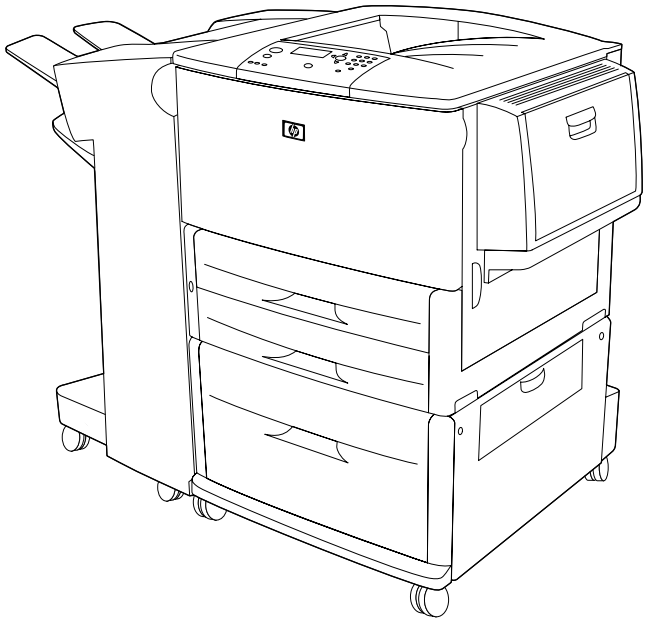
hp LaserJet 9000, 9000n, 9000dn, and 9000hns



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Edition 2, 1/2003

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1 Printer basics

Congratulations on your purchase of an HP LaserJet 9000 Series printer. If you have not done so, see the *start* guide provided with the printer for setup instructions.

Now that the printer is set up and ready to use, take a few moments to get to know the printer. This chapter introduces the following:

- Features and benefits of the printer
- Layout and basic operation of the control panel
- Interpreting control panel lights
- Using control panel menus
- Paper handling users LED status interpretation
- Helpful printer software for increased printing flexibility

Features and benefits of the printer

Print cartridge

- supplies status page with toner gauge, page count, and information about paper sizes used
- no-shake cartridge design
- authentication of HP print cartridges
- automatic seal tab removal

Paper handling options

- **Input**
  - **Optional Tray 1 (Multipurpose Tray):** A multipurpose tray for paper, transparencies, labels, and envelopes. Holds up to 100 sheets of paper or 10 envelopes.
  - **Trays 2 and 3:** Two 500-sheet trays. These trays automatically sense standard paper sizes up to Ledger A3, and allow printing on custom-size paper.
  - **Optional Tray 4 (2,000-sheet Input Tray):** This tray automatically senses standard paper sizes up to Ledger/A3, and allows printing on custom-size paper.
  - **Optional duplex printing accessory:** Provides two-sided printing (both sides of paper).
- **Output**
  - **Face-up bin:** Holds up to 100 sheets of paper.
  - **Face-down bin:** Holds up to 500 sheets of paper.
  - **Optional 3,000-sheet stacker:** A stacking device.
  - **Optional 3,000-sheet stapler/stacker:** Provides multiposition stapling for up to 50 sheets of paper per job, or equivalent job height of 5 mm (depending on paper thickness).
  - **Multifunction finisher:** Provides 1,000 sheets of stacking capacity, stapling for as many as 50 sheets of paper per document, plus folding and saddle stitching of booklets that contain up to 10 sheets of paper.
    - **Stacker bin** (Bin 1): Holds up to 1,000 sheets of paper.
    - **Booklet bin** (Bin 2): Holds up to 50 booklets.

Connectivity

- Up to three open enhanced input/output (EIO) expansion slots that support the following cards:
  - HP Jetdirect EIO cards
  - Ethernet (10Base-T, 10Base2)
  - Token Ring
  - Fast Ethernet 10/100TX
  - USB, Serial
  - LocalTalk
- Parallel C connection
- HP Fast InfraRed Connect (fast infrared connection)
- Foreign Interface Harness (FIH) connection (AUX)

Environmental features

- PowerSave setting saves energy (meets ENERGY STAR guidelines)
- High content of recyclable components and materials in the printer

Note See “Protecting the environment” on page 218 for more information.

Firmware updates

Provides the ability to upgrade the printer firmware. To download the latest firmware, go to www.hp.com/go/lj9000_firmware and follow the instructions on the screen. To easily send firmware updates to multiple printers, use the HP Web JetAdmin software (go to www.hp.com/go/webjetadmin).

Optional HP EIO hard disk

The EIO hard disk accessory can be used to store selected print jobs, support RIP Once technology, and permanently store downloaded fonts and forms in the printer. Unlike standard printer memory, many items on the EIO hard disk remain in the printer even when the printer is turned off. Fonts downloaded to the EIO hard disk are available to all users of the printer.

The EIO hard disk can be write-protected through software for additional security.

Windows users

Use the HP Resource Manager to delete files and manage fonts on a mass storage device. See “HP Resource Manager” on page 26. For more information, see the printer software help.

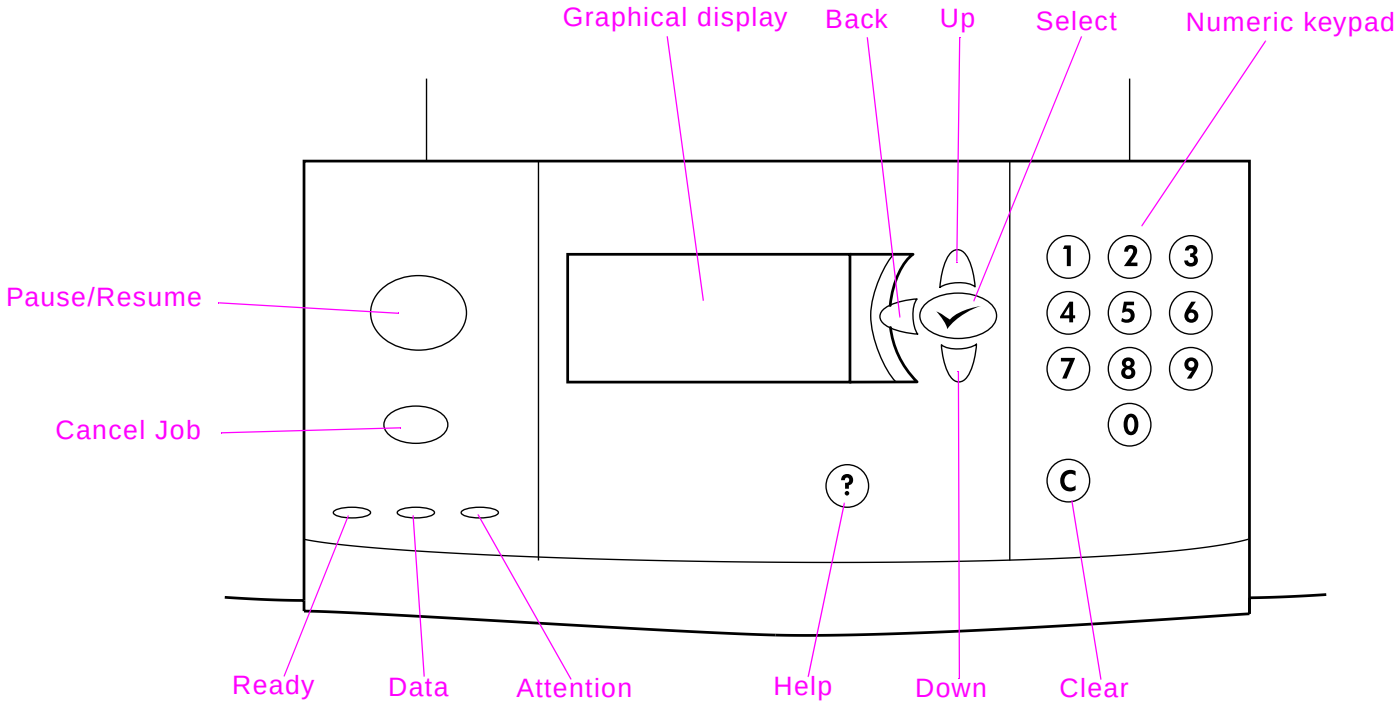
Hewlett-Packard occasionally introduces new software tools for use with your printer and accessories. These tools are available from the Internet. For more information, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/ for the addresses of the HP website.

Macintosh users

Use the HP LaserJet Utility to download fonts and files. For more information, see “HP LaserJet Utility (Macintosh)” on page 25 or the HP LaserJet Utility Guide online help included with your HP LaserJet Utility software.

Layout and basic operation of the control panel

The control panel includes three light emitting diode (LED) indicator lights, four navigation keys, dedicated help, two job-specific buttons, a numeric key pad, and a graphical display (capable of displaying up to four lines of text).



Key	Function
◀ (BACK ARROW)	Backs up one step from a selection or from a 10-key entry.
▲ (UP ARROW)	Navigates to the previous item in the list.
✓ (SELECT)	• Saves the selected value for that item. An asterisk (*) appears next to the selection, indicating that it is the new default. Default settings remain when the printer is switched off or is reset (unless you reset all factory defaults from the `Resets` menu). • Prints one of the printer information pages from the control panel.
C (CLEAR)	Returns a numeric entry to its previous value.
▼ (DOWN ARROW)	Navigates to the next item in the list.
? (HELP)	Gets help about the message currently displayed.
CANCEL JOB	Cancels the current print job in process. The time it takes to cancel depends on the size of the print job. (Press it only once.)
PAUSE/RESUME	• Returns to the ready or busy state from menus or online help. • Toggle between PAUSE and RESUME.
NUMERIC KEYPAD	Enters numeric values.

Interpreting control panel lights

Light		Indication
Ready		
	Off	The printer is offline or has an error.
	On	The printer is ready to print.
	Blinking	The printer is going offline; please wait.
Data		
	Off	The printer has no data to print.
	On	The printer has data to print, but is not ready or is offline.
	Blinking	The printer is processing or is printing the data.
Attention		
	Off	The printer has no error.
	On	The printer has a critical error. Turn the printer off and then on.
	Blinking	Action is required. See the control panel display.

Using control panel menus

For a complete list of control panel items and possible values, see “Control panel menus” on page 172. When additional trays or other accessories are installed in the printer, new menu items automatically appear.

To print a control panel menu map

See “Menu map” on page 154 for information about how to print a control panel menu map.

To change a control panel setting

1. Press ✓ to enter the menus.
2. Use ▲ or ▼ to scroll to the menu you want, and press ✓ to select it. Depending on the menu, you might have to repeat this step to select a submenu.
3. Use ▲ or ▼ to scroll to the item you want, and press ✓ to select it.
4. Use ▲ or ▼ to scroll to the value you want, and press ✓ to select it. An asterisk (*) appears next to the selection in the display, indicating that it is now the default.
5. Press PAUSE/RESUME to exit the menu.

Note
Settings in the printer driver and software override control panel settings. (Software settings override printer driver settings.) If you cannot access a menu or an item, it is either not an option for the printer, or your network administrator has locked the function. (The control panel reads ACCESS DENIED MENUS LOCKED.) See your network administrator.

Paper handling users LED status interpretation

Use the following table to interpret the status LED on the optional 2,000-sheet input tray (optional Tray 4), optional 3,000-sheet stacker, and 3,000-sheet stapler/stacker.

Light	Optional 2,000-sheet input tray	Optional 3,000-sheet stacker or 3,000-sheet stapler/stacker
Solid green	The accessory is on and ready.	The accessory is on and ready.
Blinking green	The accessory is in service mode.	The accessory is in service mode.
Solid amber	The accessory is experiencing a hardware malfunction.	The accessory is experiencing a hardware malfunction.
Blinking amber	The accessory has a jam, or a page needs to be removed from the tray, even if the page is not jammed.	The accessory has a jam, or a page needs to be removed from the unit, even if the page is not jammed.
	The lower right door might be open.	The accessory is not correctly attached to the printer.
Off	The printer might be in PowerSave mode. Press any key of your choice.	The printer might be in PowerSave mode. Press any key of your choice.
	The accessory is not receiving power.	The accessory is not receiving power.

Helpful printer software for increased printing flexibility

Windows software

Network Administrator

- HP Common Installer
- HP Internet Installer
- HP Disk Image Utility
- HP Common Drivers

Client

- HP Common Installer
- HP Common Drivers

Macintosh software

Network Administrator

- HP Common Installer
- HP Disk Image Utility
- HP Common Drivers Macintosh Client

Client

- PPDs/PDEs
- HP LaserJet Utility*
- Fonts*
- Help Files* (English only)

* These products are not supported in Traditional Chinese, Simplified Chinese, Korean, Japanese, Czech, Russian, and Turkish languages.

The printer drivers provided on the CD must be installed to take full advantage of the printer features. The other programs are recommended, but are not required for operation. See the readme file for more information.

For network printer configuration and management, use the HP Web JetAdmin software which is a server-based tool that network administrators can gain access to using a Web browser. For supported host systems and available languages or to download the software, go to www.hp.com/go/webjetadmin, or use the link on the CD.

The most recent drivers, additional drivers, and other software are available from the Internet. Depending on the configuration of Windows-driven computers, the installation program for the printer software automatically checks the computer for Internet access to obtain the latest software. If you do not have access to the Internet, see the *introduce* guide on the product CD to obtain the most recent software.

Included with the printer is a CD containing the HP LaserJet Printing System. On the CD are software components, documentation, and drivers that benefit users and network administrators. See the readme file for the most current information.

The CD includes software designed for end users and network administrators operating in the following environments:

- Microsoft Windows 9*X* and Windows Me
- Microsoft Windows NT 4.0 and Windows 2000
- IBM OS/2 version 3.0 or greater (Web)
- Apple Mac OS 7.5 or greater
- Linux (Web)
- AutoCad

The printing system also includes software for network administrators using the following network operating systems:

- Novell NetWare 3.*x*, 4.*x*, or 5.*x*
- Microsoft Windows 9*X* and Windows Me
- Microsoft Windows NT 4.0, Windows 2000, and Windows Me
- Apple MAC OS (EtherTalk)
- Linux (Web)
- UNIX (Web)

Network printer installation for UNIX and other network operating systems is available from the Web or through a local HP-authorized distributor.

Printer drivers

Printer drivers access the printer features and allow the computer to communicate with the printer (by using a printer language).

Drivers included with the printer

The most recent drivers are available at www.hp.com/cposupport/. 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.

	PCL 5e	PCL 6	PS[a]
Windows 9*X* and Windows Me	✓	✓	✓
Windows NT 4.0 and Windows 2000	✓	✓	✓
Macintosh computer[b]			✓

a. PostScript (PS) Level 3 emulation is referred to as PS throughout this *use* guide.

b. Only PostScript Printer Description (PPDs) files are included. (See "PostScript Printer Description Files (PPDs) and Printer Dialog Extension (PDEs)" on page 24). If you need the Apple LaserWriter 8 printer driver, it comes with the Macintosh operating system (OS), or it can be obtained directly from Apple.

Choose the correct printer driver for your needs

- Use the PCL 6 driver to take full advantage of the printer features. The PCL 6 driver is recommended unless backward compatibility with previous PCL drivers or older printers is necessary.
- Use the PCL 5e driver if you want print results to look comparable to those from older printers, or for font DIMM support.
- Use the PS driver for compatibility with PostScript Level 3 needs.

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

- For the Macintosh, use the Apple LaserWriter 8.6 or above printer driver, which are PS drivers.

Printer driver help

Each printer driver has help screens that can be activated either from the Help button, the F1 key, or the 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 the software application help.

Additional drivers

You can obtain the following additional printer drivers by downloading them from the Internet, or by requesting them from an HP-authorized service or support provider. (See www.hp.com/cposupport/ for more information.)

- OS/2 PCL5e and PCL 6 printer driver
- OS/2 PS2 printer driver
- AutoCAD

Note If the CD does not include the desired driver or if it is not listed here, check the software application installation disks or readme files to see if they include support for the printer. If not, contact the software manufacturer or distributor and request a driver for the printer.

Software for Windows

Use the printing system software to install the printer. If you are installing the printer on a network (Novell NetWare or Microsoft Windows network) from a Windows 9*X*, Windows NT 4.0, Windows 2000, or Windows ME system, the printing system software will guide you through the installation process, and will properly configure the network printer.

Note If the printer is used on a network, the network clients and servers must be properly configured to communicate on the network.

For additional network printer configuration and management, use HP Web JetAdmin. HP Web JetAdmin is a browser-based management tool and should be installed only on the network administrator's computer. For the latest list of supported host systems, visit HP Customer Care Online at www.hp.com/go/webjetadmin.

Access the Windows printer driver

To configure the driver, access it in one of the following ways:

Operating system	Temporarily change settings (from a software application)	Change default settings (across all software applications)
Windows 9*X* and Windows ME	From the **File** menu, click **Print**, and then click **Properties**. (The actual steps can vary; this is the most common method.)	Click the **Start** button, point to **Settings**, and then click **Printers**. Right-click the appropriate printer icon, and choose **Properties**.
Windows NT 4.0 and Windows 2000	From the **File** menu, click **Print**, and then click **Properties**. (The actual steps can vary; this is the most common method.)	Click the **Start** button, point to **Settings**, and then click **Printers**. Right-click and choose **Document Defaults** or **Properties**.

Note Settings in the printer driver and software application override control panel settings. (Software application settings override printer driver settings.)

Software for Macintosh computers

Apple LaserWriter driver, version 8.6 or later

The Apple LaserWriter 8.6 printer driver comes with the Mac OS, or can be obtained directly from Apple.

PostScript Printer Description Files (PPDs) and Printer Dialog Extension (PDEs)

PPDs, for OS 9 and earlier, in combination with the LaserWriter 8.6 printer driver, access the printer features and allow the computer to communicate with the printer. An installation program for the PPDs and other software is provided on the CD. Use the Apple LaserWriter 8.6 Driver that comes with the computer.

Use PDEs for OS X.

HP LaserJet Utility (Macintosh)

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

- customize the printer control panel messages.
- name the printer, assign it to a zone on the network, download files and fonts, and change most of the printer settings.
- set a password for the printer.
- from the computer, lock out functions on the printer control panel to prevent unauthorized access. (See the printer software help.)
- configure and set the printer for IP printing.
- initialize disk or flash memory.
- manage fonts in random access memory (RAM), disk, or flash memory.
- administer job retention features.

See the HP LaserJet utility help for more information.

Fonts

Eighty screen fonts are installed that correspond with the PS fonts resident in the printer.

Software for networks

HP Web JetAdmin software

HP Web JetAdmin is a web-based tool for proactive management and configuration of network-connected peripherals. For the latest list of supported host operating systems, visit the HP Web JetAdmin site a www.hp.com/go/webjetadmin.

HP Jetdirect Printer Installer for UNIX

The HP Jetdirect Printer Installer for UNIX is a simple printer installation utility for HP-UX and Sun Solaris networks. It is available to download at www.hp.com/support/net_printing.

HP Resource Manager

The HP Resource Manager should be installed only on the network administrator's computer. The HP Resource Manager allows you to control the optional hard disk and optional flash memory features not found in the drivers. Bidirectional communication is required.

Note HP Resource Manager is not available for the Macintosh. If you are using a Macintosh, these features are available in the HP LaserJet Utility (version 3.5.1 or greater).

Use the HP Resource Manager to do the following:

- initialize disk and flash memory
- download, delete, and manage fonts to disk and flash memory across networks
  - PostScript Type 1, PostScript Type 42 (TrueType fonts converted to PostScript format), TrueType, and PCL bitmap fonts. (To download Type 1 fonts, Adobe Type Manager must be loaded and running.)

Note For more information, see the embedded Web server user guide at www.hp.com/cposupport/.

Home pages

The home pages of the embedded Web server are the informational pages for the printer. These include:

- **Printer status page**
  This page shows the printer control panel and any current message. The control panel status lights and buttons are also displayed, so you can change the printer control panel menu settings from this page. Consumable life levels and the input tray media configuration are also displayed.
- **Configuration page**
  The printer configuration page is displayed from this site in the embedded Web server. For more information, see “Configuration page” on page 155.
- **Event log page**
  This page shows the printer event log. For more information, see “Event log page” on page 162.
- **Supplies page**
  This page shows the levels of the consumables for the printer.
- **Usage page**
  This page shows how much of each media type has been used by the printer.
- **Device identification page**
  This page lets you name the device for network management needs, and shows the IP address and server for the printer.

Device pages

The device pages of the embedded Web server allow you to configure the printer from your computer. These pages can be password protected. Always consult with your network administrator before changing the printer configuration.

- **Configure printer page**
  This page lets you configure all printer settings.
- **Alerts page**
  This page lets you configure notification recipients for various printer events.
- **E-mail page**
  The e-mail addresses of notification recipients of printer events are entered in this page.
- **Order supplies page**
  The remaining life of various consumables is shown on this page, and links to the HP website for ordering supplies is also displayed.
- **Contact information page**
  The name and e-mail address of the primary point of contact for information about the printer is entered into this page. The primary point of contact is usually the network administrator.
- **Security page**
  This page configures the password information for the embedded Web server. Password information should be configured only by the network administrator.
- **Other links page**
  This page is used to enter other websites into the embedded Web server. These sites are displayed on the navigational bar throughout the embedded Web server pages.
- **Refresh rate page**
  This page configures how often the embedded Web server obtains information from the printer regarding printer status.
- **Language page**
  The language that the embedded Web server is displayed in is configured from this page.
- **Device identification page**
  This page lets you name the device for network management needs, and shows the IP address and server for the printer.

Network pages

The network pages of the embedded Web server provide access to HP Jetdirect network configuration parameters and status. These include:

- **Network settings page**
  This page provides access to network protocol configuration parameters and other settings.
- **Support settings page**
  This page lets you configure links for support assistance.
- **Admin password page**
  This page lets you limit user access to network configuration parameters for this printer.
- **Access control page**
  This page allows an administrator to limit client system access to this printer.
- **Diagnostic pages**
  These pages provide access to network statistics and configuration page settings useful for troubleshooting.

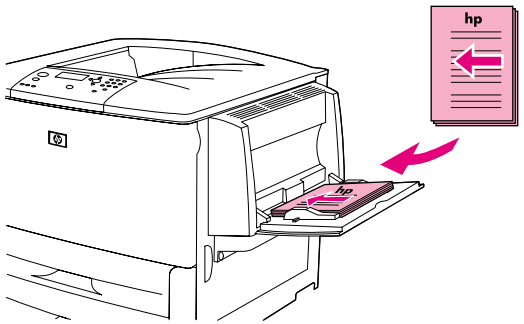
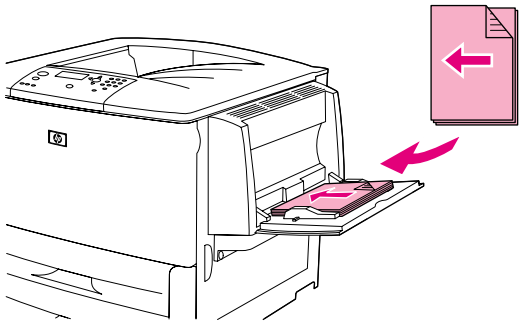
2 Printing tasks

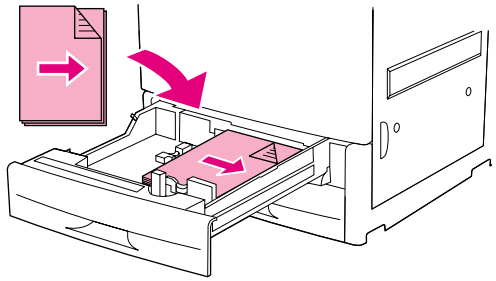
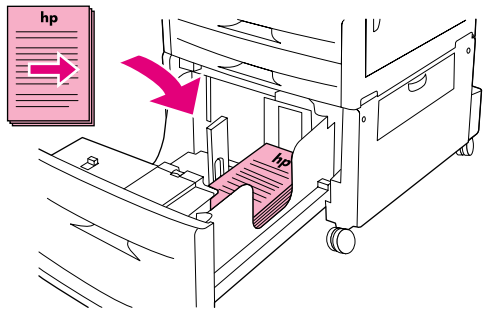
This section presents basic printing tasks, such as:

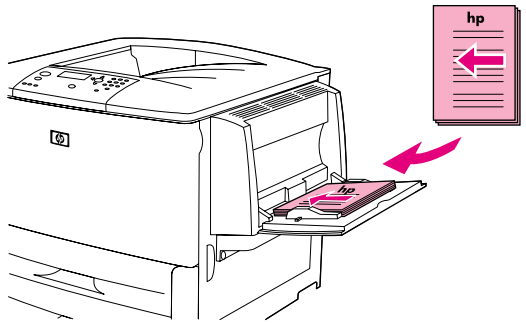
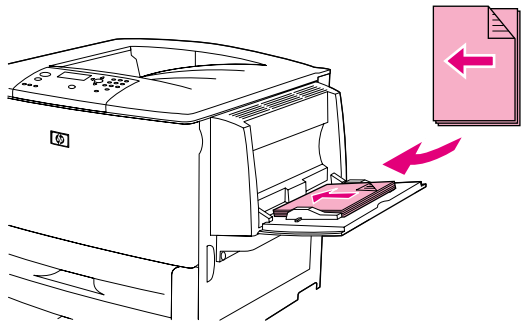
- Orienting media
- Basic printing instructions
- Selecting the output bin
- Printing envelopes

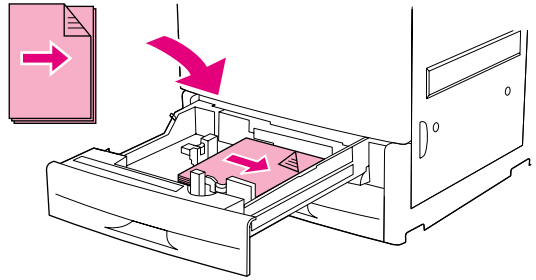
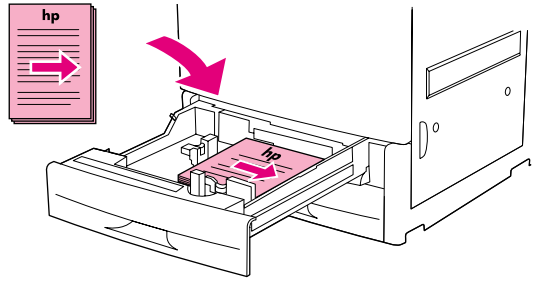
Orienting media

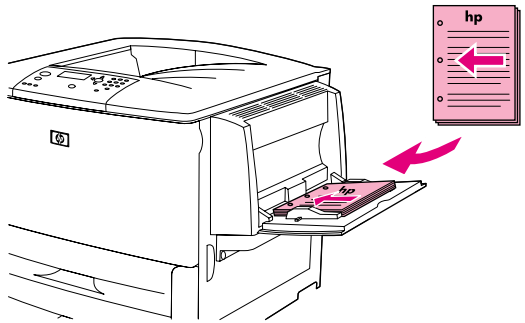
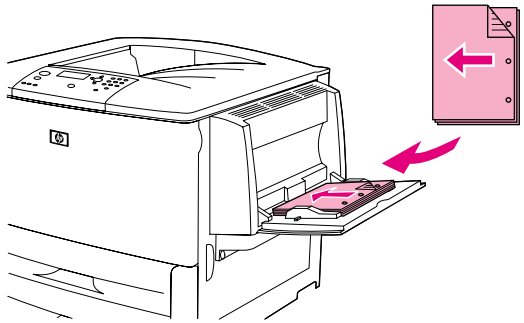
Orient media types and sizes according to the tray from which it will print and according to whether the media will be duplexed (printed on both sides).

