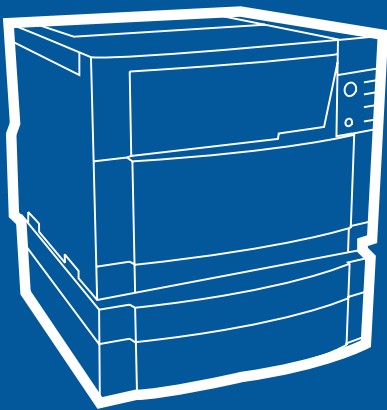




i n v e n t

learn



hp color LaserJet 4550
4550n • 4550dn • 4550hdn

user guide

Quick access to printer information

World Wide Web links

- [Product support](#)
- [Supplies](#)
- [Product information](#)

User guide links

- [How to use this online user guide](#)
- [Where to look for more information . . .](#)
- [Locating printer components](#)
- [Locating consumables](#)
- [HP Customer Care](#)
- [Worldwide Country/Region Sales and Service Offices](#)
- [Contents](#)
- [Index](#)

HP Color LaserJet 4550, 4550N, 4550DN, 4550HDN Printer

User Guide _____

Copyright and License

© Copyright Hewlett-Packard Company 2001

All Right Reserved. Except as allowed by copyright laws or herein, reproduction, adaptation, or translation without prior written permission is prohibited.

A user of the Hewlett-Packard printer associated with this user guide is granted a license to: a) print hard copies of this user guide for PERSONAL, INTERNAL or COMPANY use subject to the restriction not to sell, re-sell or otherwise distribute the hard copies; and b) place an electronic copy of this user guide on a network server provided access to the electronic copy is limited to PERSONAL, INTERNAL users of the Hewlett-Packard printer associated with this user guide.

Publication number
C7085-online

Fourth Edition,
April 2001

Warranty

The information contained in this document is subject to change without notice.

Hewlett-Packard makes no warranty of any kind with respect to this information. HEWLETT-PACKARD SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Hewlett-Packard shall not be liable for any direct, indirect, incidental, consequential, or other damage alleged in connection with the furnishing or use of this information.

Trademark Credits

Adobe[®], Acrobat[®], PostScript[®], and Adobe Photoshop[®] are trademarks of Adobe Systems Incorporated.

Arial[®] is a U.S. registered trademark of the Monotype Corporation.

CompuServe[™] is a U.S. trademark of CompuServe, Inc.

CorelDRAW[™] is a trademark of Corel Corporation or Corel Corporation Limited.

Microsoft[®] is a U.S. registered trademark of Microsoft Corporation.

Netscape Navigator is a U.S. trademark of Netscape Communications Corporation.

PANTONE[®]* *Pantone, Inc.'s check-standard trademark for color.

TrueType[™] is a U.S. trademark of Apple Computer, Inc.

UNIX[®] is a registered trademark of the Open Group.

Windows[®], MS Windows[®], and Windows NT[®] are U.S. registered trademarks of Microsoft Corporation.

Contents

Quick access to printer information	2
World Wide Web links	2
User guide links	2

Contents

Where to look for more information	12
Setting up the printer	12
Using the printer	13
How to use this online user guide	14
Features of Acrobat Reader 4.0	14

1 The HP Color LaserJet 4550 Series Printer

Overview	17
Printer features.	18
Factors affecting printer performance	20
Locating printer components	21
Controlling print jobs.	23
Managing memory	25
Printer software	26
HP Resource Manager	27
Printer drivers	28
Other components and utilities	29
Printer supplies and accessories	31

2 Using the printer control panel

Overview	33
When to use the printer control panel	34
Locating printer control panel features.	35
Using printer control panel keys	36
Using the printer online Help system.	36
Interpreting control panel indicator lights	37
Control panel menus	38
Menu locking	38
Menu map	38
Information menu.	40
Paper handling menu.	41
Printing menu.	42
Configuration menu	43
I/O menu	44

Calibration menu	45
Resets menu	46
Hard disk dependent menus	47
Quick Copy Jobs menu	47
Private/Stored Jobs menu	48
EIO menu	48
Printer information pages	49
Printer configuration page	49
Supplies status page	52
Usage page	54
Event log	56
Using the printer control panel in shared environments	57
Changing printer control panel configuration settings	58
Changing PowerSave settings	59
Switching printer personalities	60
Setting the I/O timeout	61
Disabling the high-speed parallel interface	62
Setting advanced functions	63
Resetting printer memory	63
Resetting the printer to factory default settings	64

3 Common printing tasks

Overview	65
Selecting print media	66
Supported media weights and sizes	67
Media to avoid	69
Printing on special media	70
Transparencies	70
Glossy paper	70
Colored paper	71
Envelopes	71
Labels	72
Heavy paper	72
Preprinted forms and letterhead	73
Recycled paper	73
Controlling print jobs	74
Selecting output bins	74
Selecting media by type	75
Configuring input trays	76
Configuring Tray 1 as a cassette	76
Configuring Trays 2 and 3 by media type	77
Tray priority	77
Printing from Tray 1 (multipurpose tray)	78
Loading media into Tray 1	78
Loading envelopes into Tray 1	80

Printing from Tray 2	82
Loading media into Tray 2	82
Printing from Tray 3 (optional 500-sheet paper feeder)	84
Loading media into Tray 3	86
Using the optional duplex printing accessory for two-sided printing.	89
Control panel settings for duplex printing	91
Options for binding duplex printing jobs.	92
Special printing situations.	93
Printing a different first page	93
Printing on custom-size media.	93
Stopping a print request.	94
Job retention features.	95
Quick copying a job	95
Proofing and holding a job	97
Printing a private job	99
Storing a print job.	101
Printing with the optional HP Fast InfraRed Receiver	103
Setting up to print with Windows 9x/NT	103
Printing a job	103
Interrupting and resuming printing.	104

4 Using color

Overview	105
Matching colors	106
HP ColorSmart II	107
Color management options	107
Four-color printing (CMYK)	110
Matching PANTONE®* colors	111
Automatic PANTONE®* calibration	111

5 Using fonts

Overview	115
Using internal TrueType fonts	116
Understanding printer default fonts	117
Font selection priority.	117
Selecting fonts	118
Selecting fonts from software applications	118
Selecting PCL fonts through the printer control panel	119
Printing a list of available printer fonts	121
Interpreting the font lists	122
Using fonts in PostScript Emulation	123
Using fonts on a network	124
Guidelines for printing with different fonts	124
Adding support for accessory fonts to a printer driver	125
Using special type effects.	125
Hewlett-Packard custom font services.	126

6 Printer Interfaces

Overview	127
Parallel configuration	128
Enhanced I/O (EIO) configuration	129
HP JetDirect print servers	129
Available enhanced I/O interfaces	130
NetWare networks	130
Windows and Windows NT networks	130
AppleTalk Networks	131
UNIX/Linux networks	132
Setting network security on the printer	132
Configuring the printer for the network at the printer control panel	133
Configuring Novell NetWare frame type parameters	133
Configuring TCP/IP parameters	135
Disabling network protocols (optional)	138

7 Consumables and cleaning

Overview	141
Making room around the printer for replacing consumables	142
Consumable replacement guidelines	143
Approximate replacement intervals for consumable items	144
Locating consumables	146
Environmental collection program	147
Cleaning the printer	148
Cleaning excess toner from the printer	148
Cleaning the toner density sensor	149

8 Printer control panel messages

Overview	151
Message types	152
Status messages	152
Warning messages	152
Attention messages	152
Critical error messages	152
Printer control panel messages	153
Control panel messages for external devices	170

9 Solving problems with the printer

Overview	173
Basic troubleshooting checklist	174
Paper jam locations	175
Paper jam recovery	176
Common causes of paper jams	177

Clearing paper jams	178
Clearing jams in the middle front drawer area	178
Clearing jams in the Tray 2 area	180
Clearing jams in the optional Tray 3 area	181
Clearing jams in the rear door areas	182
Clearing jams in the front duplex drawer area	184
Media-handling problems	185
Printer response problems	189
Printer control panel problems	193
Print quality troubleshooting	194
Repetitive image defects	194
Image defects	196
Background scatter	197
Banding and horizontal lines	197
Banding — horizontal	198
Banding — vertical	198
Black lines	198
Blank pages or missing a color	199
Character voids	199
Distorted image	200
Dropouts	200
Faded print, faded areas, or faded vertical streaks	201
Toner smear	202
Ghosting	203
Gray streaks	203
Irregular, raised streaks	203
Light, dark, or faded print	204
Non-adhering toner	204
Marbled output	205
Random spots	205
Sharkskin	205
Sunburn	205
Imaging drum defects	206
Overhead transparency defects	207
Dull or dark transparencies	208
Rippled or wavy transparencies	208
Incorrect image on transparencies	208
Repetitive defects on transparencies	209
Streaking or smudges on transparencies	209
Color printing problems	210
Incorrect printer output	212
Software application problems	214

Appendix A DIMM Installation

Overview	215
DIMM configuration	216
Installing DIMMs	217
Verifying DIMM installation	220
Resource saving/permanent resources	221
Installing EIO cards/mass storage	222

Appendix B PCL commands

Overview	223
Interpreting PCL printer command syntax	225
Combining escape sequences in PCL Printer command syntax	226
Entering escape characters	227
Selecting PCL fonts	228
Common PCL commands	229

Appendix C Specifications

Electrical specifications	235
Operating environment specifications	236
Acoustic emissions	236
Environmental product stewardship program	237
Regulatory statements	240
FCC regulations	240
Canadian DOC regulations	241
VCCI statement (Japan)	241
Korean EMI statement	241
Declaration of Conformity	242
Safety information	243
Laser safety	243
Laser Statement for Finland	244
Material Safety Data Sheet (MSDS)	246

Appendix D Warranty and support information

Hewlett-Packard Warranty Statement	247
HP Maintenance Agreements	249
On-site service agreements	249
Support information	250
HP Customer Care options worldwide	252
Worldwide Country/Region Sales and Service Offices	254

Appendix E Embedded Web server

Introduction.	259
Using the embedded Web server.	260
To access the embedded Web server.	260
Embedded Web server page sets	261

Index

Where to look for more information . . .

Several references are available for use with this printer. For additional copies of the guides below, contact your HP-authorized dealer.

WWW

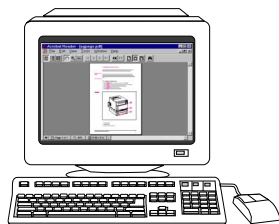
Additional information is available at <http://www.hp.com/support/lj4550>.

Setting up the printer



Getting Started Guide

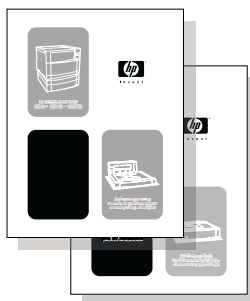
Step-by-step instructions for installing and setting up the printer.



HP JetDirect Print Server Administrator's Guide*

Instructions to configure and troubleshoot the HP JetDirect print server.

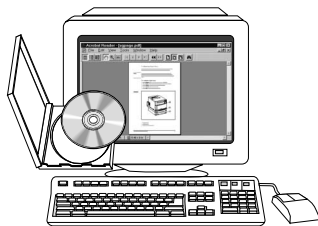
*Accompanies printers that include an HP JetDirect print server (network card).



Accessory and Consumable Installation Guides

Step-by-step instructions, supplied with the printer's optional accessories and consumables, for installing the printer's accessories and consumables.

Using the printer



Online User Guide

Detailed information on using and troubleshooting the printer. Available on the CD-ROM that came with the printer.



Online Help

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

How to use this online user guide

This user guide is provided online in an Adobe® Acrobat® portable document format (PDF). This section will help familiarize you with using PDF documents in Acrobat Reader version 4.0. For complete instructions on how to view PDF documents, see the documentation included with Acrobat Reader.

Features of Acrobat Reader 4.0

Finding topics in the online user guide

There are two primary ways to navigate to the information you need:

- Click the topic you want to read about in the **Bookmarks** section of the screen.
- Click **Contents** or **Index** in the **Bookmarks** section of the screen, and then click the topic you want to read about from the list of items displayed on the page.

Finding words

Use the **Find** command to find part of a word, a complete word, or multiple words in the document.



Click the **Find** button or choose **Find** from the **Edit** menu.

Magnifying the page view

Acrobat Reader offers several magnification choices that control how the page fits on-screen:

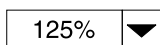
- the zoom-in tool
- the magnification button in the status bar
- the toolbar buttons

Once you zoom in on a document, you can select the hand tool or use the scroll bars to move the page.



To increase magnification: Select the zoom-in tool and click on the document page to double the current magnification.

To decrease magnification: Select the zoom-in tool while holding down **Ctrl** (Windows and UNIX) or **Option** (Macintosh), and click the center of the area you want to reduce.



Click the magnification button to select how large or small to make the page. Select from preset magnification levels and page views.



Actual Size scales the page to fit within the main window.

Fit in Window fills the window with the page's content area only.

Fit Width scales the page to fit the width of the main window.

Paging through a document

The following options are available for paging through a document.



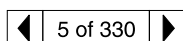
To go to the next page: Click the **Next Page** button in the toolbar or status bar, or press **Page Up** or **Page Down** on your keyboard.

To return to the previous page: Click the **Previous Page** button in the toolbar, or press the Left Arrow or Up Arrow.



To go to the first page: Click the **First Page** button in the toolbar.

To go to the last page: Click the **Last Page** button in the toolbar.



To jump to a specific numbered page: Click the page number box in the status bar at the bottom of the main window, type the page number, and click **OK**.

Browsing with thumbnails

A thumbnail is a miniature view of each document page. Click a page in the **Thumbnails** section of the window to jump quickly to that page.

Printing the document

To print selected pages: From the **File** menu, choose **Print**. Choose **Pages**. In the **From** and **To** boxes type the range of pages you wish to print. Then click **OK**.

To print the whole document: From the **File** menu, choose **Print**. Choose **All *n* pages** (*n* represents the total number of pages in the document), and then click **OK**.

WWW

Go to <http://www.adobe.com/> for the latest versions and additional languages of Adobe Acrobat Reader.

1 The HP Color LaserJet 4550 Series Printer

Overview

This chapter describes the features and specifications of the HP Color LaserJet 4550, 4550N, 4550DN, and 4550HDN printers. The chapter includes the following sections:

- [Printer features](#)
- [Locating printer components](#)
- [Controlling print jobs](#)
- [Managing memory](#)
- [Printer software](#)
- [Printer supplies and accessories](#)

Information on using the printer to perform common tasks is presented throughout this guide. Links to specific tasks are listed below.

- [Using the printer control panel](#)
- [Loading media into the printer](#)
- [Optimizing color quality](#)
- [Using fonts](#)
- [Printer Interfaces](#)
- [Consumables and cleaning](#)
- [Printer control panel messages](#)
- [Clearing paper jams](#)

Printer features

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

- Performance**
 - 16 pages per minute (ppm) in black and white
 - 4 ppm in color
 - Transparencies and glossy paper, 8 ppm in black and white, 2 ppm in color. For more information, see "[Supported media weights and sizes](#)."

- Memory**
 - 64 megabytes (MB) of random access memory (RAM) (128 MB in the HP Color LaserJet 4550DN and 4550HDN printers)
 - Can be expanded to 192 MB
 - Optional 6 GB hard disk drive (included with the HP Color LaserJet 4550HDN printer)
 - Memory Enhancement Technology (MEt), which automatically compresses data to use RAM more efficiently

- Supported printer personalities**
 - HP PCL 6
 - PostScript 3 emulation
 - HP PCL 5c
 - Automatic language switching

- Fonts**
 - 80 internal fonts available for both PCL and PostScript emulation
 - 80 printer matching screen fonts in TrueType™ format on CD-ROM

- Paper handling (input)**
 - 150-sheet multipurpose tray. Use for paper, transparencies, labels, heavy media, and envelopes
 - 250-sheet standard cassette
 - Optional 500-sheet paper feeder (included with the HP Color LaserJet 4550DN and 4550HDN printers)

- Paper handling (output)**
 - Top output bin holds up to 250 sheets of standard paper
 - Rear output bin holds up to 100 sheets of standard paper

- Duplex printing ● Duplex printing accessory mounts directly beneath the printer for two-sided printing (included with the HP Color LaserJet 4550DN and 4550HDN printers)

- Connectivity ● Bidirectional parallel port (requires a “C” connector)
 - Two Enhanced Input/Output (EIO) slots
 - HP JetDirect print server (EIO network card) (included with the HP Color LaserJet 4550N, 4550DN, and 4550HDN printers)
 - Paper handling accessory port
 - Infrared receiver port
 - Embedded Web server

- Optional storage features ● RIP Once Technology (included with the HP Color LaserJet 4550HDN printer)
 - Job retention (included with the HP Color LaserJet 4550HDN printer)
 - Flash DIMM

- Environmental features ● PowerSave setting
 - High content of recyclable components and materials

Factors affecting printer performance

Several factors affect the time it takes to print a job. Among these is maximum printer speed, measured in pages per minute (ppm). Other factors that affect printing speed include the use of special media (such as transparencies, glossy media, heavy media, and custom-size media), printer processing time, and download time.

The time required to download a print job from the computer to the printer and then have the printer process the job depends on the following variables:

- the complexity and size of graphics
- color versus black and white
- the printer's I/O configuration (network versus parallel speed)
- the speed of the computer you are using
- the amount of printer memory installed
- the network operating system and configuration (if applicable)
- printer personality (PCL or PostScript 3 emulation)

Note

Adding additional printer memory may resolve memory problems, improve how the printer handles complex graphics, and improve download times, but will not increase maximum printer speed (ppm rating).

Locating printer components

The following illustrations identify the locations and names of key components of this printer.

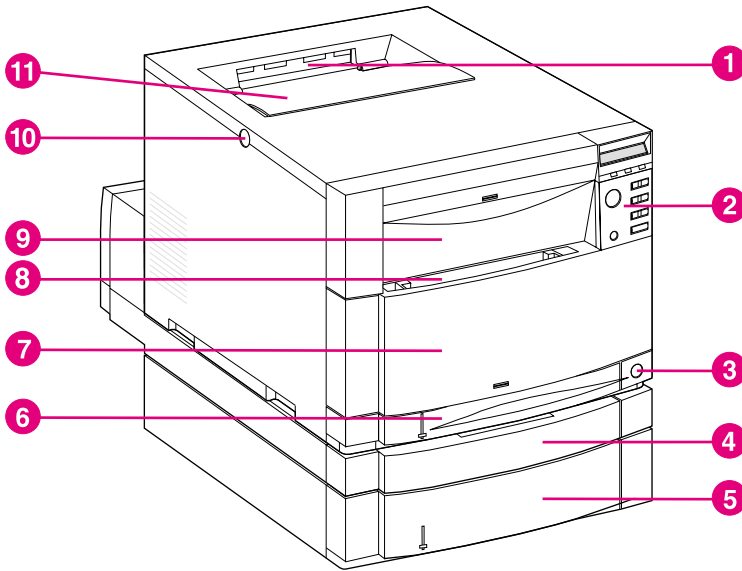


Figure 1-1 Front view (shown with 500-sheet paper feeder and duplex printing accessory)

- 1 Top output bin
- 2 Printer control panel
- 3 Power switch (standby button)
- 4 Optional duplex printing accessory drawer
- 5 Tray 3 (optional 500-sheet paper feeder)
- 6 Tray 2 (250 sheets of standard paper)
- 7 Middle front drawer (transfer belt access)
- 8 Tray 1 (150-sheet multipurpose tray)
- 9 Upper front drawer (imaging drum access)
- 10 Top cover door release button
- 11 Top cover door (toner cartridge access)

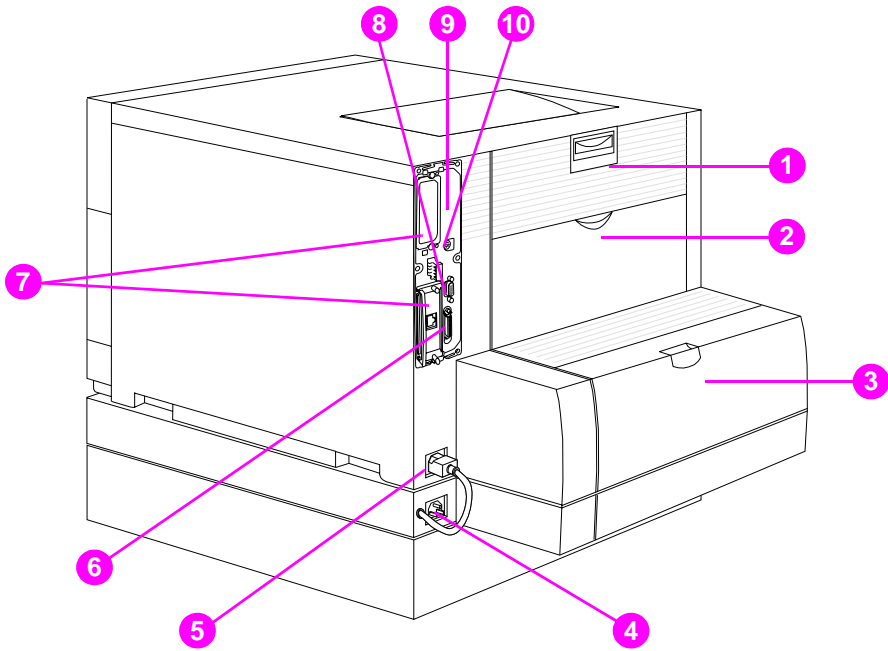


Figure 1-2 Rear view (shown with 500-sheet paper feeder and duplex printing accessory)

- 1 Rear door (fuser access)
- 2 Rear output bin door
- 3 Optional duplex printing accessory cover
- 4 Optional duplex printing accessory power receptacle
- 5 Printer power receptacle
- 6 Parallel connector ("C" connector)
- 7 EIO slots
- 8 Paper handling accessory port
- 9 Memory access (remove the formatter)
- 10 FIR port

Controlling print jobs

There are several options available for controlling print jobs:

- select printer settings through your software application or the printer driver (recommended method)
- select printer settings using the printer control panel
- select printer settings using the new embedded Web server
- enter printer commands directly into files
- HP Web JetAdmin

Select printer settings through your software application or the printer driver

The optimal way to control the printer is through your software application or the printer driver. Changing these settings affects only *your* print job. Most software applications allow you to choose printing selections from menus within the software application. These selections override the selections on the printer control panel.

