one color**
	- Make sure that the operation and location requirements of the printer are met. - Calibrate the printer.		- Make sure that the operation and location requirements of the printer are met. - Calibrate the printer. - Print the Print Quality Troubleshooting Pages (see Print quality troubleshooting) and follow the diagnostic procedure listed on the first page to help isolate the defect to a particular component.
	Fingerprints and media dents - Make sure to use supported media. - Make sure that the media you are using does not have any wrinkles or dents from handling, and that the media is not contaminated with visible fingerprints or other foreign substances. - Print the Print Quality Troubleshooting Pages (see Print quality troubleshooting) and follow the diagnostic procedure listed on the first page to help isolate the defect to a particular component.		**Loose toner** - Make sure that the operation and location requirements of the printer are met. - Make sure to use supported media. - Make sure that the media type and size for the tray are set correctly in the control panel for the media that you are using. - Make sure that the media is loaded correctly, the size guides are touching the edges of the stack of media, and the custom-media switch is set appropriately. Make sure that the media you are using does not have any wrinkles or dents from handling, and that the media is not contaminated with visible fingerprints or other foreign substances.

	Smeared toner ● Make sure to use supported media.		**White areas (dropouts) on page** ● Make sure that the operation and location requirements of the printer are met. ● Make sure to use supported media. ● Make sure that the media you are using does not have any wrinkles or dents from handling, and that the media is not contaminated with visible fingerprints or other foreign substances. ● Make sure that the media type and size for the tray are set correctly in the control panel for the media that you are using. ● Calibrate the printer. ● Print the Print Quality Troubleshooting Pages (see Print quality troubleshooting) and follow the diagnostic procedure listed on the first page to help isolate the defect to a particular component.
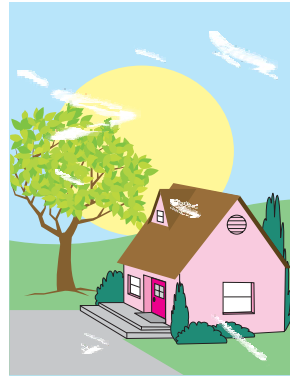
Media damage (wrinkles, curl, creases, tears)

- Make sure that the operation and location requirements of the printer are met.

- Make sure to use supported media.

- Make sure that the media is loaded correctly.

- Make sure that the media type and size for the tray are set correctly in the control panel for the media that you are using.

- Make sure that the media you are using does not have any wrinkles or dents from handling, and that the media is not contaminated with visible fingerprints or other foreign substances.

- Make sure that the following supplies are seated correctly:

  - fuser

  - transfer belt

- Inspect the jam areas and remove any undetected jammed or torn media.

Specks or stray toner

- Make sure that the operation and location requirements of the printer are met.

- Make sure to use supported media.

- Make sure that the media type and size for the tray are set correctly in the control panel for the media that you are using.

- Calibrate the printer.

- Print the Print Quality Troubleshooting Pages (see Print quality troubleshooting) and follow the diagnostic procedure listed on the first page to help isolate the defect to a particular component.

	Skewed, stretched, or off-center page
	
	● Make sure that the operation and location requirements of the printer are met.
	
	● Make sure to use supported media.
	
	● Make sure that the media is loaded correctly.
	
	● For problems with page skew, turn over the stack of media and rotate the stack 180 degrees.
	
	● Make sure that the following supplies are seated correctly:
	
	   ● fuser
	
	   ● transfer belt
	
	● Inspect the jam areas and remove any undetected jammed or torn media.		

A Working with memory and print server cards

Printer memory and fonts

The printer has two 200-pin DDR SDRAM slots. One slot is available for adding memory to the printer. DDR SDRAM memory is available in 128 and 256 MB modules.

Note   Memory specification: HP Color LaserJet 4650 series printers use 200-pin small outline dual inline memory modules (SODIMM) that support 128 or 256 MB of RAM.

The printer also has three flash memory card slots for printer firmware, fonts, and other solutions.

● The first flash memory card is reserved for printer firmware.

Note   Use the first flash memory card slot for firmware only. The slot is marked "Firmware Slot"

● The two additional flash memory card slots enable the user to add fonts and third-party solutions, such as signatures and personalities. The slots are marked "Slot 2" and "Slot 3." For more information about types of solutions available, go to http://www.hp.com/go/gsc.

Note   Flash memory cards adhere to Compact Flash specifications and size.

CAUTION   Do not insert a flash memory card that is designed for use with a digital camera into the printer. The printer does not support photo printing directly from a flash memory card. If you install a camera-type flash memory card, the control panel displays a message asking if you want to reformat the flash memory card. If you choose to reformat the card, all data on the card will be lost.

You may want to add more memory to the printer if you often print complex graphics or PS documents, or use many downloaded fonts. Additional memory also allows the printer to print multiple, collated copies at the maximum speed.

Note   Single in-line memory modules (SIMMs) / dual in-line memory modules (DIMMs) used on previous HP LaserJet printers are not compatible with the printer.

Note   To order DDR SDRAM, see Supplies and accessories.

Before ordering additional memory, see how much is currently installed by printing a configuration page.

Printing a configuration page

1. Press MENU to enter the **MENUS**.

2.   Press ▼ to highlight **INFORMATION**.

3.   Press ✔ to select **INFORMATION**.

4.   Press ▼ to highlight **PRINT CONFIGURATION**.

5.   Press ✔ to print the configuration page.

Installing memory and fonts

You can install more memory for the printer, and you can also install a font card to allow the printer to print characters for languages such as Chinese or the Cyrillic alphabet.

Static electricity can damage DIMMs. When handling DIMMs, either wear an antistatic wrist strap, or frequently touch the surface of the DIMM antistatic package and then touch bare metal on the printer.