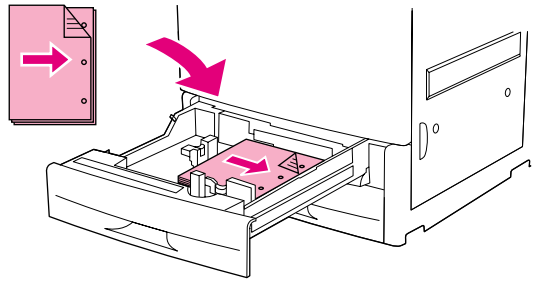
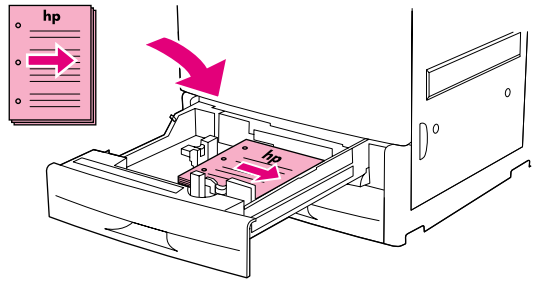
Type of media	Tray	Duplexed	Orient media like this
Letter or A4, including letterhead (weights up to 216 g/m^2) (58 lb bond)	1	No	Long edge toward feed direction; side to be printed facing up 
Letter or A4, including letterhead (weights up to 216 g/m^2) (58 lb bond)	1	Yes	Long edge toward feed direction; first side to be printed facing down 

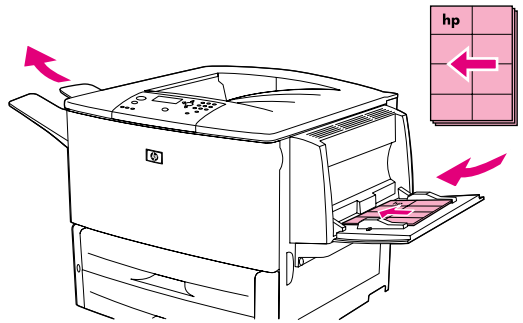
Type of media	Tray	Duplexed	Orient media like this
Letter or A4, including letterhead (weights up to 199 g/m^2) (53 lb bond)	2, 3, or 4	No	Long edge toward feed direction; side to be printed facing down 
Letter or A4, including letterhead (weights up to 199 g/m^2) (53 lb bond)	2, 3, or 4	Yes	Long edge toward feed direction; first side to be printed facing up 

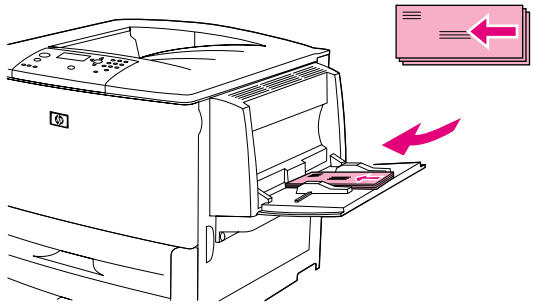
Type of media	Tray	Duplexed	Orient media like this
Other standard sizes and custom sizes (weights up to 216 g/m^2) (58 lb bond)	1	No	Long edge (up to 312 mm) toward feed direction; side to be printed facing up. For media with long edge greater than 312 mm, feed short edge, top of page, first. 
Other standard sizes and custom sizes (weights up to 216 g/m^2) (58 lb bond)	1	Yes	Long edge (up to 312 mm) toward feed direction; first side to be printed facing down. For media with long edge greater than 312 mm, feed short edge, bottom of page, first. 

Type of media	Tray	Duplexed	Orient media like this
Other standard sizes and custom sizes (weights up to 199 g/m^2) (53 lb bond)	2, 3, or 4	No	Long edge (up to 297 mm) toward feed direction; side to be printed facing down. For media with long edge greater than 297 mm, feed short edge, top of page, first. 
Other standard sizes and custom sizes (weights up to 199 g/m^2) (53 lb bond)	2, 3, or 4	Yes	Long edge (up to 297) toward feed direction; first side to be printed facing up. For media with long edge greater than 297 mm, feed short edge, bottom of page, first. 

Type of media	Tray	Duplexed	Orient media like this
Prepunched Letter or A4 (weights up to 216 g/m^2) (58 lb bond)	1	No	Long edge with holes toward feed direction; side to be printed facing up 
Prepunched Letter or A4 (weights up to 216 g/m^2) (58 lb bond)	1	Yes	Long edge without holes toward feed direction; first side to be printed facing down 

Prepunched Letter or A4 (weights up to 199 g/m^2) (53 lb bond)	2, 3, or 4	No	Long edge with holes toward feed direction; side to be printed facing down 
Prepunched Letter or A4 (weights up to 199 g/m^2) (53 lb bond)	2, 3, or 4	Yes	Long edge without holes toward feed direction; first side to be printed facing up 

Type of media	Tray	Duplexed	Orient media like this
Labels, Letter, A4 size sheets, or transparencies	Tray 1 only	No (Never duplex)	Long edge toward feed direction; side to be printed facing up 

Type of media	Tray	Duplexed	Orient media like this
Envelopes	Tray 1 only	No (Never duplex)	Short edge toward feed direction; side to be printed facing up. If height of envelope is greater than 7.5 inches, feed flap first. Otherwise, feed flap toward rear of printer. 

Basic printing instructions

This section provides the basic instructions for printing when setting options from the printer driver for this printer (Windows) or the Apple LaserWriter (Macintosh). If possible, you should try to set printer options from the program in which you are working or from the **Print** dialog box. Most Windows and Macintosh programs allow you to set the printer options this way. If a setting is not available in the program or printer driver, you must set it at the printer control panel.

To print

1 Make sure paper is loaded in the printer. See the *introduce* guide on the product CD, or at www.hp.com/cposupport/ and “Orienting media” on page 31 for instructions.

2 If you loaded a custom size media in Tray 2, Tray 3, or optional Tray 4, or if you loaded any size media in optional Tray 1, set the tray to recognize the size of paper you loaded. See the *introduce* guide on the product CD, or at www.hp.com/cposupport/.

3 Set the paper size.

- For Windows: On the **File** menu, click **Page Setup** or **Print**. If you chose **Print**, make sure this printer is selected and click **Properties**.
- For Macintosh: On the **File** menu, choose **Page Setup**. Make sure this printer is selected.

4 In the paper size box, select one of the following:

- The name assigned to the size of paper you are using.
- **Custom**

5 Select the orientation, such as **Portrait** or **Landscape**.

6 If the printer driver is not already open, on the **File** menu click **Print**. In Windows programs, also click **Properties**.

7 In the paper source box, select the tray from which you want paper pulled or select the paper type and size. See “Printing by type and size of paper” on page 57.

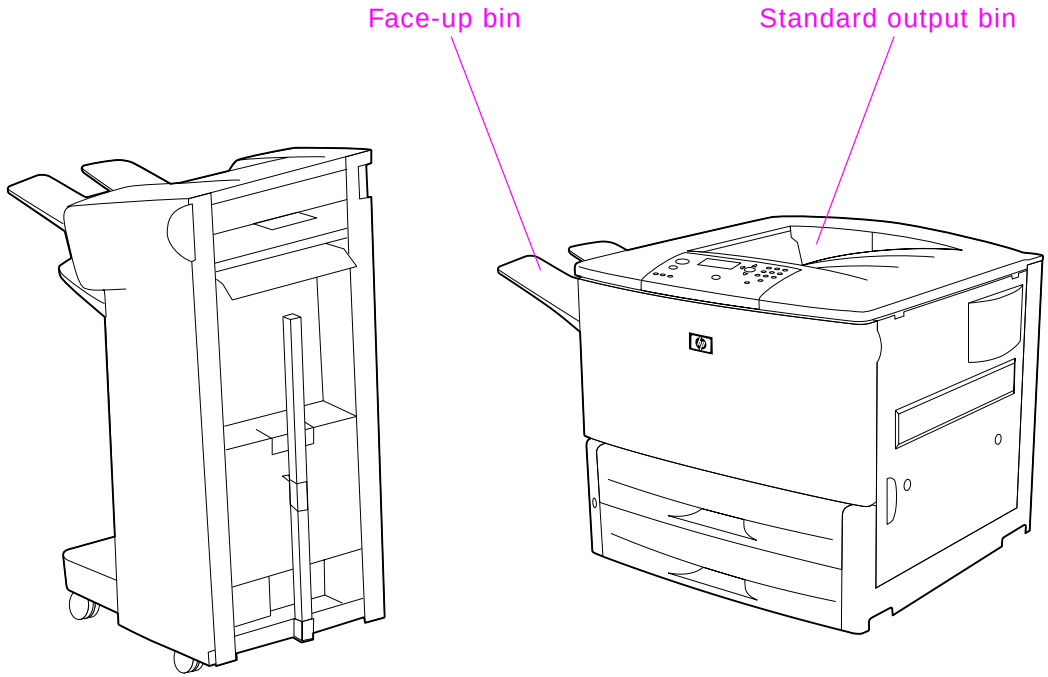
8 Select any other settings you want, such as duplexing (if an optional duplexer is installed in the printer), watermarks, or different first page. For more information about these settings, see the tasks in this section and in the next section (“Advanced printing tasks” on page 50).

9 The standard output bin is the default output location. Use this location for output of most types of media, including labels, transparencies, and heavy paper. Or, you can select an optional output accessory, such as the stacker or stapler/stacker.

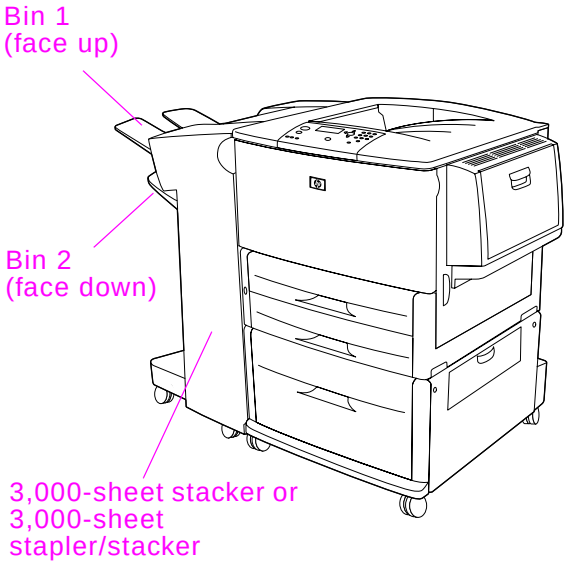
10 Select the **Print** command to print the job.

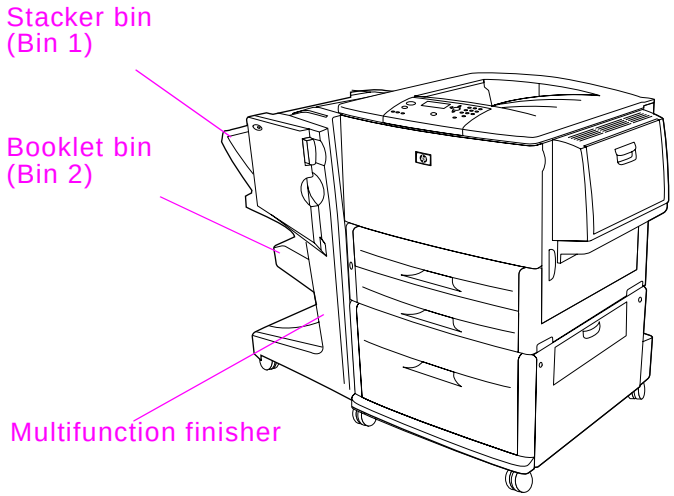
Selecting the output bin

The printer has several output locations: the standard output bin, the face-up bin, and the optional output devices.



- The **standard output bin** is located at the top of the printer and is the factory default bin. This bin can receive up to 500 sheets of paper in the correct (face down) order as they exit the printer. A sensor causes the printer to stop when the paper bin is full. Printing continues when you empty or reduce the amount of paper in the bin.
- The **face-up bin**, located on the left side or on top of the printer, holds up to 100 sheets of paper.





If you choose the 3,000-sheet stacker or 3,000-sheet stapler/stacker, the output bins are Bin 1 (face up) and Bin 2 (face down).

- **Bin 1** (face-up bin) is the top bin on the stacker or stapler/stacker. This bin holds up to 125 sheets of paper in face-up order as they exit the printer. A sensor causes the product to stop when the bin is full. Product operation continues when you empty or reduce the amount of paper in the bin.
- **Bin 2** (face-down bin) is the lower bin on the stacker or stapler/stacker. Bin 2 holds up to 3,000 sheets of paper and allows you to stack or staple jobs. This bin is the default output bin.

If you choose the multifunction finisher, the output bins are the Stacker bin and the Booklet bin.

- The **Stacker bin** (Bin 1) is the top bin on the multifunction finisher. The Stacker bin provides 1,000 sheets of stacking capacity, and can offset each job as it is stacked, delivering unstapled jobs face up or face down. This bin also provides stapling for up to 50 sheets of paper per document. The Stacker bin is the default output bin when the multifunction finisher is attached.
- The **Booklet bin** (Bin 2) is the lower bin on the multifunction finisher. This bin provides folding and saddle stitching of booklets for up to 10 sheets of paper.

Selecting an output location

You can select an output location (bin) through your program or printer driver. (Where and how you make selections depends on your program or printer driver.) If you cannot select an output location from the program or printer driver, set the default printer output location from the printer control panel.

To select an output location from the control panel

1 Use ▲ or ▼ to scroll to `Configure Device` and press ✓.

2 Use ▲ or ▼ to scroll to `Printing` and press ✓.

3 Use ▲ or ▼ to scroll to `Paper Destination` and press ✓.

4 Use ▲ or ▼ to scroll to the output bin or device you want and press ✓. Your network administrator may have changed the name of the device. An asterisk (*) appears next to your selection.

Printing envelopes

You can print envelopes using optional Tray 1, which holds up to 10 envelopes. Many types of envelopes can be printed from optional Tray 1.

Printing performance depends on the construction of the envelope. Always test a few sample envelopes before purchasing a large quantity. For envelope specifications, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.

CAUTION Envelopes with clasps, snaps, windows, coated linings, exposed self-stick adhesives, or other synthetic materials can severely damage the printer. Do not use envelopes with pressure-sensitive adhesive.

The basic steps for printing envelopes are:

1. Load the envelopes. See “To load envelopes in optional Tray 1” on page 44.
2. Move the fuser levers. See “To change the fuser levers” on page 45.
3. Send the print job. See “To print envelopes from a program” on page 46.

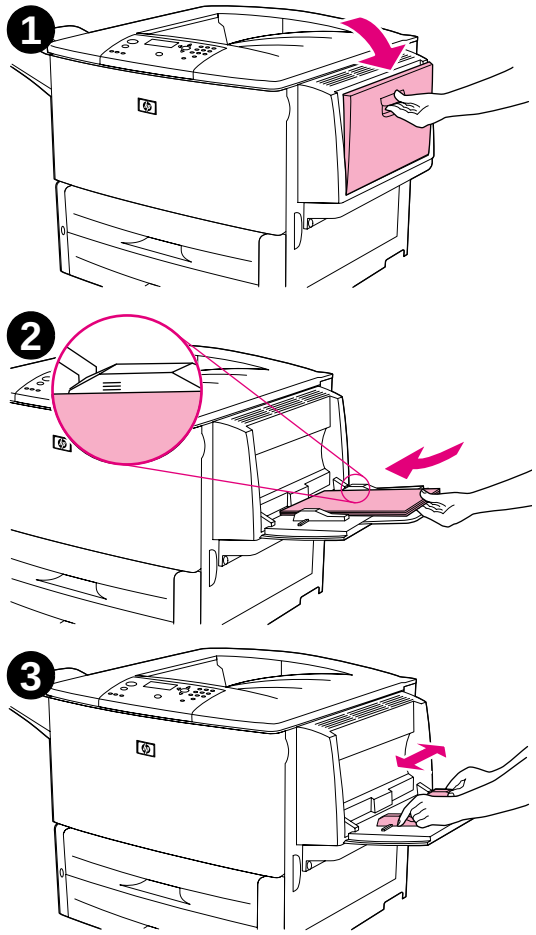
To load envelopes in optional Tray 1

1 Open optional Tray 1, but do not pull out the extension. (Most envelopes feed best without the extension. However, oversize envelopes might need the extension.)

2 Load up to 10 envelopes in the center of optional Tray 1 with the side-to-be-printed facing up, 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.

4 Change the fuser levers (see “To change the fuser levers” on page 45).



To change the fuser levers

1 If an optional output device is installed, slide it away from the printer to access the left door.

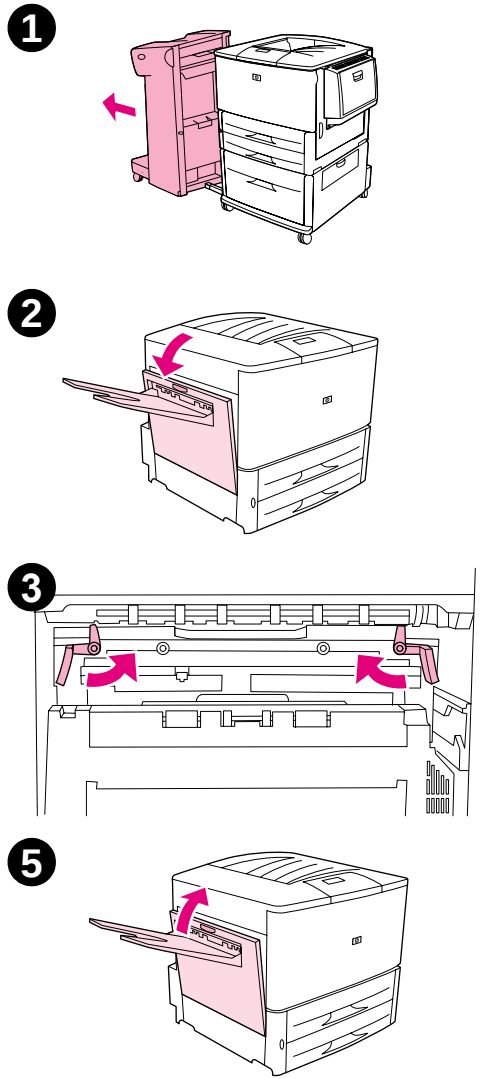
2 Open the left door.

WARNING!
Avoid touching the adjacent fusing area as shown in Step 3. It can be HOT.

3 Locate and lift up the two blue “T” shaped levers.

4 Return the fuser levers to the down position after printing an envelope.

5 Close the left door.



To print envelopes from a program

1 Load envelopes into optional Tray 1.

2 In your program or in the printer driver, specify optional Tray 1 or **Automatic**. Or, select the paper source.

3 Set the appropriate envelope size and type. For envelope specifications, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.

4 If your program does not automatically format an envelope, specify “Portrait” for page orientation.

CAUTION To avoid a printer jam, do not remove or insert an envelope after you begin printing.

5 Set margins to within 15 mm (0.6 inch) from the edge of the envelope. For best print quality, set margins for a return and mailing address (typical address margins for a Commercial #10 or DL envelope are offered). Avoid printing over the area where the three back flaps meet on the back of an envelope.

6 To print by type and size of paper, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.

7 Select the standard output bin (the default) as the output location. If you print envelopes to the stacker or stapler/stacker, they exit to the face-up bin of that accessory.

8 When finished, return the fuser levers to the down position.

CAUTION Failure to return levers to the down position for standard paper types can result in poor print quality.

Printing special paper

This section contains guidelines for printing on special media, which includes letterhead, transparencies, full-bleed images, postcards, custom-size, and heavy paper.

Printing letterhead, prepunched paper, or preprinted paper (single-sided)

- When printing letterhead, prepunched, or preprinted paper, it important to correctly orient the paper. See “Orienting media” on page 31 for instructions.
- If the paper is heavier than 199 g/m^2 (53 lb bond) and less than 216 g/m^2 (58 lb bond) load it only in optional Tray 1. See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/ for complete paper specifications.
- When printing on both sides of prepunched paper, you must select prepunched paper as the paper type in the **Paper Handling** menu from the control panel and select prepunched paper from your printer driver.

Printing labels

- Orient labels according to the guidelines in “Orienting media” on page 31.
- Print a stack of up to 50 sheets of labels from optional Tray 1.
- Use only labels recommended for laser printers. Make sure the labels meet the correct specifications. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

CAUTION Failure to follow these instructions may damage the printer.

Special cautions:

- Do not load optional Tray 1 to capacity, because labels are heavier than paper.
- Do not use labels that are separating from the backing sheet, wrinkled, or damaged in any way.
- Do not use labels that have the backing sheet exposed. (Labels must cover the entire backing sheet with no exposed spaces.)
- Do not feed a sheet of labels through the printer more than once. The adhesive backing is designed for only one pass through the printer.
- Do not print on both sides of labels.

Printing transparencies

- Transparencies used in this printer must be able to withstand the 200° C (392° F), the maximum temperature for the printer.
- Use only transparencies recommended for use in laser printers.
- Use the standard output bin for transparencies.

CAUTION Do not attempt to print on both sides of transparencies. Do not attempt to print envelopes, custom paper, or paper heavier than 199 g/m^2 (53 lb). Damage to the printer or jams might result.

Guidelines for custom-size paper, card stock, and heavy paper

- You can print custom-size paper from optional Tray 1, Tray 2, Tray 3, or optional Tray 4.
- Any size paper heavier than 199 g/m^2 (53 lb) must be printed only from optional Tray 1. For paper specifications, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.
- If you are printing from optional Tray 1, the edge of the paper feeding into the printer must be at least 98 mm (3.9 inches) wide to allow rollers inside the printer to grab the paper, and a maximum of 312 mm (12.3 inches). Measuring from the leading edge to the trailing edge of the paper, the length must be at least 191 mm (7.5 inches) and a maximum of 470 mm (18.5 inches).
- If you are printing from Tray 2 or 3, the edge of the paper feeding into the printer must be at least 148 mm (5.8 inches) wide to allow rollers inside the printer to grab the paper, and a maximum of 297 mm (11.7 inches). Measuring from the leading edge to the trailing edge of the paper, the length must be at least 210 mm (8.3 inches) and a maximum of 432 mm (17.0 inches).
- If you are printing from optional Tray 4, the edge of the paper feeding into the printer must be at least 182 mm (7.2 inches) wide to allow rollers inside the printer to grab the paper, and a maximum of 297 mm (11.7 inches). Measuring from the leading edge to the trailing edge of the paper, the length must be at least 210 mm (8.3 inches) and a maximum of 432 (17.0 inches).

Printing full-bleed paper

Since the printer has the ability to print on specially cut paper up to 312 by 470 mm (12.3 by 18.5 inches), you can print up to 297 by 450 mm (11.7 by 17.7 inches) bleed images with crop marks from optional Tray 1. See your program online help for more information.

3 Advanced printing tasks

Overview

This section presents these advanced printing tasks:

- Using features in the printer driver
- Different first page
- Blank back page
- Customizing optional Tray 1 operation
- Printing by type and size of paper
- Job retention features
  - Printing a private job
  - Storing a print job
  - QuickCopying a job
  - Proofing and holding a job
- Printing with the optional HP Fast InfraRed (FIR) Receiver
- Making booklets

Using features in the printer driver

When you print from a software application, many of the printer features are available from the printer driver. To gain access to Windows printer drivers, see “Access the Windows printer driver” on page 23.

Note Settings in the printer driver and software application generally override control panel settings. (Software application settings generally override printer driver settings.)

Printer collation

The printer collation feature allows multiple original prints (mopying) that provide you the following advantages:

- reduced network traffic
- faster return to application
- all original documents

Saving printer setup information

Printer drivers allow you to save the printer settings you use most often as the default settings. For example, the driver might be set to print on letter-size paper, portrait orientation, with automatic tray selection (from the first available tray).

Windows PCL 6 and PCL 5e printer drivers allow you to save printer settings for multiple kinds of print jobs. For example, you might want to create a quick set for envelopes, or for printing the first page of a document on letterhead.

New printer driver features

Look for **Quick Sets**, **Scale to Fit** (any page size to any page size), and **Booklet Printing** options in the Windows printer driver, or see the printer driver help for more information.

Printing watermarks

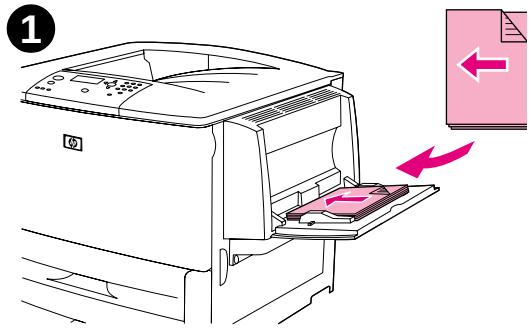
A watermark is a notice, such as “Top Secret,” printed in the background of each page in a document. Check the driver for available options, or see the printer driver online help for more information.

For Macintosh, you can select “Custom” and specify the text you choose, depending on your driver version.

Different first page

To print a different first page

Follow these instructions for printing a first page that is different from other pages in the print job.

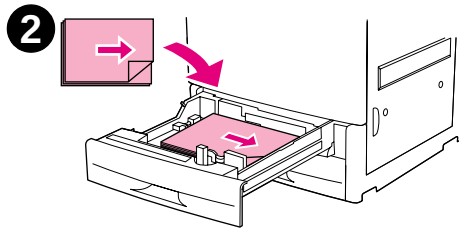


1 For Windows, select “Use different paper for first page” in your printer driver. Choose optional Tray 1 (or manual feed) for the first page and one of the other trays for the remaining pages. Place the paper for the first page in optional Tray 1. (For manual feed, place paper in optional Tray 1 after the job is sent to the printer and the printer requests paper.) For loading optional Tray 1, place the paper with the side to be printed up, the top of the page facing the rear of the printer.

For Macintosh computers, select “First from” and “Remaining from” in the print dialog box.

Note
Where and how you make selections depends on your software application or associated printer driver. (Some options may only be available through the printer driver.)

2 Load the paper for the remaining pages of the document into another tray. You may select the first and remaining pages by type of paper. For more information, see “Printing by type and size of paper” on page 57.



Blank back page

This option allows you to add blank pages to the end of a print job.

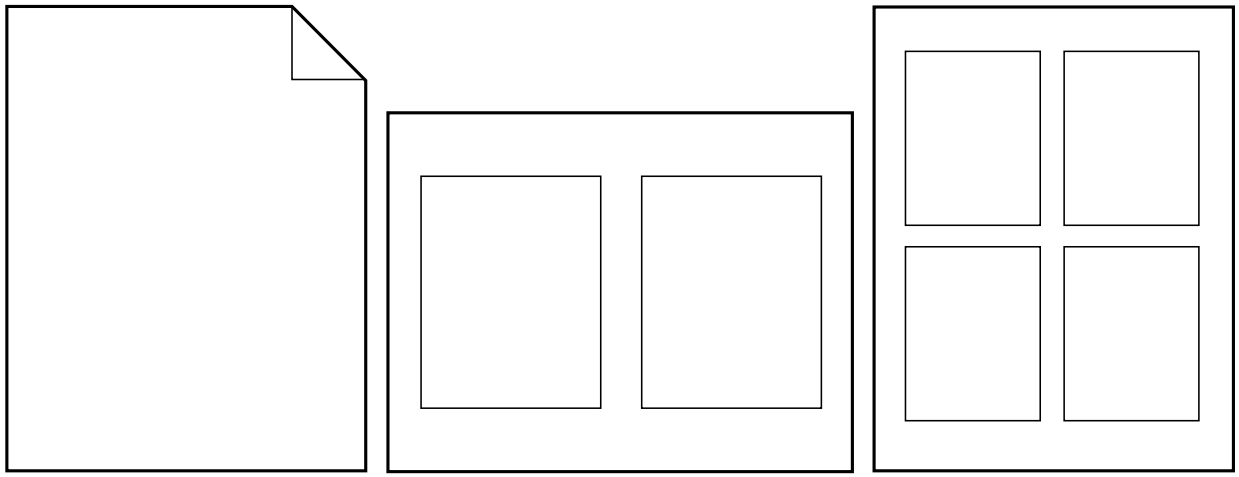
For Windows, select **Use different paper for first page** in the Paper tab of your printer driver, and then choose **Back Page**. You can then select the paper source you want to use for your back page. To turn the feature off, select **No back page**.

Printing multiple pages on one sheet of paper

You can print more than one page on a single sheet of paper. This feature is available in some printer drivers and provides a cost-effective way to print draft pages.

To print more than one page on a sheet of paper, look for a layout or pages per sheet option in the printer driver. (This is sometimes called 2-up, 4-up, or n-up printing.)

Printing left-to-right



Customizing optional Tray 1 operation

Customize optional Tray 1 to fit your printing needs.

The printer can be set to print from optional Tray 1:

- When the tray is loaded (`Tray 1 Size=Unspecified` and `Tray 1 Type=Unspecified`; formerly **First** mode). Print speed might be slower than normal.
- Only when the type of paper loaded is specifically requested (`Tray 1 Size=`any size and `Tray 1 Type=`anything *except* `Unspecified`; formerly **Cassette** mode).

Printing from optional Tray 1 when the loaded paper is requested

When `Tray 1 Size=`any size and `Tray 1 Type=`anything except `Unspecified` (formerly **Cassette** mode), the printer treats optional Tray 1 like the internal trays. Instead of looking for paper in optional Tray 1 first, the printer pulls paper starting either from the bottom tray upward or starting with the tray that matches type or size settings selected in the program from which you are printing.

From the program or the **Print** dialog box, set the type and size for a tray, if possible. If not, set the type and size from the printer control panel. (See “Printing by type and size of paper” on page 57.)

When `Tray 1 Size=`any size and `Tray 1 Type=`anything except `Unspecified` is set at the printer control panel, an option appears in the `Paper Handling` menu to configure **size** as well as **type** settings for optional Tray 1.

Manually feeding paper from optional Tray 1

The manual feed feature is another way of printing special paper from optional Tray 1, such as envelopes or letterhead. If manual feed is selected, the printer prints only from optional Tray 1.

When paper is loaded in optional Tray 1, set **Tray 1** mode in the **Paper-Handling** menu to **First** mode.