Select printer settings using the printer control panel

You can also control the printer through the keys and menus of the printer control panel. Changing these settings affects all print jobs. If you are sharing the printer, coordinate control panel changes with other users. For more information, see [Chapter 2](#).

Note

Software application and printer driver settings override printer control panel settings.

Select printer settings remotely with the embedded Web server

If you have a Web browser, you can use the printer embedded Web server to control printer settings. To access the embedded Web server, open your browser and enter the printer IP address or the printer host name. You can print a configuration page from the control panel to determine the printer address or hostname.

The embedded Web server allows complete remote control panel functionality. Refer to [Appendix E](#) for details on how to use the embedded Web server.

Note

To use the embedded Web server, you must have an IP-based network and a Web browser. The embedded Web server can be used with Microsoft® Internet Explorer 4 or above, and with Netscape Navigator 4 and above. IPX-based printer connections are not supported by the embedded Web server.

Enter printer commands directly into files

Some software applications allow you to enter printer commands (for example, escape sequences) directly into files. However, this method of controlling your printer requires that you learn printer PCL commands. For information on PCL printer commands, see [Appendix C](#) or the *PCL/PJL Technical Reference Package* for this printer. (See [page 32](#) for ordering information.)

Managing memory

This printer supports up to 192 MB of memory. You can add additional memory by installing Dual Inline Memory Modules (DIMMs). To allow for memory expansion, the printer has three DIMM slots, which accept 64 or 128 MB of RAM each. For information on installing printer memory, see [Appendix A](#).

The printer features Memory Enhancement Technology (MEt), which automatically compresses page data to provide the most efficient use of the printer's RAM.

The printer uses 168-pin, nonparity, synchronous DRAM memory modules. Extended data output (EDO) DIMMs are not supported.

Note

If memory problems occur when you are printing complex graphics, you can make more memory available by removing downloaded fonts, style sheets, and macros from printer memory. Reducing the complexity of a print job from within an application can help in avoiding memory problems.

This printer also includes HP Resource Manager, a new software utility to assist with managing memory. For a full description of this feature, see ["HP Resource Manager" on page 27](#).

Printer software

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

Note

For the latest information about the printing system software components, view the ReadMe files on the CD-ROM.

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

- Microsoft Windows 9x and 2000
- Microsoft Windows NT 4.0
- Apple Mac OS, version 7.5.3 or greater
- AutoCAD drivers, versions 12-15

Note

For a list of the network environments supported by the network administrator software components, see [page 130](#).

Note

The CD-ROM also includes the drivers and font installer for Windows 3.x, but there is no printing system for Windows 3.x.

HP Resource Manager

This network administration software utility allows you to control the hard disk and flash memory features that are not found in the software drivers. Use HP Resource Manager to do the following:

- Initialize the hard disk
- Initialize flash memory
- Download, delete, and manage fonts and macros across networks

Note

To download Type 1 fonts, you must have Adobe® Type Manager loaded on the computer and turned on.

HP Resource Manager is included on CD-ROM with the HP Color LaserJet 4550HDN printer. However, if you order the hard disk as an optional accessory, you can download the HP Resource Manager utility from the Web. The HP Resource Manager utility is not available for the Macintosh.

WWW

Download the HP Resource Manager utility from <http://www.hp.com/cposupport>, and type **HP Resource Manager** in the Quick Find box.

Printer drivers

Printer drivers access the printer features and allow the computer to communicate with the printer. The following printer drivers are included with the printer.

Operating system ^a	PCL 5c	PCL 6	PS
Windows 3.1x	✓		✓
Windows 9x	✓	✓	✓
Windows NT 4.0	✓	✓	✓
Windows 2000	✓	✓	✓
Macintosh OS			✓

a. Not all printer features are available from all drivers or OSs. See the online Help in your driver for availability of features.

Note

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

WWW

If your system didn't automatically check the Internet for the latest drivers during the installation of the software, download them from <http://www.hp.com/support/lj4550>. Once connected, select **Downloads and Drivers** to find the driver you wish to download.

Additional drivers

The following drivers are not included on the CD-ROM, but are available from the Internet or from HP Customer Care. (See [“HP Customer Care” on page 250.](#))

- OS/2 PCL 5c/6 printer driver
- OS/2 PS printer driver
- Windows NT 3.51 PCL 5c, Windows NT 3.51 PS
- UNIX and Linux Model Scripts

Other components and utilities

This printer ships with several helpful software applications for Windows and Mac OS users, as well as for Network Administrators. These programs are summarized below.

Printing system software

Windows	Mac OS	Network Administrator
<ul style="list-style-type: none">● Software installer — automates the printing system installation● Online Web registration● HP Reorder assistance software	<ul style="list-style-type: none">● PostScript Printer Description files (PPDs) — for use with the Apple LaserWriter 8 driver that comes with the Mac OS● HP LaserJet Utility — a printer management utility for Mac OS users	<ul style="list-style-type: none">● HP Web JetAdmin — a browser-based system management tool. Go to http://www.hp.com/go/webjetadmin for the latest HP Web Jetadmin software.● HP Resource Manager — a new network management tool described on page 27.● HP JetDirect Printer Installer for UNIX — available for download from http://www.hp.com/support/net_printing.

HP JetSend communications

HP JetSend is a technology from Hewlett-Packard that allows devices to communicate with each other simply and directly. HP JetSend is built into your printer, allowing it to receive information from any HP JetSend-enabled sending device anywhere on your network, whether it is in the same office or at a remote location. When you use the HP InfraRed Receiver accessory, your printer also can receive information from any HP JetSend-enabled infrared device. Examples of HP JetSend sending devices include digital cameras, computers or laptops running HP JetSend software, or scanners with HP JetSend built in. HP JetSend uses simple IP addressing between networked devices and cableless communication between infrared devices.

WWW

To enable HP JetSend on your computer or laptop, visit the HP JetSend website at <http://www.jetsend.hp.com/products>.

With the software, you will be able to exchange intra-company documents directly between two or more computers and between any HP JetSend-enabled printers, without the problems of incompatible software applications or versions. HP JetSend software will allow your colleagues to create documents on their computers and send copies directly to this printer without any device-specific drivers or configuration difficulties.

You can visit the HP JetSend website to learn which other devices are available to communicate easily and directly with your HP JetSend-enabled printer.

Note

HP JetSend software is not supported for Traditional Chinese, Simplified Chinese, Korean, and Japanese.

Printer supplies and accessories

You can increase the capabilities of your printer by adding accessories.

WWW

To order printer accessory products, go to the HP website at U.S. – <http://www.hp.com/go/supplies> or Worldwide – <http://www.hp.com/ghp/buyonline.html>.

If you don't have Internet access, contact your qualified HP dealer, or call Hewlett-Packard at (800) 538-8787 (U.S.). (See [Appendix D](#) for phone numbers.)

Accessory	Product number	Description	Additional information
Memory (DIMMs)	C7848A C7850A	64 MB 128 MB	This printer uses 168-pin dual inline memory modules (DIMMs) exclusively (SDRAM only).
500-sheet paper feeder	C4082A	Optional 500-sheet input tray	
Duplex printing accessory	C4083A	Optional two-sided printing accessory	
Printer cabinet	C4235A	HP Color LaserJet 4550 Printer Cabinet	
Toner supplies	C4191A C4192A C4193A C4194A	Black Cyan Magenta Yellow	U.S. – http://www.hp.com/go/ljsupplies or Worldwide – http://www.hp.com/ghp/buyonline.html .
Consumables	C4195A C4196A C4197A C4198A	Drum Kit Transfer Kit Fuser Kit (110V) Fuser Kit (220V)	U.S. – http://www.hp.com/go/supplies or Worldwide – http://www.hp.com/ghp/buyonline.html .
Media	C2934A C2936A C4179A C4179B	HP Transparency Film (letter) HP Transparency Film (A4) HP Soft Gloss Paper (letter) HP Soft Gloss Paper (A4)	U.S. – http://www.hp.com/go/ljsupplies or Worldwide – http://www.hp.com/ghp/buyonline.html .
Network connectivity	J3110A J3111A J3112A J4169A C4103A J4135A	HP JetDirect 600N for Ethernet (10Base-T [RJ-45]) HP JetDirect 600N for Ethernet (10Base-T [RJ-45] and 10Base-2 [BNC]) and LocalTalk (DIN-8) HP JetDirect 600N for Token Ring (DB9, RJ-45) HP JetDirect 610N for Fast Ethernet (10/100 Base-TX [RJ-45]) Infrared receiver dongle HP JetDirect connectivity card (EIO) for USB, Serial, LocalTalk	

Accessory	Product number	Description	Additional information
Cables	C2947A 92215N 92215S	10 m (30 ft) parallel cable (IEEE-1284 compliant) with a 25-pin DB male to a (IEEE-1284C) male "C" connector LocalTalk Cable Kit DIN-8 printer cable (for Macintosh computers) U.S. – http://www.hp.com/go/supplies or Worldwide – http://www.hp.com/ghp/buyonline.html .	
Reference materials	5090-3392 5021-0337 5967-0831	<i>HP LaserJet Printer Family Paper Specification Guide</i> <i>PCL/PJL Technical Reference Package</i> <i>HP JetDirect Print Server Administrator's Guide</i> For downloadable manuals, go to http://www.hp.com/support/lj4550 . When you connect, select Manuals .	
Localized font DIMMs	5062-4667 5062-4668 5062-4669 5062-4670 C4292A C4293A C2419A YS-90210	Greek Hebrew Cyrillic Arabic Traditional Chinese Simplified Chinese Hangul (Korean, includes KS/KSSM) Japanese	1 MB 8 MB
Hard disk drive	C2985B	Optional hard disk drive for additional storage.	
Flash DIMM	C4286A C4287A	Permanent storage for fonts and forms: 2 MB 4 MB	

2 Using the printer control panel

Overview

This chapter helps you use the printer control panel to maximize printer performance. This chapter includes the following sections:

- [When to use the printer control panel](#)
- [Locating printer control panel features](#)
- [Control panel menus](#)
- [Hard disk dependent menus](#)
- [Printer information pages](#)
- [Using the printer control panel in shared environments](#)
- [Changing printer control panel configuration settings](#)

Note

Unless otherwise specified, “control panel” refers to the printer’s control panel. Keys on the control panel are indicated by the **KEY** font.

When to use the printer control panel

Hewlett-Packard has designed the printer control panel to facilitate setting up default printer settings and to make printing selections when your software does not provide them.

Use the printer control panel for overall configuration requirements, to obtain printer status information, and to perform the following procedures:

- configure input trays for media type and size
- take the printer online or offline
- print configuration pages and menu maps
- change printer default settings
- verify available fonts

Software applications that provide print option commands allow you to control print jobs through the software application rather than by changing the printer control panel settings. The degree of control varies among applications. Software commands override printer control panel settings for all Printing Menu and most Configuration Menu items.

Note

For information about controlling the printer in a network environment, see the *HP JetDirect Print Server Administrator's Guide*.

WWW

For downloadable manuals, go to <http://www.hp.com/support/lj4550>. When you connect, select **Manuals**.

Locating printer control panel features

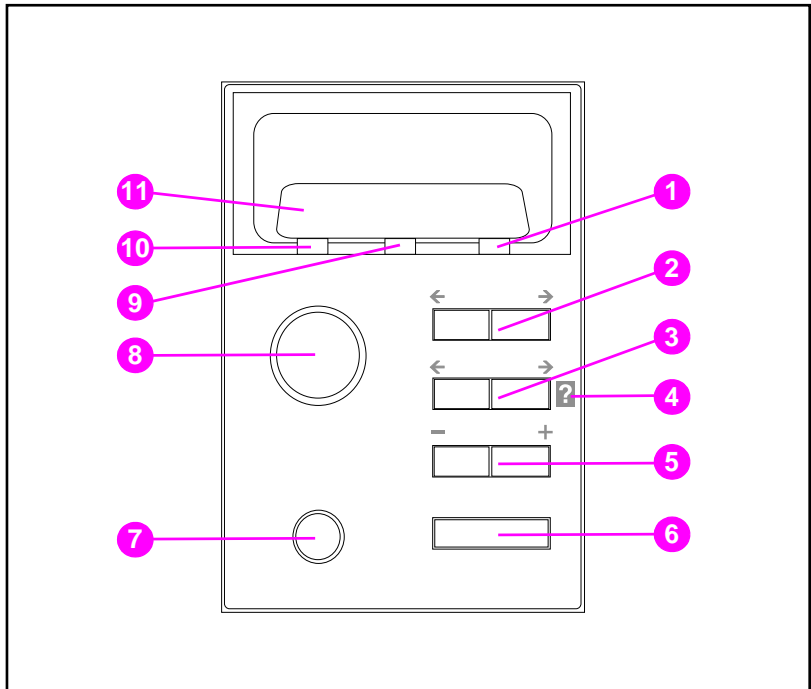


Figure 2-1 Printer control panel

- 1 Attention indicator light
- 2 Menu key*
- 3 Item key*
- 4 Printer online Help
- 5 Value key*
- 6 Select key
- 7 Cancel Job key
- 8 Go key
- 9 Data indicator light
- 10 Ready indicator light
- 11 Printer control panel display

*Rocker keys

Note

The **ITEM** key is also used to navigate through the online **?** Help system.

Using printer control panel keys

The following table summarizes the function of each printer control panel key.

Key	Function
Go	Depends on the status of the printer. Normally, Go activates printing using current settings or directs the printer to proceed with the process designated on the control panel. If the printer is offline, pressing Go will return the printer to the READY state.
CANCEL JOB	Terminates the job that is currently printing. The printer completes the current page and purges all input until a new job is detected (may take several seconds depending on the size of the job).
MENU	Displays a menu system for obtaining printer status information or changing the printer's configuration settings.
ITEM	Cycles through items in the selected menu. Menu items vary depending on the options installed and on the configuration of other menu choices. The ITEM key is also used to navigate through the printer's online Help system.
VALUE	Cycles through the value choices for a particular menu item.
SELECT	Selects the value that is currently shown on the display.

Using the printer online Help system

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

Whenever a **?** appears in an error message, or a message alternates with **FOR HELP PRESS THE ? KEY**, press the right side of the **ITEM** key to navigate through a sequence of instructions.

Note

To exit the online Help system, press either **Go** or **SELECT**.

Interpreting control panel indicator lights

The following table explains the meaning of the printer control panel indicator lights (see [page 35](#)).

Indicator	On	Off	Flashing
Ready (green)	Printer is online (able to accept and process data).	Printer is offline.	Printer is attempting to stop printing and go offline.
Data (green)	Processed data is present in the printer, but more data is needed to complete the job.	No data is being received or processed.	Data is being received and processed by the printer.
Attention (amber)	A critical error has occurred. Printer requires attention.	No conditions exist that require attention.	An error has occurred. Printer requires attention.

Control panel menus

The printer control panel menus allow you to change printer settings and to access printer status information. This section outlines the printer control panel menus and the selections available within each menu.

Menu locking

Menu selections can be locked out by a system administrator. If you are unable to access a particular menu, contact your system administrator.

Menu map

The menu map helps you navigate through control panel menus. See the menu map sample on [page 39](#) for details.

To print a menu map

- 1 On the printer control panel, press **MENU** until INFORMATION MENU displays.
- 2 Press **ITEM** until PRINT MENU MAP displays.
- 3 Press **SELECT** to print the menu map. After printing the menu map, the printer will return to the READY state.

Interpreting the menu map

The following sample illustrates a menu map. Each menu and the associated menu items are described on the pages following the graphic.

Note

In the menu descriptions, menu items followed by an asterisk (*) denote default values.

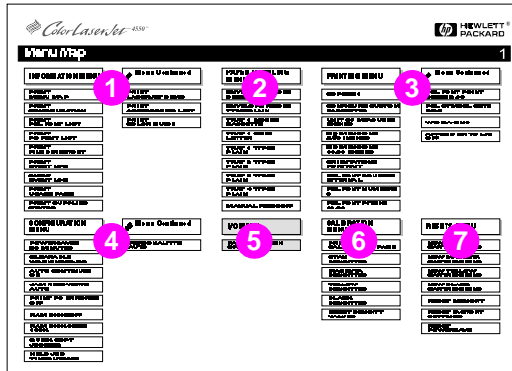


Figure 2-2

Menu map

- 1 Information menu
- 2 Paper handling menu
- 3 Printing menu
- 4 Configuration menu
- 5 I/O menu
- 6 Calibration menu
- 7 Resets menu
- 8 Quick Copy Jobs menu (only shown if a hard disk or RAM disk is installed)
- 9 Private/Stored Jobs menu (only shown if a hard disk or RAM disk is installed)

Note

Some menus only appear when the hard disk is installed. See the [Hard disk dependent menus](#) section for descriptions of these menus.

Information menu

The Information menu selections are used for accessing and printing specific printer information.

Menu item	Description
PRINT MENU MAP	Prints the control panel menu map.
PRINT CONFIGURATION	Prints the printer configuration page.
PRINT FONT LIST	Prints the available PCL and PS (emulated PostScript) font samples.
PRINT FILE DIRECTORY	Prints the name and directory of files stored in the printer on an optional hard disk or RAM memory module.
PRINT EVENT LOG	Prints a historical list of printer events.
SHOW EVENT LOG	Displays a historical list of printer events on the control panel.
PRINT PAPER PATH TEST	Prints a test of the paper path for the printer to make sure there are no media jams.
PRINT USAGE PAGE	Prints a count of all media sizes that have passed through the printer. Also lists whether they were simplex, duplex, monochrome, or color.
PRINT SUPPLIES STATUS PAGE	Prints the estimated remaining life for the toner cartridges, transfer belt, fuser, and imaging drum.
PRINT LASERJET DEMO	Prints a demonstration page for the printer.
PRINT ACCESSORIES LIST	Prints a list of optional accessories that have been installed on the printer.
PRINT COLOR GUIDE	Prints a one-page guide with hints on using color effectively.

Paper handling menu

The Paper handling menu allows you to configure input trays by size and type. This menu can also be used to set the default media size and type.

Note

The default mode for Tray 1 is TRAY 1 MODE=FIRST. In this mode, the printer will pull media from Tray 1 regardless of the size or type of media loaded. To configure Tray 1 by size or type, it must be configured as TRAY 1 MODE=CASSETTE.

Menu item	Values
TRAY 1 MODE	FIRST* CASSETTE
TRAY 1 SIZE (appears only if Tray 1 mode is set to TRAY 1 MODE=CASSETTE)	LETTER*/A4 ¹ LEGAL EXEC JIS B5 A5 CUSTOM B5 COM10 C5 DL MONARCH
TRAY 1 TYPE (appears only if Tray 1 mode is set to TRAY 1 MODE=CASSETTE)	PLAIN* PREPRINTD LTRHEAD TRANSPRNCY GLOSS PREPUNCHD LABELS BOND RECYCLED COLOR HEAVY CARDSTOCK
TRAY 2 TYPE	(same choices as TRAY 1 TYPE except LABELS and CARDSTOCK)
TRAY 3 TYPE	(same choices as TRAY 1 TYPE except LABELS and CARDSTOCK)
MANUAL FEED	ON OFF

¹In some countries, A4 is the default setting.

Printing menu

The Printing menu is used to set default settings for a specific print job.

Menu item	Values	Description
COPIES	1 to 999 (default: 1)	Number of copies.
CONFIGURE CUSTOM PAPER	YES* NO	Specifies the dimension of custom sized paper.
UNIT OF MEASURE	INCHES MM	Set the unit of measurement.
X DIMENSION		Determine the length of the custom size media.
Y DIMENSION		Determine the width of the custom size media.
ORIENTATION	PORTRAIT* LANDSCAPE	Determines the default page orientation.
PCL FONT SOURCE	INTERNAL* SOFT SLOT n (n = 1,2,3)	Instructs the printer where to look for PCL fonts.
PCL FONT NUMBER	0 to 999 (default: 0)	Specifies a default PCL font number from the printer font list.
PCL FONT PITCH ¹	0.44 to 99.99 (default: 10)	Specifies a default pitch for scalable PCL fonts.
PCL FONT POINT SIZE ²	4 to 999.75 (default: 12)	Specifies a default font size for scalable PCL fonts.
PCL SYMBOL SET	PC-8 (default)	Used to select an appropriate symbol set. See Appendix B .
WIDE A4	NO* YES	Sets the printer to allow wide-A4 type media.
APPEND CR TO LF	NO* YES	Appends a carriage return to each line feed character in the data stream. (UNIX)

¹Displays only when a fixed space font is specified

²Displays only when a proportional space font is specified

Configuration menu

The Configuration menu is used to set general printer default settings.

CAUTION

Hewlett-Packard recommends that configuration settings only be changed by a system administrator. Configuration settings seldom need to be changed.

Menu item	Values	Description
POWERSAVE TIME	1 MIN 15 MIN 30 MIN* 1 HR 2 HRS 4 HRS	The length of time before the printer goes into power-saving mode.
CLEARABLE WARNINGS	JOB* ON	If ON, message is displayed until Go is pressed. If JOB, message is displayed until end of print job.
AUTO CONTINUE	ON* OFF	Determines whether the printer continues printing when certain errors occur. If ON, printer returns to the READY state. If OFF, printer remains offline until Go is pressed.
JAM RECOVERY	AUTO* MANUAL	Printer attempts to recover from jams and reprints affected pages. If AUTO, printer returns to the READY state. If MANUAL, printer remains offline until Go is pressed. Enabling this feature consumes printer memory.
PRINT PS ERRORS	OFF* ON	Prints out an error page when emulated PostScript errors occur. If ON, printer returns to the READY state. If OFF, printer remains offline until Go is pressed.
RAM DISK	OFF* ON	Determines if a RAM disk is installed and whether or not it is activated.
RAM DISK SIZE=		Displays the size (in MB or GB) of the activated RAM disk (if installed).
QUICK COPY JOBS=		Displays the number of Quick Copy jobs saved in printer memory.
HELD JOB TIMEOUT	OFF* ON	Sets the length of time the printer will save a held job in memory prior to deleting it.
PERSONALITY	AUTO* PCL PS	The personality (language) the printer uses to process a print job.