To install DDR memory DIMMs

1. Turn the printer off.
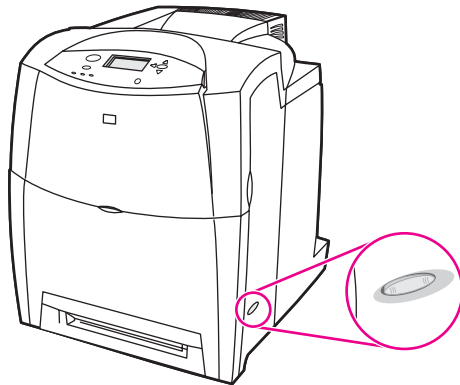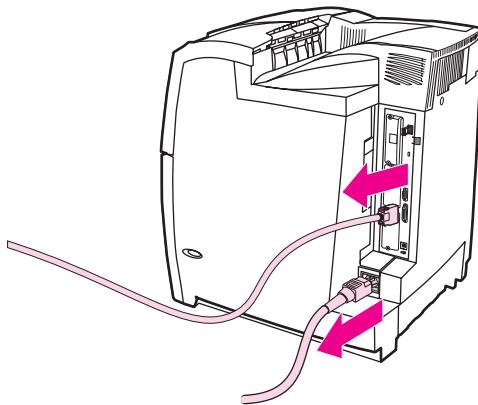

2. Disconnect all power and interface cables.

3. Locate the formatter board in the rear of the printer.
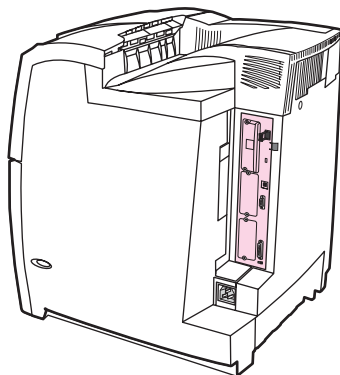
4. Using a #2 Phillips screwdriver, remove the eight screws holding the board in place, and set them aside.
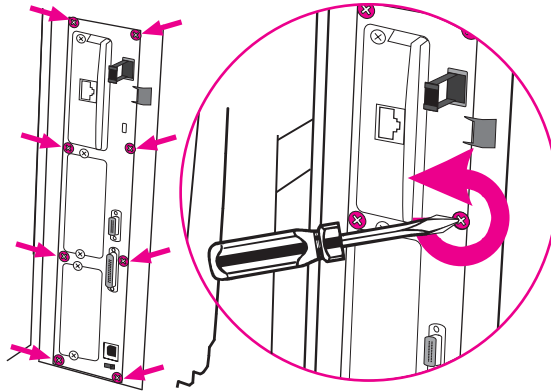
5. Slide out the formatter board and set it on a clean, flat, grounded surface.
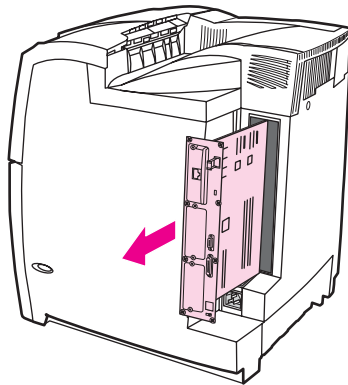
6. To replace a DDR DIMM that is currently installed, spread the latches apart on each side of the DIMM slot, lift the DDR DIMM up at an angle, and pull it out.
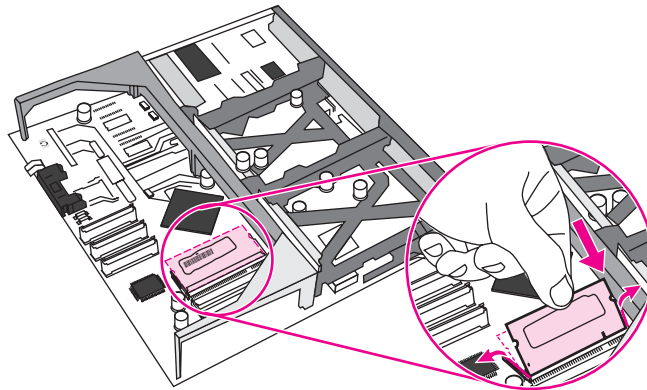
7. Remove the new DIMM from the antistatic package. Locate the alignment notch on the bottom edge of the DIMM.
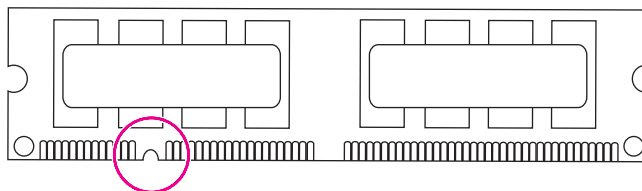
8. Holding the DIMM by the edges, align the notch on the DIMM with the bar in the DIMM slot at an angle and firmly press the DIMM into the slot until it is fully seated. When installed correctly, the metal contacts are not visible.
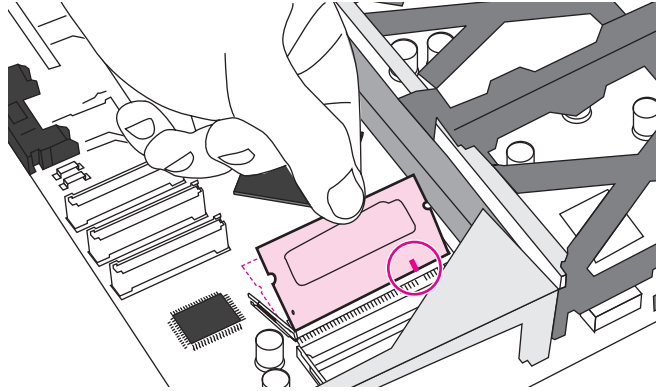
9. Push down on the DIMM until both latches engage the DIMM.
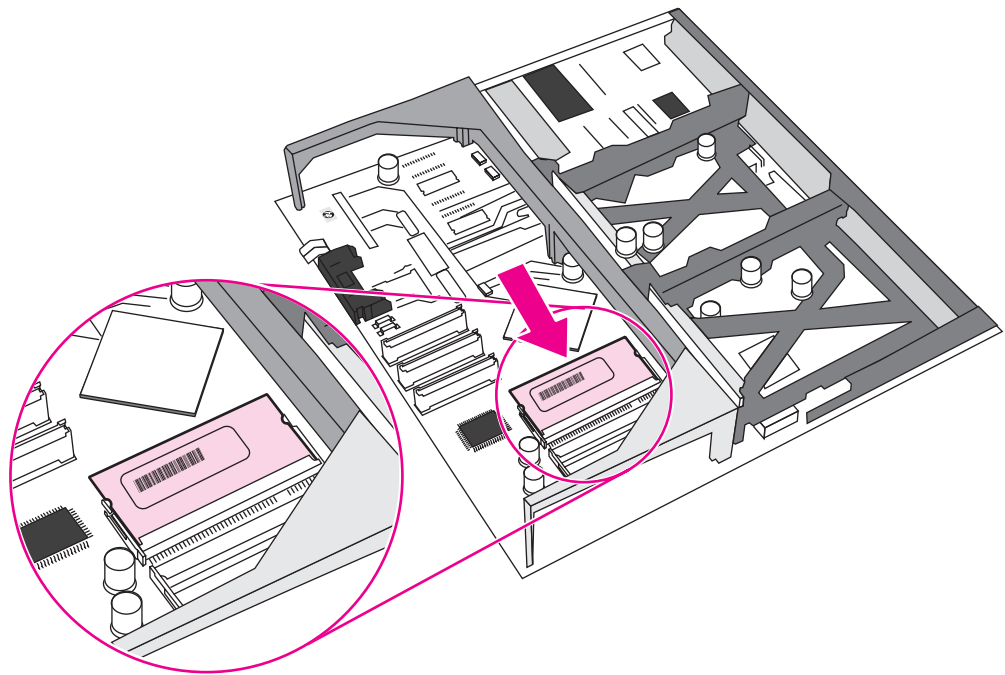
Note If you have difficulty inserting the DIMM, make sure the notch on the bottom of the DIMM is aligned with the bar in the slot. If the DIMM still does not go in, make sure you are using the correct type of DIMM.