Printing by type and size of paper

You can configure the printer to select paper by *type* (such as plain or letterhead) and *size* (such as letter or A4), as opposed to *source* (a paper tray).

Benefits of printing by type and size of paper

If you frequently use several kinds of paper, once trays are set correctly, you do not have to check which paper is loaded in each tray before you print. This is especially helpful when the printer is shared and more than one person loads or removes paper.

Printing by type and size of paper is a way to be sure that print jobs always print on the desired paper.

To set the type for the paper or media you loaded when you are unsure which type (such as bond or recycled) to choose, check the label on the package of paper. For supported types of paper, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.

Note The type and size settings can also be configured from the HP Web JetAdmin software for networked printers. See the printer driver online help.

To print by type and size of paper

Note Settings in the printer driver and software application override control panel settings. (Software application settings generally override printer driver settings.)

1 Load and adjust the trays. (See the *introduce* guide on the product CD, or at www.hp.com/cposupport/.)

2 At the printer control panel, press ✓, use ▲ or ▼ to scroll to `PAPER HANDLING`, and press ✓.

3 Do one of the following:

- To allow the printer to automatically pull the type and size of paper loaded in optional Tray 1: Set `Tray 1 Size=Unspecified` and `Tray 1 Type=Unspecified` (**First** mode).
- To print by type and size from optional Tray 1, but to have the printer prompt you to load paper before printing: Set `Tray 1 Size` to the size loaded and set `Tray 1 Type` to anything *except* `Unspecified` (**Cassette** mode).
- To print by type and size from Tray 2, Tray 3, or optional Tray 4 when the tray is loaded with standard size paper: Just set the type. The size is automatically detected.
- To print by type and size from Tray 2, Tray 3, or optional Tray 4 when the tray is loaded with a custom size paper: set the size and type. For the size, select **Custom**, and then set the values using the measurements on the guides in the trays.

4 From the program or printer driver, select the type and size of paper.

To print by type and size, it might be necessary to unload or close Tray 1, or you may have to set optional Tray 1 to **Cassette** mode. For more information, see “Paper handling menu” on page 176.

Job retention features

The four special job features available for this printer are: Private jobs, Stored jobs, QuickCopy jobs, and Proof and hold jobs.

Follow the instructions below to gain access to the job retention features at the computer. Then, see the specific section for the type of job you want to create.

CAUTION If you turn the printer off, all QuickCopy, Proof and hold, and Private jobs are deleted.

To gain access to the job storage features

For Windows

1 On the **File** menu, click **Print**.

2 Click **Properties** and click the **Destination** tab.

3 Under **Destination Features**, click **Options** to display **Job Storage Options**.

For Macintosh

In newer drivers: Select **Job Retention** from the pull-down menu in the print dialog box. In older drivers, select **Printer Specific Options**.

Printing a private job

The private printing feature lets a user specify that a job is not printed until that user releases it using a 4-digit personal identification number (PIN) through the printer control panel. The user specifies the PIN in the driver, and the PIN is sent to the printer as part of the print job.

Note The private jobs feature uses available printer RAM memory if the printer does not have a hard disk installed. For moderate to heavy use of this feature, HP recommends installing an optional hard disk.

To create private jobs

To specify that a job is private from the driver, select the Private Job option, enter a User Name and Job Name, and type a 4-digit PIN. The job will not print until you enter the PIN at the control panel.

Releasing private jobs

The user can print a private job from the control panel.

To release private jobs

1. Press ✓.
2. Use ▲ or ▼ to scroll to `Retrieve Job` and press ✓.
3. Scroll to `USER NAME` and press ✓.
4. Use ▲ or ▼ to scroll to your job and press ✓.
5. Use ▲ or ▼ to scroll to `Print` and press ✓. (The Print icon should have 🔒 next to it.)
6. Use the numeric keypad to enter the PIN, and press ✓.

Deleting a private job

A private job is automatically deleted from the printer hard disk accessory after the user releases it for printing. If you want to delete the job without printing it, use this procedure.

To delete private jobs

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Retrieve Job` and press ✓.

3 Scroll to `USER NAME` and press ✓.

4 Use ▲ or ▼ to scroll to your job and press ✓.

5 Use ▲ or ▼ to scroll to `Delete` and press ✓. (`Delete` should have 🔒 next to it.)

6 Use the numeric keypad to enter the PIN, and press ✓.

Storing a print job

The user can download a print job to the printer hard disk accessory without printing it. The user can then print the job at any time through the printer control panel. For example, a user 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 on the hard disk accessory, select the **Stored Job** option in the driver when printing from the printer.

Note The stored job feature uses available RAM memory on the printer if the printer does not have a hard disk installed. For moderate to heavy use of this feature, HP recommends installing an optional hard disk.

To create stored jobs

In the printer driver, select the **Stored Job** option and type a user name and job name. The job does not print until someone requests it at the printer. See “Printing a stored job” on page 63.

Printing a stored job

The user can print a job stored on the printer hard disk accessory from the control panel.

To print a stored job

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Retrieve Job` and press ✓.

3 Scroll to `USER NAME` and press ✓.

4 Use ▲ or ▼ to scroll to your job and press ✓.

5 To print the default number of copies, press ✓. When ✓ is selected, the screen changes to `Copies=n`. To change the number, use the numeric keypad or ▲ and ▼ to select a new number, and press ✓.

If `Print` has 🔒 next to it, the job is a private job and requires a PIN. See “Printing a private job” on page 60.

Deleting a stored job

Jobs stored on the printer hard disk accessory can be deleted from the control panel.

To delete a stored job

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Retrieve Job` and press ✓.

3 Scroll to `USER NAME` and press ✓.

4 Use ▲ or ▼ to scroll to your job and press ✓.

5 Use ▲ or ▼ to scroll to `Delete` and press ✓.

If `Delete` has 🔒 next to it, the job requires a PIN to delete. See “Printing a private job” on page 60.

QuickCopying a job

The QuickCopy feature prints the requested number of copies of a job and stores a copy on the printer hard disk accessory. Additional copies of the job can be printed later. This feature can be turned off from the driver.

The default number of different QuickCopy jobs that can be stored on the printer is 32. From the control panel, you can set a different default number. See “JOB STORAGE LIMIT=32” on page 186.

To create QuickCopy jobs

CAUTION If the printer needs additional space to store newer QuickCopy jobs, the printer will delete other stored QuickCopy jobs, starting with the oldest job. To permanently store the job and prevent the printer from deleting it when space is needed, select the **Stored Job** option instead of the **QuickCopy** option.

In the printer driver, select the **QuickCopy** option and type a user name and a job name.

When you send the job to print, the printer prints the number of copies you set in the printer driver. To print more quick copies at the printer, see “Printing additional copies of QuickCopy jobs” on page 66.

Printing additional copies of QuickCopy jobs

This section describes how to print additional copies of a job stored on the printer hard disk accessory from the control panel.

To print more copies of a QuickCopy job

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Retrieve Job` and press ✓.

3 Scroll to `USER NAME` and press ✓.

4 Use ▲ or ▼ to scroll to your job and press ✓.

5 To print the default number of copies, go to the next step. Otherwise, to check or change the number of copies to print:

   a Use ▲ or ▼ to scroll to `Copies` and press ✓. The number of copies to be printed appears at the top of the window.

   b To change the number, use the numeric keypad or ▲ and ▼ to select a new number and press ✓.

6 Use ▲ or ▼ to scroll to `Print` and press ✓. The job prints.

If `Print` has 🔒 next to it, the job requires a PIN to print. See “Printing a private job” on page 60.

Deleting a QuickCopy job

Delete a QuickCopy job at the printer when you no longer need it. If the printer needs additional space to store new QuickCopy jobs, the printer will automatically delete other stored QuickCopy jobs, starting with the oldest job.

Note Stored QuickCopy jobs can be deleted from the control panel or from HP Web JetAdmin.

To delete a QuickCopy job

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Retrieve Job` and press ✓.

3 Scroll to `USER NAME` and press ✓.

4 Use ▲ or ▼ to scroll to your job and press ✓.

5 Use ▲ or ▼ to scroll to `Delete` and press ✓.

If `Delete` has 🔒 next to it, the job requires a PIN to delete. See “Printing a private job” on page 60.

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 to print the additional copies.

To permanently store the job and prevent the printer from deleting it when space is needed for something else, select the **Stored Job** option in the driver.

The proof and hold feature uses available RAM memory on the printer if the printer does not have a hard disk installed. For moderate to heavy use of this feature, HP recommends installing an optional hard disk.

To create a proof and hold job

CAUTION If the printer needs additional space to store newer proof and hold jobs, the printer will delete other stored proof and hold jobs, starting with the oldest job. To permanently store the job and prevent the printer from deleting it when space is needed, select the **Stored Job** option in the printer driver instead of the **Proof and Hold** option.

In the printer driver, select the **Proof and Hold** option and enter a user name and job name.

The printer prints one copy of the job for you to proof. Then, see “Printing the remaining copies of a held job” on page 69.

Printing the remaining copies of a held job

The user can print the remaining copies of a job held on the printer hard disk accessory from the control panel.

To print a proof and hold job

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Retrieve Job` and press ✓.

3 Scroll to `USER NAME` and press ✓.

4 Use ▲ or ▼ to scroll to your job and press ✓.

5 Use ▲ or ▼ to scroll to `Print` and press ✓. The job prints the remaining copies requested from the computer.

If `Print` has 🔒 next to it, the job requires a PIN to print. See “Printing a private job” on page 60.

Deleting a held job

When a user sends a proof and hold job, the printer automatically deletes that user's previous proof and hold job. If there is not a proof and hold job already for that job name and the printer needs additional space, the printer may delete other proof and hold jobs, starting with the oldest one.

To delete a proof and hold job

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Retrieve Job` and press ✓.

3 Scroll to `USER NAME` and press ✓.

4 Use ▲ or ▼ to scroll to your job and press ✓.

5 Use ▲ or ▼ to scroll to `Delete` and press ✓.

If `Delete` has 🔒 next to it, the job requires a PIN to delete. See "Printing a private job" on page 60.

Printing with the optional HP Fast InfraRed (FIR) Receiver

The optional HP Fast InfraRed (FIR) Receiver enables wireless printing from any IrDA-compliant portable device (such as a laptop computer) to the HP LaserJet 9000 Series printers.

The printing connection is maintained by positioning the sending FIR port within operating range. Note that the connection can be blocked by objects such as a hand, paper, direct sunlight, or any bright light shining into either FIR port.

Note For more information, see the user guide for the HP Fast InfraRed Connect.

Setting up to print with Windows 9*X*

Before launching the Fast InfraRed driver, complete the following steps:

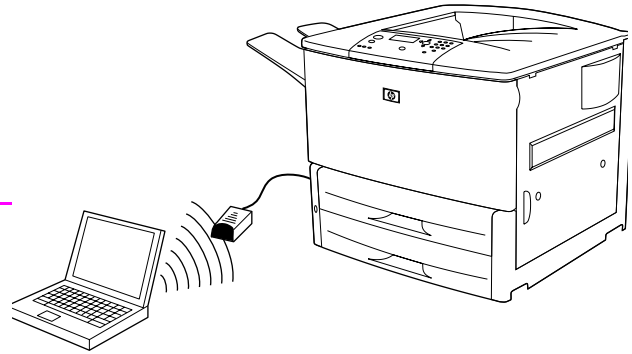
1. Click **Start**, click **Settings**, and then click **Printers**.
2. Select the HP LaserJet 9000, 9000n, 9000dn, or 9000hns as your default printer.
3. While in the same **Printers** folder, choose **Properties**, then choose **Details**, and make sure that **Virtual Infrared LPT Port** is selected.
4. Select the file to print.

Printing a job using FIR

Depending on the size of the job, printing with the HP Fast InfraRed Receiver may be slower than printing with a cable connected directly to the parallel port.

To print a job

1 Align your laptop computer (or other portable device equipped with an IrDA-compliant FIR window) within one meter (three feet) maximum of the HP FIR Connect. The FIR window must be at an angle of +/- 15 degrees relative to the printer to ensure an effective connection for printing.



Note
To prevent a broken connection while printing, make sure the sending port remains within operating range and that there is nothing between the ports, such as a hand, paper, or even direct sunlight, to block transmission.

2 Print the job. The status indicator on the HP Fast InfraRed Receiver lights up, and, after a short delay, the printer status panel displays `PROCESSING JOB`.

If the status indicator does not light up, realign the HP Fast InfraRed Receiver with the FIR port on the sending device, resend the print job, and maintain the alignment of all devices. If you have to move the equipment (for example, to add paper), make sure that all devices remain within the range of operation to maintain the connection.

If the connection is interrupted before your print job is complete, the HP Fast InfraRed Receiver status indicator turns off. You have up to 40 seconds to correct the interruption and continue the job. If the connection is resumed within this time, the status indicator lights up again.

Interrupting and resuming printing

The job interrupt and resume feature lets you temporarily stop the current print job in order to print another job through a FIR connection. When the FIR job is completed, the interrupted job resumes printing.

To interrupt the job at the printer, connect to the FIR port on the printer and send a job to the printer. The printer stops printing the current job when it reaches the end of the job it is printing. The printer then prints the job sent over the FIR connection. When the printer is done printing that job, it resumes printing the original job where it left off.

Making booklets

To make booklets easily, you can use the multifunction finisher as your output device.

You can gain access to the booklet-printing feature through some programs, such as desktop publishing programs. Refer to the user guide that came with your program for information on making booklets.

If you are using a program that does not support booklet making, you can create booklets using your HP drivers.

Note HP recommends that you use your program to prepare and preview your document for printing, then use your HP driver to print and saddle stitch your booklet.

There are three main steps to creating a booklet from your driver:

- Preparing your booklet: Arrange the pages on a sheet (booklet imposition) to create a booklet. You can impose your document from your program or use the booklet-printing feature in your HP driver.
- Adding a cover: Add a cover to your booklet by selecting a different first page using a different paper type. You can also add a cover of the same paper type as your booklet. Booklet covers must be the same size as the rest of the sheets. However, the covers may be a different weight from the rest of the booklet.
- Saddle stitching: Paper must be fed into the product short edge first. The multifunction finisher staples the center of your booklet (saddle stitching). If your booklet is only one sheet of paper, the finisher will fold the sheet, but not staple it. If the booklet consists of more than one sheet of paper, the finisher will staple and then fold up to 10 sheets per booklet.

The booklet-printing feature of the multifunction finisher allows you to saddle stitch and fold booklets using the following paper sizes:

- A3
- A4
- Letter
- Legal
- Ledger

See the *multifunction finisher use* guide at www.hp.com/lj9000 for detailed information on making booklets.

4 Printer maintenance

Overview

This section explains basic printer maintenance.

- Managing the print cartridge
- Print cartridge conditions

Managing the print cartridge

When you use a new, authentic HP print cartridge (C8543X), you can obtain the following types of supplies information:

- amount of cartridge life remaining
- estimated number of pages remaining
- number of pages printed
- other supplies information

Non-HP print cartridge

Hewlett-Packard Company cannot recommend the use of non-HP print cartridges, either new or remanufactured. Because they are not HP products, HP cannot influence their design or control their quality. Service or repairs required as a result of using a non Hewlett-Packard print cartridge will *not* be covered under the printer warranty.

When you use a non-HP print cartridge, the cartridge is unable to report on the status of the print cartridge. The `CARTRIDGE LOW` and `CARTRIDGE OUT` messages will not be provided.

Print cartridge authentication

When you insert a non-HP print cartridge in the printer, the printer will inform you if a cartridge is not a genuine HP print cartridge. If you insert a used HP cartridge from another HP printer, the printer can take as many as 60 printed pages to authenticate that the cartridge is a genuine HP part, and will then reactivate the supply status features.

If the printer control panel message states that this is not a genuine HP print cartridge and you believe you purchased an HP cartridge, call the HP fraud hotline at (1) (887) 219-3183 (toll-free in North America).

Print cartridge storage

Do not remove the print cartridge from its package until you are ready to use it. The shelf life of a cartridge in an unopened package is approximately 2.5 years.

CAUTION To prevent damage to the print cartridge, do not expose it to light for more than a few minutes.

Checking the toner level

You can check the toner level using the printer control panel, the embedded web server, printer software, or HP Web JetAdmin.

Using the printer control panel

1 Press ✓ to enter Menu.

2 Use ▲ or ▼ to select PRINT SUPPLIES STATUS and press ✓.

3 Press ✓ to print the supplies status page. See “Supplies status page” on page 156 for information about the supplies status page.

Using the embedded Web server

1 In your Web browser, enter the IP address for the printer home page. This takes you to the printer status page.

2 On the left side of the screen, click **Supplies Status**. This takes you to the supplies status page, which provides toner level information. See “Supplies status page” on page 156 for information about the supplies status page.

Using printer software

Three things are required to use this feature:

- The “Supplies Information and Ordering” software must be installed on your computer (use the custom installation option to install this software).
- The printer must be directly connected to your computer (parallel).
- You must have access to the World Wide Web.

1 At the bottom right of your screen (in the system tray), double-click the Printer icon. This opens the status window.

2 On the left side of the status window, click the Printer icon from which you wish to obtain status.

3 At the top of the status window, click the **Supplies** link. You can also scroll down to Supplies Status.

Note If you want to order supplies, click **Order Supplies**. This opens a browser that produces a URL through which to purchase consumables. Select the supplies you wish to order and finish the ordering process.

Using HP Web JetAdmin

In HP Web JetAdmin, select the printer device. The device status page shows toner level information.

Print cartridge conditions

Print cartridge is low

When the print cartridge is low, the printer control panel displays the CARTRIDGE LOW message.

If the CARTRIDGE LOW message displays, but the printer continues printing, CARTRIDGE LOW is set to CONTINUE (the default setting).

If the printer stops printing when low toner is detected, CARTRIDGE LOW is set to STOP. To resume printing, press ✓.

The printer will continue to display CARTRIDGE LOW until you replace the print cartridge.

Select CARTRIDGE LOW=CONTINUE or CARTRIDGE LOW=STOP from the Configuration menu in the control panel (“System setup submenu” on page 186).

Print cartridge is out

When the print cartridge is empty, the printer control panel displays a CARTRIDGE OUT message. The printer continues printing (without customer interaction) until drum out is reached, but HP does not guarantee print quality after this message is displayed. However, if the CARTRIDGE OUT message is a result of the drum life being exceeded, the user has to replace the cartridge immediately, and no override is possible. This is done to protect the printer and the print cartridge.

Using the printer cleaning page

Note To ensure good print quality with certain types of paper, use the cleaning page every time the print cartridge is replaced. If the cleaning page is frequently needed, try a different type of paper.

If toner specks appear on the front or back side of your print jobs, follow the procedure below.

From the printer control panel:

1. Use ▲ or ▼ to select `Config Device` and press ✓.
2. Use ▲ or ▼ to select `Print Quality` and press ✓.
3. Use ▲ or ▼ to select `Create Cleaning Page` and press ✓.
4. When toner has been cleaned from inside the printer, shiny black spots will appear on the page black strip. If white spots appear on the black strip, print another cleaning page.

Note In order for the cleaning page to work properly, print the cleaning page on copier grade paper (not bond or rough paper).

Shaking the print cartridge

When you install a print cartridge for the first time, gently shake it from side to side to distribute the toner evenly inside the cartridge. Due to the new cartridge design, this is the only time you will need to shake the cartridge.

Configuring alerts

You can use HP Web JetAdmin or the printer embedded Web server to configure the system to alert you of problems with the printer. The alerts take the form of e-mail messages sent to the e-mail account or accounts that you specify.

You can configure:

- the device you want to monitor (in this case, the printer).
- which alerts are to be received (for example, alerts for paper jams, paper out, cartridge low, cartridge out, and cover open).
- the e-mail account to which the alerts should be forwarded.

5 Problem solving

Overview

This section will help you to troubleshoot and solve printer problems.

“Clearing jams” on page 83	Occasionally, paper can jam during printing. This section will help you to locate paper jams, properly clear them from the printer, and solve repeated jams.
“Understanding printer messages” on page 103	Many different messages can appear on the printer control panel display. Some messages tell the current printer status, such as `INITIALIZING`. Other messages require action, such as `CLOSE FRONT DOOR`. Most of these messages are self-explanatory. However, some messages indicate a problem with the printer, or require further action or description. This section lists these types of messages and tells you what to do if a message persists.
“Correcting output quality problems” on page 123	The printer should produce print jobs of the highest quality. If print jobs do not appear sharp and clear, if defects such as lines, specks, or smears appear on the page, or if paper is wrinkled or curled, use this section to troubleshoot and solve the print quality problem.
“Determining printer problems” on page 132	Before you can eliminate a printer problem, you must understand the location of the problem. Use the tables in this section to determine the printer problem, and then follow the corresponding troubleshooting suggestions.
“Checking the printer configuration” on page 153	From the printer, you can print information pages, which give details about the printer and its configuration.

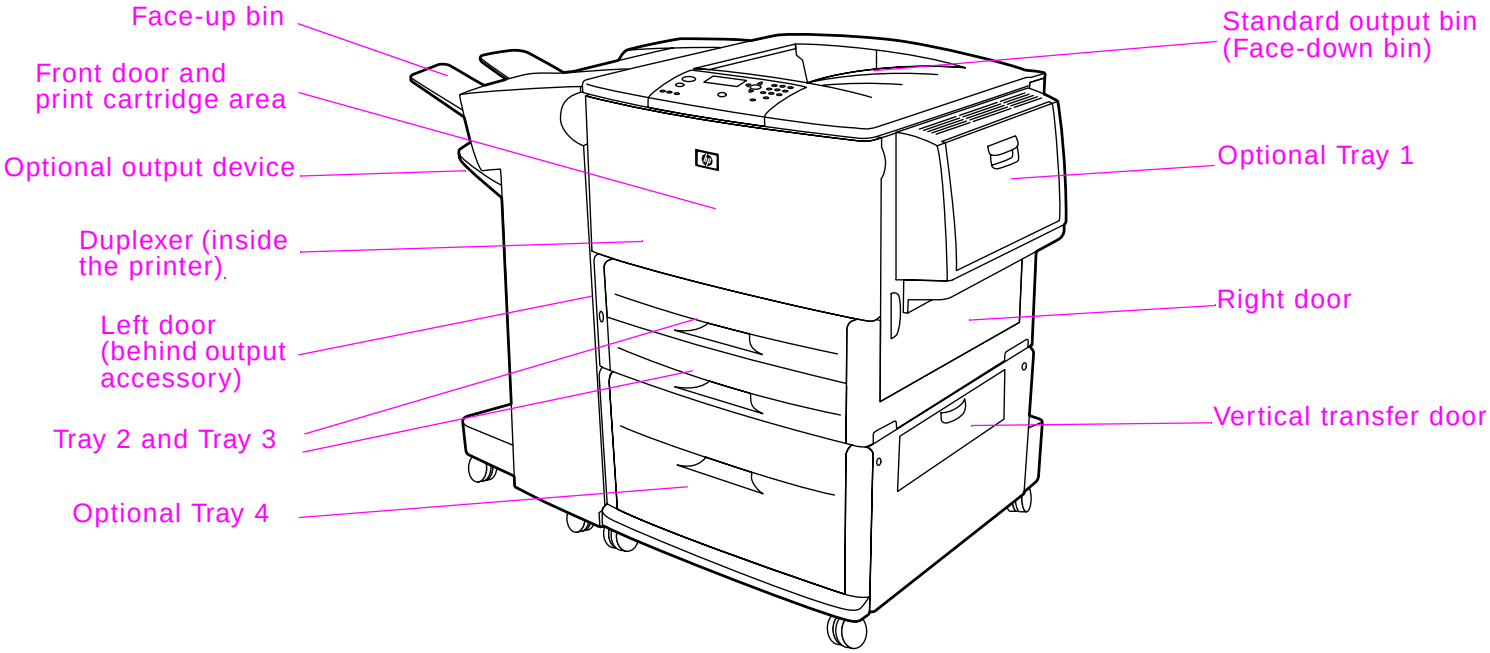
Clearing jams

If the printer control panel displays a paper jam message, look for paper in the locations indicated in the following graphic. You might need to look for paper in locations other than indicated in the paper jam message. If the location of the paper jam is not obvious, look first in the front door area.

After looking at the graphic, you can go to the procedure for clearing the jam. When clearing jams, be very careful not to tear the paper. If a small piece of paper is left in the printer, it could cause additional jams. If jams are a recurring problem, see “Solving repeated paper jams” on page 102.

Note Loose toner might remain in the printer after a paper jam and cause output quality problems. These should clear up within a few pages.

Jam locations

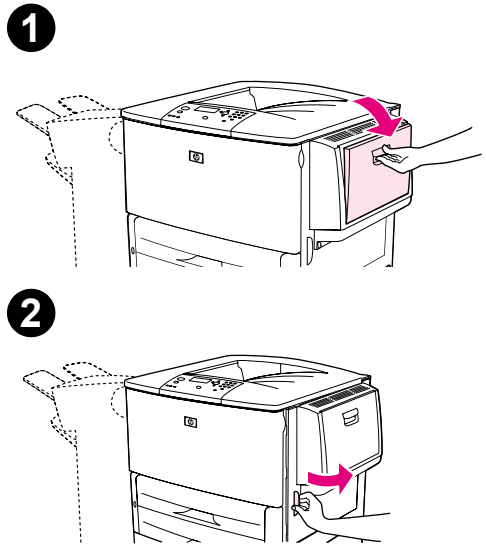


Clearing jams from the input tray areas

To clear jams in optional Tray 1

1 Check for paper in the optional Tray 1 area, and remove any paper from this area. Carefully check to be sure you have removed all pieces of torn paper.

2 Open and close the right door to reset the printer.



To clear jams inside the right door

1 Open the right door.

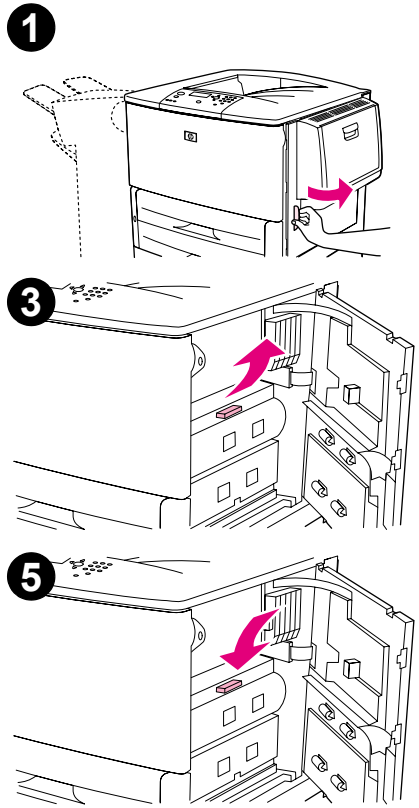
2 Check for paper in the right door area, and remove any paper from this area. Carefully check to be sure you have removed all pieces of torn paper.

3 Open the jam access cover. Pull out and lift the green tab.

4 Remove any paper from this area by pulling it out of the printer.

5 Push the green lever down to original position.

6 Close the right door.



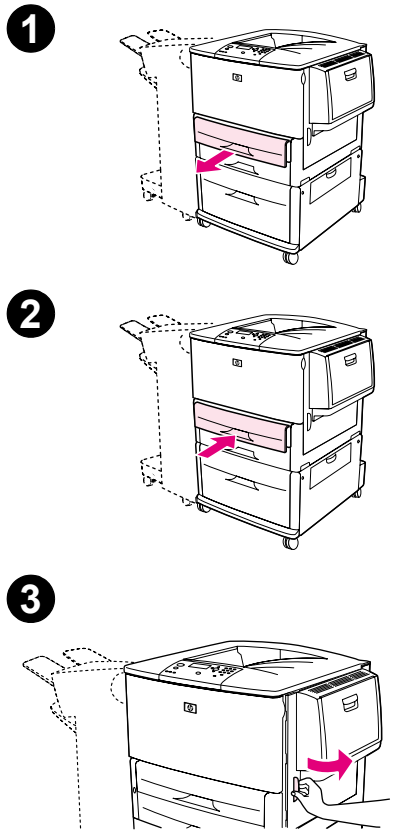
To clear jams in Trays 2 and 3

1 Open the tray until it stops.

2 Check for paper in the tray area, and remove any paper from this area. Carefully check to be sure you have removed all pieces of torn paper.