*Denotes default setting

I/O menu

The I/O menu allows you to make changes to printer interface settings. The following table lists the selections that appear for each item in this menu. (See [Chapter 6](#) for additional information.)

Menu item	Values	Description
PARALLEL HIGH SPEED	YES* NO	Allows faster parallel communications supported by newer computers.

Calibration menu

This printer features automatic, internal calibration to produce optimum color for most print jobs. The Calibration menu provides fine-tuning for critical color-matching requirements.

For more information on using this menu for setting toner densities, see [Chapter 4](#).

CAUTION

Calibrating toner densities changes the color balance of your printer by altering halftones. It affects all print jobs. Notify your network administrator before performing this procedure.

Menu item	Values	Description
PRINT CALIBRATION PAGE		Prints out the color calibration page.
CYAN DENSITY	-5 to +5 (default: 0)	Used for increasing or decreasing cyan toner density.
MAGENTA DENSITY	-5 to +5 (default: 0)	Used for increasing or decreasing magenta toner density.
YELLOW DENSITY	-5 to +5 (default: 0)	Used for increasing or decreasing yellow toner density.
BLACK DENSITY	-5 to +5 (default: 0)	Used for increasing or decreasing black toner density.
RESTORE DEFAULT DENSITY VALUES		Resets density values to default settings. Press SELECT to reset values.

Resets menu

The Resets menu is used for resetting the printer memory and for returning the printer to its factory default settings. It is also used to clear maintenance messages following the replacement of certain consumable items.

Menu item	Description
NEW [COLOR] CARTRIDGE	Resets the toner gauge for the printer and allows printing to continue.
NEW TRANSFER KIT SELECT IF DONE	Clears the maintenance message after the transfer kit has been replaced. (Only prompted when transfer kit is low.)
NEW FUSER KIT SELECT IF DONE	Clears the maintenance message after the fuser kit has been replaced. (Only prompted when fuser kit is low.)
RESET MEMORY	Resets the printer and control panel menus to user-specified default settings.
RESTORE FACTORY SETTINGS	Resets the printer and control panel menus to factory default settings.
POWERSAVE	Allows PowerSave feature to be turned on or off.

Hard disk dependent menus

Quick Copy Jobs menu

This menu provides a list of the quick copy jobs stored on the printer hard disk. The user can print or delete these jobs from the control panel. See [“Job retention features” on page 95](#) and [“Proofing and holding a job” on page 97](#) for more information about using this menu.

Note

If there are no quick copy jobs stored on the printer's hard disk, this menu is not displayed on the control panel.

Menu Item	Values	Description
[JOBNAME]		The name of the quick copy job defined by the sender.
COPIES=1	1 to 999 DELETE	The number of additional copies the user wants to print. 1-999: Prints the requested number of copies of the job. DELETE: Deletes the job from the printer's hard disk.

Private/Stored Jobs menu

This menu provides a list of the private and stored jobs on the printer's hard disk. The user can print or delete these jobs from the control panel. See "[Printing a private job](#)" on page 99 and "[Storing a print job](#)" on page 101 for more information about using this menu.

Note

If there are no private or stored jobs on the printer's hard disk, this menu is not displayed on the control panel.

Menu item	Values	Description
[JOBNAME]		The name of the job defined by the sender stored on the printer's hard disk.
PIN:0000		To print the job, the user must enter the Personal Identification Number (PIN) that was assigned to the job in the driver.
COPIES=1	1 to 999 DELETE	The number of copies the user wants to print. 1-999: Prints the requested number of copies of the job. DELETE: Deletes the job from the printer's hard disk.

EIO menu

If an Enhanced Input Output (EIO) card (for example, an HP JetDirect Print Server) has been installed in the printer, an additional menu is available. This additional menu provides a way to configure the EIO accessory and to adjust network interface settings.

WWW

For information on HP JetDirect EIO menus, see the *HP JetDirect Print Server Administrator's Guide*. This guide is included with the HP Color LaserJet 4550N, 4550DN, and 4550HDN printers and is available through HP Customer Care online at http://www.hp.com/support/net_printing.

Printer information pages

Printer configuration page

Printing a printer configuration page can help you verify that the printer is configured properly. This can be useful in troubleshooting printer problems.

To print a printer configuration page

- 1 On the printer control panel, press **MENU** until INFORMATION MENU displays.
- 2 Press **ITEM** until PRINT CONFIGURATION displays.
- 3 Press **SELECT** to print the configuration page. After the process is completed, the printer will return to the READY state.

Note

If the printer is configured with EIO cards (for example, an HP JetDirect Print Server) or an optional hard disk drive, an additional configuration page will print that provides interface configuration information.

Interpreting the printer configuration page

The following sample illustrates a printer configuration page.

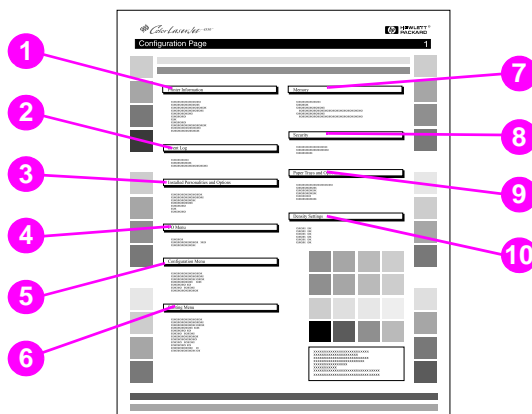


Figure 2-3 Printer configuration page

- 1 Printer information**—Lists the printer serial number, PCL/Emulated PostScript firmware revision, total number of pages printed during the life of the printer, and total number of color pages printed during the life of the printer.
- 2 Event log**—Lists the last five printer events, including printer jams, service errors, and other printer conditions.
- 3 Installed personalities and options**—Lists installed options such as EIO cards, DIMMs, duplex printing accessory, and 500-sheet paper feeder.
- 4 I/O menu**—Lists the current settings of the I/O menu items.
- 5 Configuration menu**—Lists the current settings of the configuration menu items.
- 6 Printing menu**—Lists the current settings of the printing menu items.

- 7 **Memory**—Shows the total memory installed and the total memory available in the printer. Also lists the memory allocation settings.
- 8 **Security**—Shows whether the printer control panel is locked or unlocked. Also shows whether the printer control panel password is enabled or disabled.
- 9 **Paper trays**—Lists the size and type of media currently configured for each input tray. Also lists the current Tray 1 mode, A4/letter override setting, and default size setting.
- 10 **Density settings**—Lists the current density settings.

Supplies status page

The supplies status page illustrates the remaining life for the following printer consumables and kits:

- toner cartridges (all colors)
- drum kit
- transfer kit
- fuser kit

It also lists useful printer information including the total number of pages printed (in monochrome and in color), the printer serial number, and the part numbers for the supplies.

To print the supplies status page

- 1 On the printer control panel, press **MENU** until INFORMATION MENU displays.
- 2 Press **ITEM** until PRINT SUPPLIES STATUS PAGE displays.
- 3 Press **SELECT** to print the supplies status page. After the process is completed, the printer will return to the READY state.

Interpreting the supplies status page

The following sample illustrates a supplies status page.

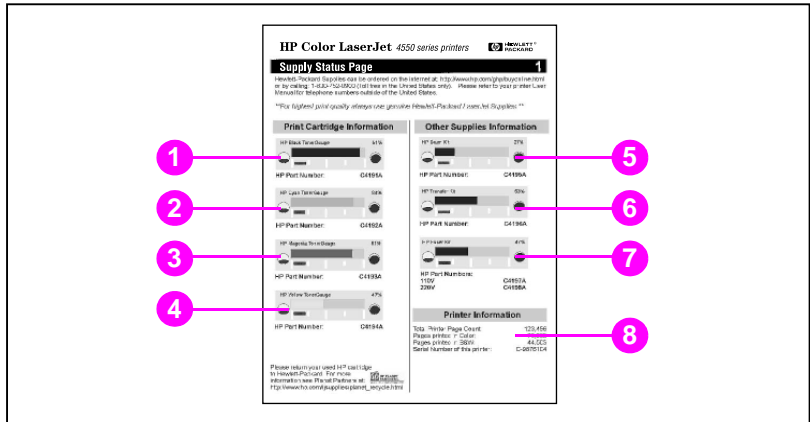


Figure 2-4

Supplies status page

Print cartridge information

- 1 Black TonerGauge
- 2 Cyan TonerGauge
- 3 Magenta TonerGauge
- 4 Yellow TonerGauge

Other supplies information

- 5 Imaging drum kit
- 6 Transfer kit
- 7 Fuser kit

Printer information

- 8 Printer usage totals

Usage page

The usage page lists a page count for each size of media that has passed through the printer. This page count includes the number of pages that were printed on one side, the number that were printed on two sides (duplexed), and totals of the two printing methods for each media size. It also lists the average percentage of page coverage for each toner color.

To print the usage page

- 1 On the printer control panel, press **MENU** until INFORMATION MENU displays.
- 2 Press **ITEM** until PRINT USAGE PAGE displays.
- 3 Press **SELECT** to print the usage page. After the process is completed, the printer will return to the READY state.

Event log

To print an event log

- 1 On the printer control panel, press **MENU** until INFORMATION MENU displays.
- 2 Press **ITEM** until PRINT EVENT LOG displays.
- 3 Press **SELECT** to print the event log. After the process is completed, the printer will return to the READY state.

Interpreting the event log

The following sample illustrates an event log.

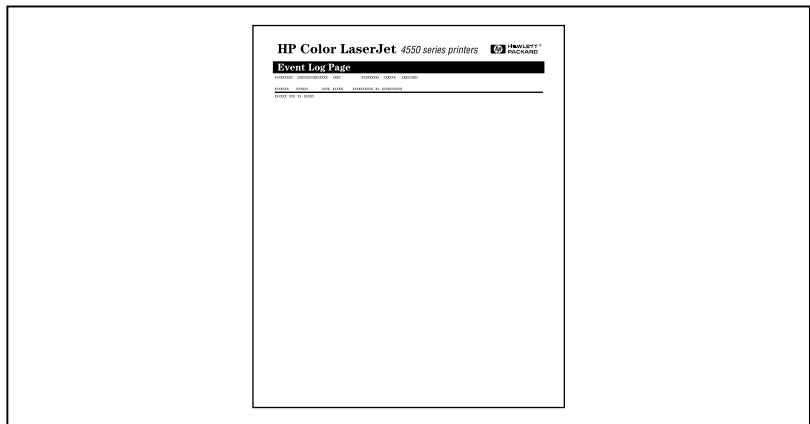


Figure 2-6 Printer event log

The printer event log lists the printer events, including printer jams, service errors, and other printer conditions.

Using the printer control panel in shared environments

The printer control panel functions essentially the same in shared printer environments as it does when connected to a standalone computer. If problems occur, contact your network administrator.

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

- Consult your system administrator before making changes to control panel settings. Changing control panel settings could affect other print jobs.
- Coordinate with other users before changing the default printer font or downloading soft fonts. Coordinating these operations conserves memory and avoids unexpected printer output.
- Be aware that switching printer personalities, such as Emulated PostScript or PCL, affects the printed output of other users.

Note

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

Changing printer control panel configuration settings

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

CAUTION

Hewlett-Packard recommends that configuration settings be changed only by a system administrator. Configuration settings very seldom need to be changed.

To change printer control panel configuration settings

- 1 Press **MENU** until `CONFIGURATION MENU` displays.
- 2 Press **ITEM** until the item that you want to change displays.
- 3 Press **VALUE** until the appropriate setting displays.
- 4 Press **SELECT** to save the setting.
- 5 Press **GO** to return the printer to the `READY` state.

Changing PowerSave settings

The adjustable PowerSave Time feature reduces power consumption when the printer has been inactive for an extended period. The printer display dims when the printer is in PowerSave Time mode. You can set the length of time before the printer goes into PowerSave Time mode to 1 minute, 15 minutes, 30 minutes, or to 1, 2, or 4 hours. The default setting is 30 minutes.

To change the PowerSave setting

- 1 Press **MENU** until CONFIGURATION MENU displays.
- 2 Press **ITEM** until POWERSAVE TIME displays.
- 3 Press **VALUE** until the appropriate setting displays.
- 4 Press **SELECT** to save the setting.
- 5 Press **GO**. The printer will return to the READY state within a few minutes.

Switching printer personalities

This printer features automatic personality (printer language) switching. In `AUTO` mode, the printer automatically detects the type of print job and configures its personality to accommodate that job. You also can change the personality mode to default to using PCL or PostScript Emulation (PS) exclusively.

To switch printer personality

- 1 Press **MENU** until `CONFIGURATION MENU` displays.
- 2 Press **ITEM** until `PERSONALITY` displays.
- 3 Press **VALUE** until the appropriate setting displays.
- 4 Press **SELECT** to save the setting.
- 5 Press **GO** to return the printer to the `READY` state.

Setting the I/O timeout

I/O Timeout sets the number of seconds that the printer waits to receive additional data from the computer before switching I/O ports. The default setting for the printer is 15 seconds.

Note

Setting the I/O Timeout too high may cause a single I/O port to remain active and prohibit data from being received through other ports. Setting I/O Timeout too low may result in missing characters, out-of-order print jobs, or other print problems.

To set the I/O timeout

- 1 Press **MENU** until I/O MENU displays.
- 2 Press **ITEM** until I/O TIMEOUT displays.
- 3 Press **VALUE** to increase or decrease the I/O Timeout value. Holding the key down will change the value more quickly.
- 4 Press **SELECT** to save the setting.
- 5 Press **GO** to return the printer to the READY state.

Disabling the high-speed parallel interface

This printer features a high-speed, bidirectional parallel interface. The interface supports high- and low-speed access. The high-speed access may not be compatible with some computers. Through the I/O Menu, you can enable and disable the high-speed parallel interface. The default setting is enabled.

To disable the high-speed parallel interface

- 1 Press **MENU** until I/O MENU displays.
- 2 Press **ITEM** until PARALLEL HIGH SPEED displays.
- 3 Press **VALUE** until NO displays. (To enable high-speed parallel interface, set the value to YES.)
- 4 Press **SELECT** to save the setting.
- 5 Press **GO** to return the printer to the READY state.

Setting advanced functions

This printer supports bidirectional parallel communication. You can turn this feature on and off through the I/O Menu.

To enable bidirectional parallel communication

- 1 Press **MENU** until I/O MENU displays.
- 2 Press **ITEM** until PARALLEL ADV COMMUNICATN displays.
- 3 Press **VALUE** until ON displays.
- 4 Press **SELECT** to save the setting.
- 5 Press **GO** to return the printer to the READY state.

Resetting printer memory

CAUTION

Resetting memory clears the page buffer, removes downloaded fonts and macros, and returns all print menu settings to user-selected defaults.

To reset printer memory

- 1 Press **MENU** until RESETS MENU displays.
- 2 Press **ITEM** until RESET MEMORY displays.
- 3 Press **SELECT**. RESETTING MEMORY appears on the printer control panel display and the printer automatically returns to the READY state.

Resetting the printer to factory default settings

Resetting the printer to factory default settings can be useful when you are troubleshooting the printer.

CAUTION

Resetting factory defaults clears the page buffer, removes downloaded fonts and macros, and returns all print menu settings to factory defaults.

To reset the printer to factory default settings

- 1 Press **MENU** until `RESETS MENU` displays.
- 2 Press **ITEM** until `RESTORE FACTORY SETTINGS` displays.
- 3 Press **SELECT** until the following message appears:

```
RESTORING  
FACTORY SETTINGS
```

This message displays until the printer has completed the initialization process. The printer automatically returns to the `READY` state.

3 Common printing tasks

Overview

This chapter helps you perform common printing tasks. The chapter includes the following sections:

- [Selecting print media](#)
- [Printing on special media](#)
- [Controlling print jobs](#)
- [Configuring input trays](#)
- [Printing from Tray 1 \(multipurpose tray\)](#)
- [Printing from Tray 2](#)
- [Printing from Tray 3 \(optional 500-sheet paper feeder\)](#)
- [Using the optional duplex printing accessory for two-sided printing](#)
- [Special printing situations](#)
- [Stopping a print request](#)
- [Job retention features](#)
- [Printing with the optional HP Fast InfraRed Receiver](#)

Selecting print media

You can use many types of paper and other print media with this printer. This section provides guidelines and specifications for selecting and using different print media.

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

WWW

See [Appendix D](#) for *HP LaserJet Family Paper Specification Guide* ordering information.

For downloadable manuals, go to <http://www.hp.com/support/lj4550>. When you connect, select **Manuals**.

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

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

CAUTION

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

Supported media weights and sizes

For optimum results, use conventional 75 g/m² (20 lb) photocopy paper. Verify that the paper is of good quality and is free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, curls, or bent edges.

Tray	Supported media	Media specifications	Capacity
Tray 1	Paper A4/Letter Legal Executive JIS B5 A5 Custom Minimum Size: 76 x 127 mm (3 by 5 in) Maximum Size: 216 x 356 mm (8.5 by 14 in)	Single-sided: If less than or equal to 148 mm wide: 60 to 176 g/m ² (16 to 47 lb bond) If more than or equal to 148 mm wide: 60 to 176 g/m ² (16 to 36 lb bond) Two-sided: 64 to 105 g/m ² (17 to 28 lb bond)	150 sheets of 75 g/m ² (20 lb) paper Do not load more than the maximum stack height of 15 mm (0.6 in).
	Transparencies Glossy (semi-gloss) paper	0.13 mm (5 mil) 120 g/m ² (32 lb/80 lb text)	Limit of 50 Limit of 50 sheets
	Envelopes (Tray 1 only) Com10 Monarch C5 DL B5 (JIS)	Maximum weight: 90 g/m ² (24 lb bond)	Limit of 10
	Labels (Tray 1 only)		Limit of 50
	Cardstock (Postcards) (Tray 1 only)	Maximum weight: 176 g/m ² (47 lb bond) Maximum size: 200 x 148 mm (7.87 x 5.82 in)	Do not load more than the maximum stack height of 15 mm (0.6 in)

Tray	Supported media	Media specifications	Capacity
Tray 2	Paper A4/Letter Legal Executive JIS B5 A5 Custom (B5 ISO)*	Single-sided: 60 to 105 g/m ² (16 to 28 lb bond) Two-sided: 64 to 105 g/m ² (17 to 28 lb bond)	250 sheets of 75 g/m ² (20 lb) paper
	Transparencies Glossy Paper	0.13 mm (5 mil) 120 g/m ² (32 lb/80 lb text)	Limit of 50 Limit of 200 sheets
Tray 3 (optional)	Paper A4/Letter Legal Executive JIS B5 Custom (B5 ISO)*	Single-sided: 60 to 105 g/m ² (16 to 28 lb bond) Two-sided: 64 to 105 g/m ² (17 to 28 lb bond)	500 sheets of 75 g/m ² (20 lb) paper
	Transparencies Glossy (semi-gloss) paper	0.13 mm (5 mil) 120 g/m ² (32 lb/80 lb text)	Limit of 50 Limit of 500 sheets
Duplex Printing Accessory (optional)	Paper A4/Letter Legal Executive JIS B5	64 to 105 g/m ² (17 to 28 lb)	

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

Media to avoid

Use the following guidelines to avoid poor print quality or damage to your printer:

- Do not use paper that is too rough.
- Do not use paper that is embossed or coated unless it is specifically recommended for use in this printer.
- Do not use paper with cutouts or perforations other than standard 3-hole punched paper.
- Do not use multipart forms.
- Do not use paper with irregularities such as tabs or staples.
- Do not use letterhead paper with low temperature dyes or thermography. Preprinted forms or letterhead must use inks that can tolerate temperatures of 190° C (374° F) for 0.1 second.
- Do not use any media that produces hazardous emissions, or that melts, offsets, or discolors when exposed to 190° C (374° F) for 0.1 second.
- Do not use paper that has already been printed on or that has been fed through a photocopier.
- Do not use paper with a watermark if you are printing solid patterns.
- **Do not use transparencies that are not specified for use with HP Color LaserJet printers.**

WWW

To order HP Color LaserJet printing supplies on the Web, go to U.S. – <http://www.hp.com/go/ljsupplies> or Worldwide – <http://www.hp.com/ghp/buyonline.html>.

Printing on special media

Use these guidelines when printing on special types of media.

WWW

To order HP Color LaserJet printing supplies on the Web, go to U.S. – <http://www.hp.com/go/ljsupplies> or Worldwide – <http://www.hp.com/ghp/buyonline.html>.

Transparencies

When printing on transparencies, use the following guidelines:

- To prevent transparencies from bonding together, always send them to the top output bin.
- Handle transparencies using the edges. Oils from your fingers that are deposited on the transparency can cause print quality problems.
- Use only overhead transparencies recommended for use in this printer. Hewlett-Packard recommends using HP Color LaserJet Transparencies with this printer. HP products are designed to work together for optimum printing results.

Glossy paper

When printing on glossy paper, select the glossy print setting in the printer driver. You can also use the printer control panel to set the media type to GLOSS for the input tray you are using. Because this affects all print jobs, it is important to return the printer back to its original settings once your job has printed. See [“Configuring input trays” on page 76](#) for more information.

Note

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

Colored paper

Colored paper should be of the same high quality as white xerographic paper. Pigments used must be able to withstand the printer's fusing temperature of 190° C (374° F) for 0.1 second without deterioration. Do not use paper with a colored coating that was added after the paper was produced.