10. Align the formatter board in the tracks at the top and bottom of the slot, and then slide the board back into the printer. Replace and tighten the eight screws removed in step 4.
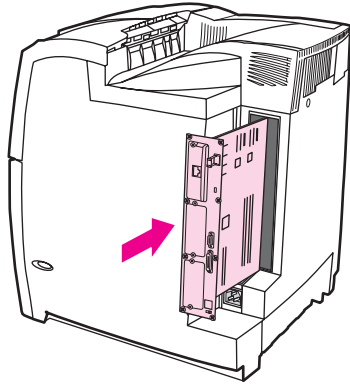
11. Reconnect the power cable and interface cables, and turn the printer on.
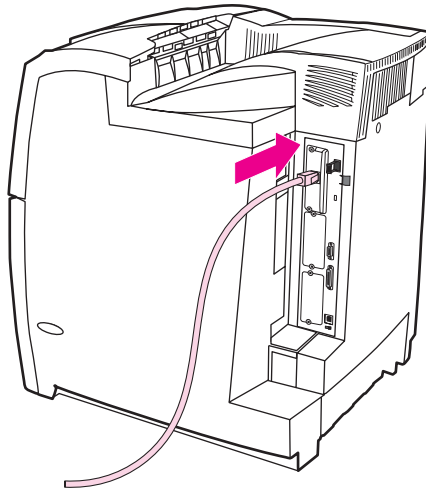
12. If you installed a memory DIMM, go to Enabling memory.

To install a flash memory card

CAUTION   Do not insert a flash memory card that is designed for use with a digital camera into the printer. The printer does not support photo printing directly from a flash memory card. If you install a camera-type flash memory card, the control panel displays a message asking if you want to reformat the flash memory card. If you choose to reformat the card, all data on the card will be lost.

1. Turn the printer off.
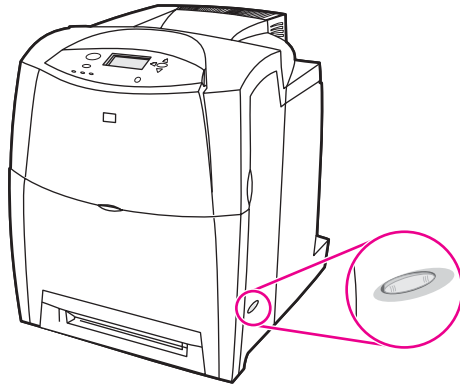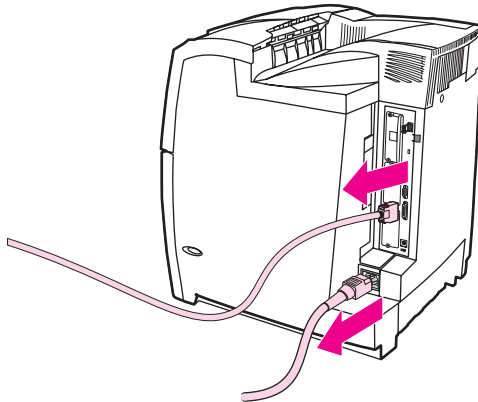
2. Disconnect all power and interface cables.

3. Locate the formatter board in the rear of the printer.
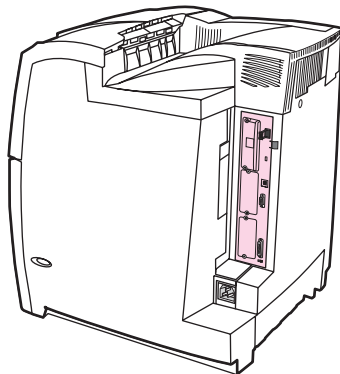
4. Using a #2 Phillips screwdriver, remove the eight screws holding the board in place, and set them aside.
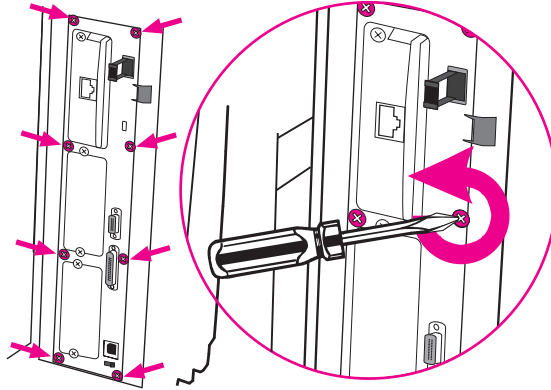
5. Slide out the formatter board and set it on a clean, flat, grounded surface.
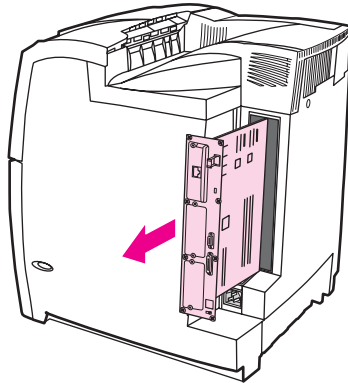
6. Align the groove on the side of the flash memory card with the notches in the connector and push it in the slot until it is fully seated.
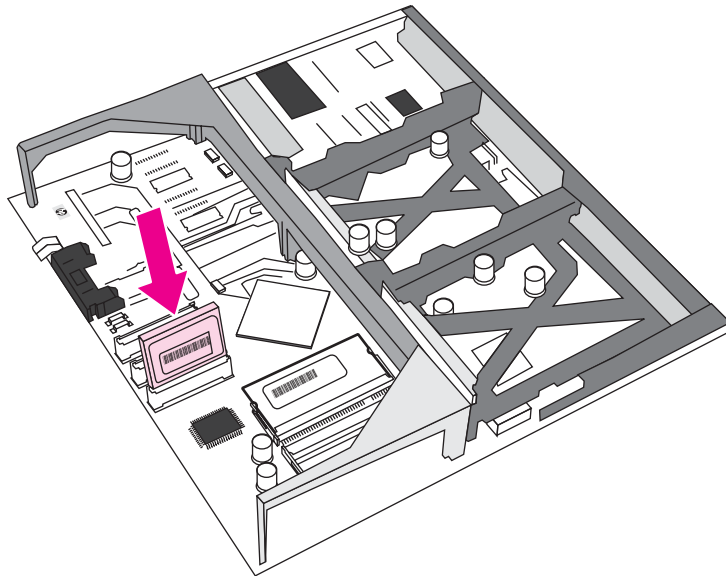
CAUTION Do not insert the flash memory card at an angle.