3 Close the tray.

4 Open and close the right door to reset the printer.



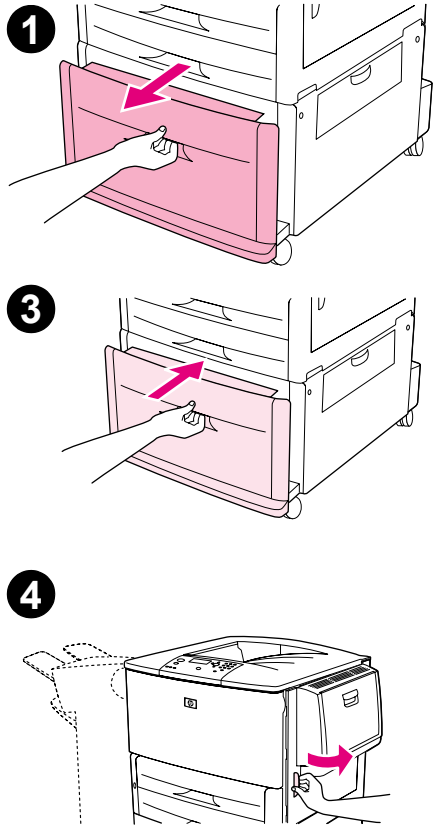
To clear jams in optional Tray 4

1 Open optional Tray 4.

2 Check for paper in the tray area, and remove any paper from this area. Carefully check to be sure you have removed all pieces of torn paper.

3 Close optional Tray 4.

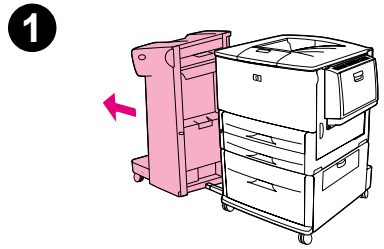
4 Open and close the right door to reset the printer.



Clearing jams from the duplex printing accessory (duplexer)

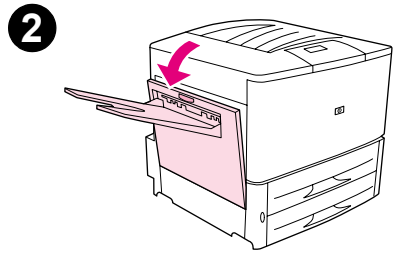
To clear jams in the duplex printing accessory

1 If an optional output device is installed, slide it away from the printer to access the left door.



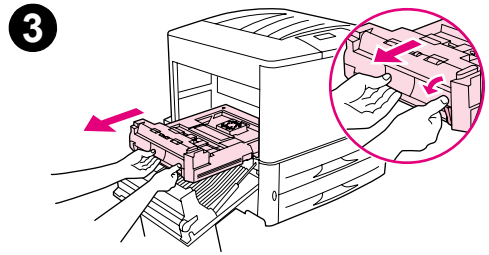
2 Open the left door and carefully pull out any paper from area.

WARNING! Avoid touching the adjacent fusing area. It can be HOT.

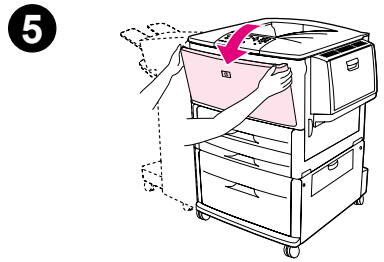


3 Remove the duplex printing accessory by pressing the green lever and pulling the unit out until it stops.

4 Remove any paper by lifting the two green levers in the duplex printing accessory.



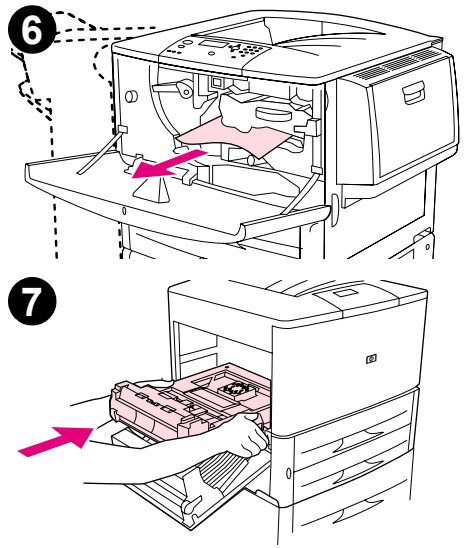
5 Open the front door.



6 Check for paper in the duplex printing accessory area, and remove any paper by pulling it out of the printer. Be careful not to tear the paper.

7 Reinstall the duplex printing accessory by sliding it back into the slot until it locks into place.

8 Close all open doors. If an optional output device is installed, push it back into place.



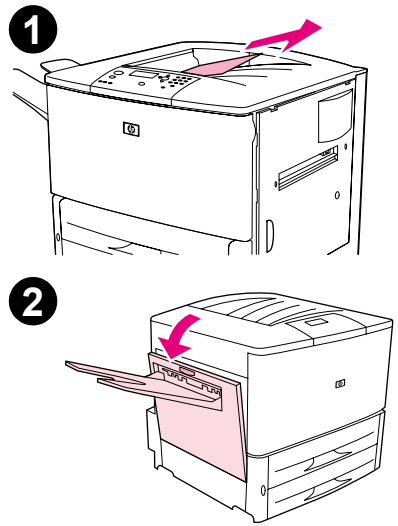
Clearing jams from the output areas

To clear jams in the standard output bin

1 If the jam extends into the output area, slowly and carefully pull the paper straight out of the printer so that it does not tear.

2 Open the left door and carefully pull out any paper from area. (If an optional output device is installed, first move it away from the printer to access the left door.)

3 Close all open doors. If an optional output device is installed, push it back into place.



To clear jams in the left door (fuser area)

1 If an optional output device is installed, slide it away from the printer to access the left door.

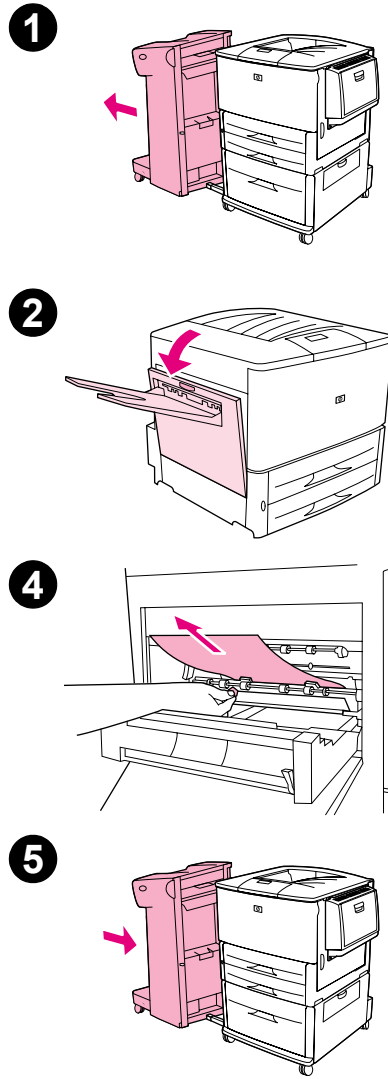
2 Open the left door.

WARNING!
Avoid touching the adjacent fusing area. It can be HOT.

3 Remove any jammed or damaged paper from this area by pulling it out of the printer.

4 Press down on the green tab and carefully check for paper. Be sure to remove all pieces of torn paper.

5 Close the left door. If an optional output device is installed, push it back into place.



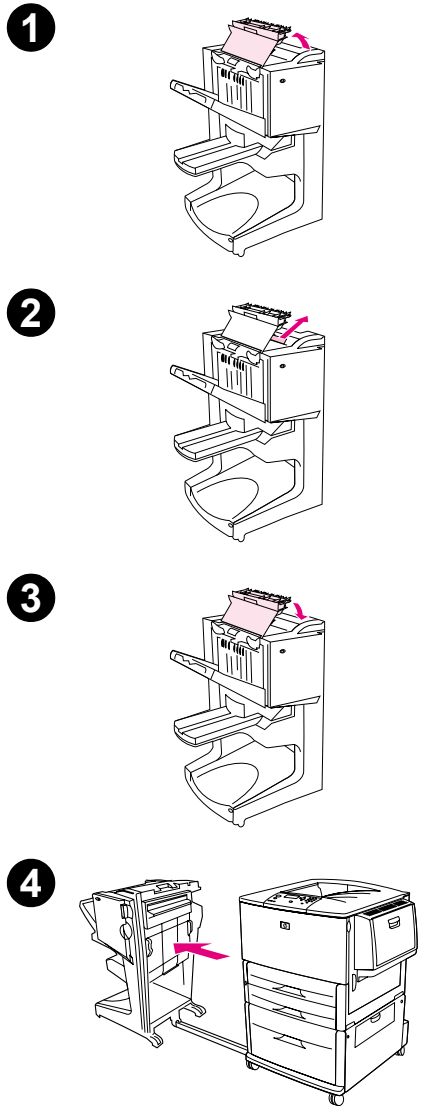
To clear jams in the multifunction finisher

1 Open the finisher cover.

2 Slowly and carefully pull the paper straight out of the finisher so that it does not tear.

3 Close the finisher cover.

4 Move the finisher away from the printer.

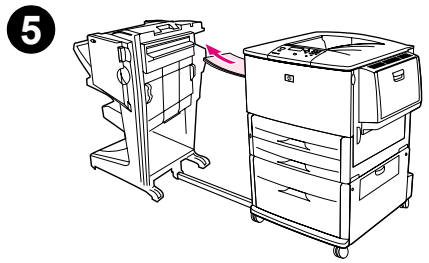


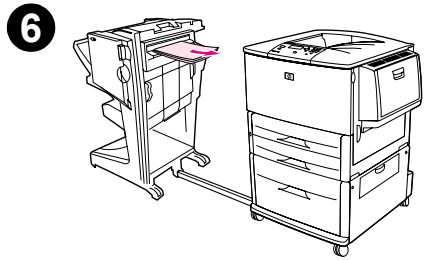
5 Carefully remove any paper from the printer output area.

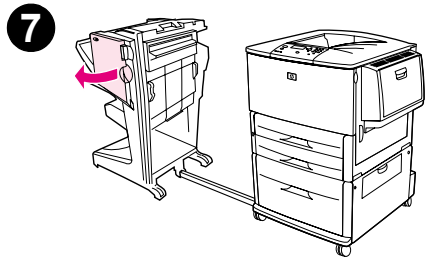
6 Carefully remove any paper from the finisher input area.

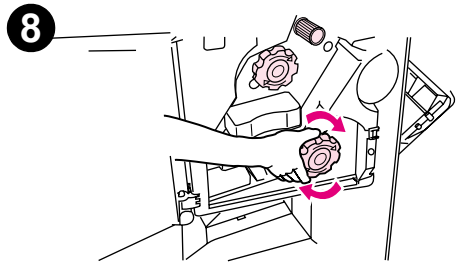
7 Open the stapler-unit door.

8 To clear a booklet jam, turn the bottom green knob clockwise to remove the booklet.



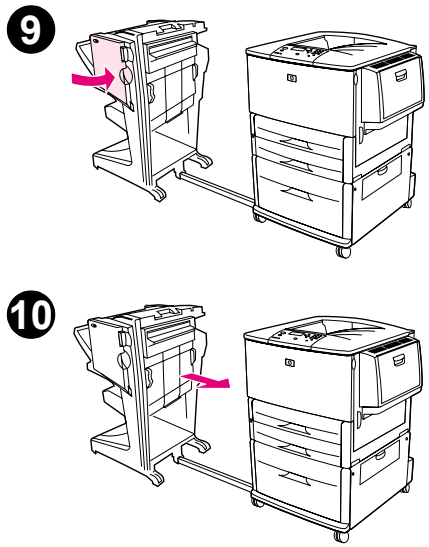






9 Close the stapler-unit door.

10 Reattach the finisher.



To clear a staple jam from the optional stapler/stacker

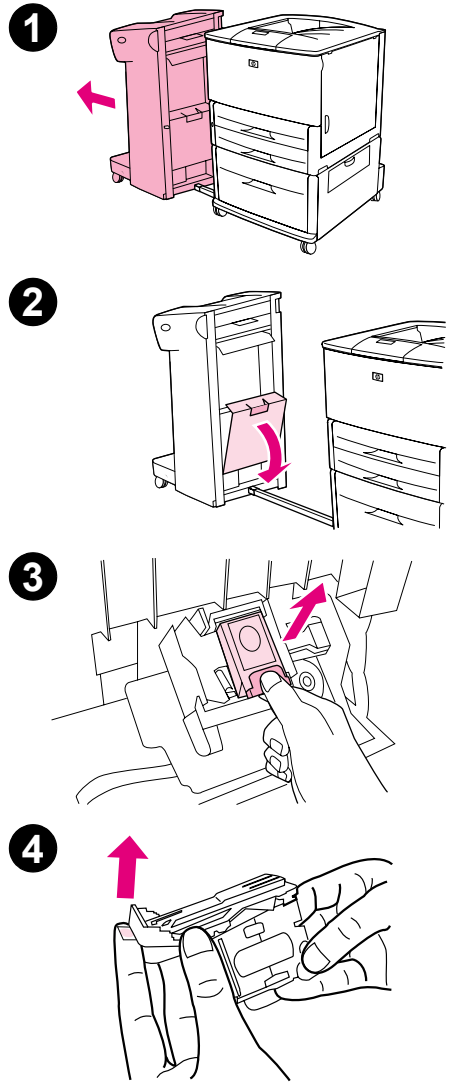
Note
The message `JAM INSIDE STAPLER` displays on the control panel.

1 Slide the stapler/stacker away from the printer.

2 Open the stapler unit door.

3 On the staple cartridge, squeeze the tabs together and pull the cartridge out.

4 Pull the cartridge lever up.



5 Remove the jammed staple.

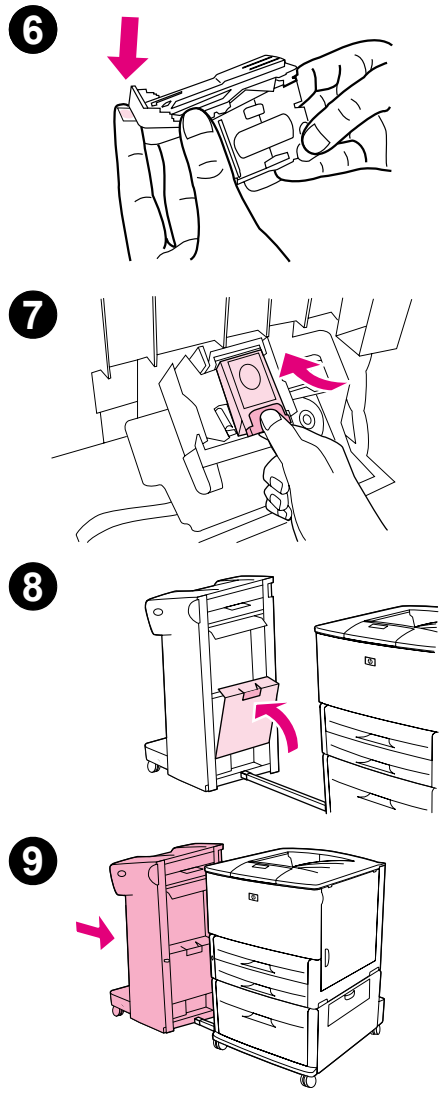
6 Push the cartridge lever down.

7 Insert the staple cartridge so that it snaps into place.

8 Close the stapler unit door.

9 Reattach the stapler/stacker to the printer.

Note The stapler needs to reload after clearing a staple jam, so the first few documents (no more than five) might not be stapled. If a print job is sent and the stapler is jammed or is out of staples, the job will still print as long as the path to the output bin is not blocked.



To clear a staple jam from the multifunction finisher

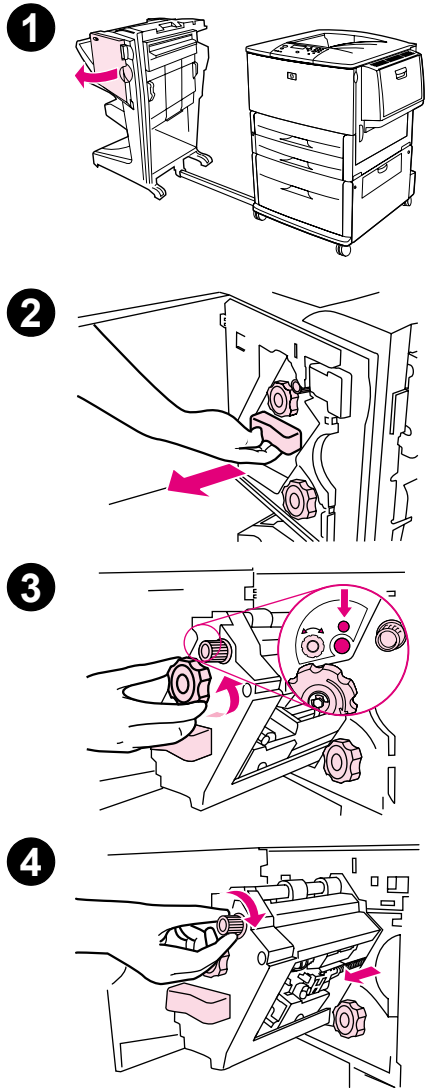
1 Open the stapler-unit door.

2 Slide the stapler-unit toward you.

3 Turn the large green knob until the blue dot appears in the window of the stapler unit.

4 Turn the small green knob at the top of the stapler unit counterclockwise until the staple cartridge moves to the left of the stapler unit.

CAUTION The blue dot must appear in the window of the stapler unit before you remove the staple cartridge. If you try to remove the staple cartridge before the blue dot appears in the window, you could damage the finisher.

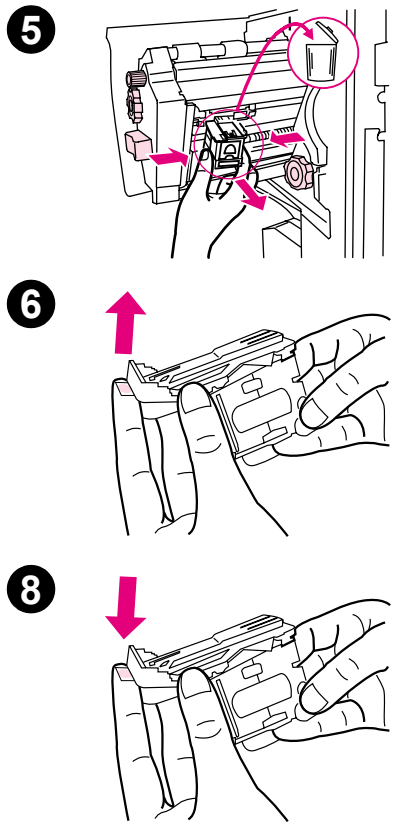


5 Remove the staple cartridge.

6 Pull up on the lever labeled with a green dot.

7 Remove the damaged staple.

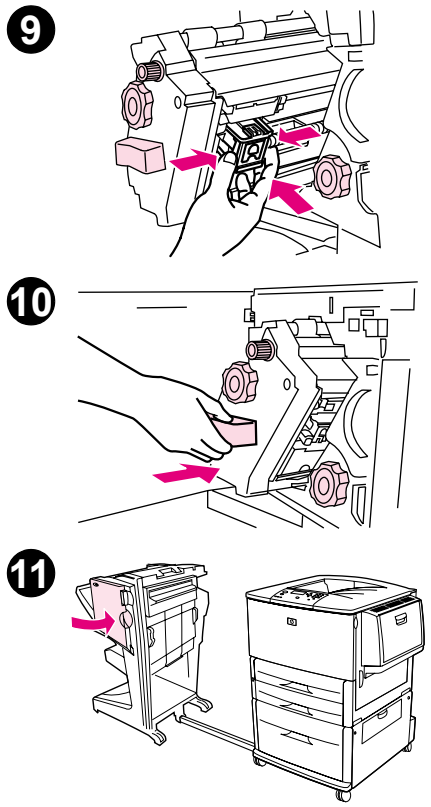
8 Press down on the level labeled with a green dot.



9 Reinstall the staple cartridge.

10 Slide the stapler unit into the finisher.

11 Close the stapler-unit door.

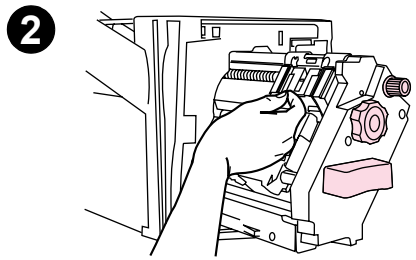


In rare instances, a staple jam might occur in the upper half of the stapler head.

1 Follow steps 1 through 4 for clearing a staple jam from the multifunction finisher (see page 98).

2 Locate the damaged staple at the back of the stapler unit, and then remove the staple.

3 Follow steps 10 through 11 for clearing a staple jam from the multifunction finisher (see page 98).



Solving repeated paper jams

Situation	Solution
General repeated paper jam problems	1. Check to see that paper is correctly loaded in the trays and that all width guides are correctly set (See “Printing tasks” on page 30).
	2. Make sure that the paper tray is set for the size of paper installed and that the tray is not overloaded with paper.
	3. Try turning over the stack of paper in the tray. If you are using prepunched or letterhead paper, try printing from optional Tray 1.
	4. Do not use previously printed paper or torn, worn, or irregular paper. For recommended paper and other paper for your printer, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.
	5. Check the paper specifications. (See the *introduce* guide on the product CD, or got to www.hp.com/cposupport/.) If paper is outside of the recommended specifications, problems can occur.
	6. Printer might be dirty. Clean the printer as described in the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.
	7. Check that all damaged or jammed paper is removed from printer.

Note If paper jams continue, contact your HP-authorized service provider. (See the HP Customer Care section in the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Understanding printer messages

Printer messages appear on the printer control panel display to relay the normal status of the printer (such as `Processing Job`), or an error condition (such as `Close Front Door`) that needs attention. “Resolving control panel messages” on page 104 lists messages that require attention, or that might raise questions. Messages are listed in alphabetical order, with numeric messages at the end of the list. Not all messages are listed, because some (such as `Ready`) are self-explanatory.

Note Some printer messages are affected by the `AUTO CONTINUE` and `CLEARABLE WARNINGS` settings in the `CONFIGURE DEVICE` menu, `System Setup` submenu, in the printer control panel (See “System setup submenu” on page 186).

Using the printer online help system

This printer features an online help system on the control panel that provides instructions for resolving most printer errors. Certain control panel messages alternate with instructions about accessing the online help system.

Whenever a ? appears in an error message or a message alternates with `FOR HELP PRESS ?`, press the **?** key to view the help and use ▲ and ▼ to scroll through the message.

To exit the online help system, press **?**.

If a message persists

- Some messages (e.g. requests to load a tray or a message that a previous print job is still in the printer memory) allow you to press ✓ to print, or to press CANCEL JOB to clear the job and eliminate the message.
- If a message persists after performing all of the recommended actions, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Resolving control panel messages

Message	Explanation or recommended action
ACCESS DENIED MENUS LOCKED	The printer control panel function you are trying to access has been locked to prevent unauthorized access. See your network administrator.
BAD DUPLEXER CONNECTION	The duplex printing accessory is not connected properly to the printer. Turn the printer off and reinstall the duplex printing accessory.
BAD TRAY 1 CONNECTION	Optional Tray 1 is not connected properly to the printer. Turn the printer off and reinstall optional Tray 1.
<BINNAME> FULL	The specified output bin is full. Empty the bin to continue printing.
CANCELLING... <JOBNAME>	The printer is cancelling a job. The message continues while the job is stopped, the paper path is flushed, and any remaining incoming data on the active data channel is received and discarded.
CARTRIDGE FAILURE	Cartridge is loaded and shipping protection strip cannot be fully removed. Return the cartridge for a new one. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Message	Explanation or recommended action
CARTRIDGE LOW - xxxx PAGES ESTIMATED To continue press ✓	The message first appears when about eight percent of toner is remaining in the cartridge (about 2,400 pages remaining for the 30,000-page cartridge at five percent coverage). Depending on how the printer is configured, it will either continue to print or it will stop. If the printer stops, you can resume printing by pressing ✓ for each job. You might want to have a replacement cartridge available. See “Print cartridge conditions” on page 79 for more information.
CARTRIDGE OUT REPLACE CARTRIDGE	Drum in print cartridge is zero. Order new authentic HP print cartridge (C8543X).
CHECKING PAPER PATH	The engine is rotating its rollers to check for possible paper jams.
CHECKING PRINTER	The engine is performing an internal test.
CHOSEN PERSONALITY NOT AVAILABLE alternates with READY	A print job requested a printer language (personality) that does is not available with this printer. The job will not print and will be cleared from memory. Print the job using a driver for a different printer language, or add the requested language to the printer (if available).
CLEARING PAPER FROM PRINTER	The printer jammed or was turned on and paper is detected in a wrong location. The printer is automatically attempting to eject the pages. If possible, use the progress bar at the bottom of the display.
CLOSE FRONT DOOR ON LEFT ACCESSORY	The stapler door on the multifunction finisher is open, or it is not closed properly. Close the stapler door properly.

Message	Explanation or recommended action
CLOSE TOP COVER ON LEFT ACCESSORY	The top cover on the multifunction finisher is open, or is not closed properly. Close the top cover properly.
CLOSE FRONT OR LEFT DOOR	The front or left doors are open and must be closed for printing to continue.
CLOSE RIGHT DOOR	The right door is open and must be closed for printing to continue.
DETECTABLE SIZE IN TRAY xx Move switch to standard	A tray is loaded with standard size paper, and the switch in the tray is set to custom. Move the switch to the "standard" position.
DIFFERENT PAPER SIZES IN JOB	Different paper sizes are used for a single job in the multifunction finisher. Verify that all pages in the job are configured for the same size paper.
DISK DEVICE FAILURE alternates with READY	The EIO hard disk had a critical failure and can no longer be used. Reseat the EIO hard disk. If the message continues, replace it with a new EIO hard disk.
DISK FILE OPERATION FAILED alternates with READY	The requested operation could not be performed. You might have attempted an illegal operation, such as trying to download a file to a nonexistent directory.

Message	Explanation or recommended action
DISK FILE SYSTEM IS FULL alternates with READY	Delete files from the EIO hard disk and then try again. HP Web JetAdmin can be used to delete files and fonts.
DISK IS WRITE PROTECTED alternates with READY	The disk device is protected, and no new files can be written to it.
EIO DISK x NOT FUNCTIONAL	The EIO hard disk is not working correctly. Remove the EIO hard disk from the slot (a slot number will replace the X) indicated. Reseat the EIO hard disk. If the message continues, replace it with a new EIO hard disk.
EIO DISK x SPINNING UP	The EIO hard disk in slot x is spinning up its platter.
EVENT LOG EMPTY	The user is attempting to view an empty event log by selecting SHOW EVENT LOG from the control panel.
FLASH DEVICE FAILURE alternates with READY	The flash DIMM had a critical failure and can no longer be used. Remove the flash DIMM and replace it with a new one.

Message	Explanation or recommended action
FLASH FILE OPERATION FAILED alternates with READY	The requested operation could not be performed. You might have attempted an illegal operation, such as trying to download a file to a non-existent directory.
FLASH FILE SYSTEM IS FULL alternates with READY	Delete files from the flash DIMM. Use HP LaserJet Resource Manager to download or delete files and fonts. (See the software help for more information.)
FLASH IS WRITE PROTECTED alternates with READY	The flash file is protected, and no new files can be written to it.
INCORRECT PIN	The wrong PIN is entered. Return to the previous screen and reenter the PIN.
INSERT OR CLOSE TRAY x	The specified tray must be inserted or closed for printing to continue.
INSTALL BOOKLET BIN	The booklet bin for the multifunction finisher is not installed properly. Install the booklet bin properly. See the *use guide* that came with the finisher for more information.

Message	Explanation or recommended action
INSTALL CARTRIDGE	The print cartridge has been removed or has been installed incorrectly. It must be replaced or reinstalled correctly for printing to continue.
INSTALL CONNECTION UNIT	Connection unit is not installed in the right access door of the printer to allow printing from the optional input device.
LOAD TRAY xx alternates with To use another tray press ✓.	A job is sent that requires a specific type and size that is not available. Load the requested paper into optional Tray 1. Press ✓ to use a type and size that is available in another tray.
MANUALLY FEED [TYPE] [SIZE] alternates with To continue press ✓.	Load the requested paper into optional Tray 1. To override the message, press ✓ if the desired paper is available in another tray. Press ✓ to use a type and size that is available in another tray.
MEMORY FULL STORED DATA LOST	There is no available memory in the printer. The current job might not print correctly, and some resources (such as downloaded fonts) might have been deleted. You might want to add more memory to the printer (See “Printer memory and expansion” on page 197).
MEMORY SETTINGS CHANGED	Indicates the resource saving or I/O buffering settings were changed by the printer because it did not have enough memory to use the previous settings. This usually occurs after removing memory from the printer, adding a duplex printing accessory, or adding a printer language. You might want to change memory settings for I/O buffering and resource saving (although default settings are usually best), or add more memory to the printer (See “Printer memory and expansion” on page 197).