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

Envelopes

Note

Envelopes can only be printed from Tray 1. Hewlett-Packard recommends configuring Tray 1 as a cassette and setting the tray's media size to the specific envelope size. See ["Loading envelopes into Tray 1" on page 80](#).

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

- Do not load more than 10 envelopes into Tray 1.
- The weight rating of envelopes should not exceed 90 g/m² (24 lb bond).
- Envelopes should be flat.
- Do not use envelopes with windows or clasps.
- Envelopes must not be wrinkled, nicked, or otherwise damaged.
- Envelopes with peel-off adhesive strips must use adhesives that can withstand the heat and pressures of the printer's fusing process.
- Envelopes should be loaded with the flaps facing away from the printer and toward the right side of the printer.

Labels

Note

For printing labels, Hewlett-Packard recommends configuring Tray 1 as a cassette and setting the tray's media type to LABELS in the printer control panel. See ["Configuring input trays" on page 76](#).

When printing labels, use the following guidelines:

- Verify that the labels' adhesive material can tolerate temperatures of 190° C (374° F) for 0.1 second.
- Verify that there is no exposed adhesive material between the labels. Exposed areas can cause labels to peel off during printing, which can cause printer jams. Exposed adhesive can also cause damage to printer components.
- Do not re-feed a sheet of labels.
- Verify that labels lie flat.
- Do not use labels that are wrinkled, bubbled, or otherwise damaged.

Heavy paper

Use Tray 1 for paper that is heavier than 105 g/m² (28 lb bond up to 42 lb bond). For optimum results when printing on heavy paper, use the printer control panel to configure Tray 1 as a cassette and then set the media type for the tray to HEAVY. Because this affects all print jobs, it is important to return the printer back to its original settings once your job has printed. See ["Configuring input trays" on page 76](#).

CAUTION

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

Preprinted forms and letterhead

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

- Forms and letterhead must be printed with heat-resistant inks that will not melt, vaporize, or release hazardous emissions when subjected to the printer's fusing temperature of approximately 190° C (374° F) for 0.1 second.
- Inks must be non-flammable and should not adversely affect any printer rollers.
- Forms and letterhead should be sealed in a moisture-proof wrapping to prevent changes during storage.
- Before you load preprinted paper such as forms and letterhead, verify that the ink on the paper is dry. During the fusing process, wet ink can come off of preprinted paper.

Recycled paper

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

WWW

See [Appendix D](#) or <http://www.hp.com/support/lj4550> for *HP LaserJet Family Paper Specification Guide* ordering information.

For downloadable manuals, go to <http://www.hp.com/support/lj4550>. When you connect, select **Manuals**.

Controlling print jobs

Among the aspects of a print job that you can control are the tray from which the printer pulls media, the bin to which you send the job, and the configuration for type and size of media for each tray. You can control print jobs through the printer driver, your software application, or the printer control panel.

CAUTION

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

Selecting output bins

This printer has two media output bins. The position of the door to the rear output bin determines the bin used: If the door to the rear output bin is open, media is directed to that bin. If it is closed, media is directed to the top output bin. There are no driver or software options for selecting an output bin. [Figure 3-1](#) illustrates the top and rear output bins.

- The top output bin holds up to 250 sheets of standard paper in correct order, facing down. When the bin is full, a sensor directs the printer to stop printing. Printing resumes when you remove paper from the bin.
- The rear output bin holds up to 100 sheets of standard paper in reverse order, facing up. Use this bin when printing on small media sizes. Because there is no sensor at this output bin, you should monitor the bin and empty it when it is full.

Note

If the rear output bin is open, duplex printing is not possible. Close the rear output bin when duplex printing.

When printing on transparencies, close the rear output bin. This causes the transparencies to be sent to the top output bin and reduces the risk of jamming.

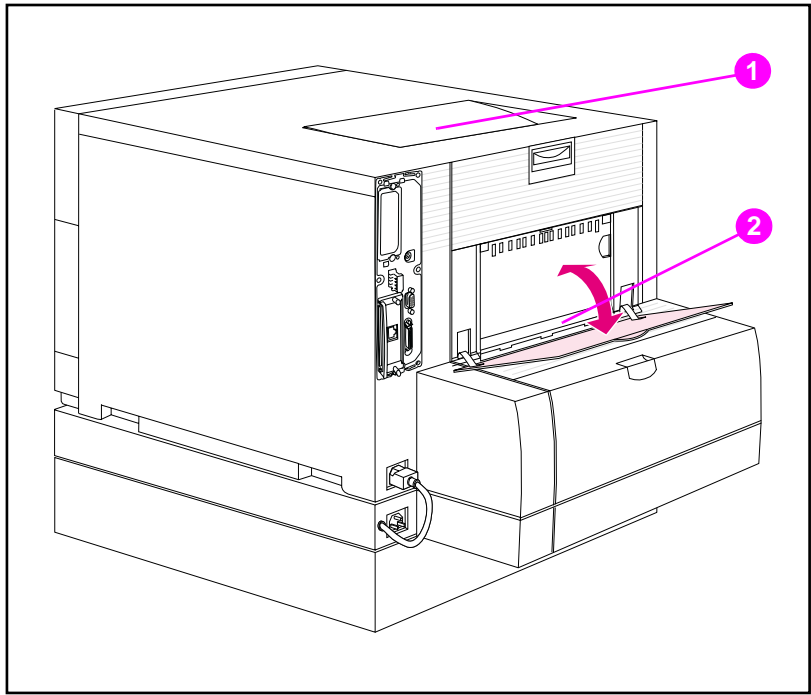


Figure 3-1

Rear view (shown with the optional 500-sheet paper feeder and duplex printing accessory)

- 1 Top output bin
- 2 Rear output bin

Selecting media by type

If you want to select media for your job by type of media rather than by the input tray (source), you must first configure a printer tray for the media type you are using, and then specify that media type in the printer driver.

Selecting media by type rather than source is similar to locking out trays and helps protect special media from accidental use. For example, if a tray is configured for letterhead, and you specify in your driver to print on plain paper, the printer will not pull the letterhead from that tray. Instead, it will pull from a tray that has plain paper loaded and that has been configured for plain paper on the printer control panel.

Configuring input trays

This printer allows you to configure input trays by type and size. This allows you to load different media types and sizes in the printer's input trays and then request media by type or size.

- When the printer is used as a standalone printer, it might be beneficial to configure the printer as `TRAY 1 MODE=FIRST`. In this mode, if media is loaded in Tray 1 and no other tray is specified, media will be pulled from Tray 1 regardless of the type or size of media loaded in the tray.
- When the printer is used in a network environment, it might be beneficial to configure Tray 1 as `TRAY 1 MODE=CASSETTE`. In this mode, the tray acts as a cassette-style tray and can then be configured for media type and size.

Note

If using the duplex printing accessory when Tray 1 is in `FIRST` mode, be sure that the media loaded meets the specifications for duplex printing. (See [“Supported media weights and sizes” on page 67.](#))

Configuring Tray 1 as a cassette

Tray 1 is designed to accommodate printing on a variety of media types.

To configure Tray 1 as a cassette

- 1 Press **MENU** until `PAPER HANDLING MENU` displays.
- 2 Press **ITEM** until `TRAY 1 MODE` displays.
- 3 Press **VALUE** until `CASSETTE` displays.
- 4 Press **SELECT** to save the setting.
- 5 Press **ITEM** until `TRAY 1 SIZE` displays.
- 6 Press **VALUE** until the proper media size displays.
- 7 Press **SELECT** to save the setting.
- 8 Press **ITEM** until `TRAY 1 TYPE` displays.
- 9 Press **VALUE** until the proper media type displays.
- 10 Press **SELECT** to save the setting.
- 11 Press **GO** to return the printer to the `READY` state.

Configuring Trays 2 and 3 by media type

Trays 2 and 3 are cassette-style trays. You can select them by media size and type through your software application or the printer driver.

Note

Tray 2 has an internal media-size sensor and does not need to be configured on the printer control panel for media size. The media-size knob on the side of Tray 3 must be set to the correct media size.

To configure Trays 2 or 3

- 1 Press **MENU** until PAPER HANDLING MENU displays.
- 2 Press **ITEM** until TRAY 2 TYPE (or TRAY 3 TYPE when configuring Tray 3) displays.
- 3 Press **VALUE** until the proper media type displays.
- 4 Press **SELECT** to save the setting.
- 5 Press **GO** to return the printer to the READY state.

Tray priority

When all trays have the same size and type media loaded, the printer pulls media from input trays in the following order:

When Tray 1 is configured as TRAY 1 MODE=FIRST

- Tray 1
- Tray 3 (if attached)
- Tray 2

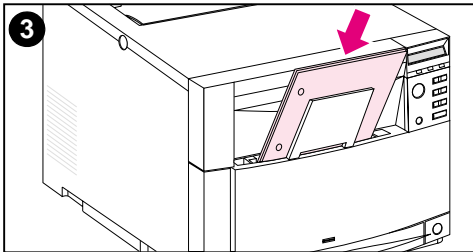
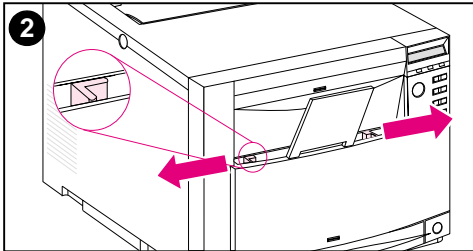
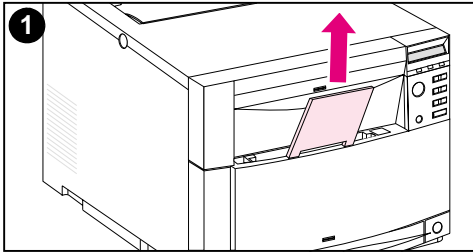
When Tray 1 is configured as TRAY 1 MODE=CASSETTE

- Tray 3 (if attached)
- Tray 2
- Tray 1

Printing from Tray 1 (multipurpose tray)

Tray 1, the multipurpose tray, can print on all supported sizes and types of media and envelopes. (See [“Supported media weights and sizes” on page 67.](#))

Loading media into Tray 1

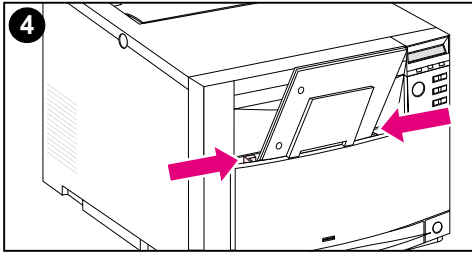


To load media into Tray 1

CAUTION

To avoid jams, never add or remove media from a tray during printing. To avoid damaging the printer, place labels and paper heavier than 105 g/m² (28 lb up to 42 lb bond) only in Tray 1.

- 1 Pull up the tray extension.
- 2 Slide the media-width guides all the way open.
- 3 Load media into the tray with the side to be printed facing the printer. Slide the media in until it sits squarely in the bottom of the tray.



- 4 Slide the media-width guides in until they hold the media firmly in place without bending it.

Note

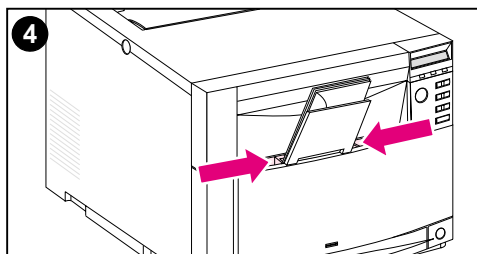
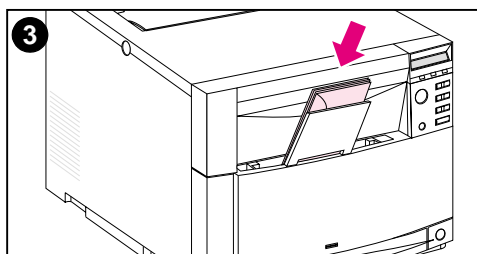
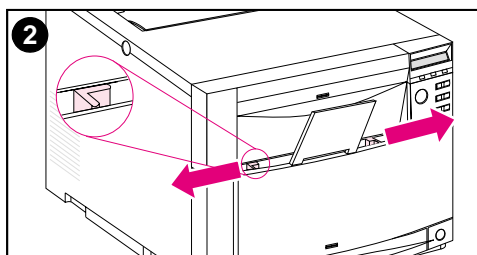
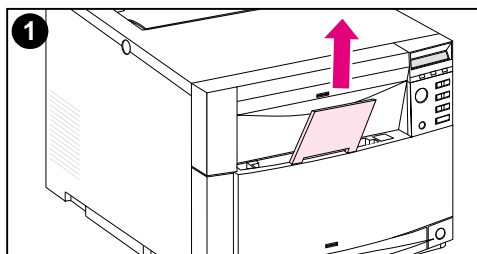
For proper paper feeding, custom media must be at least 76 mm (3 in) wide and 127 mm (5 in) long.

Note

Load prepunched paper with the holes toward the side of the printer as illustrated. For two-sided printing, load media with the front side facing away from the printer.

Loading envelopes into Tray 1

Envelopes can be printed only from Tray 1. This tray holds up to 10 envelopes. For envelope specifications, see [“Supported media weights and sizes” on page 67](#).



To load envelopes into Tray 1

CAUTION

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

- 1 Pull up the tray extension.
- 2 Slide the media-width guides all the way open.
- 3 Load up to 10 envelopes into Tray 1 with their back flap facing away from the printer. Slide the envelopes in until they sit squarely in the bottom of the tray as illustrated.
- 4 Slide the media-width guides in until they hold the envelopes firmly in place without bending them.

Printing envelopes when TRAY 1 MODE=CASSETTE

For the best results when printing envelopes, Tray 1 should be configured as TRAY 1 MODE=CASSETTE and the media size should be set to the size corresponding to the correct envelope size.

- 1 Set the media size for Tray 1 in the printer control panel. (See [“Configuring Tray 1 as a cassette” on page 76.](#))
- 2 Specify Tray 1 or select the media source by size (for example, COM 10 or DL) in the printer driver.
- 3 If your software does not automatically format an envelope, specify Landscape for page orientation in your software application or printer driver. Use the following guidelines to set margins for return and destination addresses on Commercial #10 or DL envelopes.

Address Type	Left Margin	Top Margin
Return	15 mm (0.6 in)	15 mm (0.6 in)
Destination	102 mm (4.0 in)	51 mm (2.0 in)

Note

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

- 4 Select **Print** from the software application or printer driver.

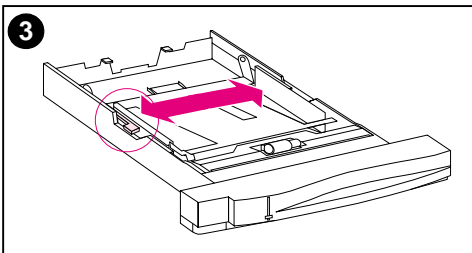
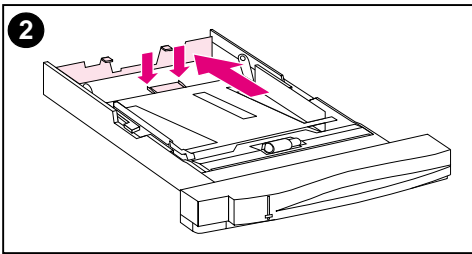
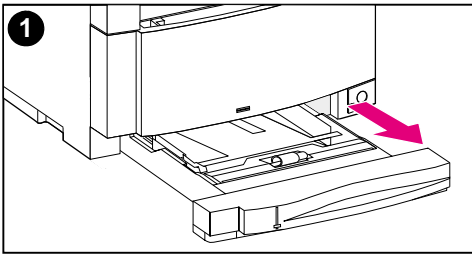
Printing envelopes when TRAY 1 MODE=FIRST

If Tray 1 is configured as TRAY 1 MODE=FIRST (default), select Tray 1 or use autoselect and then print the file from your software application or the printer driver. In this mode, the printer will pull media from the tray regardless of the size and type of media loaded. If your software does not automatically format an envelope, follow the instructions provided in the previous section.

Printing from Tray 2

Tray 2 holds up to 250 sheets of standard paper. The tray adjusts for Letter, Legal, A4, A5, JIS B5, Custom (B5 ISO), and Executive paper. The printer automatically detects the media size in Tray 2 based on the tray's paper guide configuration. (See ["Supported media weights and sizes" on page 67.](#))

Loading media into Tray 2



To load media into Tray 2

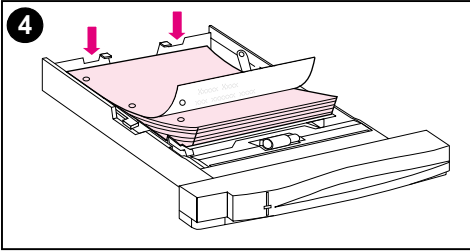
CAUTION

Do not print cardstock, labels, envelopes, or unsupported sizes of media from Tray 2. These media types should be printed only from Tray 1.

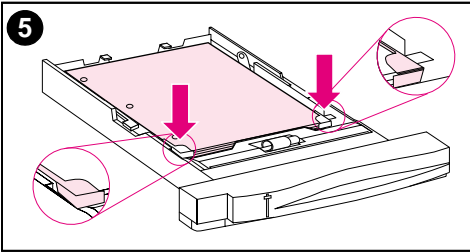
Do not overfill the input tray. Overfilling trays can cause jams in the printer.

To avoid causing jams, never open the tray while it is in use.

- 1 Remove Tray 2 from the printer and place it on a flat surface.
- 2 Set the rear media-length guide by squeezing the guide adjustment latch and sliding the back of the tray to the length of media you are loading.
- 3 Slide the media-width guides all the way open by squeezing the release latch.

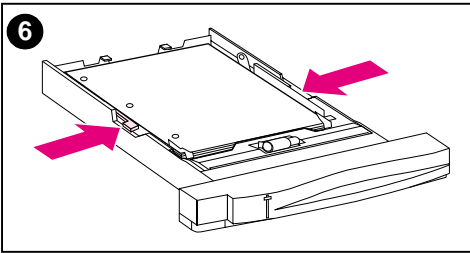


4 Load the media with the print side facing down into the tray.



5 Verify that the media lies flat in the tray and that it fits under the metal tabs.

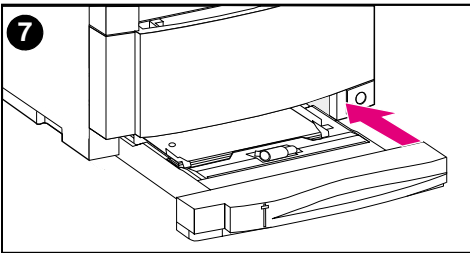
6 Slide the media-width guides in until they hold the media firmly in place without bending it.



7 Insert Tray 2 into the printer.

Note

Load prepunched paper as illustrated. For two-sided printing, load the media with the front side facing up.



Printing from Tray 3 (optional 500-sheet paper feeder)

The printer supports an optional 500-sheet paper feeder (Tray 3). Tray 3 attaches to the bottom of the printer and serves as the printer's base. When the optional duplex printing accessory is installed, the duplex unit must be positioned between the printer and the 500-sheet paper feeder. The printer's internal sensors detect the presence or absence of Tray 3, and the printer control panel options automatically adjust to reflect the current configuration.

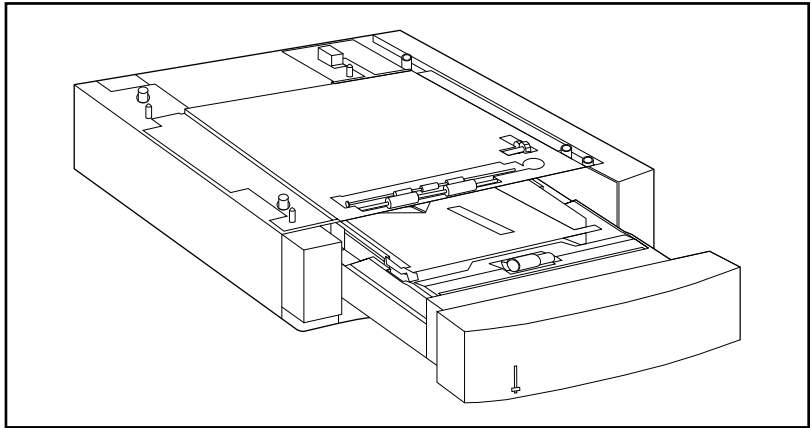


Figure 3-2 Tray 3 (optional 500-sheet paper feeder)

The following are features of the 500-sheet paper feeder (Tray 3):

- The tray has a capacity of 500 sheets of standard paper. (See [“Supported media weights and sizes” on page 67.](#))
- It is adjustable for specific media sizes, with corresponding stop positions.
- The printer detects media size based on Tray 3’s physical configuration and the position of the media-size knob located on the side of the tray.
- A user-configurable control panel menu settings identifies the media type that the printer expects to be loaded in Tray 3.
- An internal sensor automatically detects when Tray 3 is empty.
- A paper level indicator is provided on the front face of the tray.

Note

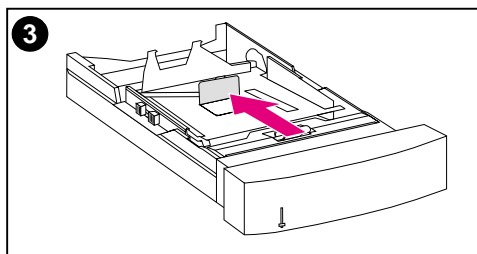
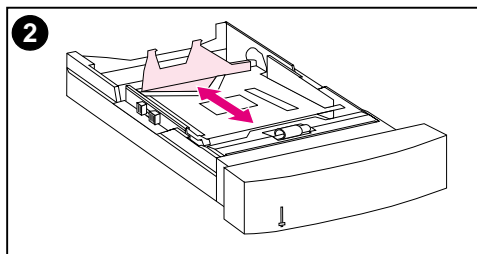
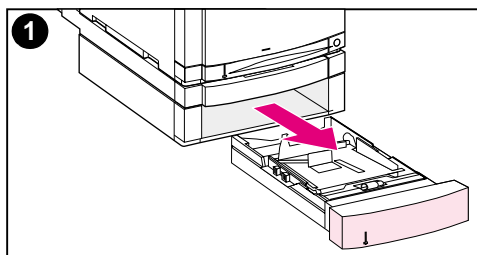
The paper path for the 500-sheet paper feeder passes through Tray 2. If Tray 2 is partially pulled out or removed, media from the paper feeder cannot feed into the printer. This causes the printer to go offline and generates a message that Tray 2 must be installed.