Note The first flash memory slot marked "Firmware Slot" is reserved for firmware only. Slots 2 and 3 should be used for all other solutions.

7. Align the formatter board in the tracks at the top and bottom of the slot, and then slide the board back into the printer. Replace and tighten the eight screws removed in step 4.
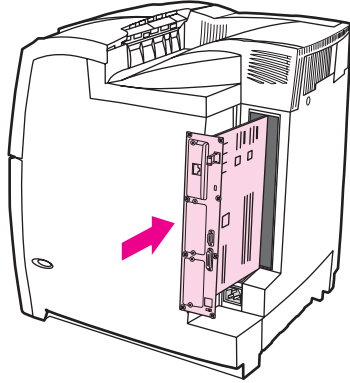
8. Reconnect the power cable and interface cables, and turn the printer on.
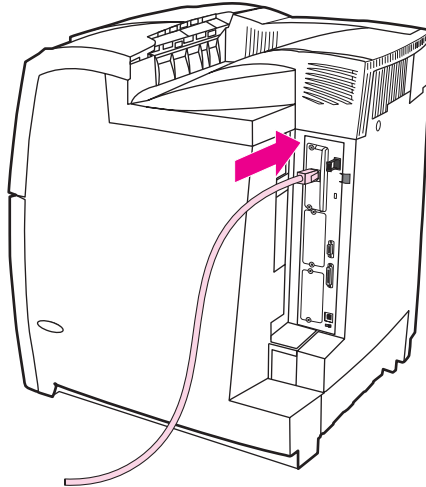
Enabling memory

If you installed a memory DIMM, set the printer driver to recognize the newly added memory.

To enable memory for Windows 98, ME, and NT

1. On the **Start** menu, point to **Settings**, and click **Printers**.

2. Right-click the printer and select **Properties**.

3. On the **Configure** tab, click **More**.

4. In the **Total Memory** field, type or select the total amount of memory that is now installed.

5. Click **OK**.

To enable memory for Windows 2000 and XP

1. On the **Start** menu, point to **Settings**, and click **Printers** or **Printers and Faxes**.

2. Right-click the printer and select **Properties**.

3. On the **Device Settings** tab, click **Printer Memory** (in the **Installable Options** section).

4. Select the total amount of memory that is now installed.

5. Click **OK**.

Installing an HP Jetdirect print server card

You can install an HP Jetdirect print server card in the base model printer, which comes with an open EIO slot.

To install an HP Jetdirect print server card

1. Turn the printer off.
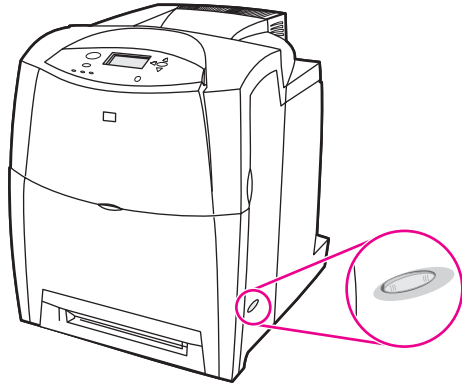
2. Disconnect all power and interface cables.
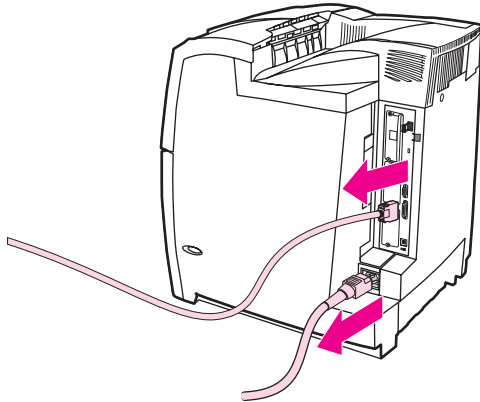
3. Locate an empty EIO slot. Loosen and remove the two retaining screws holding the cover for the EIO slot onto the printer, and then remove the cover. You will not need these screws and cover again.
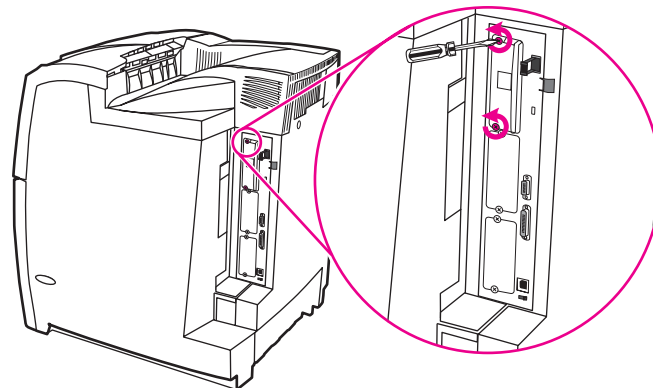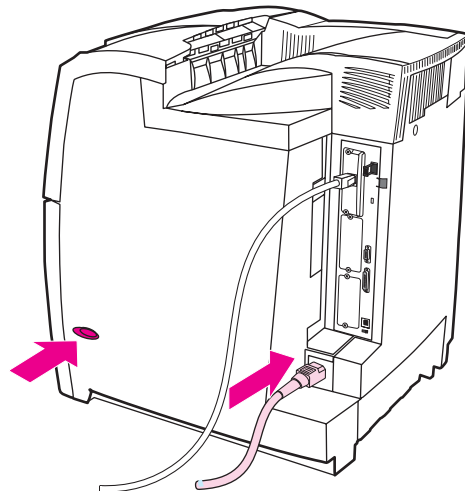
4. Firmly insert the HP Jetdirect print server card into the EIO slot. Insert and tighten the retaining screws that came with the print server card.
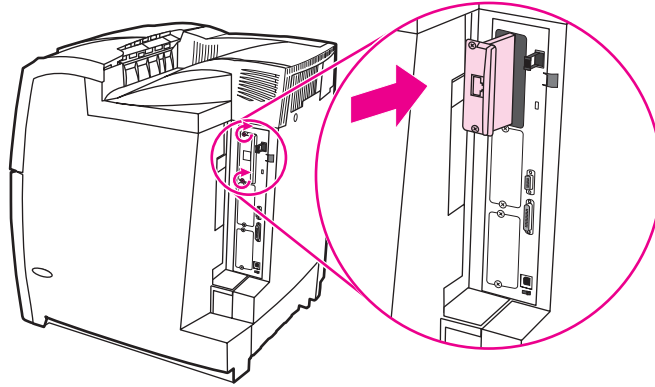
5. Connect the network cable.
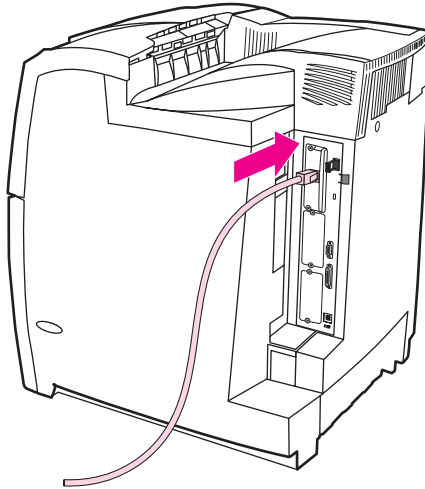
6. Reconnect the power cable, and turn the printer on.