Message	Explanation or recommended action
MEMORY SHORTAGE JOB CLEARED	The printer did not have enough free memory to print the entire job. The remainder of the job will not print and will be cleared from memory.
alternates with	Press ✓ to continue.
READY	Change the resource saving setting from the printer control panel (See “Control panel menus” on page 172) or add more memory to the printer (See “Printer memory and expansion” on page 197).
MEMORY SHORTAGE PAGE SIMPLIFIED	The printer had to compress the job in order to fit it in available memory. Some data loss might have occurred.
alternates with	Press ✓ to continue.
READY	The print quality of these pages might not be acceptable. Reduce the complexity of these pages and reprint them. You might want to add more memory to the printer (See “Printer memory and expansion” on page 197).
NO JOB TO CANCEL	The CANCEL JOB key was pressed, but there is no active job or buffered data to cancel. Message is displayed for approximately two seconds before the printer is returned to the READY state.
NON-HP CARTRIDGE DETECTED	The printer has detected that the cartridge is not a genuine HP cartridge, and the message is displayed for approximately 30 seconds before the printer is returned to the READY state. If you think you purchased an HP print cartridge, call the HP fraud hotline (1-877-219-3183, toll-free in North America). Any printer repair required as a result of using a non-HP print cartridge is not covered under the printer warranty.

Message	Explanation or recommended action
PERFORM PRINTER MAINTENANCE	The printer has passed its prescribed printed page threshold between maintenance procedures. To ensure optimum print quality, the printer prompts you to perform routine maintenance every 350,000 pages. To order a Printer Maintenance Kit, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.
RAM DISK DEVICE FAILURE alternates with READY	The RAM disk had a critical failure and can no longer be used. Turn the printer off, and then turn the printer on to clear the message.
RAM DISK FILE OPERATION FAILED alternates with READY	The requested operation could not be performed. You might have attempted an illegal operation, such as trying to download a file to a non-existent directory.
RAM DISK FILE SYSTEM IS FULL alternates with READY	Delete files and then try again, or turn the printer off, and then turn the printer on to delete all files on the device. (Delete files using HP LaserJet Resource Manager or another software utility. See the software help for more information.) If the message persists, increase the size of the RAM disk. Change the RAM disk size from the **Configuration** menu in the printer control panel (See “System setup submenu” on page 186).
RAM DISK IS WRITE PROTECTED alternates with READY	The RAM disk is protected, and no new files can be written to it.
RESEND UPGRADE	There is an error in the printer firmware flash. Resend a valid firmware image.

Message	Explanation or recommended action
ROM DISK DEVICE FAILURE alternates with READY	The ROM disk had a critical failure and can no longer be used. Turn the printer off, and then turn the printer on to clear the message.
ROM DISK FILE OPERATION FAILED alternates with READY	The requested operation could not be performed. You might have attempted an illegal operation, such as trying to download a file to a non-existent directory.
ROM DISK FILE SYSTEM IS FULL alternates with READY	Delete files and then try again, or turn the printer off, and then turn the printer on to delete all files on the device. (Delete files using HP LaserJet Resource Manager or another software utility. See the software help for more information.) If the message persists, increase the size of the ROM disk. Change the ROM disk size from the **Configuration** menu in the printer control panel (See “System setup submenu” on page 186).
ROM DISK IS WRITE PROTECTED	The ROM disk is protected, and no new files can be written to it.
ROTATE PAPER IN TRAY xx alternates with	Tray xx is loaded with Letter or A4 paper in the portrait orientation, but the job that used the tray did not specify booklet making. Tray xx has letter (or A4) but needs to be rotated.
SIZE MISMATCH TRAY xx=[SIZE]	Tray xx is loaded with paper that is longer or shorter in the feed direction than the size configured for the tray.

Message	Explanation or recommended action
STAPLER LOW ON STAPLES	The stapler device is running out of staples and needs to be refilled.
STAPLER OUT OF STAPLES	The stapler device is out of staples and needs to be refilled.
TRAY xx CONTAINS UNKNOWN MEDIA	The printer cannot sense what type of media is in the specified tray (xx).
TRAY xx EMPTY alternates with READY	Load the empty tray (xx) to clear the message. If you do not load the specified tray, the printer will continue printing from the next available tray, and the message will continue to display.
TRAY xx OPEN alternates with READY	The specified tray is open or is not closed completely.
TRAY xx SIZE=*SELECTED SIZE alternates with To change, move switch in tray x	The custom switch is in the "standard" position, and a value from the menu is selected.
TYPE MISMATCH TRAY x=[TYPE]	The system detected an overhead transparency in the paper path coming from the tray (xx).

Message	Explanation or recommended action
UNABLE TO MOPY JOB	A mopy job cannot be mopied because of a memory, disk, or configuration problem. Only one copy will be produced. If job name is unknown, insert UNTITLED.
UNABLE TO STORE JOB	A job cannot be stored on the printer because of a memory, disk, or configuration problem. If job name is unknown, insert UNTITLED.
UNSUPPORTED SIZE IN TRAY xx	A sent job has a specified size that is not supported by the printer.
USE [TYPE] [SIZE] FROM TRAY N INSTEAD?	If the requested paper size or type is not available, the printer asks if it should use a different paper size or type. Select a size or type from a different tray.
WAIT FOR PRINTER TO REINITIALIZE	The RAM disk setting has been changed before the printer is automatically rebooted. This change will not take effect until the printer reinitializes. If you change the mode of the external device, turn the printer off, turn the printer on, and wait for the printer to reinitialize.
xx.y PRINTER ERROR To continue press ✓	A printer error which can be cleared by pressing ✓ in the printer control panel has occurred.

Message	Explanation or recommended action
13.xy.zz JAM IN [LOCATION]	Remove jammed paper from the specified location (See **“Clearing jams” on page 83**). Open and close the front door to clear the message. If the message persists after all jams have been cleared, a sensor might be stuck or broken. Contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
20 INSUFFICIENT MEMORY To continue press ✓	The printer received more data than can fit in its available memory. You might have tried to transfer too many macros, soft fonts, or complex graphics. Press ✓ to print the transferred data (some data might be lost), then simplify the print job or install additional memory (See “Printer memory and expansion” on page 197).
21 PAGE TOO COMPLEX alternates with To continue press ✓	The page formatting process was not fast enough for the printer. Press ✓ to print the transferred data. (Some data might be lost.) The page protection item appears in the CONFIGURE DEVICE - DEFAULTS - EVENTS menu, and should be set to ON to print the page. When the page is successfully printed, PAGE PROTECT=ON, should be set back to AUTO (See “System setup submenu” on page 186). If this message appears often, simplify the print job.
22 EIO x BUFFER OVERFLOW	Too much data was sent to the EIO card in the specified slot (x). An improper communications protocol might be in use. Press ✓ to print the transferred data. (Some data might be lost.) Check the host configuration. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Message	Explanation or recommended action
22 PARALLEL I/O BUFFER OVERFLOW alternates with To continue press ✓	Too much data was sent to the parallel port. Check for a loose cable connection, and be sure to use a high-quality cable. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) (Some non-HP parallel cables might be missing pin connections or might otherwise not conform to the IEEE-1284 specification.) This error can occur if the driver you are using is not IEEE-1284 compliant. For best results, use the HP driver that came with the printer (See "Printer drivers" on page 20). Press ✓ to clear the error message. (Data will be lost.) If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
22 SERIAL I/O BUFFER OVERFLOW	The printer serial buffer has overflowed during a busy state. Press ✓ to print the transferred data. (Some data might be lost.)
40 BAD SERIAL TRANSMISSION	A serial data error (parity, framing, or line overrun) occurred during the reception of data from the computer. Press ✓ to clear the error message and continue printing.
40 EIO x BAD TRANSMISSION	The connection between the printer and the EIO card in the specified slot has been broken. Press ✓ to clear the error message and continue printing.
41.x PRINTER ERROR alternates with To continue press ✓	A temporary printing error occurred. Turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Message	Explanation or recommended action
41.3 UNEXPECTED SIZE TRAY xx alternates with To change size press ✓	A tray (xx) is loaded with paper that is longer or shorter in the feed direction than the size configured for the tray. Press ✓ to get to TRAY xx SIZE=. Reconfigure the size in a tray so the printer will use a tray with the size required for the print job. If the error does not clear, turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
41.5 UNEXPECTED TYPE TRAY xx alternates with To change type press ✓	The tray (xx) is loaded with paper that is not the same type configured for the tray. Press ✓ to get to TRAY xx TYPE=. Reconfigure the type in a tray so the printer will use a tray with the type required for the print job. If the error does not clear, turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
49.xxxxx	A critical firmware error has occurred. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
50.x FUSER ERROR	A fuser error has occurred. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or www.hp.com/cposupport/.)

Message	Explanation or recommended action
51.x PRINTER ERROR alternates with To continue cycle power	A temporary printing error occurred. Turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or www.hp.com/cposupport/.)
52.x PRINTER ERROR alternates with To continue cycle power	A temporary printing error occurred. Turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or www.hp.com/cposupport/.)
53.xy.zz PRINTER ERROR	There is a problem with the printer memory. The DIMM that caused the error will not be used. Values of x, y, and zz are as follows: x = DIMM type 0 = ROM 1 = RAM y = Device location 0 = Internal memory (ROM or RAM) 1 to 4 = DIMM slots 1, 2, 3, or 4 zz = Error number You might need to reseat or replace the specified DIMM. Turn the printer off, and then replace the DIMM that caused the error. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Message	Explanation or recommended action
55.xx PRINTER ERROR alternates with To continue press ✓	A temporary printing error occurred. Press ✓. If the error does not clear, turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
56.x PRINTER ERROR alternates with To continue cycle power	A temporary printing error occurred. Turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
57.x PRINTER ERROR	A temporary printing error occurred. Turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
58.x PRINTER ERROR alternates with To continue cycle power	A temporary printing error occurred. Turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Message	Explanation or recommended action
59.x PRINTER ERROR alternates with To continue cycle power	A temporary printing error occurred. Turn the printer off, then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
60.x PRINTER ERROR	An obstruction prevents the tray specified by xx from lifting paper properly for feeding. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
62.x PRINTER ERROR	There is a problem with the printer memory. The x value refers to the location of the problem: 0 = Internal memory 1 to 4 = DIMM slots 1, 2, 3, or 4 You might need to replace the specified DIMM. To continue press ✓. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
64 PRINTER ERROR alternates with To continue cycle power	A scan buffer error occurred. Turn the printer off, and then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Message	Explanation or recommended action
68.x PERMANENT STORAGE ERROR alternates with To continue press ✓	An error occurred in the printer nonvolatile memory (NVRAM), and one or more printer settings has been reset to its factory default. Printing can continue, but there might be some unexpected functions because an error occurred in permanent storage. Pressing ✓ should clear the message. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
68.x PERMANENT STORAGE FULL alternates with To continue press ✓	The printer NVRAM is full. Some settings saved in the NVRAM might have been reset to the factory defaults. Printing can continue, but there might be some unexpected functions because an error occurred in permanent storage. Pressing ✓ should clear the message. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
68.x PERMANENT STORAGE WRITE FAIL	The printer NVRAM is failing to write. Printing can continue, but there might be some unexpected functions because an error occurred in permanent storage. Pressing ✓ should clear the message. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Message	Explanation or recommended action
69.x PRINTER ERROR	A temporary printing error occurred. Turn the printer off, reseat the duplex printing accessory, and then turn the printer on. If this message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
79.xxxx PRINTER ERROR	A critical hardware error occurred. Turn the printer off, and then turn the printer on. If the message persists, contact an HP-authorized service or support provider. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
8x.yyyy	The EIO accessory card in slot x has encountered a critical error as specified by yyyy.
81 SERVICE (xxx)	This message is used when errors occur while testing the printer at the manufacturing site.

Correcting output quality problems

Use the examples in the image defect table to determine which print quality problem you are experiencing, then see the corresponding reference pages to troubleshoot.

Note The examples below depict letter-size paper that has passed through the printer long-edge first. (If the paper has passed through the printer short-edge first, lines and repeating defects will run vertically rather than horizontally.)

Image defect table

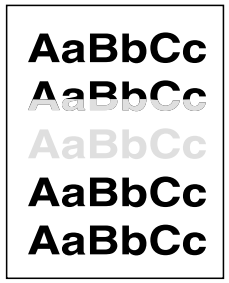
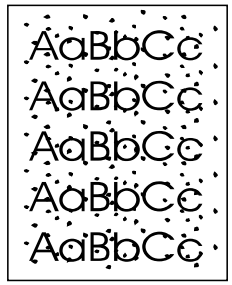
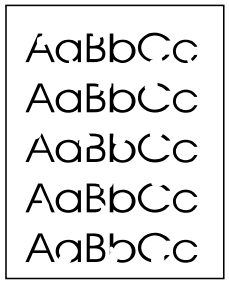
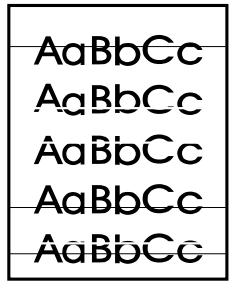
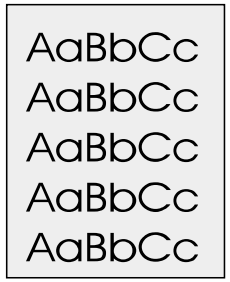
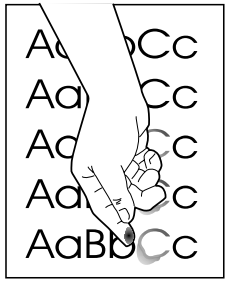
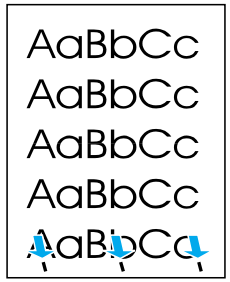
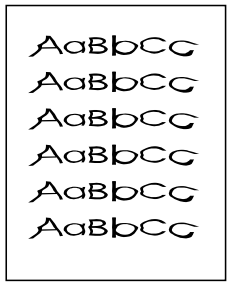
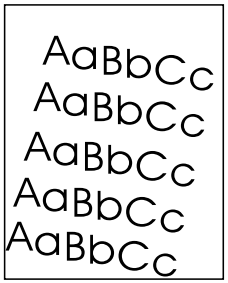
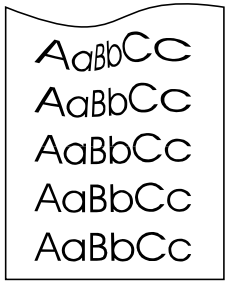
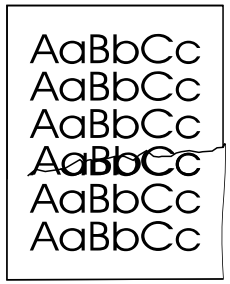
			
See “Light print or fade” on page 125	See “Specks” on page 125	See “Dropouts” on page 125	See “Lines” on page 125

Image defect table

			
See “Gray background” on page 126	See “Toner smear” on page 126	See “Loose toner” on page 127	See “Repeating defects” on page 127
			
See “Misformed characters” on page 127	See “Page skew” on page 128	See “Curl or wave” on page 128	See “Wrinkles or creases” on page 128

Light print or fade

- The print cartridge might be low. Replace the print cartridge.
- Maintenance might be due. Check this by printing a copy of the supplies status page (see “Supplies status page” on page 156). If maintenance is due, order and install the printer maintenance kit. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
- The print cartridge might be almost empty. Replace the print cartridge.

Specks

Specks might appear on a page after a jam has been cleared.

- Print a few more pages to see if the problem corrects itself.
- If specks occur frequently, set your printer up to automatically run a cleaning page (see “Using the printer cleaning page” on page 80).
- Clean the inside of the printer (see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/) and run a manual cleaning page to clean the fuser (see “Using the printer cleaning page” on page 80).
- Try using a different type of paper.
- Check for print cartridge leaks. If the print cartridge is leaking, replace it.

Dropouts

- Make sure that the environmental specifications for the printer are being met (see “Environmental product stewardship program” on page 218).
- If the paper is rough and the toner easily rubs off, either try changing the fuser mode to High 1 or High 2, or try using a smoother paper.
- Try using a different paper type.

Lines

- Print a few more pages to see if the problem corrects itself.

- Clean the inside of the printer (see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/) and run a manual cleaning page to clean the fuser (see “Using the printer cleaning page” on page 80).
- Replace the print cartridge.
- Maintenance might be due. Check this by printing a copy of the supplies status page (see “Supplies status page” on page 156). If maintenance is due, order and install the printer maintenance kit. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Gray background

- Do not use paper that has already been run through the printer.
- Print a few more pages to see if the problem corrects itself.
- Turn over the stack of paper in the tray. Also, try rotating the paper 180°.
- At the printer control panel, use the **Print quality** menu to decrease the toner density setting (see “Print quality submenu” on page 184).
- Make sure that the environmental specifications for the printer are being met (see “Environmental product stewardship program” on page 218).
- Replace the print cartridge.

Toner smear

Also see “Loose toner” on page 127.

- Print a few more pages to see if the problem corrects itself.
- Try using a different type of paper.
- Make sure that the environmental specifications for the printer are being met (see “Environmental product stewardship program” on page 218).
- Clean the inside of the printer (see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/) and run a manual cleaning page to clean the fuser (see “Using the printer cleaning page” on page 80).
- Maintenance might be due. Check this by printing a copy of the supplies status page (see “Supplies status page” on page 156). If maintenance is due, order and install the printer maintenance kit. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

- Replace the print cartridge.

Loose toner

Loose toner, in this context, is defined as toner that can be rubbed off the page.

- If paper is heavy or rough, try using a high fuser mode so that toner fuses more completely onto the paper. At the printer control panel, use CONFIGURE FUSER MODE MENU in the **Paper handling** menu (see “Paper handling menu” on page 176).
- If you have observed a rougher texture on one side of your paper, try printing on the non-rough side.
- Make sure that the environmental specifications for the printer are being met (see “Environmental product stewardship program” on page 218).
- Make sure that paper type and quality meet HP specifications (see “Specifications” on page 164).
- Maintenance might be due. Check this by printing a copy of the supplies status page (see “Supplies status page” on page 156). If maintenance is due, order and install the printer maintenance kit. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Repeating defects

- Print a few more pages to see if the problem corrects itself.
- If the distance between defects is 38 mm (1.5 in) or 94 mm (3.76 in), the print cartridge might need to be replaced.
- Clean the inside of the printer (see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/) and run a manual cleaning page to clean the fuser (see “Using the printer cleaning page” on page 80).
- Maintenance might be due. Check this by printing a copy of the supplies status page (see “Supplies status page” on page 156). If maintenance is due, order and install the printer maintenance kit. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Misformed characters

- Print a few more pages to see if the problem corrects itself.
- Make sure that the environmental specifications for the printer are being met (see “Environmental product stewardship program” on page 218).

- Maintenance might be due. Check this by printing a copy of the supplies status page (see “Supplies status page” on page 156). If maintenance is due, order and install the printer maintenance kit. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Page skew

- Print a few more pages to see if the problem corrects itself.
- Verify that there are no torn pieces of paper inside the printer.
- Make sure that paper is loaded correctly, all adjustments have been made, and the paper is under the corner tabs (see “Orienting media” on page 31).
- Turn over the stack of paper in the tray. Also, try rotating the paper 180°.
- Make sure that paper type and quality meet HP specifications (see “Specifications” on page 164).
- Make sure that the environmental specifications for the printer are being met (see “Environmental product stewardship program” on page 218).

Curl or wave

- Turn over the stack of paper in the tray. Also, try rotating the paper 180°.
- Make sure that paper type and quality meet HP specifications (see “Specifications” on page 164).
- Make sure that the environmental specifications for the printer are being met (see “Environmental product stewardship program” on page 218).
- Try printing to a different output bin.
- If media is lightweight and smooth, try using a low fuser mode to reduce the heat in the fusing process. At the printer control panel, use `CONFIGURE FUSER MODE MENU` on the **Paper handling** menu to do this (see “Paper handling menu” on page 176).

Wrinkles or creases

- Print a few more pages to see if the problem corrects itself.
- Make sure that the environmental specifications for the printer are being met (see “Environmental product stewardship program” on page 218).
- Turn over the stack of paper in the tray. Also, try rotating the paper 180°.

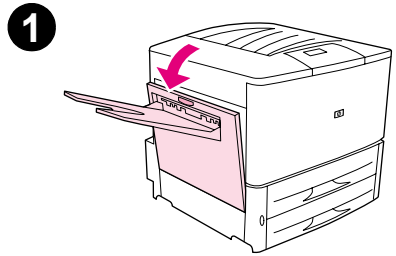
- Make sure that paper is loaded correctly, all adjustments have been made, and the paper is under the corner tabs (see “Orienting media” on page 31).
- Make sure that paper type and quality meet HP specifications (see “Specifications” on page 164).
- If envelopes are creasing, try storing envelopes so that they lie flat.

Preventing wrinkles on envelopes

If envelopes are wrinkled when printed, first ensure that you are using supported types of envelopes. Then, use the following procedure to move the fuser levers to the higher position while printing the envelopes.

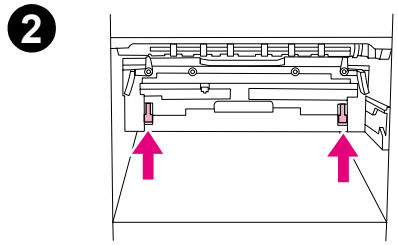
To prevent wrinkles on envelopes

1 Open the left door (If an optional output device is installed, first slide it away from the printer).



WARNING!
Avoid touching the adjacent fusing area. It can be HOT.

2 Locate and lift up the two blue levers.



3 Close the left door.

When finished printing the envelopes, return the fuser levers to the down position for standard paper types.

CAUTION
Failure to return levers in the down position for standard paper types might result in poor print quality.

Detecting printer problems

Troubleshooting checklist

- Print job on custom paper does not fit correctly
- Problems with the stapler/stacker
- Problems with the multifunction finisher

Note For more information about an optional HP output device, see the *use* guide that came with the device.

Determining printer problems

Situation	Solution
A printer cover is open.	Firmly close the printer doors (left, front, and right).
Correct size of paper is not loaded.	Check paper trays to be sure the correct sizes are loaded as configured. Also, check that guides are set correctly.
Display is blank, and internal fans are not running.	Make sure that the printer power is on. Press all the keys to see if one is stuck; contact your HP-authorized service representative if this does not work.
Messages appear in the display.	See “Understanding printer messages” on page 103.
Paper is jammed in the printer.	Check for paper jams (See **“Clearing jams” on page 83**).
Paper tray is out of paper.	Load paper. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
Printer display is in the wrong language or displays unfamiliar characters.	Reconfigure the control panel display language. See the *start* guide, or press ✓ while simultaneously pushing the power switch ON. Hold ✓ until SELECT LANGUAGE appears, then release ✓. Use ▲ and ▼ to select the desired language. Press ✓ to save your selection. The control panel display will indicate the printer is ready to use. If the new language does not appear in the display, you might not have pressed ✓ to save your new selection.
Printer is not turned on.	Press the printer control button to turn the printer on (button in).
Printer is not working at all.	Plug the AC power cord firmly into the grounded power receptacle and into the printer. (Be sure the power source is energized.)

Situation	Solution
Printer is turned on, but internal fans are not running.	Make sure the line voltage is correct for the printer power configuration. (See the plate next to the power receptacle on the back of your printer for voltage requirements.) If you are using a power strip and its voltage is not within specification, plug the printer directly into the power receptacle.
Printer voltage is not correct.	Make sure line voltage is in the correct range. (See the product label next to the power receptacle on the back of the printer for voltage requirements.)

Software, computer, and printer interface problems

Situation	Solution
A page fails to print.	Set PRINT PS ERRORS=ON, and then send the job again to print a PS error page. If this does not identify the problem, try turning off **Resource Saving** and **I/O Buffering** or try installing more memory (See "PCL or PS font list" on page 159).
A page prints with clipped margins.	If the page margins are clipped, you might have to print the page at 300-dpi resolution or install more memory. Also try turning off **Resource Saving** and **I/O Buffering**.
A PS error page prints.	• Make sure the print job is a PS job. • Check to see whether your program expected you to send a setup or PS header file to the printer. • Check the printer setup in your software application to make sure that the printer is selected. • Check cable connections to ensure that they are secure. • Reduce the complexity of the graphic. • Add available memory by turning on Resource Saving.
A text listing of PS commands prints instead of your PS print job.	The control panel PERSONALITY=AUTO setting might have been confused by a nonstandard PS code. Check the PERSONALITY setting to see if it is set to PS or PCL. If it is set to PCL, set it to PERSONALITY=AUTO. If it is set to AUTO, set it to PS for this print job only. When the job has printed, return the setting to AUTO.
Attempted to use a disk-resident font, but the printer substituted a different font.	If you are using PCL, print the PCL Font Page, and verify that the font is on the disk. If you are using PS, print the PS Font Page and make sure that the font is on the disk. If the font is not on the disk, use the HP Resource Manager or the Macintosh-based HP LaserJet utility to download the font.

Situation	Solution
Auto setup did not automatically set up the printer.	• Set up the printer manually by selecting **Configure**. • Select an alternate PPD (See “Selecting an alternate PPD” on page 149). • The PPD might have been renamed. If so, select the renamed PPD (See “Selecting an alternate PPD” on page 149). • A network queue might be present.
Blank pages print.	• Turn the printer off and then back on. • Make sure the printer cartridge is installed properly.
Cannot access Tray 2 or 3, or optional Tray 4.	Make sure that the paper tray guides are adjusted correctly for the paper size you are using. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
Cannot clear `MANUALLY FEED [TYPE] [SIZE]` message.	• A previous print job might still be in the printer buffer. • Make sure that optional Tray 1 has the correct paper size loaded. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
Computer software problem.	Check that your computer is working correctly by printing from a program you know works, or by printing a plain text file to see if the problem is with your program or with your printer driver. (For example, `C:\dir>LPTn` where n is the number of the computer port the printer is connected to, for example LPT1.) To print the page, you might have to send a form feed command from your computer.

Situation	Solution
Connection cannot be established or seems to take longer than usual.	• Use a device that is IRDA-compliant; look for an IRDA symbol on the device, or see the computer user guide for IRDA specifications. • Make sure that the operating system on your computer includes a FIR driver and that your program uses a compatible driver. (Note that complex pages take longer to print.) • Position the HP Fast InfraRed Receiver within the range of operation described in "Printing a job using FIR" on page 72, and make sure that no object is blocking the connection. (This object could be a hand, paper, books, or even bright light.) • Make sure that the two IR ports are clean (free from dirt and grease). • Make sure that no bright light is shining directly into either IR port. Bright light of any kind (sunlight, incandescent light, fluorescent light, or light from an infrared remote control, such as those used for TVs and VCRs) shining directly into one of the IR ports might cause interference. • Position the portable device closer to the FIR port on the printer.
Control panel settings, such as RESOLUTION or ORIENTATION, do not work or are ignored.	Software commands override control panel settings (See "Using control panel menus" on page 15 for information about how your program works with control panel settings).
Data from a previous print job is still in the printer buffer.	• Make sure that you are using the correct printer driver. • A complex print job might still be processing. • Make sure the printer is not paused. Make sure the control panel reads PROCESSING JOB. • Pull out the print cartridge and check for paper. Reseat the print cartridge. • Open Trays 2 and 3. Make sure that the appropriate paper is inserted. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) Close the trays.

Situation	Solution
Data is missing, but there are no printer messages.	• Check your software application to be sure the print file contains no errors. • Check your cable to make sure it is securely connected to both the printer and the computer. • Your parallel printer cable might be defective. Use a high-quality cable. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/ for an HP cable part number.) • Check your network connection.
Data light is flashing, but nothing prints.	• Make sure that you are using the correct printer driver. • A complex print job might still be processing. • Make sure the printer is not paused. Make sure the control panel reads `PROCESSING JOB`. • Pull out the print cartridge and check for paper. Reseat the print cartridge. • Open Trays 2 and 3. Make sure that the appropriate paper is loaded. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) Close the trays.
Disk failure `EIO x DISK NOT FUNCTIONING`	Turn the printer off and make sure that the EIO hard disk is inserted correctly and is securely fastened. If the control panel message continues to be displayed, the EIO hard disk needs to be replaced.
Disk is not initialized `DISK x NOT INITIALIZED`	Use the Windows-based HP Resource Manager or the Macintosh-based HP LaserJet Utility to initialize the disk.
Disk is write-protected `DISK IS WRITE PROTECTED`	Fonts and forms cannot be stored on the disk when the disk is write-protected. Use the Windows-based HP Resource Manager or the Macintosh-based HP LaserJet Utility to remove the write protection from the disk.