Loading media into Tray 3

Tray 3 adjusts for the following media sizes:

- Letter
- Legal
- A4
- JIS B5
- Custom (B5 ISO)
- Executive

The printer automatically detects the media size in Tray 3 based on the tray's physical configuration and the position of the media-size knob.



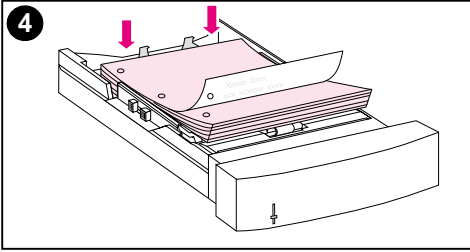
To load media into Tray 3

CAUTION

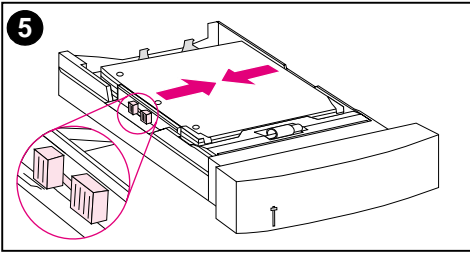
Do not print cardstock, labels, and envelopes from Tray 3. This media should be printed only from Tray 1.

Do not overfill the input tray. Overfilling trays can cause jams in the printer.

- 1 Remove Tray 3 and place it on a flat surface.
- 2 Set the rear media-length guide by squeezing the release latch and sliding the guide to the length of media you are loading.
- 3 For special-size media, flip up the special media guide in the center of the tray.

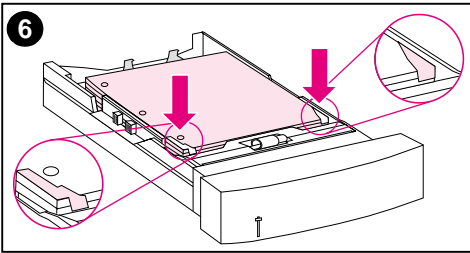


4 Squeezing the release latch, slide the media-width guides all the way open.

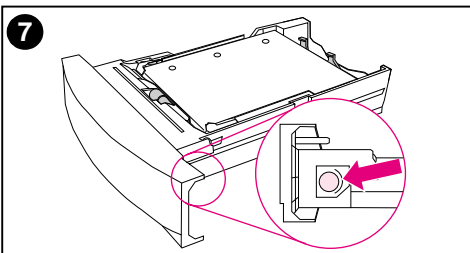


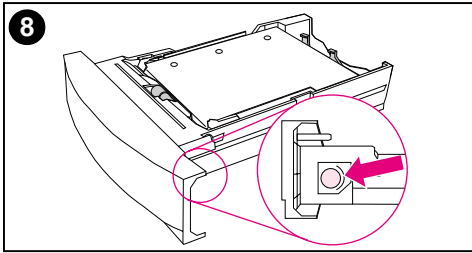
5 Load the media into Tray 3 with the print side facing down. Do not overfill the tray.

6 Slide the media-width guides in until they hold the media firmly in place without bending it.



7 Verify that the media lies flat in the tray and that it fits under the metal tabs.

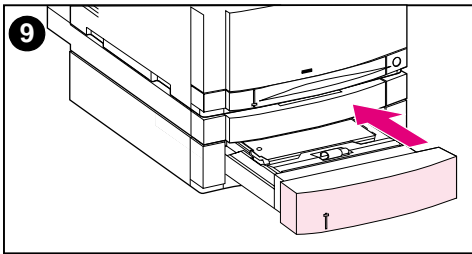




8 Set the media-size knob on the side of the tray to the size of the media loaded in the tray.

9 Insert Tray 3 into the printer.

10 Verify that the printer driver is configured to recognize Tray 3. (For instructions, see the online Help for the printer driver.)



Note

Load prepunched paper with holes toward the side of the tray as illustrated. For two-sided printing, load media with the front side facing up.

Using the optional duplex printing accessory for two-sided printing

The optional duplex printing accessory ([figure 3-3](#)), enables you to print on both sides of a page. In two-sided printing, known as duplex printing or duplexing, the back side of the page is printed first. Then the page is sent through the duplex printing accessory, where it is flipped over and sent back through the printer for printing on the front.

Note

Although the printer detects the presence of the duplex printing accessory, you must still specify duplex options in your software application or in the printer driver in order to print on both sides of the page.

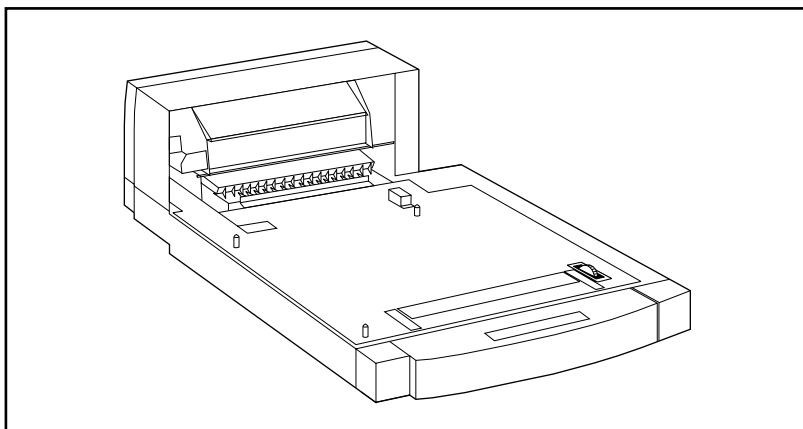


Figure 3-3

Optional duplex printing accessory

To use the optional duplex printing accessory:

- Be sure that the optional duplex printing accessory is installed correctly. If the 500-sheet paper feeder (Tray 3) is installed, the duplex unit must be positioned between the printer and Tray 3.
- Verify that the printer driver is configured to recognize the duplex printing accessory. (For instructions, see the online Help for the printer driver.)
- Close the door to the rear output bin. The rear output bin is located at the back of the printer.
- Select the appropriate duplex options in the printer driver software. Duplex options include the page and binding orientation.
- Duplex printing is not supported for certain media types, including transparencies, labels, and cardstock.

Control panel settings for duplex printing

Many software applications allow you to change duplex printing settings. If your software application or printer driver does not allow you to adjust duplex printing settings, you can adjust these settings through the control panel. Do not leave DUPLEX set to ON if transparencies or labels are used with the printer or serious damage may result.

CAUTION

Do not open the door to the rear output bin during duplex printing. Doing so can cause jams or misprints.

To set duplex printing from the printer control panel

Note

Changing duplex settings through the printer control panel affects all print jobs. Whenever possible, change duplex settings through your software application or printer driver.

- 1 Press **MENU** until PRINTING MENU displays.
- 2 Press **ITEM** until DUPLEX displays.
- 3 Press **VALUE** until ON displays.
- 4 Press **SELECT** to save the setting.
- 5 Press **ITEM** until BINDING displays.
- 6 Press **VALUE** to select either LONG EDGE or SHORT EDGE binding (see [figure 3-4](#)).
- 7 Press **SELECT** to save the setting.
- 8 Press **GO** to return the printer to the READY state.
- 9 From your software application or printer driver, select duplex printing if possible.
- 10 Print the job.

Note

To select duplex printing from the printer driver, the driver must first be configured to recognize the duplex printing accessory. (For instructions, see the online Help for the printer driver.)

Options for binding duplex printing jobs

Before printing in duplex mode, decide on which edge you will be binding your finished document. The binding setup options are:

- *Long-edge (book) binding*, which is the conventional layout used in book binding. (See 1 in [figure 3-4.](#))
- *Short-edge (tablet) binding*, which is the type often used with calendars. (See 2 in [figure 3-4.](#))

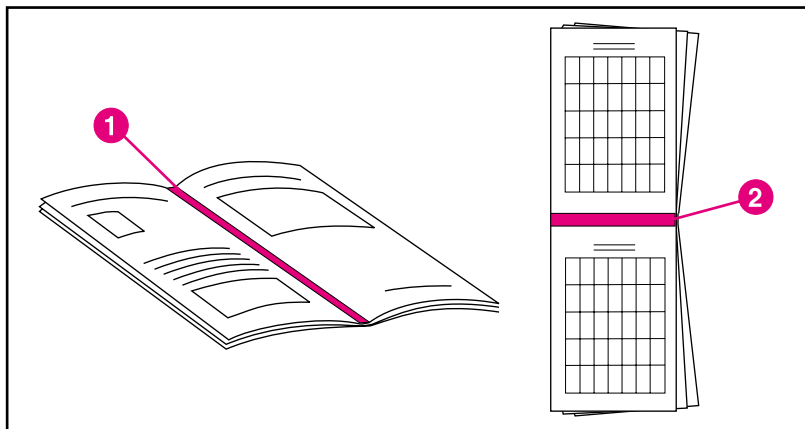


Figure 3-4 Binding options

- 1 Long-edge binding
- 2 Short-edge binding

Special printing situations

Use these guidelines when printing on special types of media.

Printing a different first page

Use the following procedure to print the first page of a document on a different media type than the rest of the document. One example is printing the first page of a letter on letterhead paper and the rest of the letter on plain paper.

- 1 From your application or printer driver, specify a tray for the first page (letterhead) and another tray for the remaining pages.
- 2 Load the letterhead into the tray that you specified in step 1.
- 3 Load the paper for the remaining pages of the document into another tray.

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

Printing on custom-size media

The printer supports single-sided printing on custom-size media. Tray 1 supports media sizes from 76 by 127 mm (3 by 5 in) to 216 by 356 mm (8.5 by 14 in), including B5 ISO. The only custom size supported by Trays 2 and 3 is B5 ISO.

When printing on custom-size media, if Tray 1 is configured in the printer control panel as `TRAY 1 MODE=CASSETTE`, you must set the media size for Tray 1 to `CUSTOM` in the printer control panel. If Tray 1 is configured as `TRAY 1 MODE=FIRST`, the printer will print on whatever media is loaded in the tray. When printing on custom size (B5 ISO) media from Trays 2 or 3, adjust the paper guides on the tray to the Custom (B5 ISO) marking.

Some software applications and printer drivers allow you to specify custom paper-size dimensions. Be sure to set the correct paper size in both the page setup and print dialog boxes.

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

Stopping a print request

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

Note

It may take some time for all printing to clear after a print job is canceled.

To stop the current print job from the printer control panel

Press **CANCEL JOB** on the printer control panel to cancel the job that is currently printing. Pressing **CANCEL JOB** does not affect subsequent print jobs that are stored in the printer buffer.

To stop the current print job from your software application

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

Job retention features

To use the Job retention features listed below, you must install a hard disk in the printer and properly configure the printer drivers. All Job retention features are selected in the printer driver. Some Job retention features require you to use the printer control panel menus to release the print job.

CAUTION

Make sure to identify your jobs in the printer driver before printing. Using default names may override previous jobs with the same default name or cause the job to be deleted.

Note

Adding additional printer memory may resolve memory problems, improve how the printer handles complex graphics, and improve download times, but will not increase maximum printer speed (ppm rating).

Quick copying a job

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

For more information about specifying the number of quick copy jobs that can be stored, see the `QUICK COPY JOBS` control panel item described on [page 47](#).

Printing additional copies of a quick copy job

To print additional copies of a job stored on the printer's hard disk from the control panel:

- 1 Press **MENU** repeatedly until `QUICK COPY JOBS MENU` appears.
- 2 Press **ITEM** until the desired user or job name appears.

Note

If you are using a Macintosh computer, the user name appears on the first line of the display and the job name appears on the second line of the display. After you have selected the desired user name using **ITEM**, press **VALUE** until the desired job name appears.

- 3 Press **SELECT** to select the job. `COPIES=1` appears.
- 4 Press **- VALUE +** until the desired number of copies appears.
- 5 Press **SELECT** to print the job.

Deleting a stored quick copy job

When a user sends a quick copy job, the printer overwrites any previous jobs with the same user and job name. If there is not a quick copy job already stored under the same user and job name and the printer needs additional space, the printer may delete other stored quick copy jobs starting with the oldest job. The default number of quick copy jobs that can be stored is 32. The number of quick copy jobs that can be stored is set from the control panel (see [page 47](#)).

Note

If you turn the printer off and then back on, all quick copy, proof and hold, and private jobs are deleted.

A stored quick copy job can also be deleted from the control panel.

- 1 Press **MENU** repeatedly until `QUICK COPY JOBS MENU` appears.
- 2 Press **ITEM** until the desired user name appears.

Note

If you are using a Macintosh computer, the user name appears on the first line of the display and the job name appears on the second line of the display. After you have selected the desired user name using **ITEM**, press **VALUE** until the desired job name appears.

- 3 Press **SELECT** to select the job. `COPIES=1` appears.
- 4 Press **- VALUE** until `DELETE` appears.
- 5 Press **SELECT** to delete the job.

Proofing and holding a job

The proof and hold feature provides a quick and easy way to print and proof one copy of a job and then print 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.

Printing the remaining copies of a held job

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

- 1 Press **MENU** repeatedly until `QUICK COPY JOBS MENU` appears.
- 2 Press **ITEM** until the desired user name appears.

Note

If you are using a Macintosh computer, the user name appears on the first line of the display and the job name appears on the second line of the display. After you have selected the desired user name using **ITEM**, press **VALUE** until the desired job name appears.

- 3 Press **SELECT** to select the job. `COPIES=1` appears.
- 4 Press **- VALUE +** until the desired number of copies appears.
- 5 Press **SELECT** to print the job.

Deleting a held job

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

Note

If you turn the printer off and then back on, all quick copy, proof and hold, and private jobs are deleted. A stored proof and hold job can also be deleted from the control panel.

- 1 Press **MENU** repeatedly until **QUICK COPY JOBS MENU** appears.
- 2 Press **ITEM** until the desired user name appears.

Note

If you are using a Macintosh computer, the user name appears on the first line of the display and the job name appears on the second line of the display. After you have selected the desired user name using **ITEM**, press **VALUE** until the desired job name appears.

- 3 Press **SELECT** to select the job. **COPIES=1** appears.
- 4 Press **- VALUE** until **DELETE** appears.
- 5 Press **SELECT** to delete the job.

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 it is sent to the printer as part of the print job.

Specifying a private job

To specify that a job is private from the driver, select the Private Job option in the printer driver and type a 4-digit PIN.

Releasing a private job

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

- 1 Press **MENU** repeatedly until PRIVATE/STORED JOBS MENU appears.
- 2 Press **ITEM** until the desired user name appears.

Note

If you are using a Macintosh computer, the user name appears on the first line of the display and the job name appears on the second line of the display. After you have selected the desired user name using **ITEM**, press **VALUE** until the desired job name appears.

- 3 Press **SELECT** PIN:0000 appears.
- 4 Press **- VALUE +** to change the first number of the PIN, and then press **SELECT**. An * appears in place of the number. Repeat these steps to change the remaining three numbers of the PIN. COPIES=1 appears.
- 5 Press **- VALUE +** until the desired number of copies appears.
- 6 Press **SELECT** to print the job.

Deleting a private job

A private job is automatically deleted from the printer's hard disk after the user releases it for printing, unless the user selects the Stored Job option in the driver.

Note

If you turn the printer off and then back on, all quick copy, proof and hold, and private jobs are deleted.

A private job can also be deleted from the printer control panel before it is ever printed.

- 1 Press **MENU** repeatedly until PRIVATE/STORED JOBS MENU appears.
- 2 Press **ITEM** until the desired user name appears.

Note

If you are using a Macintosh computer, the user name appears on the first line of the display and the job name appears on the second line of the display. After you have selected the desired user name using **ITEM**, press **VALUE** until the desired job name appears.

- 3 Press **SELECT** to select the job. PIN: 0000 appears.
- 4 Press **- VALUE +** to change the first number of the PIN, and then press **SELECT**. An * appears in place of the number. Repeat these steps to change the remaining three numbers of the PIN. COPIES=1 appears.
- 5 Press **- VALUE** until DELETE appears.
- 6 Press **SELECT** to delete the job.

Storing a print job

The user can download a print job to the printer's hard disk 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 permanently on the hard disk, select the Stored Job option in the driver when printing the job.

Printing a stored job

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

- 1 Press **MENU** repeatedly until PRIVATE/STORED JOBS MENU appears.
- 2 Press **ITEM** until the desired user name appears.

Note

If you are using a Macintosh computer, the user name appears on the first line of the display and the job name appears on the second line of the display. After you have selected the desired user name using **ITEM**, press **VALUE** until the desired job name appears.

- 3 Press **SELECT** to select the job name. COPIES=1 appears.
- 4 Press **- VALUE +** until the desired number of copies appears.
- 5 Press **SELECT** to print the job.

Deleting a stored job

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

- 1 Press **MENU** repeatedly until PRIVATE/STORED JOBS MENU appears.
- 2 Press **ITEM** until the desired user name appears.

Note

If you are using a Macintosh computer, the user name appears on the first line of the display and the job name appears on the second line of the display. After you have selected the desired user name using **ITEM**, press **VALUE** until the desired job name appears.

- 3 Press **SELECT** to select the job. COPIES=1 appears.
- 4 Press **- VALUE** until DELETE appears.
- 5 Press **SELECT** to delete the job.

Printing with the optional HP Fast InfraRed Receiver

The HP Fast InfraRed Receiver enables wireless printing from any IrDA-compliant portable device (such as a laptop computer) to the HP Color LaserJet 4550, 4550N, 4550DN, or 4550HDN printer.

The printing connection is maintained by positioning the sending infrared (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 that came with the HP Fast InfraRed Receiver.

Setting up to print with Windows 9x/NT

Before launching the InfraRed Driver, complete the following steps:

- 1 From the Printers folder, select the HP Color LaserJet 4550, 4550N, 4550DN, or 4550HDN as your default printer.
- 2 Choose **Properties/Details** for the HP Color LaserJet 4550, 4550N, 4550DN, or 4550HDN printer, and make sure that Virtual Infrared LPT Port is selected.
- 3 Select the file to print.

Printing a job

- 1 Align your laptop computer (or other portable device equipped with an IrDA-compliant FIR window) within 2 to 3 feet (1 meter) maximum of the HP Fast InfraRed Receiver. The FIR window angle must be within +/- 15 degrees to ensure an effective connection for printing.
- 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.

Note

The connection is permanently broken if the sending port is moved out of operating range or if anything passing between the ports blocks transmission for more than 40 seconds. (This block could be a hand, paper, or even direct sunlight.) 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.

Interrupting and resuming printing

The job interrupt and resume feature lets a user temporarily stop a job that may be currently printing in order to print another job using the FIR port. When the new job is finished printing, the interrupted job resumes printing.

A user can only interrupt jobs that are printing and collating multiple copies by connecting to the infrared (FIR) port on the printer and sending a job to the printer. The printer stops printing the current job when it reaches the end of the copy 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 with multiple copies where it left off.

4 Using color

Overview

The HP Color LaserJet 4550 series printer, through a combination of great technology and excellent engineering, offers great color right out of the box. It provides a powerful blend of automatic color features to generate superb color results.

This chapter explains the following topics:

- [Matching colors](#)
- [HP ColorSmart II](#)
- [Four-color printing \(CMYK\)](#)
- [Matching PANTONE®* colors](#)

Matching colors

The process of matching printer output color to your monitor is quite complex because printers and computer monitors use different methods of producing color. Monitors *display* colors by light pixels using an RGB (red, green, blue) color process, but printers *print* colors using a CMYK (cyan, magenta, yellow, and black) process.

Several factors can influence your ability to match printed colors to those on your monitor. These factors include:

- Print media
- Printer colorants (inks or toners for example)
- Printing process (inkjet, press or laser technology for example)
- Overhead lighting
- Personal differences in perception of color
- Software applications
- Printer drivers
- PC operating system
- Monitors
- Video cards and drivers

For most users, the best method for matching colors on your screen to your printer is to print sRGB colors. The HP Color LaserJet 4550 uses HP ColorSmart II, which uses sRGB and automatically optimizes color output. Keep in mind the above factors when colors on your screen do not perfectly match your printed colors.

HP ColorSmart II

HP ColorSmart II is a set of technologies that enables optimal color output *automatically* for diverse types of documents.

HP ColorSmart II utilizes object tagging and Standard RGB (sRGB) color technologies. Object tagging allows optimal color and halftone settings to be used for different objects on a page (text, graphics and photos). The printer analyzes the page (what objects it contains) and intelligently uses halftone and color settings that provide the best print quality for each object. Object tagging, combined with optimized default settings, produces great color out of the box.

In the Windows environment, you will find the HP ColorSmart II **Automatic** and **Manual** settings on the Color tab in the printer driver.

Color management options

Print in Grayscale

Selecting the **Print in Grayscale** option from your printer driver prints your document in black and white. This option is useful for previewing preliminary copies of slides and hardcopy output quickly for color document that will be photocopied or faxed.

Automatic color adjustment

The **Automatic** color adjustment feature of HP ColorSmart II (the default setting) optimizes the color and halftones used for each element in a document. **Automatic** also provides additional color options for application and operating systems that support color management systems. For more information, see your printer driver online Help.

Note

Automatic is the default setting and is recommended for printing all color documents.

Manual color adjustment

The **Manual** color adjustment feature of HP ColorSmart II allows you to adjust the color and halftone modes for text, graphics and photographs. To access the **Manual** color options from the Color tab, select **Manual**, then **Options**.