7. Print a configuration page (see Configuration page). In addition to a printer configuration page and a Supplies Status page, an HP Jetdirect configuration page that contains network configuration and status information should also print.

   If it does not print, uninstall and reinstall the print server card to ensure that it is completely seated in the slot.

8. Perform one of these steps:

   - Choose the correct port. See the computer or operating system documentation for instructions.

   - Reinstall the software, choosing the network installation this time.

B Supplies and accessories

To order supplies in the US, contact http://www.hp.com/go/ljsupplies. To order supplies worldwide, see http://www.hp.com/ghp/buyonline.html. To order accessories, see http://www.hp.com/go/accessories.

Ordering directly through the embedded Web server (for printers with network connections)

Use the following steps to order printing supplies directly through the embedded Web server (see Using the embedded Web server.)

1. In the Web browser on the computer, enter the IP address for the printer. The printer status window appears. Or, go to the URL provided in the alert email.

2. Click **Other Links**.

3. Click **Order Supplies**. The browser opens to a page in which you can choose to send information about the printer to HP. You also have the option to order supplies without sending the printer's information to HP.

4. Select the part numbers you want to order and follow the instructions on the screen.

Ordering directly through the hp toolbox software

The HP toolbox software gives you the ability to order supplies directly from the computer. Two things are necessary to use this feature:

- The HP toolbox software must be installed on your computer. (It is automatically installed as part of the typical software installation.)

- You must have access to the World Wide Web.

1. At the bottom right of the screen (in the system tray), select the **hp toolbox** icon. The software opens in a Web browser. (Or, on the **Start** menu, select **Programs**, and then **HP toolbox**.)

2. On the left side of the window, click **Other Links**.

3. Click **Order Supplies**. The browser opens to the supplies purchasing page.

4. Select the supplies you want to order.

Supplies, accessories, and part numbers

Part	Part number	Type/size
Memory	J6073A	Printer hard disk
	C4287A	4 MB Flash DIMM
	Q2635AC	DIMM-32 MB Flash memory card
	Q2630A	DIMM-128 MB DDR 200-pin SDRAM
	Q2631A	DIMM-256 MB DDR 200-pin SDRAM
Accessories	J7934A	HP Jetdirect 620n fast ethernet print server
	C9667A	Printer cabinet
	Q3673A	Optional 500-sheet paper feeder (Tray 3)
	Q3674A	Optional 2 x 500-sheet input tray (Tray 3 and Tray 4)
Printer supplies	C9720A	Black print cartridge
	C9721A	Cyan print cartridge
	C9722A	Yellow print cartridge
	C9723A	Magenta print cartridge
	Q3675A	Image transfer kit
	Q3676A	Image fuser kit (110 volt)
	Q3677A	Image fuser kit (220 volt)
Cables	C2946A	IEEE-1284-C compliant parallel cable, 3 meters (m) (approximately 10 feet) long, with 25-pin male/micro 36-pin male ("C" size) connector

Supplies, accessories, and part numbers (continued)

Part	Part number	Type/size
	92215S	Macintosh DIN-8 printer cable
	C2947A	10 m parallel cable
	92215N	HP LocalTalk cable kit
Media	C2934A	HP Color LaserJet Transparencies (letter) 50 sheets
	C2936A	HP Color LaserJet Transparencies (A4) 50 sheets
	C4179A	HP LaserJet Soft Gloss paper (letter) 200 sheets
	C4179B	HP LaserJet Soft Gloss paper (A4) 200 sheets
	Q1298A	HP LaserJet Tough paper (letter)
	Q1298B	HP LaserJet Tough paper (A4)
	HPU1132	HP Premium Choice LaserJet paper (letter)
	CHP410	HP Premium Choice LaserJet paper (A4)
	HPJ1124	HP LaserJet paper (letter)
	CHP310	HP LaserJet paper (A4)
	Q2413A	HP Premium Cover paper letter (8.5 by 11 inches), 100 sheets
	Q2420A	HP High Gloss Laser Paper
Reference materials	5963-7863	*HP LaserJet Printer Family Print Media Guide*
	5021-0337	*PCL/PJL Technical Reference Package* For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.
	Q3668-90909	*HP Color LaserJet 4650 Series User Guide* For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.
	Q3668-90902	*HP Color LaserJet 4650 Series Getting Started Install Guide* For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.