Situation	Solution
Driver might not be set up to print on both sides of the paper.	Make sure that the option to print on both sides of the paper is properly configured in the driver.
Duplex printing accessory jams.	Make sure that you are using the supported paper weights and sizes. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
FIR port status indicator does not light up.	• Make sure that the printer is in READY mode and that the FIR port you are printing from is IRDA-compliant and within the range of operation described in "Printing a job using FIR" on page 72. • Make sure that the HP Fast InfraRed receiver is properly connected to the printer. • Run the printer Self Test. Make sure that FIR POD (IRDA Compliant) is printed under Installed Personalities and Options.
First page takes much longer to print than following pages.	• Make sure that the printer displays READY. • Set the **PowerSave** feature for a longer time period (See "Configuration page" on page 155). If a page takes longer to print due to complex formatting commands, changing the **PowerSave** setting might not improve print speed. You might want to simplify the page.
Garbled pages print, there are overprints, or only a portion of a page prints.	• Make sure that your program is configured for the correct printer. • Replace the printer interface (I/O) cable with a cable you know works to see if the cable is defective. • Your parallel printer cable might be defective. Use a high-quality cable. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/ for an HP cable part number.) • Set the PERSONALITY item in the Configuration menu to AUTO (See "PERSONALITY=AUTO" on page 186). The printer might have been set to PCL, and a PS job was sent to the printer, or vice versa. • Data sent to the printer might be corrupt. Try sending another file to see if it prints.

Situation	Solution
General operation problems.	For general paper operation information, see “Printing tasks” on page 30.
General repeated stapler jam problems.	• Check to see that the job to be stapled is less than five mm (.08 inch) thick. • Stapler might have some trapped staple wires that are obstructing the magazine. Remove loose staples and paper dust from the inside of the stapler (See “To clear a staple jam from the optional stapler/stacker” on page 96).
Job has been properly sent, but the printer will not print.	If the connection is broken before the entire print job has been transmitted to the printer (printing has not yet started), the printer might not print any of the job. Press CANCEL JOB to clear the printer memory. Then, reposition the portable device within the range of operation described in “Printing a job using FIR” on page 72, and print the job again.
Job has incorrect fonts.	• If you are printing an .EPS file, try downloading the fonts contained in the .EPS file to the printer before printing. Use the HP LaserJet Utility (See “Software for Macintosh computers” on page 24). • If the document is not printing with New York, Geneva, or Monaco fonts, go into the **Page Setup** dialog box, and select **Options** to deselect substituted fonts.
Job is not sent to the desired printer.	Another printer with the same or similar name might have received the print job. Make sure that the printer name matches the name selected in the **Chooser** (See “Selecting an alternate PPD” on page 149).

Situation	Solution
Job prints in Courier (the printer default font) instead of the font you requested.	• The requested typeface is not available in the printer or is not present on the disk. Use a font download utility to download the desired font. • Fonts downloaded to memory are lost when the printer is turned off. They are also lost if Resource Saving is not used, and a personality switch is performed to print a PCL job. Disk fonts are not affected by PCL jobs or by turning the printer off. • Print a PS Font Page to verify that the font is available. If a disk font appears to be missing, it might be because a software utility was used to delete the font, because the disk was re-initialized, or because the disk drive is not installed correctly. Print a configuration page to verify that the disk drive is installed and is functioning correctly. • Print a Disk Directory to help identify available fonts.
Job prints on the wrong side of the paper.	• Make sure you have loaded the paper correctly. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) • If you are printing one-sided copies, load paper into optional Tray 1 with the side to be printed facing up. Load paper in Trays 2, 3, and optional Tray 4 with the side to be printed facing down. • If you are printing two-sided copies, load paper into optional Tray 1 with the first side to be printed facing down. Load paper in Trays 2, 3, and optional Tray 4 with the first side to be printed facing up.
Job was not duplexed.	• Print a configuration page to ensure that the duplex printing accessory is installed properly (See “Configuration page” on page 155). • Make sure the duplex printing accessory has been configured in the printer driver. • Make sure that the software is not overriding the printer driver setting.

Situation	Solution
Job was not stapled.	Jobs sent to the stapler might not be stapled for one or more of the following reasons: • One-page jobs will not be stapled. • The stapler is out of staples and AUTO CONTINUE is set to ON. • The wrong size or type of paper was used for the job. • More than 50 pages were sent to the stapler, exceeding its capacity. • The stapler has bent or broken staples in the stapler head. • A staple jam was recently cleared (up to two sequential jobs might not be stapled). • The job was sent to a bin other than the stapler bin because the wrong size or type of paper was used for the job. • The interface cable to the stapler unit might be defective or not connected properly.
Job went to a different location than was expected.	The wrong size or type of paper was used for the job. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)
Last page did not print and the Data light is on.	• Make sure that you are using the correct printer driver. • Complex print job might still be processing. • Printer might be waiting for the end of a file that did not come with the job. Press ✓ to send it. • Make sure the printer is not paused. Make sure the control panel reads PROCESSING JOB. • Pull out the print cartridge and check for paper. Reseat the print cartridge. • Open Trays 2 and 3. Make sure that the appropriate paper is loaded. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) Close the trays.

Situation	Solution
LOAD TRAY x [TYPE] [SIZE] paper size message	Load the requested paper size, or press ✓ to print on a size already loaded. The printer has a job in the buffer and is waiting to print on the correct paper size. Set the paper type in the control panel (See "Control panel menus" on page 172).
Network or shared printer problems.	Check for network or shared printer problems by connecting your computer directly to the printer and printing from a program you know works. If you suspect network problems, check with your network administrator or consult the network documentation that came with your printer network cards.
Optional Tray 4 will not work.	The power cord is not firmly plugged in to both the printer and the power receptacle. Remove and reconnect the power cord.
Paper is loaded into optional Tray 1, and the control panel displays a load or manual feed message.	Load the correct paper in the tray. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) If the correct paper is already loaded, press ✓.
Paper is not going to the correct output location.	• Verify that the correct output bin is selected in the printer driver. For more information about changing printer driver settings, see the online help. • The paper does not meet the specifications for the output bin (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/).
Paper jams and paper-feeding problems.	• See "To clear jams in Trays 2 and 3" on page 87 or "To clear jams in optional Tray 4" on page 88. • Ensure that paper specifications are within recommended range. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) • Make sure the paper guides are adjusted properly and are not skewed. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) • Perform preventive maintenance if requested by the printer.

Situation	Solution
Paper size adjustment and installation.	See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.
Printer does not recognize the duplex printing accessory.	• Print a configuration page to ensure that the duplex printing accessory is installed properly (See “Configuration page” on page 155). • Turn the printer off. Remove and reinstall the unit. Turn the printer on. • Make sure that the duplex printing accessory has been configured in the printer driver.
Printer does not recognize the hard disk.	Turn the printer off and verify that the hard disk is inserted correctly and is securely fastened.
Printer does not recognize optional Tray 4.	• Make sure you selected optional Tray 4 in the printer driver (See “Helpful printer software for increased printing flexibility” on page 17). • Turn the printer off and then back on. • Make sure the power cord is plugged into optional Tray 4 (See “Cabling configurations” on page 148). • If the printer still does not recognize optional Tray 4, contact your dealer or authorized HP service provider.
Printer does not recognize stapler.	Check the cable to the stapler. Make sure it is properly connected at both ends (See “Cabling configurations” on page 148).

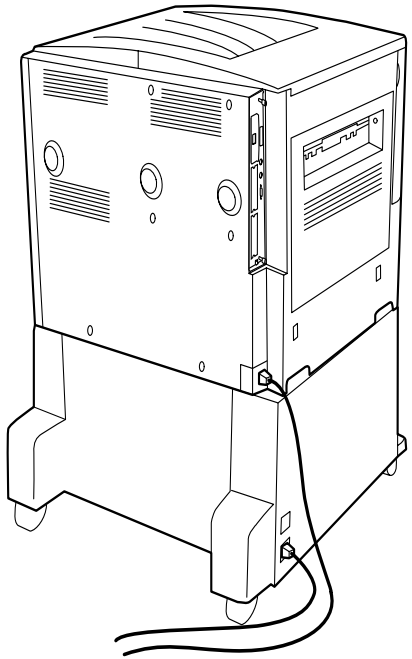
Situation	Solution
Printer draws paper from the wrong tray.	• Be sure your program is selecting the correct paper size or type. • Make sure that the driver for your program is correctly installed, configured, and capable of requesting the desired paper size and type. • The size of paper requested is not loaded in the tray selected. The printer draws paper from the next default tray that contains the correct size. Load the correct paper in the tray and make sure the tray is adjusted correctly. Load the tray with enough paper to complete the print job. • If you selected Tray 2, 3, or optional Tray 4 and did not turn the printer off when installing it, the printer does not recognize it and draws paper from the next default tray source. Turn the printer off, then back on, and the printer will recognize the tray.
Printer interface problems.	Print a configuration page from the printer control panel to verify that the interface configurations shown on the printout match those on the host computer (See “Configuration page” on page 155).
Printer is paused.	Press PAUSE/RESUME. The printer control panel should display READY and the Ready light should be lit. Resume printing.
Printer is off or not connected to an active power source.	Make sure that all power cables are firmly plugged in to both the printer components and an active power source. Make sure the printer is on.
Printer is ready, but not receiving data (the Data light does not blink).	• Check for loose I/O cable connections at the printer and computer or network port. • Try your I/O cable on a system that you know works. • Check that the correct interface cable was selected and is securely connected to both the printer and the computer. If the cable is not correctly configured, see the *start* guide for configuration information. • If connected to a network, print a Jetdirect configuration page to check for interface or network problems (See “Configuration page” on page 155).

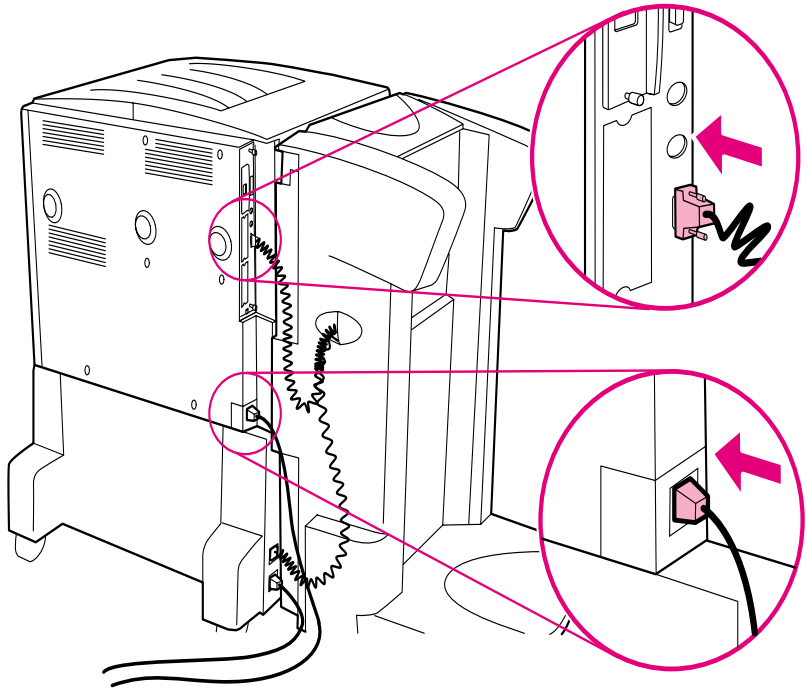
Situation	Solution
Printer is usually slow to respond.	• Printer speed is highly dependent on how your software application is set up, which printer driver you are using, and how much traffic is on the network. See the *start* guide for configuration information. • You might need to add more memory (See “Installing memory” on page 200).
Printer port problem.	Check that your computer port is configured and working properly. One way to check this is to connect another printer to that port on your computer and print from a program you know works.
Printer prints only part of a page or document.	The connection has been broken during transmission. If you move the portable device during transmission, the connection can be broken. IRDA-compliant devices are designed to recover from temporary connection interruptions. You have up to 40 seconds to re-establish the connection (depending on the portable device being used).
Printer prints wrong fonts or formats.	• The font is not present in the printer and must be downloaded from your program, or the proper font DIMM must be installed. Check your program to make sure the correct printer driver has been installed and configured. To verify that the font you want is available, print a PS or PCL font list (See “Information menu” on page 175). • Your software selected a substitute font for one that is not available in the printer. (See your software program manual for more information about font selection.)

Situation	Solution
Printing stops in the middle of the job.	• Check the control panel display for an error message. • If you are on a network, make sure the computer is correctly configured and that there is not a network problem (see your network administrator). • Check the line voltage to make sure that it is steady and within printer specifications. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) Turn the printer off and then back on. • Check the time-out setting in your network application. You might need to increase it. • If you are trying to copy a file to the printer from the DOS prompt, use the copy command `COPY [filename] LPTn /B` printer port, such as `LPT1` (where `n` is the port number). **Note** To output the page, you might have to send a form feed command from the computer.
PS print job will not print.	Check the configuration in the **PostScript** tab of Windows. Check that **Protocol** is set to AppleTalk and that **Binary Data** is not selected.
Software is selecting the wrong port.	Check your operating system port settings to be sure the print job is being sent to the correct port (for example, `LPT1`).
The control panel and driver are not set to the same paper size.	Make sure that the custom paper size defined from the control panel and the custom paper size defined in the driver are the same.
The file you are trying to print might not have the option to print on both sides of the paper turned on.	Make sure that the option to print on both sides of the paper is configured in the driver.

Situation	Solution
The FIR status indicator turns off during transmission.	The connection might have been broken. Press CANCEL JOB to clear the printer memory. Then, reposition the portable device within the range of operation described in "Printing a job using FIR" on page 72, and print the job again.
The Macintosh computer is not communicating with the printer.	• Make sure the printer control panel displays READY. • Make sure the correct printer driver is selected in the left half of the **Chooser.** Then make sure that the desired printer name is selected (highlighted) on the right half of the **Chooser**. There will be an icon next to the printer name after the driver has been set up and configured with the PPD. • If the printer resides on a network with multiple zones, make sure the correct zone is selected in the **AppleTalk Zones** box in the **Chooser**. • Make sure the correct printer has been selected in the **Chooser** by printing a configuration page (See "Configuration page" on page 155). Make sure the name of the printer displayed on the configuration page matches the printer in the **Chooser**. • Make sure **AppleTalk** is active. (Select this in the **Chooser** or in the AppleTalk control panel, whichever is applicable for your OS version.) • Make sure the computer and printer are on the same network. From **Control Panels** in the **Apple** menu, select the **Network** (or the AppleTalk) control panel and then choose the correct network (for example, LocalTalk or EtherTalk).
The printer driver icon does not appear in the **Chooser**.	Make sure the Apple LaserWriter 8 **Chooser** extension resides in the Extensions folder. If it is not present anywhere on your system, you can obtain the driver from your Macintosh OS system software CD, from Apple Computer, Inc., or see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.
Type has been specified as labels, transparencies, or envelopes.	• Make sure that the media type can be printed on both sides. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) • Change the media type to the proper media type for printing on both sides.

Cabling configurations





Selecting an alternate PPD

This section, which only applies to Macintosh users, explains how to select an alternate PPD.

To select an alternate PPD

1 Open the **Chooser** from the **Apple** menu.

2 Click the LaserWriter 8 icon.

3 If you are on a network with multiple zones, select the zone in the **AppleTalk Zones** box where the printer is located.

4 Click the printer name you want to use in the **Select a PostScript Printer** box. (Double-clicking will immediately generate the next few steps.)

5 Click **Setup.** (This button might read **Create** for first-time setup.)

6 Click **Select PPD.**

7 Find the desired PPD in the list and click **Select**. If the desired PPD is not listed, choose one of the following options:

- Select a PPD for a printer with similar features.
- Select a PPD from another folder.
- Select the generic PPD by clicking **Use Generic**. The generic PPD allows you to print, but limits your access to printer features.

8 In the **Setup** dialog box, click **Select**, and then click **OK** to return to the **Chooser**.

Note If you manually select a PPD, an icon might not appear next to the selected printer in the **Select a PostScript Printer** box. In the **Chooser**, click **Setup**, click **Printer Info**, and then click **Update Info** to bring up the icon.

9 Close the **Chooser**.

Renaming the printer

If you are going to rename the printer, do this before selecting the printer in the **Chooser**. If you rename the printer after selecting it in the **Chooser**, you will have to go back into the **Chooser** and reselect it.

Use the **Printer Name** feature in the **HP LaserJet Utility** settings to rename the printer.

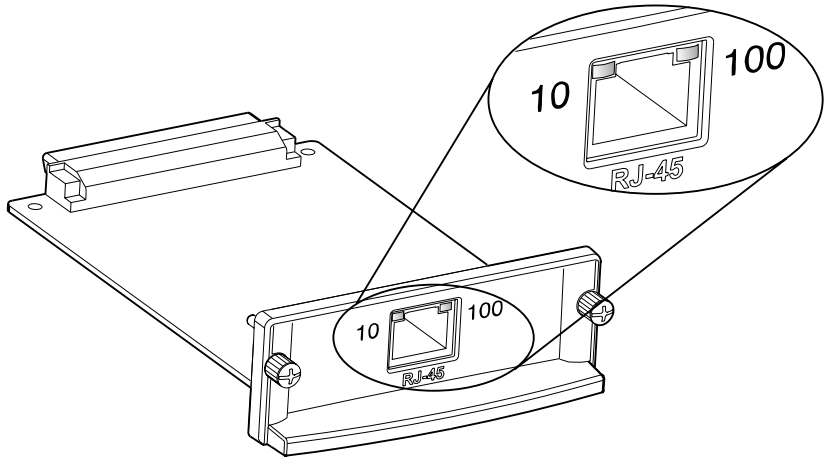
Communicating with an optional HP Jetdirect print server

If the printer contains an optional HP Jetdirect internal print server, and you cannot communicate with the printer over the network, verify the operation of the print server. Check the Jetdirect Configuration Page for the message I/O CARD READY. (To print a configuration page, press 22 for five seconds while the printer is idle.) For troubleshooting information, see the HP Jetdirect administrator's guide.

HP Jetdirect 610N 10/100TX Print Server

If the printer contains an optional HP Jetdirect 10/100TX print server, check to see that the print server was able to link to the network. (If you have a different HP Jetdirect print server, see the guide that came with it.)

- Check the link-speed indicators (10 or 100) on the print server. If both are off, the printer server failed to link to the network.



- Check the HP Jetdirect configuration page. The message LOSS OF CARRIER ERROR indicates that the print server failed to link to the network.

The HP Jetdirect 10/100TX print server might require up to 10 seconds to establish a link to the network. If the print server failed to link, verify that all cables are correctly connected. If all cables are correctly connected, but the print server still fails to link, follow the steps below to reconfigure the print server:

1 Use the **EIO** menu to manually set the link speed (10 or 100 Mbps) and communication mode (full or half-duplex) so that they match the network. (See “EIO submenu” on page 190). For example, if the port on the network switch is set for 100TX full-duplex operation, you must set the print server for 100TX full-duplex operation.

2 Turn the printer off and back on and check the print server operation. If the print server fails to link, try a different network cable.

Checking the printer configuration

From the printer control panel, you can print pages that give details about the printer and its current configuration. The following information pages are described here:

- Menu map
- Configuration page
- Supplies status page
- Usage page
- PCL or PS font list
- File directory page
- Jetdirect
- Event log
- Paper path test

Use this procedure to print these information pages. Then, see the specific sections below for more information about each page.

To print an information page

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Information` and press ✓.

3 Use ▲ or ▼ to scroll to the information page you want and press ✓.

Note To print a configuration page, press 22 on the numeric keypad. To print a menu map, press 21 on the numeric keypad.

Menu map

To see the current settings for the menus and items available in the control panel, print a control panel menu map. Many of these values can be overridden from the printer driver or program. You might want to store the menu map near the printer for reference.

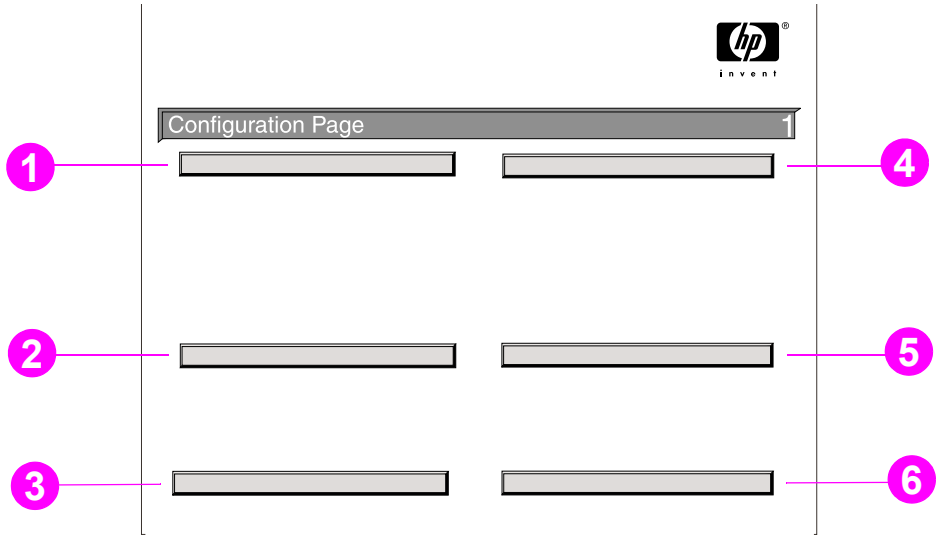
The content of the menu map varies, depending on the options currently installed in the printer. For a complete list of control panel items and possible values, see “Control panel menus” on page 172. To change a control panel setting, see “Control panel menus” on page 172.

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.

Note If an HP Jetdirect print server is installed, an HP Jetdirect configuration page will print out as well.

The configuration page contains the following information:



1 **Printer Information** lists the serial number, HP JetSend IP addresses, page counts, and other information for the printer.

2 **Event Log** lists the number of entries in the log, the maximum number of entries viewable, and the last three entries. The second page of the event log is the manufacturer's page. This page contains information that might assist HP Customer Care representatives in solving possible printer problems.

3 **Installed Personalities and Options** lists all printer languages that are installed (such as PCL and PS), and lists options that are installed in each DIMM slot and EIO slot.

4 **Memory** lists the printer memory information, PCL Driver Work Space (DWS), and I/O buffering and Resource Saving information.

5 **Security** lists the status of the printer control panel lock, control panel password, and disk drive.

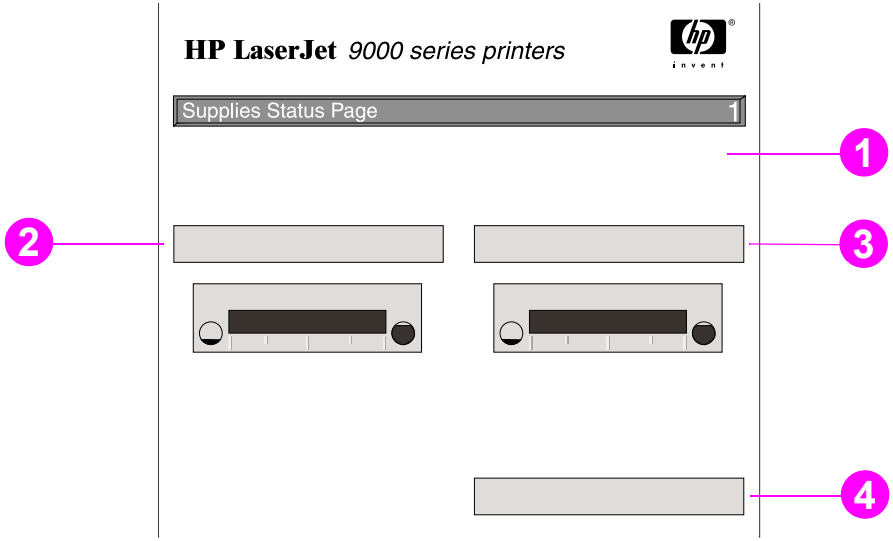
6 **Paper Trays and Options** lists the size settings for all trays and lists optional paper-handling accessories that are installed.

Note Numbers in the sample printout match the numbers in the printer messages. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.) The content of the configuration page varies, depending on the options currently installed in the printer.

Supplies status page

Use the supplies status page to obtain information about the toner cartridge installed in the printer, the amount of toner left in the toner cartridge, and the number of pages and jobs that have been processed. The page also lets you know when you should schedule the next preventative maintenance.

The supplies status page contains the following information:



1 **Supplies website** is the local website for ordering supplies through the Internet.

2 **Cartridge Information** indicates the amount of toner available in the print cartridge, estimated pages remaining for the amount of toner left in the cartridge, total number of pages and jobs processed, print cartridge manufacture date and serial number, and how to recycle HP print cartridges.

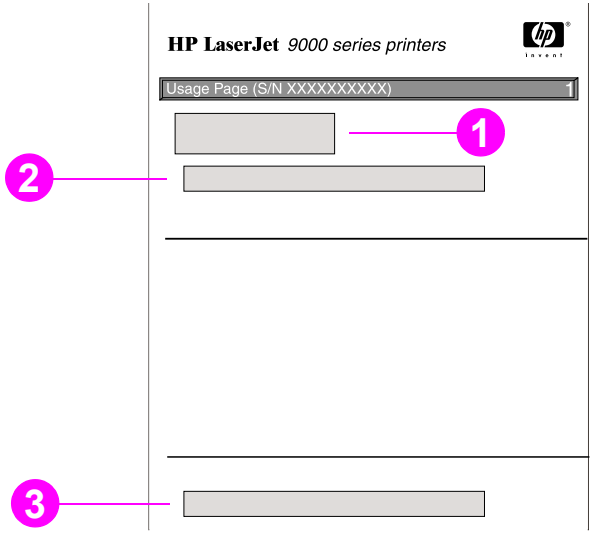
3 **Other Supplies Information** indicates the percentage of the maintenance kit has been used and the HP part numbers.

4 **Printer Information** lists total printer page count, preventative maintenance interval, pages until next maintenance should be performed, and serial number of the printer.

Usage page

Use the usage page to obtain information about the page sizes and number of pages printed.

The usage page contains the following information:


HP LaserJet 9000 series printers
Usage Page (S/N XXXXXXXXXX) 1
1
2
3

1 **Product Name** and **Printer Name** indicate the series of HP LaserJet printer in use.

2 **Usage Totals** indicates types of pages that have been printed, the number of single-sided pages printed, the number of duplexed pages printed, and the total number of pages printed.

3 **Coverage** indicates the amount of toner used on a 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 a hard disk or flash DIMM.)

The PS font list shows the PS fonts installed, and gives a sample of those fonts. The following describes the information that can be found on the PCL font list:

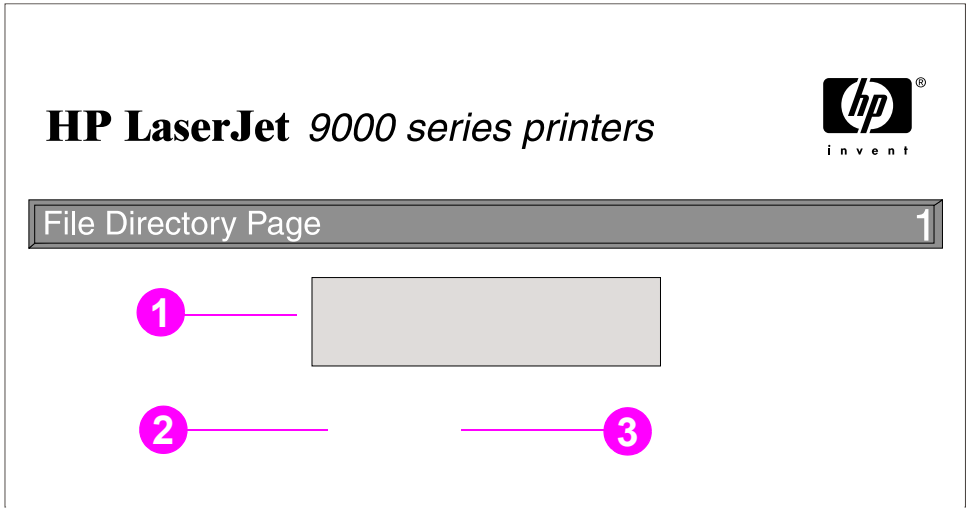
- **Font** gives the font names and samples.
- **Pitch/Point** indicates the pitch and point size of the font.
- **Escape Sequence** (a PCL 5e programming command) is used to select the designated font. (See the legend at the bottom of the font list page.)

Note For step-by-step instructions about using printer commands to select a font with MS-DOS programs, see “Common PCL 5e printer commands” on page 212.

- **Font #** is the number used to select fonts from the printer control panel (not the software application). Do not confuse the font # with the font ID, described below. The number indicates the DIMM slot where the font is stored.
  - SOFT: Downloaded fonts that stay resident in the printer until other fonts are downloaded to replace them or until the printer is turned off.
  - INTERNAL: Fonts that permanently reside in the printer.
- **Font ID** is the number you assign to soft fonts when you download them through software.