Halftone options

Halftone options affect the resolution and clarity of your color output. You can select halftone settings for text, graphics, and photos independently. The two halftone options are **Smooth** and **Detail**.

- The **Smooth** option provides better results for large, solid-filled print areas. It also enhances photos by smoothing out fine color gradations.
- The **Detail** option is useful for text and graphics that require sharp distinctions among lines or colors, or images that contain a pattern or a high level of detail.

Color map

The color map settings in the printer driver tell the printer how to interpret the data sent from a software application into the final colors that the printer will output. The color map settings can be adjusted to **Screen match** or **Vivid**.

- **Screen Match** (sRGB — standard red-green-blue) prints colors that are optimized to match RGB monitor colors. Use this setting to more closely match the colors on your screen.

sRGB is a world-wide color standard originally developed by HP and Microsoft as a common color language for monitors, input devices (scanners, digital cameras), and output devices (printers, plotters). It is the default color space used for HP products, Microsoft Operating Systems, the World Wide Web, and most office software sold today. sRGB is representative of the typical Windows PC monitor today and the convergence standard for High-Definition Television.

Note

Factors such as the type of monitor you use and the room's lighting can affect the appearance of colors on your screen. For more information, see the ["Matching colors"](#) section earlier in this chapter.

The latest versions of Adobe PhotoShop, CorelDRAW™, Microsoft Office, and many other applications use sRGB to communicate color. Most importantly, as the default color space in Microsoft Operating Systems, sRGB has gained broad adoption as a means to exchange color information between applications and devices using a common definition that assures typical users will experience greatly improved color matching. sRGB combined with HP ColorSmart II improves the user's ability to match colors between the printer, the PC monitor and also other input devices (scanner, digital camera) automatically, without the need to become color experts.

- **Vivid** enhances the saturation of the printed colors to produce a vivid color appearance. For more information, see your printer driver online Help.

Four-color printing (CMYK)

Cyan, magenta, yellow and black (CMYK) are the inks used by a printing press. It is often called four-color printing. CMYK data files are typically used by and originate from graphic arts (printing and publishing) environments. The HP Color LaserJet 4550 series printer is optimized to print RGB colors for a good match to the screen, but will also accept CMYK colors through the PostScript printer driver.

By default, the HP Color LaserJet 4550 series printer interprets CMYK data according to the Standard Web Offset Press (SWOP) standard. This standard defines how a particular set of CMYK inks should behave. The printer performs a SWOP color map and internal half-tones to emulate a SWOP CMYK press. Emulations for Dainippon Press (DIC) and Euro-standard CMYK inks used in the Far East and Europe are also available, and can be selected from the printer driver.

Matching PANTONE®* colors

The PANTONE®* Matching System colors are specified as CMYK colors as supported in many graphics software applications. This color-matching system is useful for matching printer output to a specific color (for example, a logo). See the documentation for your software application for instructions on using PANTONE®* colors.

For more information on using PANTONE®* colors, see the Readme file for the PANTONE®* color-matching system included on the printing system CD-ROM.

Note

Color settings, halftone settings, and print media affect the appearance of PANTONE®* colors. To optimize PANTONE®*-certified colors, use the default PostScript 3 emulation driver settings and HP LaserJet paper.

Automatic PANTONE®* calibration

Automatic PANTONE®* calibration generates high-quality PANTONE®* colors from the PANTONE®* color name automatically, providing the best possible color calibration in the HP Color LaserJet 4550 printers. An example of a PANTONE®* name is: PANTONE®* 286CVC. When printing PANTONE® colors, **Automatic PANTONE®* calibration** is the default setting for HP Color LaserJet 4550 printers. This feature automatically converts PANTONE®* colors to optimal color values for the HP Color LaserJet 4550 using the PANTONE®* color name in the data stream sent to the printer.

Most application programs that support the use of PANTONE®* colors for graphic objects will include the PANTONE®*name in the PostScript output, along with the color values assigned to the object. The HP Color LaserJet 4550 printer will recognize the PANTONE®* name and substitute the optimum color values for the printer based on color tables developed to provide the best possible match for each specific PANTONE®* color within the printer's color gamut.

No special actions are necessary in the application program or the driver to enable this feature. You have the option of turning off **Automatic PANTONE®* calibration** if you want to use application-generated color values rather than HP-generated color values.

To turn off Automatic PANTONE®* calibration

- In Windows, go to **Properties, Advanced**, and then **Printer Features**.
- On a Macintosh, go to the **CMYK Inks** page of the driver interface.

Applications known to generate PostScript files with graphic objects preserving the PANTONE®* name are listed below:

- Adobe Illustrator 7 and 8
- Adobe PageMaker 6.5
- CorelDRAW 7, 8, and 9
- Deneba Canvas 5*
- Macromedia Freehand 7 and 8
- Micrografx Designer
- QuarkXpress 3 and 4

Note

Subsequent versions of Deneba Canvas no longer generate compatible PANTONE® names

Microsoft Publisher 2000 adds support for PANTONE®* colors but does not preserve the PANTONE®* name necessary for this feature to work.

The **Automatic PANTONE®* calibration** feature only applies to vector graphics, not picture (raster) data such as scanned images and TIFF files. Adobe PhotoShop®, for example, being a raster image editor, is not on the above list of applications that support the **Automatic PANTONE®* calibration** feature.

WWW

PANTONE®* palettes for some raster image editor applications, such as Adobe PhotoShop, are available on the Web at <http://www.hp.com/support/lj4550>.

Once connected, select **Downloads and Drivers**. ICC color profiles, sRGB color swatches, and printer drivers are also available at this Web address.

PANTONE®* Application Palettes are available for:

- Adobe Illustrator 4–8
- PageMaker 5, 6, and 6.5
- PhotoShop 3–5.5
- CorelDRAW 6–9
- Micrographics Designer 6–7
- Macromedia Freehand 4–8
- QuarkXpress (as EPS files) 3.3–4.04
- Deneba Canvas 3.5–6.1
- Fractal Design Painter 2–5.5
- EPSF Charts
- TIFF Charts
- PANTONE®* Color Drive
- Text Format (ASCII)
- Raw PostScript File
- Adobe Acrobat

Vector graphics such as company logos created in one of the above applications (using palettes or applications preserving the PANTONE®* name) can be imported into Microsoft Word, PowerPoint or other MS Office applications. To do this, the color application must create an Encapsulated PostScript (EPS) file of the image for insertion as a file into the Office document using the insert file function.

Note

Cutting and pasting from the clipboard will not work. These tasks do not preserve the PANTONE®* name or the CMYK palette value.

Some of the PANTONE®* colors will not match exactly. There are over 945 PANTONE®* colors in the PANTONE®* Matching System. These colors were created using sixteen inks on a lithographic printing press. Not all of these colors are reproducible by a laser color printer because they are out of a laser printer's 4-color range (gamut). PANTONE®* calibrates HP printers to provide the closest match for all the colors we can reproduce and provide the colors closest to those we cannot reproduce.

Note

This feature requires the use of the PostScript 3 Emulation printer driver. It utilizes a function in the PostScript language for describing custom colors like PANTONE®* that is unique to PostScript and not present in the PCL data stream. PANTONE®* colors are used mostly in publishing environments by applications such as QuarkXpress and Adobe InDesign that tend to use PostScript only.

5 Using fonts

Overview

This chapter provides information on various fonts. The chapter includes the following sections:

- [Using internal TrueType fonts](#)
- [Understanding printer default fonts](#)
- [Selecting fonts](#)
- [Printing a list of available printer fonts](#)
- [Using fonts in PostScript Emulation](#)
- [Using fonts on a network](#)
- [Adding support for accessory fonts to a printer driver](#)
- [Using special type effects](#)
- [Hewlett-Packard custom font services](#)

Using internal TrueType fonts

TrueType is a font format developed jointly by Microsoft Corporation and Apple Computer, Inc. Hewlett-Packard has included 80 TrueType fonts with this printer, and matching screen fonts for use within Windows.

You do not need to download these TrueType fonts because they are already installed in your printer. The printer driver automatically uses internal fonts when it can. This results in increased printing performance.

See the Microsoft Windows documentation for specific instructions on using TrueType fonts with Windows.

Understanding printer default fonts

The default font for this printer is 12-point Courier in the PC-8 symbol set. The printer uses the default font only if another font has not been specified.

Changing the default font

You can select a different default font from the printer control panel. See [“Selecting PCL fonts through the printer control panel” on page 119](#).

Selecting a font other than the default

- You can request a font from within most software applications.
- You can send a PCL printer command requesting a font different from the default. For information on printer PCL commands, see [Appendix B](#) or the *PCL/PJL Technical Reference Package* for this printer. (See [page 32](#) for ordering information.)

Font selection priority

The printer selects printer fonts in the following order:

- 1 soft fonts (downloaded fonts)
- 2 fonts on DIMMs
- 3 internal fonts

In order to select a font, the font must be available from one of these sources. If the font you request is not available, the printer selects the closest match based on individual font characteristics (PCL only).

Selecting fonts

You can select fonts either from a software application or through the printer control panel.

Note

A font request from a software application or printer driver overrides font settings in the printer control panel.

Selecting fonts from software applications

For information on changing font selection, base font, printer setup, print options, and font appearance from a software application, see the documentation for your application.

Selecting symbol sets

If you want to print a symbol such as Ω while the printer is in PCL mode, you must first select the symbol set that contains that character. See the *PCL/PJL Technical Reference Package* for a complete listing of available symbol sets and printer commands. (See [page 32](#) for ordering information.)

Symbol set availability

Many software applications allow you to specify a symbol set from the printer setup menu. You should consider two things when using symbol sets:

- Software applications may not support all of the printer's symbol sets.
- Typefaces are designed to work with specific symbol sets.

Entering symbols into text

The documentation for your software application should contain instructions for entering special symbols into text. See the documentation's index for phrases such as *compose feature*, *composite characters*, *symbol sets*, *character sets*, *code pages*, and *extended characters*.

Selecting PCL fonts through the printer control panel

If your software application does not allow you to select fonts through its menus, you can select PCL (TrueType) fonts through the printer control panel. Only one font can be selected for a particular print job.

Note

A font selected through the printer control panel becomes the default font for all subsequent print jobs.

You must specify several items when selecting a font through the printer control panel. These items are listed on the printer's font page and include:

- the font source
- the font number
- the point size or pitch
- a symbol set

Note

A font request from a software application overrides font settings in the printer control panel.

To select PCL default fonts through the printer control panel

- 1 Print a list of available PCL printer fonts. (For instructions, see [“Printing a list of available printer fonts” on page 121.](#))
- 2 On the printed font list, locate the font source and number that correspond to the font you wish to use.
- 3 Press **MENU** until PRINTING MENU displays.
- 4 Press **ITEM** until PCL FONT SOURCE displays.
- 5 Press **VALUE** until the font source displays. The following sources are available:
 - INTERNAL
 - SOFT
 - DIMM SLOT n ($n = 1,2,3$)
- 6 Press **SELECT** to save your selection. An asterisk (*) appears next to your selection.
- 7 Press **ITEM** until PCL FONT NUMBER displays.
- 8 Press **VALUE** until the correct font number displays.
- 9 Press **SELECT** to save your selection. An asterisk (*) appears next to your selection.
- 10 Press **ITEM** until PCL FONT POINT SIZE displays (or, for proportional fonts, until PITCH displays). This selection is not available for bitmapped fonts.
- 11 Press **VALUE** until the correct point size or pitch displays.
- 12 Press **SELECT** to save your selection. An asterisk (*) appears next to your selection.
- 13 Press **GO** to return the printer to the READY state.

Printing a list of available printer fonts

You can use the Information Menu on the printer control panel to print a list of available fonts.

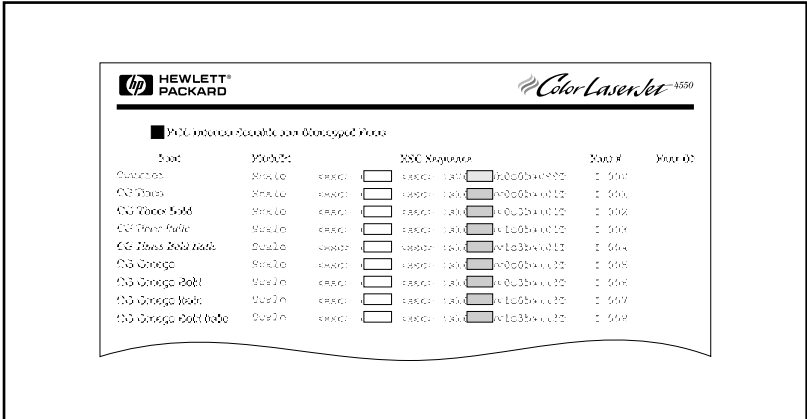
To print a list of available fonts

- 1 Press **MENU** until INFORMATION MENU displays.
- 2 Press **ITEM** until PRINT FONT LIST displays.
- 3 Press **SELECT** to print the font list.
- 4 After the list has printed, the printer returns to the READY state.

Note

Temporary soft fonts (fonts that your software downloaded for a specific document) do not appear on the printout. Permanent soft fonts do appear on the printout.

The font list displays all available typefaces for installed cards (DIMMs), permanent downloaded soft fonts, and internal fonts.



Font	Style	Size	Page #
Courier	Regular	12	1
Courier	Italic	12	1
Courier	Bold	12	1
Courier	Bold Italic	12	1
Georgia	Regular	12	1
Georgia	Italic	12	1
Georgia	Bold	12	1
Georgia	Bold Italic	12	1

Figure 5-1

Font list

Interpreting the font lists

The PCL font list displays samples of available fonts. The following is a description of the elements of the font list:

- 1 Font**
The name of the typeface family.
- 2 Pitch/Pt**
Pitch indicates the number of characters per inch of a fixed-space font. Point Size is the height of the font, measured in points, and is used to describe scalable fonts.
- 3 ESC Sequence**
Escape Sequence (a PCL command) is used to select the designated font. Fill in Pitch or Point Size and Symbol Set in the boxes as required. The escape sequence contains a shaded box followed by “v” or “h.” This indicates that you must enter the point size (for example, 14.25v) or pitch (for example, 12.00h).
- 4 Font #**
The number you use to select internal or downloaded soft fonts from the control panel. The source of the font is also listed.
Note: Do not confuse the font number with the soft font ID.
- 5 Font ID**
The identification number you assign to soft fonts when you download them through your software.

See the *PCL/PJL Technical Reference Package* for instructions on downloading fonts. (See [page 32](#) for ordering information.)

The font list for PostScript Emulation displays all fonts installed in the printer’s firmware. Although the characters are listed in only one size, you can scale the typefaces to any size.

Using fonts in PostScript Emulation

The printer is configured with 80 scalable fonts that are available for PCL and PostScript Emulation. The printing system installer on the CD-ROM installs 80 fonts on your PC for use by any software application.

Using fonts on a network

Consult with your network administrator or with other network users before using the printer control panel to change the default font and before downloading or removing soft fonts and typefaces.

To conserve memory and avoid unexpected printer output, use the guidelines that follow. Your network operating system might automatically protect each user's print job from the effects of other print jobs in the network. Consult a network administrator for more information.

Guidelines for printing with different fonts

- The 80 internal fonts are available in PostScript Emulation (PS) and PCL mode.
- To conserve printer memory, download only those fonts that are needed.
- If you require several downloaded fonts, consider installing additional printer memory.
- Some software applications automatically download fonts at the beginning of each print job. It might be possible to configure those applications to download only soft fonts that are not already resident in the printer. See your software application's documentation for more information.

Adding support for accessory fonts to a printer driver

When you are using typefaces on DIMMs, your printer driver will require information about the size, shape, and style of the type characters so that it can format your text correctly.

Using special type effects

The printer can create special type effects, such as patterns, reverse printing, mirrored text, and font rotation. See the user guide for your application to verify that the application supports these features. Developers can find complete instructions for using special type effects in the *PCL Technical Reference Package*. (See [page 32](#) for ordering information.)

Hewlett-Packard custom font services

Hewlett-Packard offers fonts on disk, cartridge, or DIMMs. You can design a custom font package to fit your particular needs. The items below are examples of available custom fonts:

- fonts or typefaces from any Hewlett-Packard standard font product or typeface collection
- bar codes, including 3 of 9, 128, Interleaved 2 of 5, UPC, USPS Zip, and others
- custom symbol set mappings
- signatures and logos

For custom fonts (such as signature fonts and logos) and also discontinued font products (such as Barcodes & More, Tax 1, and Pro Collection), contact:

Hewlett-Packard LaserJet Font Solutions
(541) 715-5757

Outside the U.S., contact your local HP dealer.

6 Printer Interfaces

Overview

This chapter provides information on available printer interfaces. The chapter includes the following sections:

- [Parallel configuration](#)
- [Enhanced I/O \(EIO\) configuration](#)
- [Configuring the printer for the network at the printer control panel](#)

Parallel configuration

If your printer is not configured with a network interface card, connect the printer to your computer using a bidirectional parallel cable (IEEE-1284C compliant) with a “C” connector (see [figure 6-1](#)) plugged into the printer’s parallel port. The cable can be a maximum of 10 meters (30 feet) long. For ordering information, see [“Printer supplies and accessories” on page 31](#).

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

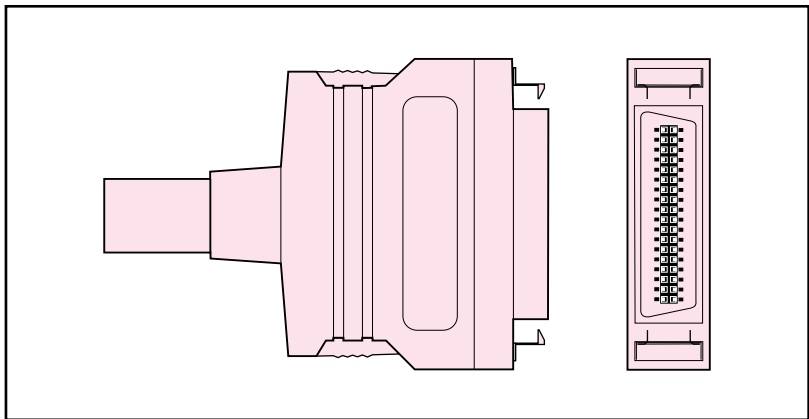


Figure 6-1 Parallel cable “C” connector

Note

To use the enhanced capabilities of the bidirectional parallel interface, such as bidirectional communication between the computer and printer, faster transfer of data, and automatic configuration of printer drivers, your printer driver must support these capabilities.

When you are using multiple ports, you can adjust automatic I/O switching to maximize performance by using the timeout feature. If data from other ports appears in the middle of your print job, increase the I/O Timeout value. (See [“Setting the I/O timeout” on page 61](#).)

Enhanced I/O (EIO) configuration

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

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

The printer control panel will have an additional menu (EIO Menu) if the printer is configured with EIO network cards.

HP JetDirect print servers

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

Note

Installation of these cards and network configuration should be performed by a network administrator.

Available enhanced I/O interfaces

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

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

WWW

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

NetWare networks

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

For Windows 9x, Windows NT 4.0, and Windows 2000 systems, use your printer installation utility for printer setup on a NetWare network.

Windows and Windows NT networks

For Windows 9x, Windows NT 4.0, and Windows 2000 systems, use your printer installation utility for printer setup on a Microsoft Windows network. The utility supports printer setup for either peer-to-peer or client-server network operation.

AppleTalk Networks

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

LocalTalk configuration

The LocalTalk interface enables you to print directly from a standalone Apple Macintosh computer or from a Macintosh computer on a LocalTalk network. For specific information on configuring your computer and printer to print through a LocalTalk interface, refer to the printer's getting started guide and the *HP JetDirect Print Server Administrator's Guide*.

Macintosh DIN-8 cable

To connect a Macintosh computer directly to this printer, use a standard Macintosh DIN-8 printer cable. This cable cannot be used in a network configuration.

Note

For LocalTalk configuration, the DIN-8 printer cable must be plugged into the printer port of your Macintosh computer.

LocalTalk network configuration

To connect the printer to a Macintosh computer on a LocalTalk network, use the HP LocalTalk Cable Kit. You will need a kit for each printer and an additional kit for each Macintosh computer on your network.

UNIX/Linux networks

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

For installation and management on UNIX or Linux networks, use HP Web JetAdmin.

WWW

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

Setting network security on the printer

This printer features control panel locking which allows network administrators to prevent users from changing certain settings in the printer control panel. When a menu of the printer control panel is locked, unauthorized users trying to change printer control panel settings will receive the following message:

```
ACCESS DENIED  
MENUS LOCKED
```

You can use the HP Web JetAdmin software, the HP LaserJet Utility for Macintosh, or an ASCII escape sequence to perform this procedure. For instructions on locking the printer control panel using either the HP Web JetAdmin software or the HP LaserJet Utility for Macintosh, see their online Helps.

Configuring the printer for the network at the printer control panel

You might need to configure certain network parameters on the printer. You can configure these parameters from the printer control panel, the embedded Web server, or for most networks, from the HP Web JetAdmin software (or the HP LaserJet Utility for Macintosh). The utilities are provided on the printing software CD-ROM that comes with the printer.

Note

The embedded Web server is a new printer feature from HP. For more information about using the embedded Web server, see [Appendix E](#).