Supplies, accessories, and part numbers (continued)

Part	Part number	Type/size
	Q3673-90901	*HP Color LaserJet 4650 Series 500-Sheet Input Tray Install Guide* For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.
	Q3674-90901	*HP Color LaserJet 4650 Series 2 x 500-Sheet Input Tray Install Guide* For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.
		HP Color LaserJet 4650 Series Print Cartridge Install Guide For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.
	Q3675-90901	*HP Color LaserJet 4650 Series Image Transfer Kit Install Guide* For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.
	Q3676-90901	*HP Color LaserJet 4650 Series Image Fuser Kit Install Guide* For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.
		HP Color LaserJet 4650 Series Printer Cabinet Install Guide For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.
		HP Color LaserJet 4650 Series Software Technical Reference Guide For downloadable versions, go to http://www.hp.com/support/lj4650. When connected, select **Manuals**.

C Service and Support

Hewlett-Packard limited warranty statement

HP PRODUCT	DURATION OF LIMITED WARRANTY
HP Color LaserJet 4650, 4650n, 4650dn, 4650dtn, and 4650hdn printer	One-year limited warranty

HP warrants to you, the end-user customer, that HP hardware and accessories will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new.

HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software which does not execute its programming instructions due to such defects.

HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

HP's limited warranty is valid in any country/region or locality where HP has a support presence for this product and where HP has marketed this product. The level of warranty service you receive may vary according to local standards. HP will not alter form, fit or function of the product to make it operate in a country/region for which it was never intended to function for legal or regulatory reasons. TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. Some countries/regions, states or provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion might not apply to you. This warranty gives you specific legal rights and you might also have other rights that vary from country/region to country/region, state to state, or province to province.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries/regions, states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

Print Cartridge Limited Warranty Statement

This HP Print Cartridge is warranted to be free from defects in materials and workmanship.

This warranty does not apply to print cartridges that (a) have been refilled, refurbished, remanufactured or tampered with in any way, (b) experience problems resulting from misuse, improper storage, or operation outside of the published environmental specifications for the printer product or (c) exhibit wear from ordinary use.

To obtain warranty service, please return the product to place of purchase (with a written description of the problem and print samples) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTY IS EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

TO THE EXTENT ALLOWED BY LOCAL LAW, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

Fuser and Transfer unit Limited Warranty Statement

This HP product is warranted to be free from defects in materials and workmanship until the printer provides a low-life indicator on the control panel.

This warranty does not apply to products that (a) have been refurbished, remanufactured or tampered with in any way, (b) experience problems resulting from misuse, improper storage, or operation outside of the published environmental specifications for the printer product or (c) exhibit wear from ordinary use.

To obtain warranty service, please return the product to place of purchase (with a written description of the problem) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTY IS EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

TO THE EXTENT ALLOWED BY LOCAL LAW, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

HP maintenance agreements

HP has several types of maintenance agreements that meet a wide range of support needs. Maintenance agreements are not part of the standard warranty. Support services may vary by area. Check with your local HP dealer to determine the services available to you.

On-site service agreements

To provide you with the level of support best suited to your needs, HP has on-site service agreements with three response times:

Priority on-site service

This agreement provides 4-hour service response to your site for calls made during normal HP business hours.

Next-day on-site service

This agreement provides support by the next working day following a service request. Extended coverage hours and extended travel beyond HP's designated service zones are available on most on-site agreements (for additional charges).

Weekly (volume) on-site service

This agreement provides scheduled weekly on-site visits for organizations with many HP products. This agreement is designated for sites using 25 or more workstation products, including printers, plotters, computers, and disk drives.

D Printer specifications

Physical dimensions

Product	Height	Depth	Width	Weight
HP Color LaserJet 4650	566 mm (22.30 in)	480 mm (18.91 in)	456 mm (17.97 in)	36.3 kg (80.03 lbs)
HP Color LaserJet 4650 with optional Tray 3	654 mm (25.77 in)	480 mm (18.91 in)	456 mm (17.97 in)	43.8 kg (96.56 lbs)
HP Color LaserJet 4650 with optional 2 x 500 sheet input tray	1035 mm (40.7 in)	645 mm (25.4 in)	460 mm (18.1 in)	65.8 kg (145 lbs)

Electrical specifications

	110-Volt models	220-Volt models
Power requirements	110-127V (+/- 10 percent) 50/60 Hz (+/- 2 Hz)	220-240V (+/- 10 percent) 50/60 Hz (+/- 2 Hz)

Power consumption (average, in watts)

	Power consumption (average, in watts)				
Product model	Active (22 ppm letter)	Idle	PowerSave	Off	Heat Output-Idle (BTU/Hour)
HP Color LaserJet 4650	560	38	26	0.3	130
HP Color LaserJet 4650n	560	38	26	0.3	130
HP Color LaserJet 4650dn	560	38	26	0.3	130
HP Color LaserJet 4650dtn	560	38	26	0.3	130
HP Color LaserJet 4650hdn	560	40	31	0.3	137

Note   Values are subject to change. See http://www.hp.com/support/lj4650 for current information.

PowerSave default activation time is 30 minutes.

Acoustic emissions

Sound Power Level	Declared Per ISO 9296
Active (22 ppm letter)	L_{WAd}=6.5 Bels (A) [65 dB (A)]
Idle	L_{WAd}=5.0 Bels (A) [50 dB (A)]
SPL - Bystander Position	**Declared Per ISO 9296**
Active (22 ppm letter)	L_{pAm}=51 dB (A)
Idle	L_{pAm}=34 dB (A)

Note   Values are subject to change. See http://www.hp.com/support/lj4650 for current information.

Environmental specifications

Specification	Recommended
Temperature	17 to 25 °C (62.6 to 77 °F)
Humidity	30 to 70 percent relative humidity (RH)
Altitude	0 to 2600 m (0 to 8530 ft)

E Regulatory information

FCC regulations

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If this equipment is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. 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 receiving antenna.

● increase separation between equipment and receiver.

● connect equipment to an outlet on a circuit different from that to which the receiver is located.

● consult your dealer or an experienced radio/TV technician.

Note Any changes or modifications to the printer that are not expressly approved by HP could void the user's authority to operate this equipment.

Use of a shielded interface cable is required to comply with the Class B limits of Part 15 of FCC rules.

Environmental product stewardship program

Protecting the environment

Hewlett-Packard Company is committed to providing quality products in an environmentally sound manner. This product has been designed with several attributes to minimize impacts on the environment.

Ozone production

This product generates no appreciable ozone gas (O_3).