File directory page

The file directory page contains the following information:



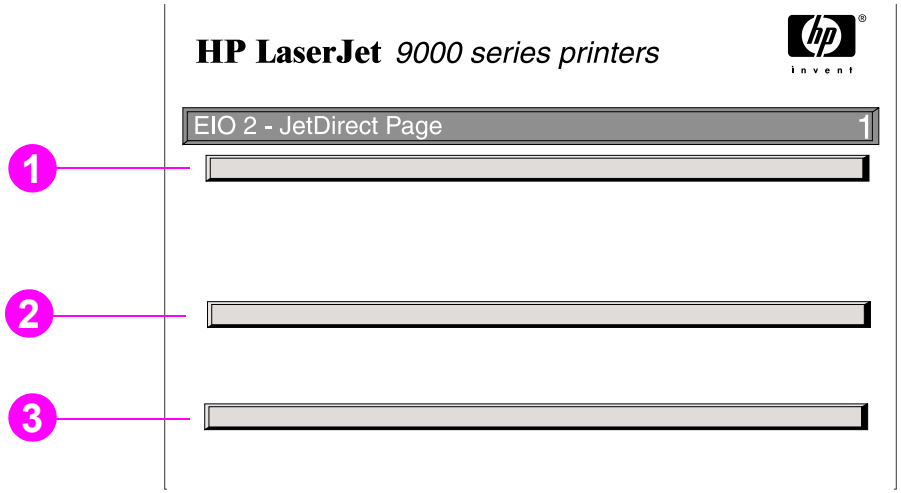
1 **Disk Information** indicates the disk model number, serial number, capacity, available free space, and whether you might write to the disk.

2 **File Size** column indicates the size of each file under the Directory/File Name column. If a directory is listed on the line, then Directory appears in this column, and its path is listed in the Directory/File Name column.

3 **Directory/File Name** indicates the name of the file. Files in a subdirectory are listed right after the directory line. The files are not necessarily listed in alphabetic order.

Jetdirect page

The Jetdirect page contains the following information:



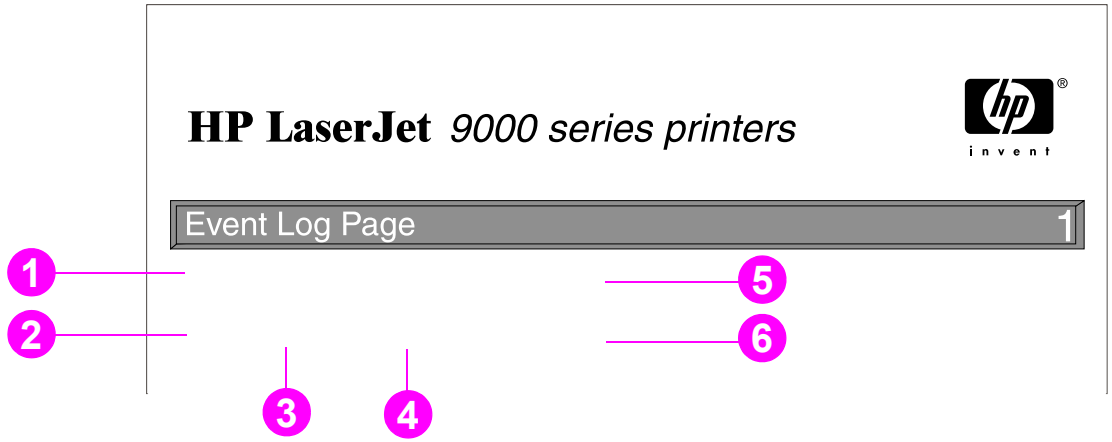
1 **HP Jetdirect Configuration** indicates the printer status, model number, hardware firmware version, port select, port configuration, auto negotiation, manufacturing identification, and manufactured date.

2 **Network Status** indicates the total packets received, unicast packets received, bad packets received, framing errors received, total packets transmitted, unsendable packets, transmit collisions, and transmit late collisions.

3 **Protocol Information** indicates the status for TCP/IP, IPX/SPX, Novell/NetWare, AppleTalk, and DLC/LLC.

Event log page

The first page of the event log contains the following information:



1 **Current Page Count** indicates the number of pages printed from the printer.

2 **Number** indicates the order in which the errors occurred. The last error to occur has the highest number.

3 **Error** indicates the internal error code for each error.

4 **Page Count** indicates the number of pages printed from the printer when the error occurred.

5 **Serial Number** indicates the serial number of the printer.

6 **Description or Personality** indicates whether the error occurred due to a problem within a printer personality or due to a printer jam.

The second page of the event log is the manufacturing page. This page contains information that might assist HP Customer Care representatives in solving possible printer problems.

To print an event log

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Configure Device` and press ✓.

3 Use ▲ or ▼ to scroll to `Diagnostics` and press ✓.

4 Use ▲ or ▼ to scroll to `Print Event Log` and press ✓.

Printing a paper path test

The paper path test can be used to verify that various paper paths are working properly or to troubleshoot problems with tray configuration.

To print a paper path test

1 Press ✓.

2 Use ▲ or ▼ to scroll to `Configure Device` and press ✓.

3 Use ▲ or ▼ to scroll to `Diagnostics` and press ✓.

4 Use ▲ or ▼ to scroll to `Set Paper Path Test` and press ✓.

5 Use ▲ or ▼ to select the input tray you want to test, the output bin, the duplex printing accessory (if available), and number of copies, pressing ✓ after you set the value for each. After selecting the last option, the paper path test automatically starts.

A Specifications

Overview

This section presents some of the printer specifications.

Paper weight equivalence table

Use this table to determine approximate equivalent basis weight in weight specifications other than U.S. bond weight. For example, to determine the equivalent of 20 lb U.S. bond weight paper in U.S. cover weight, locate the bond weight (in row two, first column) and scan across the row to the cover weight (in the third column). The equivalent is 75 g/m^2 (28 lb).

Note Shaded areas indicate a standard weight for that grade.

U.S. Bond Weight (lb)	U.S. Text/ Book Weight (lb)	U.S. Cover Weight (lb)	U.S. Bristol Weight (lb)	U.S. Index Weight (lb)	U.S. Tag Weight (lb)	Metric Weight (g/m^2)
17	43	24	29	35	39	64
20	50	28	34	42	46	75
21	54	30	36	44	49	80
22	56	31	38	46	51	81
24	60	33	41	50	55	90
27	68	37	45	55	61	100
28	70	39	49	58	65	105
32	80	44	55	67	74	120
34	86	47	58	71	79	128

U.S. Bond Weight (lb)	U.S. Text/ Book Weight (lb)	U.S. Cover Weight (lb)	U.S. Bristol Weight (lb)	U.S. Index Weight (lb)	U.S. Tag Weight (lb)	Metric Weight (g/m^2)
36	91	50	62	75	83	135
39	100	55	67	82	91	148
42	107	58	72	87	97	157
43	110	60	74	90	100	163
47	119	65	80	97	108	176
53	134	74	90	110	122	199
58	146	80	98	120	133	216

Printing supplies

Item	Part number	Description or use
Print cartridge		
30,000 pages	C8543X	Replacement HP maximum capacity, smart print cartridge.
HP LaserJet Monochrome Transparencies		Specifically engineered for use with HP LaserJet monochrome printers.
Letter (8.5 by 11 in), 50 sheets/box	92296T	Specifications: 4.3 mil thickness. Two-sided coating.
A4 (210 by 297 mm), 50 sheets/box	92296U	
HP LaserJet Soft Gloss Paper		For use with HP Color LaserJet and HP LaserJet monochrome printers. Coated paper, good for business documents with high impact, such as brochures, sales material, and documents with graphics and photographic images.
Letter (8.5 by 11 in), 50 sheets/box	C4179A	
A4 (210 by 297 mm), 50 sheets/box	C4179B	
		Specifications: 32 lb. Two-sided satin gloss coating.
HP Premium Choice LaserJet Paper		For use with HP Color LaserJet and HP LaserJet monochrome printers. A heavy, super-bright paper for high-impact documents such as resumes, brochures, reports, and presentations.
Letter (8.5 by 11 in), 500 sheets/ream, 10-ream carton	HPU1132	
A4 (210 by 297 mm), 500 sheets/ream, 4-ream carton	CHP410	Specifications: 98 bright, 32 lb.
Tabloid (11 by 17 in), 250 sheets/ream, 6-ream carton	HPU1732	
A3 (420 by 297 mm), 500 sheets/ream, 4-ream carton	CHP420	

Item	Part number	Description or use
HP LaserJet Paper		Enhances performance for all HP LaserJet printers. Heavier for letterhead, high-value memos, legal documents, direct mail, and correspondence. Specifications: 96 bright, 24 lb.
Letter (8.5 by 11 in), 500 sheets/ream, 10-ream carton	HPJ1124	
Letter (8.5 by 11 in), 3-hole, 500 sheets/ream, 10-ream carton	HPJ113H	
Legal (8.5 by 14 in), 500 sheets/ream, 10-ream carton	HPJ1424	
A4 (210 by 297 mm), 500 sheets/ream, 5-ream carton	CHP310	
Tabloid (11 by 17 in), 500 sheets/ream, 5-ream carton	HPJ1724	
HP Printing Paper		For use with laser and inkjet printers. Created especially for small offices and home offices. Heavier and brighter than copier paper. Specifications: 92 bright, 22 lb.
Letter (8.5 by 11 in), 500 sheets/ream, 10-ream carton	HPP1122	
A4 (210 by 297 mm), 500 sheets/ream, 5-ream carton	CHP210	
A3 (420 by 297 mm), 500 sheets/ream, 5-ream carton	CHP220	

Item	Part number	Description or use
HP MultiPurpose Paper		For use with all office equipment (laser and inkjet printers, copiers, and fax machines). Created for businesses that want one paper for all their office needs. Brighter and smoother than other office papers. Specifications: 90 bright, 20 lb.
Letter (8.5 by 11 in), 500 sheets/ream, 10-ream carton	HPM1120	
Letter (8.5 by 11 in), 500 sheets/ream, 5-ream carton	HPM115R	
Letter (8.5 by 11 in), 3-hole, 500 sheets/ream, 10-ream carton	HPM113H	
Legal (8.5 by 14 in), 500 sheets/ream, 10-ream carton	HPM1420	
Tabloid (11 by 17 in), 500 sheets/ream, 5-ream carton	HPM1720	
HP Office Paper		For use with all office equipment (laser and inkjet printers, copiers, and fax machines). Good for standard, high-volume printing. Brighter than standard papers. Specifications: 87 bright, 20 lb.
Letter (8.5 by 11 in), 500 sheets/ream, 10-ream carton	HPC8511	
Letter (8.5 by 11 in), 3-hole, 500 sheets/ream, 10-ream carton	HPC3HP	
Legal (8.5 by 14 in), 500 sheets/ream, 10-ream carton	HPC8514	
A4 (210 by 297 mm), 500 sheets/ream, 5-ream carton	CHP110	
Tabloid (11 by 17 in), 500 sheets/ream, 5-ream carton	HPC1117	

Item	Part number	Description or use
HP Office Recycled Paper		For use with all office equipment (laser and inkjet printers, copiers, and fax machines). Good for high-volume printing.
Letter (8.5 by 11 in), 500 sheets/ream, 10-ream carton	HPE1120	
Letter (8.5 by 11 in), 3-hole, 500 sheets/ream, 10-ream carton	HPE113H	Satisfies U.S. Executive Order 13101 for environmentally preferable products.
Legal (8.5 by 14 in), 500 sheets/ream, 10-ream carton	HPE1420	Specifications: 84 bright, 20 lb, 30% post-consumer content.

Envelope margins

The following table gives typical address margins for a Commercial #10 or DL envelope.

Type of address	Top margin	Left margin
Return address	15 mm (0.6 inches)	15 mm (0.6 inches)
Delivery address	51 mm (2 inches)	85 mm (3.5 inches)

Note For the best print quality, position margins no closer than 15 mm (0.6 inches) from the edges of the envelope.

B Control panel menus

Overview

The control panel menu layout represents an attempt to show the menus used by all end users while protecting the menus used by administrators. End users will typically use the first three menus of the list. Administrators and service technicians will use the other items, which can be protected by a personal identification number (PIN).

You can perform most routine printing tasks from the computer through the printer driver or software application. This is the most convenient method to control the printer, and will override the printer control panel settings. See the help files associated with the software, or for more information about how to gain access to the printer driver, see “Helpful printer software for increased printing flexibility” on page 17.

Note Printer driver and software commands override the printer control panel settings.

From the control panel, you can print a menu map that shows the layout and current settings of the control panel menu items (See “Menu map” on page 154).

Additional menu items can appear in the control panel, depending on the options currently installed in the printer.

This appendix lists all the items and possible values for the printer. (Default values are listed in the “Item” column.)

Note For more information about an optional HP output device, see the user guide that came with the device.

This appendix includes:

- Retrieve job menu shows jobs stored on the device. Jobs are listed by user and job name. See “Job retention features” on page 59 for information of how to store jobs.
- Information menu lists printable menu map and other information pages.
- Paper handling menu allows the user to set paper type (and size if not detected) for each printer tray.
- Configure device menu allows administrators to set defaults, I/O ports, diagnostics, and resets.
  - Printing submenu
  - Print quality submenu
  - System setup submenu
  - I/O submenu
  - Diagnostics submenu
  - Resets submenu
- Service menu allows service technicians to monitor printer status and to provide appropriate assistance during a service call.

Retrieve job menu

Note If there are no private, stored, quick copy, or proof-and-hold jobs on the printer hard disk or RAM memory, the message `NO STORED JOB` is displayed when the menu is selected.

1. The user is presented a list of user names.
2. The user selects a user name, and is then shown a list of jobs stored for that user.
3. The user selects a job name, and can print or delete. If a job requires a PIN to print, 🔒 appears next to the **PRINT** command and a PIN must be provided. If a job requires a PIN to delete, 🔒 appears next to the **DELETE** command and a PIN must be provided.
4. If the user selects **PRINT**, the printer prompts the user to specify the number of copies to print (1 to 32,000).

Information menu

To print an information page, scroll to the desired page and press ✓.

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Item	Explanation
PRINT MENU MAP	Generates a menu map that shows layout and current settings of the control menu items. The printer will back up one screen to SET FRONT TO BACK when the page is completed.
PRINT CONFIGURATION	Generates a page detailing the current configuration of the printer. The printer will return to the online READY state when the page is completed.
PRINT SUPPLIES STATUS	Generates a page that shows the number of pages remaining for each supply in the printer. The printer will return to the online READY state when the page is completed.
PRINT USAGE PAGE	Generates a page that contains information that could be used for cost accounting. This item is only available if a hard disk is installed. The printer will return to the online READY state when the page is completed.
PRINT FILE DIRECTORY	Generates a directory page containing information for all installed mass storage devices. The printer will return to the online READY state when the page is completed.
PRINT PCL FONT LIST	Generates a typeface list of all PCL fonts available on the printer. The printer will return to the online READY state when the page is completed.
PRINT PS FONT LIST	Generates a typeface list of all PS fonts available on the printer. The printer will return to the online READY state when the page is completed.

Paper handling menu

When paper handling settings are correctly configured through the control panel, you can print by choosing the type and size of paper from the printer driver or software application. For more information, see “Printing by type and size of paper” on page 57.

Some items in this menu (such as duplex and manual feed) are accessible from a software application, or from the printer driver (if the appropriate driver is installed). Printer driver and software application settings override control panel settings. For more information, see “Using features in the printer driver” on page 51.

Item	Values	Explanation
TRAY 1 MODE=FIRST	FIRST CASSETTE	FIRST: Allows the user to specify if media in the tray should be used. CASSETTE: If set to CASSETTE, the tray must be configured with a size and type, and functions like all other trays.
TRAY <N> SIZE=LETTER		Allows the user to set the paper size for Tray 2, 3, and optional Tray 4 (if installed) when the custom switch is in the CUSTOM position. Size is detected if the switch is in the STANDARD position. Substitute the tray number for <N>.
TRAY <N> TYPE=PLAIN		Allows the user to specify the type of media in each tray. Substitute the tray number for <N>.

Item	Values	Explanation
FUSER MODES	AUTO NORMAL LOW HIGH1 HIGH2 SPECIAL	Configure the fuser mode associated with each paper type. The fuser mode can only be changed from this menu option in the control panel. AUTO: Utilizes the optimum mode for that media type. NORMAL: Normal temperature, prints at 50 pages per minute (ppm). LOW: Low temperature, prints at 50 ppm. HIGH1: Raises the temperature, prints at 50 ppm. HIGH2: Raises the temperature, prints at 32 ppm. SPECIAL: Mode to print at normal speeds with a 40-second delay added to the beginning of the next job. After each 400 pages are printed, the first page of that job is printed at a slower speed in order to clean the fuser. No defects should be noticeable on the printed page. This is not a preferred setting. The default value for each paper type is AUTO. For a complete list of supported paper types, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/. **CAUTION** If you change the fuser mode to HIGH1 or HIGH2, be sure to change it back to the default when you are done printing. Setting a paper type to HIGH1 or HIGH2 might shorten the life of some consumables, such as the fuser, and might cause other failures or jams.

Configure device menu

This menu contains all administrative functions.

Printing submenu

Some items in this menu are available from a software application, or from the printer driver (if the appropriate driver is installed). Printer driver and program settings override control panel settings. For more information, see “Using features in the printer driver” on page 51.

Item	Values	Explanation
COPIES=1	1 to 32,000	Set the default number of copies by selecting any number from 1 to 32,000. Use the numeric keypad to select the number of copies. **Note** It is best to set the number of copies from the printer driver or software application. (Driver and software settings override control panel settings.)
DEFAULT PAPER SIZE= LETTER	ANY LETTER LEGAL A4 EXECUTIVE 11X17 A3 JISB4 JISB5 CUSTOM A5	Set the default image size for paper and envelopes. (The item name will change from paper to envelope as you scroll through the available sizes.)

Item	Values	Explanation
DEFAULT CUSTOM PAPER SIZE	UNIT OF MEASURE X DIMENSION Y DIMENSION	Allows the user to set a custom paper size for any of the installed trays. Substitute the tray number for <N>. This menu only appears when the selected tray custom switch is in the custom size position. The user selects the X and Y dimensions of the custom paper size using the ruler labels in the trays.
PAPER DESTINATION= STANDARD OUTPUT BIN	STANDARD OUTPUT FACE UP OPTIONAL BIN	Allows the user to configure the output paper bin destination. Only installed optional bins will appear on the menu.
PAPER DESTINATION= FACE DOWN BIN	FACE UP BIN FACE DOWN BIN BOOKLET BIN	Indicates where the copies are delivered to the output device. You can choose the booklet bin only if the multifunction finisher is attached.
DUPLEX=OFF	OFF ON	This item appears only when an optional duplex printing accessory is installed. Set the value to ON to print on both sides (duplex) or OFF to print on one side (simplex) of a sheet of paper. For more information, see the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.
BINDING=LONG EDGE	LONG EDGE SHORT EDGE	Allows the user to change the binding edge for duplex printing. The menu item is displayed when a duplex printing accessory is installed in the printer and DUPLEX=ON.
OVERRIDE A4/LETTER= NO	YES NO	This command is used to print on letter-size paper when an A4 job is sent, but no A4-size paper is loaded in the printer (or to print on A4-size paper when a letter job is sent, but no letter paper is loaded in the printer).

Item	Values	Explanation
MANUAL FEED=OFF	OFF ON	Feed the paper manually from optional Tray 1, rather than automatically from a tray. When MANUAL FEED=ON and optional Tray 1 is empty, the printer goes offline when it receives a print job. It then displays MANUALLY FEED [PAPER SIZE]. For more information, see “Manually feeding paper from optional Tray 1” on page 56.
EDGE TO EDGE OVERRIDE=OFF	OFF ON	Turns the edge-to-edge mode on or off for all print jobs. This mode can be overridden inside a print job by an edge-to-edge PJL variable.
COURIER FONT=REGULAR	REGULAR DARK	Select the version of Courier font to use: REGULAR: The internal Courier font available on the HP LaserJet 4 Series printers. DARK: The internal Courier font available on the HP LaserJet III Series printers. Both fonts are not available at the same time.
WIDE A4=NO	YES NO	The Wide A4 setting changes the number of characters that can be printed on a single line of A4 paper. YES: Up to 80 10-pitch characters can be printed on one line. NO: Up to 78 10-pitch characters can be printed on one line.
PRINT PS ERRORS=OFF	ON OFF	Select ON to print the PS error page when PS errors occur.

Item	Values	Explanation
FORM LENGTH	60	Sets vertical spacing from 5 to 128 lines for default paper size. Enter the value using the numeric keypad.
ORIENTATION	PORTRAIT	Allows the user to select default page orientation. **Note** It is best to set the page orientation from the printer driver or software application. (Driver and software settings override control panel settings.)
FONT SOURCE	INTERNAL	INTERNAL: Internal fonts. SOFT: Permanent soft fonts. SLOT 1, 2, or 3: Fonts stored in one of the three DIMM slots.
FONT NUMBER	0-999	The printer assigns a number to each font and lists them on the PCL Font List (See "PCL or PS font list" on page 159). The font number appears in the Font # column of the printout.
FONT PITCH=10.00	0.44 to 99.99	Using the numeric keypad or ▲ and ▼, enter a value. This item might not appear, depending on the font selected.
FONT POINT SIZE=12.00	4.00 to 999.75	Using the numeric keypad or ▲ and ▼, enter a value. This item might not appear, depending on the font selected.
SYMBOL SET=PC-8	PC-8	Select any one of several available symbol sets from the printer control panel. A symbol set is a unique grouping of all the characters in a font. PC-8 or PC-850 is recommended for line draw characters.

Item	Values	Explanation
APPEND CR TO LF=NO	YES NO	Select YES to append a carriage return to each line feed encountered in backward-compatible PCL jobs (pure text, no job control). Some environments, such as UNIX, indicate a new line using only the line feed control code. This option allows the user to append the required carriage return to each line feed.

Item	Values	Explanation
STAPLES=NONE	Values vary depending on the output device attached	If stapling is requested, indicates where the staple is placed and how many staples are placed. If a stacker is attached to the printer, stapling is not an option. If a stapler/stacker is attached, you can choose the following values: NONE ONE (upper-left corner) ANGLED (upper-left corner) TWO THREE SIX CUSTOM (only if the stapler/stacker has a definition for "custom") **Note** Because of paper size, paper orientation, and paper feed direction, you should experiment with staple options to find the results you want. If a multifunction finisher is attached, you can choose the following values: NONE ONE TWO SADDLE STITCH

Print quality submenu

Some items in this menu are accessible from a software application, or from the printer driver (if the appropriate driver is installed). Printer driver and software application settings override control panel settings. For more information, see “Using features in the printer driver” on page 51.

Item	Values	Explanation
SET REGISTRATION		Shift the margin alignment to center the image on the page from top to bottom, and left to right. You can also align the image on the front, with the image printed on the back.
RESOLUTION= FASTRES 1200	300 600 FASTRES 1200	Select the resolution from the values listed below: 300: Produces draft print quality at maximum printer speed (50 ppm). 300 dpi (dots per inch) is recommended for some bitmapped fonts and graphics, and for compatibility with the HP LaserJet III family of printers. 600: Produces high print quality at maximum printer speed (50 ppm). FASTRES 1200: Produces optimum print quality (comparable to 1,200 dpi) at maximum printer speed (50 ppm). **Note** It is best to change the resolution from the printer driver or software application. (Driver and software settings override control panel settings.)
RET=MEDIUM	OFF LIGHT MEDIUM DARK	Use printer Resolution Enhancement technology (REt) setting to produce print with smooth angles, curves, and edges. All print resolutions, including FastRes 1,200, benefit from REt. **Note** It is best to change the REt setting from the printer driver or software application. (Driver and software settings override control panel settings.)

Item	Values	Explanation
ECONOMODE=OFF	OFF ON	Turn EconoMode on (to save toner) or off (for high quality). EconoMode is designed to give print output at a very low cost. EconoMode will work only with genuine HP print cartridges. **Note** It is best to turn EconoMode on or off from the control panel (Control panel settings override driver and software settings).
TONER DENSITY=3	1 to 5	Lighten or darken the print on the page by changing the toner density setting. The settings range from 1 (light) to 5 (dark), but the default setting of 3 usually produces the best results. **Note** It is best to change the toner density from the printer driver or software application. (Driver and software settings override control panel settings.)
SMALL PAPER MODE	No value to select.	When printing narrow media the part of the fuser rollers that do not make contact with the media swell up and can cause wrinkles.
CREATE CLEANING PAGE	No value to select.	Press ✓ to print a cleaning page (for cleaning excess toner from the paper path). In order for the cleaning page to work properly, print the page on copier grade paper (not bond or rough paper). Follow the instructions on the cleaning page. The progress bar shows how long before the process is complete.
PROCESS CLEANING PAGE	No value to select.	This item appears only after a cleaning page has been generated (as described above). Press ✓ to process the cleaning page. The progress bar shows how long until the process is complete.

System setup submenu

Items in this menu affect the printer function. Configure the printer according to your printing needs.

Item	Values	Explanation
JOB STORAGE LIMIT=32	1 to 100	Specifies the number of jobs that can be stored on the printer hard disk accessory.
JOB HELD TIMEOUT= OFF	OFF 1 HOUR 4 HOURS 1 DAY 1 WEEK	Sets the amount of time that quick copy, proof and hold, private, and stored jobs are kept before being automatically deleted from the queue.
POWERSAVE TIME=1 HOUR	1 MINUTE 15 MINUTES 30 MINUTES 1 HOUR 2 HOURS 4 HOURS	Set how long the printer remains idle before it enters PowerSave mode: • Minimizes the amount of power consumed by the printer when it is idle. • Reduces wear on the printer electronic components (Turns off the display backlight). • When you send a print job, press a control panel key, open a paper tray, or open the top cover, the printer automatically exits PowerSave mode. **Note** PowerSave turns off the backlight on the display, but the display is still readable.
PERSONALITY=AUTO	AUTO PCL POSTSCRIPT	Select the default printer language (personality). Possible values are determined by which valid languages are installed in the printer. Normally you should not change the printer language (the default is AUTO). If you change it to a specific printer language, the printer does not automatically switch from one language to another unless specific software commands are sent to the printer.

Item	Values	Explanation
CLEARABLE WARNINGS= JOB	ON JOB	Set the amount of time that a clearable warning is displayed on the printer control panel. ON: Warning messages display on the control panel until ✓ is pressed. JOB: Warning messages display on the control panel until the end of the job from which they were generated.
AUTO CONTINUE=ON	ON OFF	Determine how the printer reacts to errors. ON: If an error prevents printing, the message is displayed, and the printer goes offline for 10 seconds before returning online. OFF: If an error prevents printing, the message remains on the display, and the printer does not print until ✓ is pressed. **Note** To stop printing when out of staples (when a stapler accessory is installed), set AUTO CONTINUE=OFF in the control panel **System setup** menu.
CARTRIDGE LOW= CONTINUE	CONTINUE STOP	Determine how the printer functions when toner is low. The CARTRIDGE LOW message first appears when the print cartridge is almost out of toner. (About 2,400 pages can still be printed at five percent coverage.) CONTINUE: The printer continues to print while the CARTRIDGE LOW message is displayed. STOP: The printer goes offline and wait for further action. For more information, see “Managing the print cartridge” on page 76.

Item	Values	Explanation
JAM RECOVERY= AUTO	AUTO ON OFF	Determine how the printer functions when a jam occurs. AUTO: The printer automatically selects the best mode for printer jam recovery (usually ON). This is the default setting. ON: The printer automatically reprints pages after a paper jam is cleared. OFF: The printer does not reprint pages following a paper jam. Printing performance might be increased with this setting.
RAM DISK=AUTO	AUTO OFF	This item determines how the RAM disk is configured. This item appears only if there is no optional hard disk installed, and the printer has at least 8 megabytes (MB) of memory. OFF: The RAM disk is disabled. **Note** If the setting is changed from OFF to AUTO, the printer automatically reinitializes when it becomes idle.
LANGUAGE=ENGLISH		Includes all languages in the list. When scrolling through the language values, LANGUAGE= should be updated so it is presented in the highlighted language.

I/O submenu

Items in the **I/O** (input/output) menu affect the communication between the printer and the computer.

I/O timeout submenu

Item	Values	Explanation
I/O TIMEOUT=15	5 to 300	Select the **I/O** timeout period in seconds. (**I/O** timeout refers to the time, measured in seconds, that the printer waits before ending a print job.) This setting allows you to adjust timeout for best performance. If data from other ports appear in the middle of your print job, increase the timeout value.

Parallel input submenu

Item	Values	Explanation
HIGH SPEED	YES NO	The printer accepts faster parallel communications used for connections with newer computers.
ADVANCED FUNCTIONS=ON	ON OFF	Turn the bidirectional parallel communication on or off. The default is set for a bidirectional parallel port (IEEE-1284). This setting allows the printer to send status readback messages to the computer. (Turning the parallel advanced functions on might slow language switching.)