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

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

- configuring Novell NetWare frame type parameters
- configuring TCP/IP parameters
- configuring the Apple EtherNet phase parameters
- disabling unused network protocols

Configuring Novell NetWare frame type parameters

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

To configure the Novell NetWare parameters from the printer control panel

- 1 Press **MENU** until HP EIO 1 or 2 MENU displays.
- 2 Press **ITEM** until CFG NETWORK=NO displays.
- 3 Press **VALUE** until CFG NETWORK=YES displays.
- 4 Press **SELECT** once. CFG NETWORK=YES displays.
- 5 Press **ITEM** until CFG IPX/SPX=NO displays.
- 6 Press **VALUE** until CFG IPX/SPX=YES displays.
- 7 Press **SELECT** once. CFG IPX/SPX=YES displays.
- 8 Press **ITEM** until FRAME=AUTO displays.
- 9 To configure the frame type setting protocol, press **VALUE** to select one of the frame types from the following table:

Frame type	Description
AUTO (default)	All listed Novell frame types will be allowed.
EN_8023	Limits frame types to IPX over IEEE 802.3 frames. All others will be counted and discarded.
EN_II	Limit frame types to IPX over Ethernet II frames. All others will be counted and discarded.
EN_8022	Limit frame types to IPX over IEEE 802.2 with Ethernet frames. All others will be counted and discarded.
EN_SNAP	Limit frame types to IPX over SNAP with Ethernet frames. All others will be counted and discarded.

- 10 Press **SELECT** to save the value. An asterisk (*) displays.
- 11 If you are finished, press **Go** to return the printer to the READY state.
– OR –
See the appropriate sections for other protocols that will be used.

Configuring TCP/IP parameters

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

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

Note

Do not disable BOOTP if you will be using RARP or DHCP to configure TCP/IP parameters.

To configure TCP/IP parameters from the printer control panel

- 1 Press **MENU** until HP EIO 1 or 2 MENU displays.
- 2 Press **ITEM** until CFG NETWORK=NO * displays.
- 3 Press **VALUE** until CFG NETWORK=YES displays.
- 4 Press **SELECT** once. CFG NETWORK=YES * displays.
- 5 Press **ITEM** until CFG TCP/IP=NO * displays.
- 6 Press **VALUE** once. CFG TCP/IP=YES displays.
- 7 Press **SELECT** once. CFG TCP/IP=YES * displays.
- 8 Press **ITEM** to configure TCP/IP parameters manually. BOOTP=YES * displays.

- 9 If you keep `BOOTP=YES *`, the values for the TCP/IP parameters will be provided by the BOOTP file, RARP, or DHCP and no other TCP/IP configuration is necessary. Skip to step 17.
– OR –
Press **VALUE** to change the value of the `BOOTP=` parameter.
`BOOTP=NO` displays.
- 10 Press **SELECT** to save the selection. `BOOTP=NO *` appears, and you are prompted to configure each of the TCP/IP parameters.
- 11 Press **ITEM** to continue configuring. `IP BYTE 1=<value> *` displays.
- 12 Press **VALUE** until the value of the first byte of the IP address displays.
- 13 Press **SELECT** to save the value.
- 14 Repeat steps 12 and 13 to configure the remaining bytes of the IP address.
- 15 Press **ITEM** to continue.
- 16 Repeat steps 12-15 to configure the subnet mask bytes (`SM`), default gateway (`GW`), and timeout (`TIMEOUT`).
- 17 If you are finished, press **Go** to return the printer to the `READY` state.
– OR –
See the appropriate sections for other protocols that will be used.

To configure Apple AppleTalk parameters from the printer control panel

- 1 Press **MENU** until HP EIO 1 MENU displays.
- 2 Press **ITEM** until CFG NETWORK=NO * displays.
- 3 Press **VALUE** until CFG NETWORK=YES displays.
- 4 Press **SELECT** once. CFG NETWORK=YES * displays.
- 5 Press **ITEM** until CFG ETALK=NO * displays.
- 6 Press **VALUE** until CFG ETALK=YES displays.
- 7 Press **SELECT** once. CFG ETALK=YES * displays.
- 8 Press **ITEM**. PHASE=1 or PHASE=2 displays.
- 9 Press **ITEM** to retain the value and continue, or press **VALUE** to change the phase parameter.
- 10 Press **SELECT** to save the new value.
- 11 If you are finished, press **GO** to return the printer to the READY state.
– OR –
See the appropriate sections for other protocols that will be used.

Disabling network protocols (optional)

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

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

To reach network protocols

- 1 Press **MENU** until HP EIO 1 MENU displays.
- 2 Press **ITEM** until CFG NETWORK=NO * displays.
- 3 Press **VALUE** until CFG NETWORK=YES displays.
- 4 Press **SELECT** once. CFG NETWORK=YES * displays.

In the sections that follow, find the protocol that you want to disable.

To disable IPX/SPX

Note

Do not disable this protocol if Windows 95/98 or Windows NT clients will be printing to the printer.

- 1 Press **ITEM** until IPX/SPX=ON * appears.
- 2 Press **VALUE** to change to IPX/SPX=OFF.
- 3 Press **SELECT** to save the new status. IPX/SPX=OFF * appears.
- 4 To disable another protocol, find the appropriate section.
– OR –
Press **GO** to return the printer to the READY state.

To disable DLC/LLC

- 1 Press **ITEM** until DLC/LLC=ON * displays.
- 2 Press **VALUE** to change to DLC/LLC=OFF.
- 3 Press **SELECT** to save the new status. DLC/LLC=OFF * displays.
- 4 To disable another protocol, find the appropriate section.
– OR –
Press **GO** to return the printer to the READY state.

To disable TCP/IP

- 1 Press **ITEM** until TCP/IP=ON * displays.
- 2 Press **VALUE** to change to TCP/IP=OFF.
- 3 Press **SELECT** to save the new status. TCP/IP=OFF * displays.
- 4 To disable another protocol, find the appropriate section.
– OR –
Press **GO** to return the printer to the READY state.

Note

You cannot access the printer using the embedded Web server if TCP/IP is disabled.

To disable Apple AppleTalk

- 1 Press **ITEM** until ETALK=ON * displays.
- 2 Press **VALUE** to change to ETALK=OFF.
- 3 Press **SELECT** to save the new status. ETALK=OFF * displays.
- 4 To disable another protocol, find the appropriate section.
– OR –
Press **GO** to return the printer to the READY state.

7 Consumables and cleaning

Overview

This chapter provides an overview of the printer's consumable items. The chapter includes the following sections:

- [Making room around the printer for replacing consumables](#)
- [Approximate replacement intervals for consumable items](#)
- [Locating consumables](#)
- [Environmental collection program](#)
- [Cleaning the printer](#)

For complete instructions on installing consumables, see the installation guides supplied with each consumable item.

Making room around the printer for replacing consumables

The following illustration shows the clearance necessary around the printer for replacing consumables.

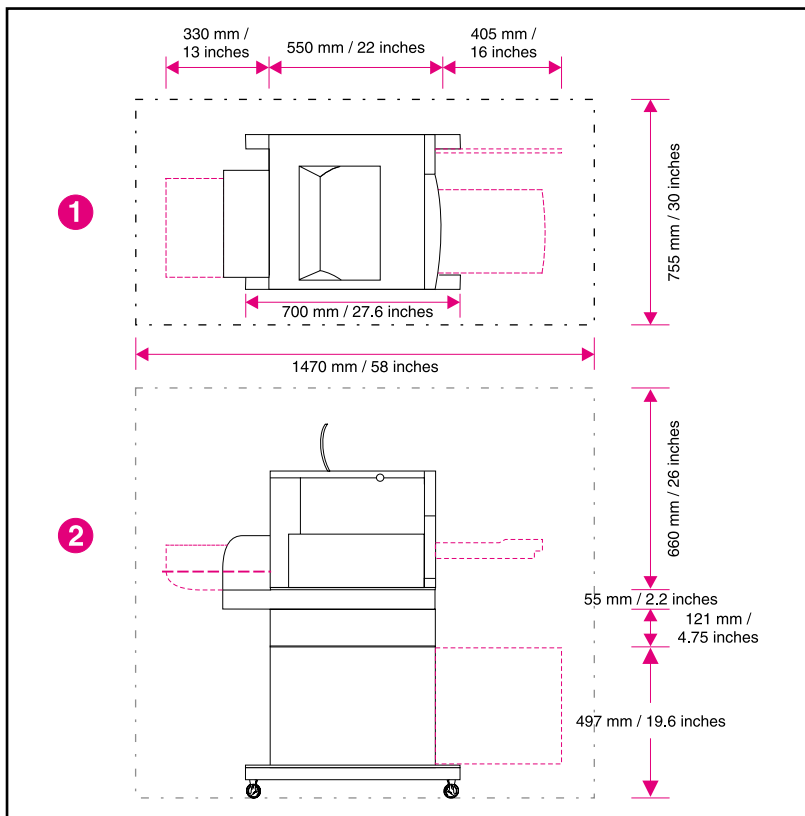


Figure 7-1 Consumable replacement clearance diagram

- 1 Top view
- 2 Side view

Consumable replacement guidelines

To facilitate consumable replacement, keep the following guidelines in mind when setting up the printer.

- Sufficient space is required in the front and rear of the printer for removing consumable items.
- The printer should be located on a flat, sturdy surface.
- 102 mm (4 in) of space is required on the sides of the printer to ensure proper ventilation.

Approximate replacement intervals for consumable items

You can identify consumable items by their labeling and their blue plastic handles.

WWW

For instructions on installing consumables, see the installation guides supplied with each consumable item or visit <http://www.hp.com/support/lj4550>. When you connect, select **Solve a Problem**.

CAUTION

Hewlett-Packard recommends the use of HP products in this printer. Use of non-HP products may cause problems requiring service that is not covered by the Hewlett-Packard warranty or service agreements.

The following table lists the replacement intervals for printer consumable items and the control panel messages that prompt you when to replace each item.

Consumable	Printer message	Page count	Approximate time period ²
Black toner cartridge	BLACK TONER LOW or BLACK TONER OUT	9,000 pages ¹	4 months
Cyan toner cartridge	CYAN TONER LOW or CYAN TONER OUT	6,000 pages ¹	2.5 months
Magenta toner cartridge	MAGENTA TONER LOW or MAGENTA TONER OUT	6,000 pages ¹	2.5 months
Yellow toner cartridge	YELLOW TONER LOW or YELLOW TONER OUT	6,000 pages ¹	2.5 months
Drum kit	DRUM LIFE OUT REPLACE KIT or WASTE TONER FULL REPLACE DRUM KIT	6,250 color pages ³ or 25,000 black and white only pages.	3 months for color pages, or 12.5 months for black and white only pages.
Transfer kit	TRANSFER KIT OUT REPLACE KIT	25,000 color pages, or 100,000 black and white only pages.	12.5 months for color pages, or 50 months for black and white only pages.
Fuser kit	FUSER LIFE OUT REPLACE KIT	50,000 color pages, or 100,000 black and white only pages.	25 months for color pages, or 50 months for black and white only pages.

1 Approximate average A4/letter-size page count based on 5% coverage of individual toner colors. Page counts are only estimations, and usage conditions and print patterns may cause results to vary.

2 Approximate lives are based on 2,000 pages per month.

3 6,250 color pages or 25,000 black-only pages; based on two-page, A4/letter-sized print jobs. Actual number of pages will vary depending on individual customer usage. Factors impacting page yield include color versus black-only printing mix, paper size, typical job length and complexity, and automatic duplexing.

Locating consumables

The following figure illustrates the location of each consumable item.

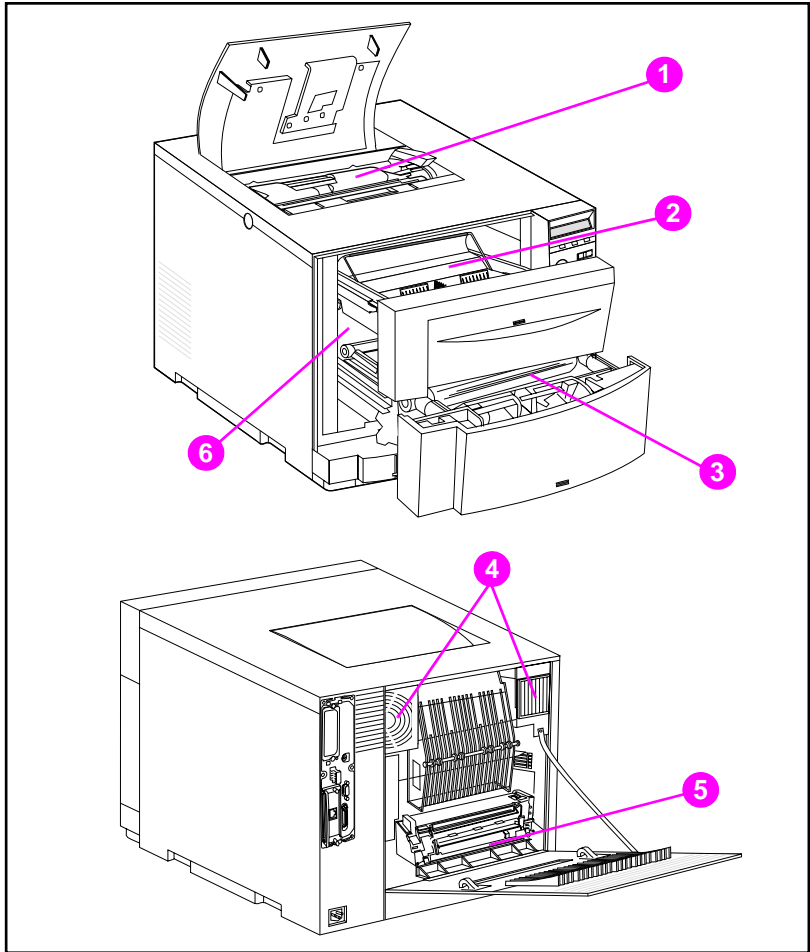


Figure 7-2 Consumable item locations

- 1 Toner cartridges
- 2 Imaging drum cartridge
- 3 Transfer belt
- 4 Air filters
- 5 Fuser
- 6 Transfer roller

Environmental collection program

Hewlett-Packard encourages responsible disposal of HP LaserJet printer supplies through its Planet Partners Program. For details on this program, see the recycling instruction guide enclosed with each consumable item. This program may not be available in all countries.

The following consumable items can be disposed of through the Planet Partners Program:

- Toner cartridge
- Imaging drum cartridge
- Transfer belt
- Fuser

Cleaning the printer

Cleaning excess toner from the printer

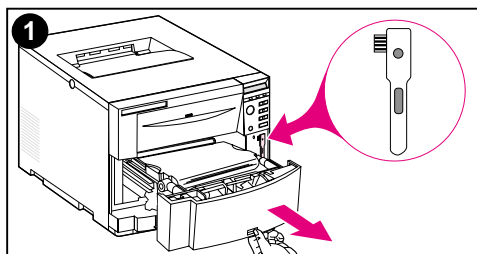
Toner from the yellow, magenta, and cyan toner cartridges will accumulate on the flaps that cover the toner cartridges. Although this accumulation of toner does not cause any print defect, the excess toner needs to be cleaned from the flap occasionally. Clean the flap covering the toner cartridge and other excess toner from the printer when you are replacing toner cartridges. There is a toner cloth provided with each replacement toner cartridge to clean the toner from the printer. See the instructions included with the replacement toner cartridge for more information about cleaning the printer.

CAUTION

Do not use the toner cleaning cloth on the drum, developer sleeves in the toner cartridge, or transfer rollers. Doing so can damage these units and cause other print quality problems.

If toner has built up on the toner cartridge, it may fall onto the transfer roller, which causes streaking on the media being printed. To clean the toner from the transfer roller, print several blank pages until the streaking stops.

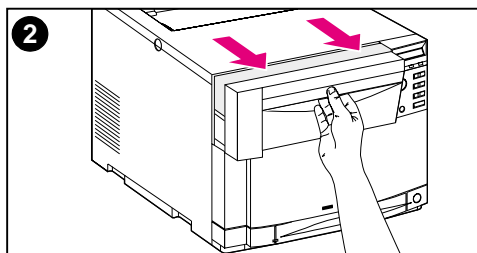
Cleaning the toner density sensor



The toner density sensor should be cleaned whenever the imaging drum is replaced or whenever the control panel message **DENSITY SENSOR OUT OF RANGE** displays.

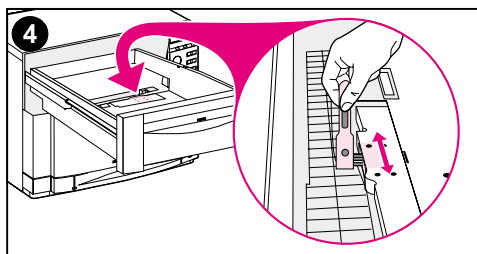
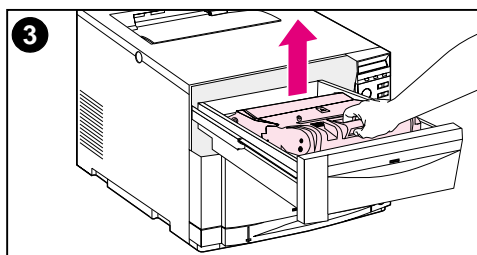
CAUTION

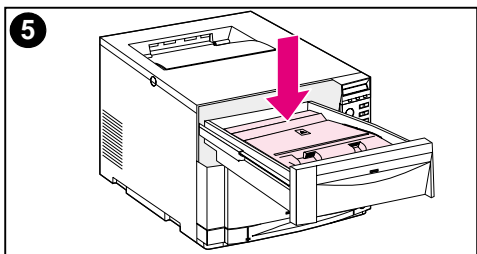
To avoid scratching the sensor, do not clean it with any paper products.



To clean the toner density sensor

- 1 Open the lower front drawer and remove the cleaning brush mounted inside. Then close the drawer.
- 2 Pull open the top front drawer.
- 3 Remove the imaging drum by the blue handle.
- 4 Use the cleaning brush to remove all dust and toner particles from the sensor, as illustrated.

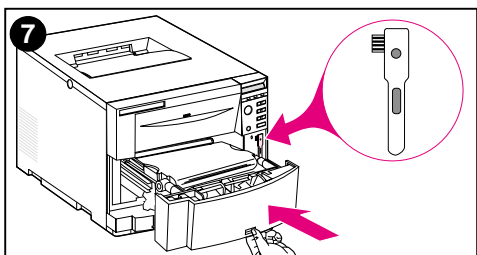
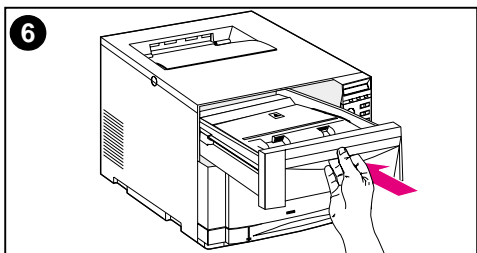




5 Re-insert the imaging drum.

6 Close the top front drawer.

7 Replace the cleaning brush and firmly close the lower front drawer.



8 Printer control panel messages

Overview

This chapter lists printer control panel messages and explains their meaning. The control panel displays four types of messages. These message types are:

- [Status messages](#)
- [Warning messages](#)
- [Attention messages](#)
- [Critical error messages](#)

Message types

Status messages

Status messages reflect the current state of the printer. They inform the user of normal printer operation and do not require user interaction to clear them. They change as the state of the printer changes. Whenever the printer is ready, not busy, and has no pending warning messages, the status message **READY** is displayed if the printer is online. If the printer is offline, the message **OFFLINE** is displayed.

Warning messages

Warning messages inform you of data and print errors. These messages typically alternate with the **READY** or **OFFLINE** messages and remain displayed until you press **Go**. If **CLEARABLE WARNING** is set to **JOB** in the printer's configuration menu, then these messages are cleared by the next print job.

Attention messages

Attention messages inform you that some action must be taken, such as adding paper or clearing a paper jam. For certain errors, the printer continues printing without user intervention. If **AUTO CONTINUE** is set to **ON** in the configuration menu, the printer will automatically attempt to return online.

Critical error messages

Critical error messages inform you of a device failure. You can clear some of these messages by turning the printer off and then on. These messages are not affected by the **AUTO CONTINUE** setting. If a condition persists, service is required.

Printer control panel messages

The following table lists the printer control panel messages for this printer. Printer messages with numeric prefixes are listed in numerical order. Printer messages without numeric prefixes are listed in alphabetical order.

Note

Except when the printer is initially turned on, messages are displayed in the display language selected in the printer control panel (such as English, French, or Spanish).

Printer control panel messages

Message	Description	Recommended action
ACCESS DENIED MENUS LOCKED	Displayed for approximately 5 seconds when a user attempts to modify a menu value while control panel locking is enabled.	No action required.
BAD DUPLEXER CONNECTION	The duplex printing accessory is not correctly installed.	Verify that the power cord is connected to the duplex printing accessory and that the short power cord from the duplex printing accessory is connected to the printer. If the error continues, verify that the duplex printing accessory is correctly installed.
CALIBRATING	The printer is executing an internal color calibration. This process should take approximately 90 seconds.	No action required.
CANCELING JOB	The printer is in the process of canceling a print job. Incoming data for the current job will be discarded.	No action required.
CANNOT DUPLEX CHECK REAR BIN alternates with CANNOT DUPLEX CHECK PAPER	The printer cannot duplex because the rear output bin is open or the media is not supported by the duplex printing accessory.	Close the rear output bin. If the bin is closed, verify that the media is supported by the duplex printing accessory. See "Supported media weights and sizes" on page 67.
CANNOT DUPLEX CLOSE REAR BIN	The printer cannot duplex because the rear output bin is open.	Close the rear output bin.