Power consumption

Power usage drops significantly while in PowerSave mode, which saves natural resources and saves money without affecting the high performance of this printer. This product qualifies for ENERGY STAR® (Version 3.0), which is a voluntary program to encourage the development of energy-efficient office products.

ENERGY STAR® is a U.S. registered service mark of the U.S. Environmental Protection Agency. As an ENERGY STAR® partner, Hewlett-Packard Company has determined that this product meets ENERGY STAR® Guidelines for energy efficiency. For more information, see http://www.energystar.gov/.

Paper use

This product's optional, automatic, duplex feature (two-sided printing, see Two-sided (duplex) printing) and N-up printing (multiple pages printed on one page) capability can reduce paper usage and the resulting demands on natural resources.

Plastics

Plastic parts over 25 grams have markings according to international standards that enhance the ability to identify plastics for recycling purposes at the end of the product's life.

HP LaserJet printing supplies

In many countries/regions, this product's printing supplies (print cartridges, fuser, and transfer unit) can be returned to HP through the HP Printing Supplies Returns and Recycling Program. An easy-to-use and free takeback program is available in over 48 countries/regions. Multilingual program information and instructions are included in every new HP LaserJet print cartridge and supplies package.

HP Printing Supplies Returns and Recycling Program Information

Since 1990, the HP Printing Supplies Returns and Recycling Program has collected millions of used LaserJet print cartridges that otherwise might have been discarded in the world's landfills. The HP LaserJet print cartridges and supplies are collected and bulk-shipped to our resource and recovery partners, who disassemble the cartridges. After a thorough quality inspection, selected parts are reclaimed for use in new cartridges. Remaining materials are separated and converted into raw materials for use by other industries to make a variety of useful products.

- **U.S. returns**—For a more environmentally responsible return of used cartridges and supplies, HP encourages the use of bulk returns. Simply bundle two or more cartridges together and use the single, pre-paid, and pre-addressed UPS label that is supplied in the package. For more information in the U.S., call 1-800-340-2445 or visit the HP LaserJet Supplies website at http://www.hp.com/go/recycle.

- **Non-U.S. recycling returns**—Non-U.S. customers should call the local HP Sales and Service Office or visit the http://www.hp.com/go/recycle website for further information regarding availability of the HP Supplies Returns and Recycling Program.

Recycled paper

This product is capable of using recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Family Print Media Guide*. See Supplies and accessories for ordering information. This product is suitable for the use of recycled paper according to EN 12281:2002.

Material restrictions

This product does not contain batteries.

This product does not contain added mercury.

This product contains lead in solder that may require special handling at end-of-life.

For recycling information, contact http://www.hp.com/go/recycle, contact your local authorities, or go to the Electronics Industries Alliance website http://www.eiae.org.

Material Safety Data Sheet (MSDS)

Material Safety Data Sheets (MSDS) can be obtained by contacting the HP LaserJet Supplies website at http://www.hp.com/hpinfo/community/environment/productinfo/safety.htm.

For more information

On HP's environmental programs, including:

- Product environmental profile sheet for this and many related HP products
- HP's commitment to the environment
- HP's environmental management system
- HP's end-of-life product return and recycling program
- Material Safety Data Sheets (MSDS)

See http://www.hp.com/go/environment or http://www.hp.com/hpinfo/community/environment.

Declaration of Conformity

Declaration of Conformity
according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Hewlett-Packard Development Company
Manufacturer's Address:	11311 Chinden Boulevard
	Boise, Idaho 83714-1021, USA

declares that the product

Product Name:	HP Color LaserJet 4650/4650n/4650dn/4650dtn/4650hdn
Regulatory Model Number[4]:	BOISB-0304-00
	Including
	Q3673A - Optional 500-Sheet Input Tray
	Q3674A - Optional 2 x 500-Sheet Input Tray
Product Options:	All

conforms to the following Product Specifications:

Safety:	IEC 60950:1999 / EN60950:2000
	IEC 60825-1:1993 +A1:1997 +A2:2001 / EN60825-1:1994 +A11:1996 +A2:2001 (Class 1 Laser/LED Product)
	GB4943-2001
EMC:	CISPR 22:1997 / EN 55022:1998 Class B[1, 3]
	EN 61000-3-2:1995 / A14
	EN 61000-3-3:1995 / A1
	EN 55024:1998
	FCC Title 47 CFR, Part 15 Class B[2] / ICES-003, Issue 3
	GB9254-1998, GB17625.1-1998

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC, and carries the CE-Marking accordingly:

[1]The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.

[2]This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two Conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

[3]The product includes LAN (Local Area Network) options. When the interface cable is attached to LAN connectors, the product meets the requirements of EN55022 Class A in which case the following applies: "Warning - This is a class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures".

[4]For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the product name or the product number(s).

Boise, Idaho 83714-1021, USA

29 January, 2004

For regulatory topics only:

Australia Contact:	Product Regulations Manager, Hewlett-Packard Australia, Ltd. 31-41 Joseph Street Blackburn, Victoria 3130, Australia
European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard Gmbh, Department HQ-TRE/Standards Europe Herrenberger Straße 140 Böblingen, D-71034, Böblingen (FAX: +49-7031-14-3143)
USA Contact:	Product Relations Manager, Hewlett-Packard Company PO Box 15, Mail Stop 160, Boise, Idaho 83707-0015, USA (Phone: 208-396-6000)

Safety statements

Laser safety

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. The printer is certified as a "Class 1" laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Since radiation emitted inside the printer is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

WARNING!   Using controls, making adjustments, or performing procedures other than those specified in this user guide may result in exposure to hazardous radiation.

Canadian DOC regulations

Complies with Canadian EMC Class B requirements.

« Conforme à la classe B des normes canadiennes de compatibilité électromagnétiques. « CEM ». »

EMI statement (Korea)

VCCI statement (Japan)

Laser Statement for Finland

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP Color LaserJet 4650, 4650n, 4650dn, 4650dtn, 4650hdn laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle. Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (1994) mukaisesti.

VAROITUS!

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

HUOLTO

HP Color LaserJet 4650, 4650n, 4650dn, 4650dtn, 4650hdn -kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

VARO!

Mikäli kirjoittimen suojakotelo avataan, olet alttiina näkymättömällelasersäteilylle laitteen ollessa toiminnassa. Älä katso säteeseen.

VARNING!