EIO submenu

The EIO (enhanced input/output) submenu appears only when an EIO device is installed in an EIO slot on the printer (such as an HP Jetdirect print server). The items in the menu depend on the particular accessory product installed. If the printer contains an HP Jetdirect print server EIO card, you can configure basic networking parameters using the EIO menu. These and other parameters can also be configured through HP Web JetAdmin or other network configuration tools (such as Telnet or browsing the embedded Web server).

Item	Options	Values	Explanation
TCP/IP	ENABLE	ON OFF	Selects whether the TCP/IP protocol is enabled (ON) or disabled (OFF).
	CONFIG METHOD	BOOTP DHCP MANUAL	Selects whether the TCP/IP configuration parameters are set automatically from a network server either using BootP (Bootstrap Protocol), DHCP (Dynamic Host Configuration Protocol), or manually from the **EIO** submenu.
	MANUAL SETTINGS		Provides access to parameters that can manually configured from the printer control panel. For manual configuration, CONFIG METHOD must be set to MANUAL.
		IP ADDRESS n.n.n.n	The unique IP address of the printer, where n is a value from 0 to 255.
		SUBNET MASK m.m.m.m	The subnet mask for the printer, where m is a value from 0 to 255. The mask is applied to IP addresses to uniquely identify subnetworks and nodes.
		SYSLOG SERVER n.n.n.n	The IP address of the syslog server used to receive and log syslog messages.
		DEFAULT GATEWAY n.n.n.n	The IP address of the gateway or router used for communications with other networks.
		IDLE TIMEOUT xx	The timeout value (in seconds) after an idle TCP print data connection is automatically closed. The default value is 270 seconds. 0 disables the timeout.

Item	Options	Values	Explanation
IPX/SPX	ENABLE	ON OFF	Selects whether the IPX/SPX protocol stack is enabled (ON) or disabled (OFF).
	FRAME TYPE	AUTO EN_8023 EN_II EN_8022 EN_SNAP TR_8022 TR_SNAP	Selects the frame type setting for your network AUTO (default) automatically sets and limits the frame type to the first one detected. For an Ethernet network only, frame type selections include EN_8023, EN_II, EN_8022, and EN_SNAP. For a Token Ring network only, frame type selections include TR_8022 and TR_SNAP.
	SOURCE ROUTING	AUTO OFF ALL ROUTES SINGLE ROUTE	For a Token Ring network only, specify the NetWare Token Ring Source Routing parameter. AUTO (default): The type of source routing required on the network is automatically sensed. OFF: All packets are sent without source routing, and only packets from the same ring are received. ALL ROUTES and SINGLE ROUTES: All packets are sent with source routing (broadcasts and when the route is unknown).
APPLETALK	ENABLE	ON OFF	For an Ethernet network only, selects whether the AppleTalk protocol is enabled (ON) or disabled (OFF).
DLC/LLC	ENABLE	ON OFF	Selects whether the DLC/LLC protocol stack is enabled (ON) or disabled (OFF).

Item	Options	Values	Explanation
LINK SPEED		AUTO 10T HALF 10T FULL 100TX HALF 100TX FULL	For an Ethernet network only, sets the network link speed and communication mode of the HP Jetdirect 10/100TX print server. The default setting is AUTO, where the printer automatically configures itself to match the network link speed (10 or 100 Mbps) and communication mode (half or full duplex).

Diagnostics submenu

Administrators can use this submenu to isolate parts, and to troubleshoot jam and print quality issues.

Item	Values	Explanation
PRINT EVENT LOG		Generates a localized LIFO (last in, first out) list of the 50 most recent entries in the error log. The printed event log shows error number, page count, error code, and description or personality.
SHOW EVENT LOG		Allows the user to scroll through the contents of the event log from the control panel, and shows the 50 most recent events. Use ▲ and ▼ to scroll through the event log contents.
SET PAPER PATH TEST		Generates a test page that is useful for testing the paper handling features of the printer.
SERVICE TEST		Engine tests access portions of the printer internal diagnostics that occur when the printer is turned on. These diagnostics are available as tools to help isolate problems that are not reported by the firmware.

Resets submenu

Note Use this menu with caution. You can lose buffered page data or printer configuration settings when you select these items. Reset the printer only under the following circumstances:

- You want to restore the printer default settings.
- Communication between the printer and computer has been interrupted.
- You are having problems with a port.

The items in the **Resets** submenu will clear all memory in the printer, while CANCEL JOB clears only the current job.

Item	Explanation
RESTORE FACTORY SETTINGS	This item performs a simple reset and restores most of the factory (default) settings. This item also clears the input buffer for the active I/O. Resetting memory during a print job can result in data loss. This item does not affect network settings stored on the HP Jetdirect print server (if installed).
CLEAR MAINTENANCE MESSAGE	This item appears only after the PERFORM PRINTER MAINTENANCE message displays. OFF: The PERFORM PRINTER MAINTENANCE message will be cleared. If you do not replace the printer maintenance kit, the PERFORM PRINTER MAINTENANCE message will be displayed again after approximately 17,500 pages. The message should not be turned off unless the necessary printer maintenance has been performed. If the required maintenance is not performed, printer performance will degrade. For more information, see “Printer maintenance” on page 75.
POWERSAVE	This item allows the user to turn POWERSAVE ON and OFF. If POWERSAVE is OFF, the printer will never enter PowerSave mode and no asterisk will appear next to any item when the user enters the POWERSAVE TIME menu item. Default value for POWERSAVE is ON.

Service menu

The **Service** menu is locked and requires a PIN to enter. A service professional may use this, but a user should have no need for access.

Item	Explanation
CLEAR EVENT LOG	This item allows the service representative to clear the printer internal error log.
TOTAL PAGE COUNT	The page count stored in NVRAM and displayed on the configuration page printout represents the number of pages, which the formatter has formatted (engine test prints are not included in this number). If it becomes necessary to repair a printer by installing a new controller PCA, the service representative must be able to set the page count so that it represents the age of the print engine rather the age of the controller PCA.
MAINTENANCE COUNT	This item allows a service representative to reset the page count if the value is lost for some reason. This will be set initially at the factory to 0. Users can enter any number up to value set for maintenance interval. This value will be reset to 0 if the user sets the menu item NEW MAINTENANCE KIT to YES in the **Resets** menu.
MAINTENANCE INTERVAL	This item allows a service representative to set the page count threshold when the next service is due for the printer. Initially, this will be set at the factory to a value applicable to each type of engine. Users can enter any number up to 350,000.
SERIAL NUMBER	This item allows the manufacturing facility to set the serial number of the formatter initially installed in the printer. Also, this number is updated accordingly if a service representative replaced a printer formatter board.
COLD RESET PAPER	The default paper size is stored in NVRAM, and when the printer is cold reset, the default paper size is set to the factory setting.

C Printer memory and expansion

Overview

This appendix includes:

- Determining memory requirements
- Installing memory
- Checking memory installation
- Saving resources (permanent resources)
- Installing EIO cards/mass storage

The printer has three DIMM slots for upgrading:

- more printer memory. DIMMs are available in 16, 32, 64, and 128 MB, for a maximum of 384 MB.
- flash DIMMs, available in 2, 4, 6, 8, and 16 MB. Unlike standard printer memory, flash DIMMs can be used to permanently store downloaded items in the printer, even when the printer is off.
- DIMM-based accessory fonts, macros, and patterns.
- other DIMM-based printer languages and printer options.

Note Single in-line memory modules (SIMMs) used on previous HP LaserJet printers are not compatible with this printer.

You might want to add more memory to the printer if you often print complex graphics or PS documents, print with the optional duplex printing accessory, use many downloaded fonts, or print large paper sizes (such as A3, B4, or 11 by 17).

The printer has three EIO slots for expanding printer capabilities:

- One or more network cards.
- A mass storage device, such as a hard disk.

For ordering information, see the HP Customer Care section in the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.

Determining memory requirements

The amount of memory you need depends on the types of documents you print. Your print engine can print most text and graphics at 1,200 dpi FastRes without additional memory.

Add memory to your printer if you:

- commonly print complex graphics.
- use many temporarily downloaded fonts.
- print complex documents.
- print two-sided documents.
- use advanced functions.
- print PostScript documents.

Installing memory

Use this procedure to install additional memory. Before you begin, print a configuration page by pressing 22 on the numeric keypad to find out how much memory is installed in the printer before adding more memory. The table lists the maximum amount of memory allowed for each DIMM slot.

Note To obtain 384 MB of memory, you need to remove the 64 MB that came with the printer and replace it with 128 MB.

Slot label on the Configuration page	Slot label on the Formatter board	Description
Slot 1	J1	Flash firmware
Slot 2	J2	64 MB
Slot 3	J3	128 MB
Slot 4	J4	128 MB
Total		384 MB

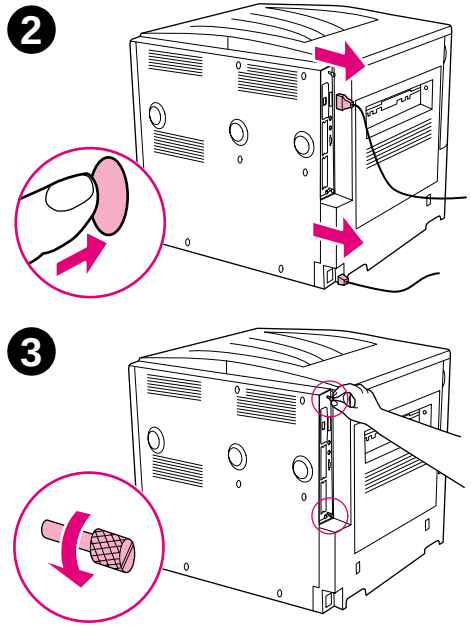
CAUTION
Static electricity can damage DIMMs. When handling DIMMs, either wear an antistatic wrist strap or frequently touch the surface of the DIMM antistatic package, then touch bare metal on the printer.

To install memory

1 If you have not already done so, print a configuration page to find out how much memory is installed in the printer before adding more memory. (Press 22 on the numeric keypad when the printer is idle.)

2 Turn the printer off. Disconnect the power cord and any cables.

3 Loosen the two captive thumb screws on the back of the printer.

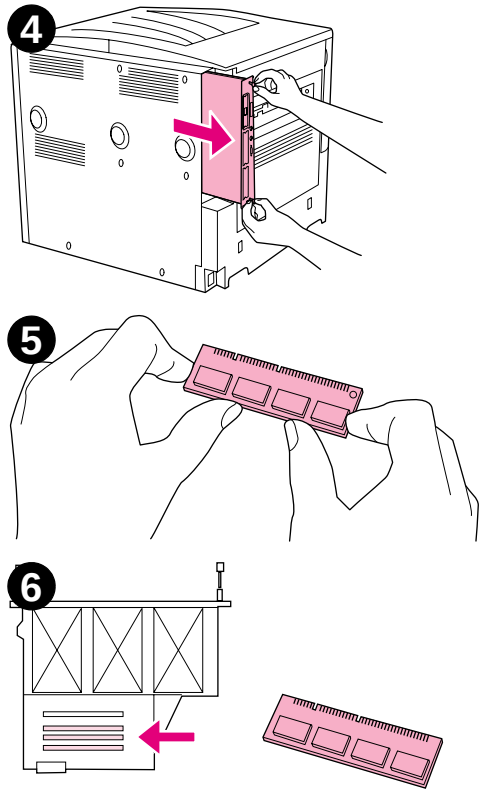


4 Grasp the screws and pull the formatter board out of the printer. Place it on a flat, non-conductive surface.

5 Remove the DIMM from the antistatic package. Hold the DIMM with fingers against the side edges and thumbs against the back edge. Align the notches on the DIMM with the DIMM slot. (Check that the locks on each side of the DIMM slot are open, or outward.)

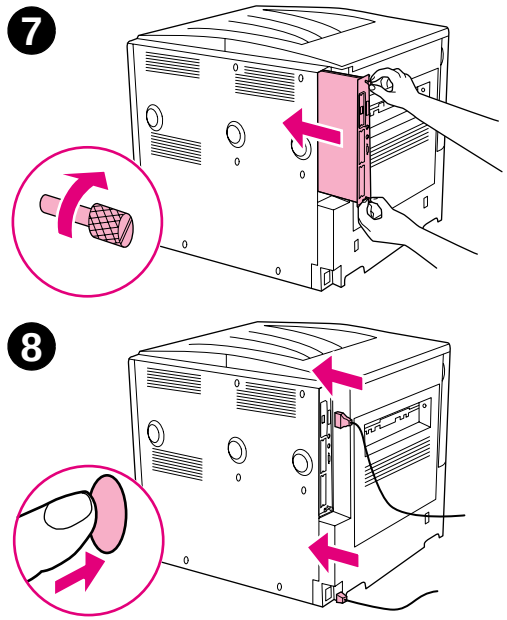
See “Installing memory” on page 200 for the maximum amount of memory for each DIMM slot.

6 Press the DIMM straight into the slot (press firmly). Make sure the locks on each side of the DIMM snap inward into place. (To remove a DIMM, the locks must be released.)



7 Slide the formatter board back into the printer and tighten the two screws.

8 Plug in the power cord and connect all cables. Turn the printer on.



Checking memory installation

Follow this procedure to verify that DIMMs are installed correctly:

1. Check that the printer control panel displays READY when the printer is turned on. If an error message appears, a DIMM might have been incorrectly installed.

2. Press 22 on the numeric keypad. The configuration page prints.

3. Check the memory section on the configuration page and compare it to the configuration page printed before the DIMM installation. If the amount of memory has not increased, one of the following situations might have occurred:

   - The DIMM might not be installed correctly. Repeat the installation procedure.
   - The DIMM might be defective. Try a new DIMM, or try installing the DIMM in a different slot.

Note If you installed a printer language (personality), check the Installed Personalities and Options section on the configuration page. This area should list the new printer language.

Saving resources (permanent resources)

Utilities or jobs that you downloaded to the printer sometimes include resources (for example, fonts, macros, or patterns). Resources that are internally marked as permanent remain in the printer memory until you turn the printer off.

If you do not have an optional hard disk or flash DIMM for storing downloaded resources, you might want to change the amount of memory allocated to each language when downloading an unusually large number of fonts, or if the printer is in a shared environment.

The minimum amount of memory that can be allocated to resource saving is 400 KB each for PCL and PS.

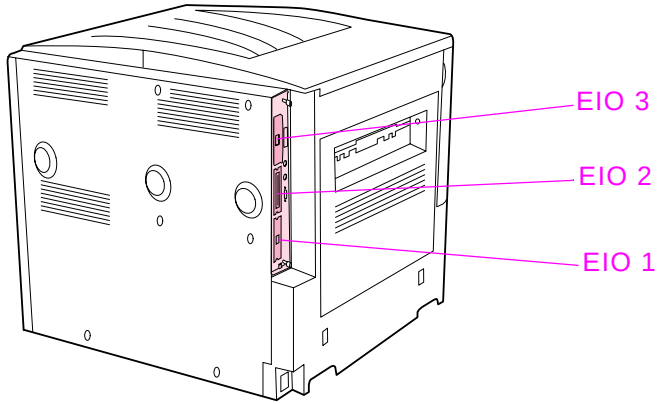
Installing EIO cards/mass storage

Hewlett-Packard constantly introduces new software tools for use with your printer and accessories. These tools are available from the Internet free of charge. (See the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.)

Follow this procedure to install an EIO card or mass storage device:

1 Turn off the printer and remove the power cord before installing the EIO cards or mass storage device.

2 Use the graphic for the location of the EIO cards or optional mass storage device, such as a hard disk.



3 Use HP Resource Manager to manage fonts on a mass storage device, or LaserJet Utility on a Macintosh.

4 After you have installed a new device, press 22 on the numeric keypad to print a configuration page.

D Printer commands

Overview

Most software applications do not require you to enter printer commands. See your computer and software documentation to find the method for entering printer commands, if needed.

This appendix includes:

- Understanding PCL 5e printer command syntax
- Selecting PCL 5e fonts
- Common PCL 5e printer commands

Note The table at the end of this appendix contains commonly used PCL 5e commands (See “Common PCL 5e printer commands” on page 212). To order a *PCL 5/PJL Technical Reference Documentation Package*, see www.hp.com/support/lj9000.

PCL 5e

PCL 5e printer commands tell the printer which tasks to perform or which fonts to use. This appendix provides a quick reference for users familiar with PCL 5e command structure.

Note Unless PCL 5e backward compatibility is required, HP recommends that PCL 6 printer drivers be used to take full advantage of all printer features. The PCL 5e printer driver in this printer is not backward compatible with older printers that use PCL 5e printer drivers.

HP-GL/2

The printer has the ability to print vector graphics using the HP-GL/2 graphics language. Printing in the HP-GL/2 language requires that the printer leave PCL 5e language and enter HP-GL/2 mode, which can be done by sending the printer PCL 5e code. Some software applications change languages through their drivers.

PJL

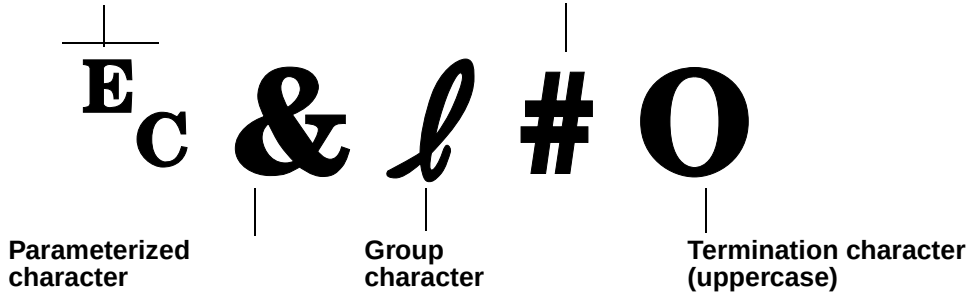
HP's Printer Job Language (PJL) provides control above PCL 5e and other printer languages. The four major functions provided by PJL are: printer language changing, job separation, printer configuration, and status readback from the printer. PJL commands may be used to change printer default settings.

Understanding PCL 5e printer command syntax

Before using printer commands, compare these characters:

Lowercase l:	l	Uppercase O:	O
Number one:	1	Number 0:	0

Many printer commands use the lowercase letter l (l) and the number one (1), or the uppercase letter O (O) and the number zero (0). These characters may not appear on your screen as shown here. You must use the exact character and case specified for PCL 5e printer commands.



Combining escape sequences

Escape sequences may be combined into one escape sequence string. There are three important rules to follow when combining code:

1 The first two characters after the escape character (the parameterized and group characters) must be the same in all of the commands to be combined.

2 When combining escape sequences, change the uppercase (termination) character in each individual escape sequence to lower case.

3 The final character of the combined escape sequence must be uppercase.

The following is an example of an escape sequence string that would be sent to the printer to select legal paper, landscape orientation, and eight lines per inch:

```
Ec&l3AEc&l1OEc&l8D
```

The following escape sequence sends the same printer commands by combining them into a shorter sequence:

```
Ec&l3a1o8D
```

Selecting PCL 5e fonts

Print a PCL font list to view the command for each internal font (See “PCL or PS font list” on page 159). A sample section is shown below. Notice the two variable boxes for symbol set and point size.

Univers Medium Scale <esc>(☐ <esc>(s1p ▒ v0s0b4148T I 01

These variables must be filled in, or the printer will use defaults. For example, if you want a symbol set that contains line-draw characters, select the 10U (PC-8) or 12U (PC-850) symbol set. Other common symbol set codes are listed in the table in “Font selection” on page 215.

Note

Fonts are either "fixed" or "proportional" in spacing. The printer contains both fixed fonts (Courier, Letter Gothic, and Lineprinter) and proportional fonts (CG Times, Arial, Times New Roman, and others).

Fixed-spaced fonts are generally used in applications such as spreadsheets and databases, where it is important for columns to line up vertically. Proportional-spaced fonts are generally used in text and word processing applications.

Common PCL 5e printer commands

Function	Command	Options (#)
Job control commands		
Reset	?E	n/a
Number of copies	Ec&l#X	1 to 32,000
2-sided/1-sided printing	Ec&l#S	0 = Simplex (1-sided) printing 1 = Duplex (2-sided) with long-edge binding 2 = Duplex (2-sided) with short-edge binding

Function	Command	Options (#)
Page control commands		
Paper source	Ecl#H	0 = prints or ejects current page 1 = Tray 2 2 = manual feed, paper 3 = manual feed, envelope 4 = Optional Tray 1 5 = Tray 3 7 = auto select 20 = Optional Tray 4 22-69 = external trays
Paper size	Ecl#A	1 = Executive 2 = Letter 3 = Legal 6 = 11 by 17 17 = 16K 18 = JIS EXEC 19 = 8K 25 = A5 26 = A4 27 = A3 44 = B6-JIS 45 = B5-JIS 46 = B4-JIS 72 = Postcard (double) 80 = Monarch 81 = Commercial 10 90 = DL 91 = International C5 100 = B5 101 = Custom

Function	Command	Options (#)
Paper type	Ec&n#	5WdBond = Bond 6WdPlain = Plain 6WdColor = Color 7WdLabels = Labels 9WdRecycled = Recycled 11WdLetterhead = Letterhead 10WdCardstock = Cardstock 11WdPrepunched = Prepunched 11WdPreprinted = Preprinted 13WdTransparency = Transparency #WdCustompapertype = Custom[a]
Orientation	Ec&l#O	0 = Portrait 1 = Landscape 2 = Reverse Portrait 3 = Reverse Landscape
Top margin	Ec&l#E	# = number of lines
Text length (bottom margin)	Ec&l#F	# = number of lines from top margin
Left margin	Ec&a#L	# = column number
Right margin	Ec&a#M	# = column number from left margin
Horizontal motion index	Ec&k#H	1/120-inch increments (compresses print horizontally)
Vertical motion index	Ec&l#C	1/48-inch increments (compresses print vertically)
Line spacing	Ec&l#D	# = lines per inch (1, 2, 3, 4, 5, 6, 12, 16, 24, 48)
Perforation skip	Ec&l#L	0 = disable 1 = enable
Programming hints		
End of line wrap	Ec&s#C	0 = Enable 1 = Disable

Function	Command	Options (#)
Display functions On	EcY	n/a
Display functions Off	EcZ	n/a
Language selection		
Enter PCL mode	Ec%#A	0 = Use previous PCL cursor position 1 = Use current HP-GL/2 pen position
Enter HP-GL/2 mode	Ec%#B	0 = Use previous HP-GL/2 pen position 1 = Use current PCL cursor position
Font selection		
Symbol sets[b]	Ec(#	8U = HP Roman-8 Symbol Set 10U = IBM Layout (PC-8) (code page 437) Default Symbol Set 12U = IBM Layout for Europe (PC-850) (code page 850) 8M = Math-8 19U = Windows 3.1 Latin 1 9E = Windows 3.1 Latin 2 (commonly used in Eastern Europe) 5T = Windows 3.1 Latin 5 (commonly used in Turkey) 579L = Wingdings font
Primary spacing	Ec(s#P	0 = fixed 1 = proportional
Primary pitch	Ec(s#H	# = characters/inch
Set pitch mode[c]	Ec&k#S	0 = 10 4 = 12 (elite) 2 = 16.5 to 16.7 (compressed)
Primary height	Ec(s#V	# = points
Primary style[b]	Ec(s#S	0 = upright (solid) 1 = italic 4 = condensed 5 = condensed italic

Function	Command	Options (#)
Primary stroke Wt.[b]	Ec(s#B	0 = medium (book or text) 1 = semi bold 3 = bold 4 = extra bold
Typeface[b]	Ec(s#T	Print a PCL font list to view the command for each internal font (See “Information menu” on page 175).

a. For custom paper, replace “Custompapertype” with the name of the paper, and replace the “#” with the number of characters in the name plus 1.

b. Order the *PCL 5/PJL Technical Reference Documentation Package* for symbol set charts, or for more information see www.hp.com/support/lj9000.

c. The preferred method is to use the primary pitch command.

E Regulatory information

Overview

- Environmental product stewardship program
- Environmental conformity

Environmental product stewardship program

Protecting the environment

Hewlett-Packard Company is committed to providing quality products in an environmentally-sound manner. The HP LaserJet printer has been designed with several attributes to minimize impacts on the environment.

The HP LaserJet printer eliminates:

Ozone production	The printer uses charging rollers in the electrophotographic process and therefore generates no appreciable ozone gas (0_3).
CFC Usage	Class I U.S. Clean Air Act stratospheric ozone-depleting chemicals (chlorofluorocarbons [CFCs], for example) have been eliminated from the manufacturing of the printer and packaging.

The printer design reduces:

Energy consumption

Energy usage drops significantly in low-power (PowerSave) mode. Not only does this save natural resources, but it also saves money without affecting the high performance of this printer. This product qualifies for ENERGY STAR®. ENERGY STAR® 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 this product meets ENERGY STAR® Guidelines for energy efficiency. For more information, see http://www.epa.gov/energystar/

Toner consumption

EconoMode uses less toner, which may extend the life of the print cartridge.

Paper use

Depending on the type of software program in use, you can request that a number of pages of your document be printed on one sheet of paper. This N-up printing practice and the printer automatic duplexing feature, which provides two-sided printing, can reduce paper usage and the resulting demands on natural resources.

This HP LaserJet printer also contributes to protecting the environment in the following ways:

Plastics marking for recycling

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 life.

HP Printing Supplies Environmental Program

In over 25 countries/regions, this product's print cartridges can be returned to HP through the HP Printing Supplies Environmental Program. Multi-lingual program information and instructions are included in every new HP LaserJet print cartridge and consumables package.

HP Printing Supplies Environmental Program Information

Since 1990, the HP Printing Supplies Environmental Program has collected more than 39 million used LaserJet print cartridges that otherwise may have been discarded in the world's landfills. The HP LaserJet print cartridges go to a collection center and are bulk-shipped to our recycling partners who disassemble the cartridge parts for recycling. Materials are separated and converted into raw materials for use by other industries to make a variety of useful products.

For more information about the recycling program, see http://www.ljsupplies.com.

U.S. recycling returns

For U.S. returns, the HP Printing Supplies Environmental Program is an easy-to-use, free-of-charge way to recycle HP LaserJet print cartridges. If you use only a few cartridges per year, all you have to do is use the pre-paid delivery label and instructions you will find in every HP LaserJet print cartridge box. For returning multiple cartridges, HP encourages bulk returns. Simply bundle two or more cartridges together and apply the single, pre-paid, pre-addressed UPS label that is supplied in the package.

For returning large numbers of cartridges at one time, for additional mailing labels, or for more information call (1) (800) (340-2445) in the U.S. or visit the HP LaserJet Supplies website at http://www.ljsupplies.com.

Non-US recycling returns

For non-U.S. returns, check the print cartridge recycling information in the box for instructions on recycling in your country/region. If your country/region is not listed or for further information, contact your the local HP Sales and Service Office.

Recycled paper

This printer is suited for the use of recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Media Specifications Guide*. See www.hp.com/support/lj9000 for ordering information. This printer is suitable for the use of recycled paper according to DIN 19309.

Material safety data sheet

The Print Cartridge/Drum material safety data sheet (MSDS) can be obtained by accessing http://www.hp.com/go/msds and selecting the HP LaserJet icon.

If you do not have access to the Internet, call U.S. HP FIRST (fax-on-demand service) for material data sheets:

- within the U.S. and Canada, call (1) (800) 231-9300
- outside the U.S. and Canada, call (1) (404) 329-2009

Select an Index to view a list of the available documents. Index 7 contains material safety data sheets for printer products.

To ensure longevity of your HP LaserJet printer, HP provides the following:

Extended warranty	HP SupportPack provides coverage for the HP hardware product and all HP-supplied internal components. The hardware maintenance covers a three-year period from date of the HP product purchase. The customer must purchase HP SupportPack within 90 days of the HP product purchase. For more information, see the HP Customer Care section in the *introduce* guide on the product CD, or go to www.hp.com/cposupport/.

Environmental conformity

Plastics	Plastic parts have material identification markings, according to international standards, that enhance the ability to identify plastics for proper disposition at the end of the printer's life. The plastics used in the printer housing and chassis are technically recyclable.
Printer and parts	Design for recycling has been incorporated into the printer and its accessories. The number of materials has been kept to a minimum while ensuring proper functionality and high product reliability. Dissimilar materials have been designed to separate easily. Fasteners and other connections are easy to locate, access, and remove with common tools. High priority parts have been designed to be accessed quickly for efficient disassembly and repair. Plastic parts have been primarily designed in two colors to enhance recycling options. A few small parts are colored specifically to highlight customer access points. HP disposes of returned products in an environmentally sound manner. Many of the functional parts are recovered, tested, and reused as fully-warrantied service parts. Used printer parts are not placed into new product manufacturing. The remainder of the product parts are recycled, if possible. For product recycling information, call (1) (800) (340-2445).
Paper	The printer is suited for the use of recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Media Specifications Guide*. See www.hp.com/support/lj9000 for ordering information. The printer is suited for the use of recycled paper according to DIN 19 309.

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