Om laserprinterns skyddshölje öppnas då apparaten är i funktion, utsättas användaren för osynlig laserstrålning. Betrakta ej strålen. Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista: Aallonpituus 775-795 nm

Teho 5 m W

Luokan 3B laser

Glossary

bidirectional communication

Two-way data transmission.

bin

A receptacle for holding printed pages.

BOOTP

Abbreviation for "Bootstrap Protocol," an Internet protocol that allows a computer to find its own IP address.

chooser

A Macintosh accessory that allows you to select a device.

CMYK

An acronym for colors "cyan, magenta, yellow, and black."

control panel

The area on the printer that contains buttons and a display screen. Use the control panel to set printer settings and to get information about the printer's status.

DDR

Acronym for double data-rate.

default

The normal or standard setting for hardware or software.

DHCP

An acronym for "dynamic host configuration protocol." DHCP enables individual computers or peripherals connected to a network to find their own configuration information, including the IP address.

DIMM

An acronym for "dual in-line memory module." A small circuit board that holds memory chips.

duplex

A feature that allows printing on both sides of a sheet of paper.

EIO

An acronym for "Enhanced Input/Output." A hardware interface used for adding an internal print server, network adaptor, hard disk, and other plug-in functionality for HP printers.

embedded Web server

A server that is completely contained within a device. Embedded Web servers provide management information about the device. They are helpful for managing single devices on a small network. By using a Web browser to access an embedded Web server, network users can obtain network printer status updates, perform simple troubleshooting operations, change device configuration settings, and link to online customer support. When you need to manage many network devices, it is more effective to use an integrated Web server management tool, such as HP Web Jetadmin.

Emulated PostScript

Software that emulates Adobe PostScript, a programming language that describes the appearance of the printed page.

firmware

Programming instructions that are stored in a read-only memory unit inside the printer.

Flash memory card

A small-sized, high-quality, removable memory card.

font

A complete set of letters, numerals, and symbols in a typeface.

fuser

The assembly that uses heat to fuse the toner onto the paper or other media.

grayscale

Various shades of gray.

halftone pattern

A halftone pattern uses differing sizes of ink dots to produce a continuous-tone image such as a photograph.

HP Jetdirect

HP product for network printing.

HP Web Jetadmin

HP trademarked Web-based printer control software that lets you use a computer to manage any peripheral connected to an HP Jetdirect print server.

I/O

An acronym for "input/output" and refers to computer port settings.

IP address

The unique number assigned to a computer device connected to a network.

IPX/SPX

An acronym for "internetwork packet exchange/sequenced packet exchange."

macro

A single keystroke or command that results in a series of actions or instructions.

media

The paper, labels, transparencies, or other material on which the printer prints the image.

memory tag

A memory partition with a specific address.

monochrome

Black and white. Devoid of color.

mopy

The HP term for "multiple original prints" capability.

network

A system of computers interconnected by telephone wires or other means in order to share information.

network administrator

A person who manages a network.

page buffer

Temporary printer memory used to hold page data while the printer creates an image of the page.

parallel cable

A type of computer cable often used to connect printers directly to a computer rather than to a network.

parallel port

A connection point for a device connected with a parallel cable.

PCL

An acronym for "Printer Control Language."

peripheral

An auxilliary device, such as a printer, modem, or storage system, that works in conjunction with a computer.

personality

Distinctive features or characteristics of a printer or printer language.

pixel

Abbreviation for "picture element," which is the smallest unit of area in an image displayed on a screen.

PJL

An acronym for "Printer Job Language."

PostScript

A trademarked page description language.

PPD

An acronym for "PostScript Printer Description."

Print Task Quick Set

A feature of the printer driver that allows you to save the current printer driver settings (for example: page orientation, two-sided printing, and paper sources) for reuse.

printer driver

Software program that allows a computer to access printer features.

RAM

An acronym for "random access memory," a type of computer memory used to store data that may change.

RARP

An acronym for "Reverse Address Resolution Protocol," a protocol that enables a computer or peripheral to determine its own IP address.

raster image

An image composed of dots.

render

The process of outputting text or graphics.

RGB

An acronym for colors red, green, and blue.

ROM

An acronym for "read-only memory," a type of computer memory used to store data that should not be changed.

supplies

Materials used by the printer that are used up and must be replaced. Supply items for the HP Color LaserJet 4650 printer are the four print cartridges, the transfer belt, and the fuser.

TCP/IP

An internet protocol (developed by the U.S. Department of Defense) that has become the global standard for communications.

toner

The fine black or colored powder that forms the image on the printed media.

transfer unit

The black plastic belt that transports the media inside the printer and transfers the toner from the print cartridges onto the media.

tray

A receptacle for holding blank media.

xerographic paper

General term for paper intended for photocopy or laser printer use.

Index

envelopes
    jams   198
    loading in Tray 1   85
environmental features   7
errors
    auto continue   55
event log
    viewing   115

F
FCC regulations   245
file directory page
    printing   112
flash memory card
    installing   222
font list
    printing   113

G
grayscale printing   124

H
HP fraud hotline   130
HP Jetdirect print servers
    configuring   115
    installing   227
HP toolbox
    using   117
hp toolbox   23
HP Web Jetadmin
    checking toner level   132
    using to configure alerts   139

I
I/O (input/output) menu   46
images
    printing   95
information menu   40
input trays
    capacities   25
    configuring   41, 52, 80
IP address
    displaying   51

J
jam recovery
    setting   57
jams
    common causes   179
    configuring alerts   139
    envelopes   198
    locations   177
    recovery   177
Japanese VCCI statement   250
Jetdirect print servers
    configuring   115
job held timeout   50

job storage limit   50

K
Korean EMI statement   250

L
language
    changing   58
    embedded Web server   115
lights   33

M
maintenance
    agreements   239
media
    colored paper   95
    envelopes   95
    glossy paper   94
    heavy paper   96
    labels   95
    letterhead   97
    loading in Tray 1   83
    loading Tray 2, Tray 3, Tray 4   87, 89
    maximum size   8
    ordering   233
    preprinted forms   97
    recycled paper   97
    selecting   78
    size   25
    tough paper   97
    transparencies   94
    type   8, 25
    weight   8, 25
memory
    adding   108, 217
    enabling   225
menu map
    description   40
    printing   110
menus
    configure device   42
    diagnostics   48
    I/O (input/output)   46
    information   40
    paper handling   41
    print quality   43
    printing   42
    resets   47
    retrieve job   39
    system setup   44
messages
    error   147
    status   147
    warning   147

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