Printer control panel messages (continued)

Message	Description	Recommended action
CHECKING PAPER PATH	The printer is performing an internal test. When finished, the printer remains offline.	When the test has finished, press Go to return the printer to the READY state.
CHECKING PRINTER	The printer is performing an internal test. This process should take approximately 30 seconds. When finished, the printer remains offline.	When the test has finished, press Go to return the printer to the READY state.
CLEARING PAPER FROM PRINTER	The printer has jammed or was turned on and media was detected in the paper path. The printer is attempting to clear these pages.	No action required.
CLOSE FRONT DUPLEX DRAWER	The duplex drawer is not completely closed.	Close the duplex drawer.
CLOSE MIDDLE FRONT DRAWER	The middle front drawer is not completely closed.	Close the middle front drawer.
CLOSE UPPER REAR DOOR	The upper rear door is not completely closed.	Close the upper rear door.
CLOSE TOP COVER	The top cover is not completely closed.	Close the top cover.
CLOSE UPPER FRONT DRAWER	The upper front drawer is not completely closed.	Close the upper front drawer.
[COLOR] TONER LOW	The toner cartridge specified is low on toner.	Printing will continue until a TONER OUT message appears. To change the toner cartridge now, press SELECT .
[COLOR] TONER OUT	The toner cartridge specified is out of toner.	Change the specified toner cartridge now to ensure print quality. See "Printer supplies and accessories" on page 31.
[COLOR] TONER LOW alternates with PRESS SELECT TO CHANGE TONER	The toner cartridge specified is low on toner and must be replaced now. See "Printer supplies and accessories" on page 31.	Press SELECT to enter the toner replacement menu.
CONTINUING INTERRUPTED JOB	The printer is continuing the print job that was interrupted.	No action required.
DATA RECEIVED	The printer has received and processed data and is waiting for a form feed.	Press Go to initiate a form feed.

Printer control panel messages (continued)

Message	Description	Recommended action
DENSITY SENSOR OUT OF RANGE alternates with CLEAN DENSITY SENSOR	A density sensor out of range error was detected during a color calibration.	The density sensor may be dirty. Inspect and clean the sensor (see "Cleaning the toner density sensor" on page 149 for cleaning instructions).
DRUM ERROR REPLACE KIT	An error has been detected with a component of the print drum kit.	Replace the print drum kit.
DRUM LIFE LOW ORDER KIT	The imaging drum is near the end of its expected life.	Order a replacement drum kit, and continue printing. See "Printer supplies and accessories" on page 31 .
DRUM LIFE OUT REPLACE KIT	The imaging drum has reached the end of its expected life. See "Printer supplies and accessories" on page 31 .	Replace the drum kit.
DUPLEX ERROR CHECK DUPLEXER	An error has occurred in the duplex printing accessory.	Verify that the duplex printing accessory is correctly installed.
EIO DISK X NOT FUNCTIONAL	The EIO disk is not working correctly.	Remove the EIO disk from the slot indicated. Call HP Support.
EIO X INITIALIZING YYY alternates with DO NOT POWER OFF	The EIO device in slot X is initializing. The YYY value will increment every 10 seconds during this process.	No action required.
EIO X NOT FUNCTIONAL	The EIO slot specified does not have a card installed or is not functional.	No action required.
EIO X DISK SPINNING UP	The disk accessory is initializing. The first parameter is the accessory slot number for this accessory card.	No action required.
EVENT LOG EMPTY	SHOW EVENT LOG was selected from the Information Menu, but the event log has no entries.	No action required.
FLASH DIMM X INITIALIZING alternates with DO NOT POWER OFF	The new Flash DIMM installed in slot X is initializing.	No action required.
[FS] DEVICE FAILURE	The hard disk, flash DIMM, or RAM disk had a critical failure and no longer can be used.	Remove the flash DIMM and replace it with a new one.

Printer control panel messages (continued)

Message	Description	Recommended action
[FS] FILE OPERATION FAILED	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.	No action required.
[FS] FILE SYSTEM IS FULL	The hard disk, flash DIMM, or RAM disk is full.	Delete files from the device. Use HP Resource Manager to download or delete files and fonts. (See the software help for more information.)
[FS] IS WRITE PROTECTED	The hard disk, flash DIMM, or RAM disk is protected and no new files can be written to it.	Disable the write protection through HP Resource Manager.
[FS] NOT INITIALIZED	The hard disk, flash DIMM, or RAM disk has been initialized by another HP printer product.	Re-initialize the device using HP Resource manager or HP Web JetAdmin (see the online help for more information).
FUSER LIFE LOW ORDER KIT	The fuser is near the end of its expected life.	Order a replacement fuser kit, and continue printing. See "Printer supplies and accessories" on page 31.
FUSER LIFE OUT REPLACE KIT	The fuser has reached the end of its expected life. See "Printer supplies and accessories" on page 31.	Replace the fuser kit.
INCORRECT PIN PLEASE TRY AGAIN	The personal identification number (PIN) was not entered correctly.	Re-enter the PIN.
INITIALIZING	This message is displayed when the printer is initially turned on.	No action required.
INSTALL [COLOR] TONER	The color toner cartridge indicated has been removed.	The toner cartridge has been removed and must be replaced for printing to continue.
INSTALL DRUM KIT	The drum kit is not installed or is incorrectly installed.	Verify that the drum kit is correctly installed.
INSTALL TRAY	Tray 2 is not installed or is not completely closed, preventing media from being printed from Tray 3.	Verify that Tray 2 is completely closed.
INTERRUPTING JOB PLEASE WAIT	The print job currently processing is being interrupted by a higher priority print job.	No action required.

Printer control panel messages (continued)

Message	Description	Recommended action
MANUALLY FEED [SIZE]	Load the requested paper into Tray 1.	Press Go if the desired paper is already loaded in Tray 1.
MANUALLY FEED TRAY 1 ENVELOPE	Load envelopes into Tray 1.	Press Go if envelopes are already loaded in Tray 1.
MANUALLY FEED [TYPE] [SIZE]	Load the requested paper into Tray 1.	Press Go if the desired paper is already loaded in Tray 1.
MEMORY FULL STORED DATA LOST	The printer has no available memory. The current job may not print correctly. Some downloaded fonts may have been deleted.	Try printing simplified pages. If this does not resolve the problem, add printer memory.
MEMORY SETTINGS CHANGED	The I/O buffering settings were changed by the printer because there is not enough memory available to use the previous settings.	No action required. Adding printer memory may prevent this from occurring.
MEMORY SHORTAGE JOB CLEARED	The available memory was not enough to continue printing. The remainder of the job was canceled.	Adding printer memory may prevent this from occurring.
MEMORY SHORTAGE PAGE SIMPLIFIED	The image was too large for available printer memory. Therefore, the printer compressed the image, resulting in lost data.	Adding printer memory may prevent this from occurring.
MOPY PAGE TOO COMPLEX alternates with PRESS GO TO CONTINUE	The print job sent to the printer was too complex.	No action required.
NO JOB TO CANCEL	CANCEL JOB was pressed but there is no active job or buffered data to cancel. The printer automatically returns to the READY state.	No action required.
OFFLINE	The printer is offline and there are no error messages pending.	Press Go to return the printer to the READY state.
OUTPUT BIN FULL alternates with CLEAR PAPER FROM [BIN NAME]	The top output bin is full.	Remove media from the top output bin.

Printer control panel messages (continued)

Message	Description	Recommended action
PAGE CANNOT PRINT NOW alternates with RETRY WHEN PRINTING STOPS	An internal page has been requested while the printer is processing an incoming job. Internal pages are not permitted to interrupt and can only be printed when the printer is in the READY state.	Request the internal page when the printer is in the READY state.
PLEASE WAIT	The printer is in the process of purging data so that it can go offline or into the menus.	No action required.
POWERSAVE ON	The printer is in PowerSave mode. This message is cleared by pressing any key or by the receipt of a print job.	No action required.
PRESS GO TO PRINT alternates with PRESS SELECT TO CHANGE TONER	The top cover was opened and closed when the printer was not in toner cartridge replacement mode.	Press Go to resume printing or press SELECT to enter the toner replacement menu.
PRINTER LANGUAGE NOT AVAILABLE alternates with PRINT JOB CANCELLED	The printer received a request for a language (personality) that does not exist in the printer.	No action required.
PRINTING ACCESSORIES	The accessories page is being generated. The printer returns to the READY state upon completion of this page.	No action required.
PRINTING CALIBRATION PAGE	The color calibration page is being generated. The printer returns to the READY state upon completion of this page.	No action required.
PRINTING COLOR GUIDE	The color guides page is being printed. The printer returns to the READY state upon completion of this page.	No action required.
PRINTING CONFIGURATION	The configuration page is being printed. The printer returns to the READY state upon completion of this page.	No action required.

Printer control panel messages (continued)

Message	Description	Recommended action
PRINTING DEMONSTRATION 1	The printer's LaserJet demo page is being generated. The printer will return to the online READY state upon the completion of the page.	No action required.
PRINTING ENGINE TEST	The engine test page is being printed. The printer returns to the READY state upon completion of this page.	No action required.
PRINTING EVENT LOG	The event log is being printed. The printer returns to the READY state upon completion of the page.	No action required.
PRINTING FILE DIRECTORY	The file directory is being printed. The printer returns to the READY state upon completion of the page.	No action required.
PRINTING FONT LIST	A typeface list for the available personalities is being printed. The printer returns to the READY state upon completion of these pages.	No action required.
PRINTING MENU MAP	The printer menu map is being printed. The printer returns to the READY state upon completion of this page.	No action required.
PRINTING PAPER PATH TEST	The paper path test page is being printed. The printer returns to the READY state upon completion of this page.	No action required.
PRINTING REGISTRATION	The registration page is being generated. The printer will return to the READY state upon the completion of the page.	No action required.
PRINTING USAGE PAGE	The printer usage page is being printed. The printer returns to the READY state upon completion of this page.	No action required.
PROCESSING COPY X OF Y	The printer is processing one of several copy jobs.	No action required.
PROCESSING JOB	The printer is processing the current job.	No action required.
PROCESSING JOB FROM TRAY X	The printer is processing the current job from a particular tray.	No action required.

Printer control panel messages (continued)

Message	Description	Recommended action
READY	The printer is online and ready to receive data, and no status or device attendance messages are pending.	No action required.
REINSTALL TRANSFER BELT	The transfer belt is broken or incorrectly installed.	Remove the transfer belt. Inspect the transfer belt for damaged areas and replace it if necessary. Check for broken connectors in the middle front drawer. Check for paper jammed inside the connectors in the middle front drawer. Turn the white knobs on the transfer belt until little windows are visible. Tap the windows to shake any toner loose. If the toner does not shake loose, reach under the window with a Q-tip and remove the toner from the window.
REMOVE PAPER JAM	Printer media has become jammed somewhere in the paper path.	Ensure that all jammed paper is removed from the paper path. See "Paper jam locations" on page 175.
REQUEST ACCEPTED PLEASE WAIT	The printer is executing a request. The printer returns to the READY state upon completion of this process.	No action required.
RESETTING MEMORY	The printer is executing a memory reset. The printer returns to the READY state upon completion of this process.	No action required.
RESETTING VALUES FINISHED	The color calibration density values have been reset to their default values.	No action required.
RESTORING FACTORY SETTINGS	The printer is executing a RESTORE FACTORY SETTINGS or a COLD RESET.	No action required.

Printer control panel messages (continued)

Message	Description	Recommended action
TONER [COLOR] OUT alternates with PRESS SELECT TO CHANGE TONER	The toner cartridge specified is out of toner. If the TONER OUT setting in the CONFIGURATION MENU is set to OVERRIDE, pressing Go will resume printing.	Press SELECT to enter the toner replacement menu. Press Go to resume printing without changing the cartridge.
TONER POSITION [COLOR] = [STATE]	Indicates the current state of a particular toner cartridge. This message is displayed when SELECT is pressed while a TONER LOW/OUT message is displayed.	If necessary, replace the specified toner cartridge.
TRANSFER KIT LOW ORDER KIT	The transfer kit is near the end of its expected life.	Order a replacement transfer kit and continue printing. See "Printer supplies and accessories" on page 31.
TRANSFER KIT OUT REPLACE KIT	The transfer kit has reached the end of its expected life. See "Printer supplies and accessories" on page 31.	Replace the transfer kit.
TRAY 1 LOAD [SIZE]	Tray 1 does not contain the specified media size.	Load the specified media size into Tray 1.
TRAY 1 LOAD [TYPE] [SIZE]	Tray 1 does not contain the specified media size and type.	Load the specified media size and type into Tray 1.
TRAY X CONTAINS UNKNOWN MEDIA	The media type in the specified tray cannot be determined.	Remove the unknown media from the specified tray.
TRAY X EMPTY [TYPE] [SIZE]	The specified tray is empty but the current job does not need this tray to complete the job.	No action required.
TRAY X LOAD [SIZE]	The specified tray requires the necessary media size.	Load the media size into the specified tray.
TRAY X LOAD [TYPE] [SIZE]	The specified media type and size need to be loaded into the requested tray.	Load the specified media type and size into the requested tray. Press Go to override this request and cause the page to be printed on different media.
TRAY X OPEN	The specified tray is not completely closed.	Close the specified tray.

Printer control panel messages (continued)

Message	Description	Recommended action
TRAY X SIZE= [SIZE]	Media has been loaded into the specified tray.	The most recently configured media size will be displayed with an asterisk next to it. Press -VALUE+ to view all the possible media sizes. Press SELECT to display the current media size. Press GO to remove the message.
TRAY X TYPE= [TYPE]	Media has been loaded into the specified tray	The most recently configured media type will be displayed with an asterisk next to it. Press -VALUE+ to view all the possible media types. Press SELECT to display the current media type. Press GO to remove the message.
UNABLE TO MOPY JOB	Memory or file system failures would not allow a mopy job to occur.	Only one copy will be produced.
UNABLE TO STORE JOB	Memory or file system failures would not allow a stored job to occur.	Install additional memory in the printer. Install a hard disk in to the printer If a hard disk is installed, delete previously stored print jobs.
UNSUPPORTED SIZE IN TRAY XX	There is unsupported print media in the specified tray.	Remove the unsupported media size from the specified tray.
WAIT FOR PRINTER TO REINITIALIZE	The printer is reinitializing. The printer returns to the READY state upon completion of this process.	No action required.
WARMING UP	The printer fuser is heating up. Printing will continue when the fuser reaches the proper temperature.	No action required.
WASTE TONER FULL REPLACE DRUM KIT	The waste toner receptacle in the drum kit is full.	Replace the drum kit.

Printer control panel messages (continued)

Message	Description	Recommended action
<p>13.XX PAPER JAM</p> <p>alternates with:</p> <p>CHECK ALL REAR DOORS</p> <p>or</p> <p>CHECK MIDDLE FRONT DRAWER</p> <p>or</p> <p>CHECK FRONT DUPLEX DRAWER</p>	<p>A jam has occurred. XX specifies the type of paper jam.</p> <p>HP LaserJet 4550/4500</p> <p><u>XX</u> <u>Description</u></p> <p>1/0 Paper jam in paper feed area 5/1 Paper jam in fusing unit area 6/2 Paper jam in fusing unit area 10/3 Paper jam in reversing area 11/4 Paper jam in reversing area 12/5 Paper jam in path to duplexer area 13/6 Paper jam in path to duplexer area 20/7 Paper jam in paper path area 21/8 Door open jam 23/9 Unexpected media type 24/10 Unexpected media type 25/11 Unexpected media type 2/12 Paper jam in paper feed area</p>	<p>See "Clearing paper jams" on page 178 for instructions.</p> <p>Open the rear duplex cover (if installed) and remove any jammed media. Open the upper rear door and remove any jammed media from the rear paper path and fuser area.</p> <p>Open the middle front drawer and remove any jammed media.</p> <p>Open the front duplex drawer and remove any jammed media.</p>
<p>13.XX PAPER JAM IN INPUT DEVICE</p> <p>alternates with</p> <p>CHECK TRAY X AND FRONT DRAWER</p>	<p>A jam has occurred where XX is the location of the media jam.</p>	<p>See "Clearing paper jams" on page 178 for instructions.</p>
<p>13.1 JAM#: OPEN MIDDLE DRAWER</p> <p>alternates with</p> <p>CHECK IN REAR OF DRAWER</p>	<p>A jam has occurred inside the middle front drawer area. The jam may be located in the fuser area.</p>	<p>Open the middle front drawer and carefully inspect for any media. Be sure to inspect the fusing area. You may need to access the fusing area through the rear door. Remove any jammed media.</p>
<p>20 INSUFFICIENT MEMORY</p> <p>alternates with</p> <p>PRESS GO TO CONTINUE</p>	<p>More data has been received from the computer than fits in the printer's internal memory.</p>	<p>To continue printing, press Go. Only the amount of data that fits in the printer's internal memory is printed. Adding more memory should resolve this problem.</p>
<p>21 PAGE TOO COMPLEX TO PRINT</p> <p>alternates with</p> <p>PRESS GO TO CONTINUE</p>	<p>The data sent to the printer was too complex.</p>	<p>Press Go to print the transferred data, some data might be lost. If this message persists, call HP Support.</p>

Printer control panel messages (continued)

Message	Description	Recommended action
22 EIO X BUFFER OVERFLOW alternates with PRESS GO TO CONTINUE	The I/O buffer for the EIO card in slot X has overflowed.	Press Go to resume printing and then resend the job.
22 PARALLEL I/O BUFFER OVERFLOW alternates with PRESS GO TO CONTINUE	The printer's parallel buffer has overflowed.	Press Go to resume printing and then resend the job.
40 EIO X BAD TRANSMISSION alternates with PRESS GO TO CONTINUE	A connection with the card in the specified slot has been broken.	Press Go to continue printing.
41.3 UNEXPECTED PAPER SIZE alternates with LOAD TRAY X <TYPE> <SIZE>	A tray is configured for a specific paper size, but the sheet loaded is a different size.	Load the proper size paper in the tray or reconfigure the tray for the paper size it contains. Then press Go to continue printing.
41.5 UNEXPECTED PAPER TYPE alternates with LOAD TRAY X <TYPE> <SIZE>	A tray is configured for a specific media type, but a different media type is loaded.	Load the proper media type in the tray or reconfigure the tray for the media type it contains.
41.X PRINTER ERROR alternates with PRESS GO TO CONTINUE	A temporary printing error occurred.	Press Go . The page containing the error will automatically be reprinted if jam recovery is enabled. If the error does not clear, turn the printer off, then turn the printer on. If this message persists, call HP Support.

Printer control panel messages (continued)

Message	Description	Recommended action
49 ERROR (XXXX) CYCLE POWER	A communication error has occurred.	Turn the printer off and then on to clear the error. If this does not solve the problem try the following: 1) Cancel the current print job from your PC or server. Resend the print job. If this does not work, try sending a different job. 2) If your computer is connected to the printer through a parallel cable, verify that the cable is connected correctly and is of good quality. 3) If the problem persists, call HP Support.
50.X FUSER ERROR	A fusing error has occurred. X indicates the error type as follows: X <u>Description</u> 1 Low fuser temperature 2 Fuser warm up service 3 High fuser temperature 4 Faulty fuser 5 Fuser voltage mismatch 6 Fuser heater cutoff 7 Fuser motor malfunction	Clear the error by turning the printer off and then on. If the problem persists, call HP Support. For 50.5 fuser errors (fuser voltage mismatch), verify that the fuser is the same voltage type as the printer.
51.X PRINTER ERROR alternates with CYCLE POWER TO CONTINUE	A laser error has occurred due to a beam detect error or laser failure.	Clear the error by turning the printer off and then on. If the problem persists, call HP Support.
52.X PRINTER ERROR alternates with CYCLE POWER TO CONTINUE	A scanner failure has occurred.	Clear the error by turning the printer off and then on. If the problem persists, call HP Support.

Printer control panel messages (continued)

Message	Description	Recommended action
<p>53.XY.ZZ ERROR BASE MEM BANK B or 53.XY.ZZ ERROR DIMM A BANK B alternates with PRESS GO TO CONTINUE alternates with NO MORE ERRORS CONTINUING</p>	<p>Indicates a memory error. If a DIMM caused the error, the DIMM will not be recognized. Values of X, Y, and Z are as follows:</p> <p>X <u>Memory Type</u></p> <p>0 ROM 1 RAM</p> <p>Y <u>Device Location</u></p> <p>0 On board 1 DIMM Slot 1 2 DIMM Slot 2 3 DIMM Slot 3</p> <p>ZZ <u>Error Number</u></p> <p>0 Unsupported memory 1 Unrecognized memory 3 Failed RAM test</p>	<p>Clear the error by turning the printer off and then on. Verify that the DIMM is correctly installed. If the DIMM is correctly installed, replace the DIMM. See “Installing DIMMs” on page 217. If the problem persists, call HP Support.</p>
<p>54.X PRINTER ERROR</p>	<p>An error has occurred where X is indicated below.</p> <p>X <u>Description</u></p> <p>1 Internal power failure 2 Carousel rotation failure 3 Density sensor out of range 4 Optional equipment not available 5 Waste toner sensor malfunction 6 OHT sensor malfunction</p>	<p>Clear the error by turning the printer off and then on. If the problem persists, call HP Support.</p>

Printer control panel messages (continued)

Message	Description	Recommended action
54.2 PRINTER ERROR	A toner cartridge has been incorrectly installed.	Turn off the printer, and open the top cover. Locate the carousel brake release and press the metal tab with the end of a pen. With your other hand push the carousel around to the position required to remove the toner cartridge. If the carousel is still blocked after releasing the carousel break, open the front drawers and push the carousel. Remove the toner cartridge. If the toner cartridge cannot be removed, move the carousel until it comes loose. Replace or reinstall the toner cartridge. For instructions, see U.S. – http://www.hp.com/go/ljsupplies or Worldwide – http://www.hp.com/ghp/buyonline.html .
55 DC CONTROLLER ERROR	The print engine is not communicating with the formatter.	Clear the error by turning the printer off and then on. If the problem persists, call HP Support.
55.X PRINTER ERROR alternates with PRESS GO TO CONTINUE	A temporary printing error occurred.	Press Go . The page containing the error will automatically be reprinted if jam recovery is enabled. If the error does not clear, turn the printer off and then on. If this message persists, call HP Support.
56.X PRINTER ERROR alternates with CYCLE POWER TO CONTINUE	A temporary printing error occurred.	Clear the error by turning the printer off and then on. If this message persists, call HP Support.

Printer control panel messages (continued)

Message	Description	Recommended action
57.X PRINTER ERROR alternates with CYCLE POWER TO CONTINUE	An error has occurred where X is indicated below: X <u>Description</u> 1 Fan motor 1 malfunction 2 Fan motor 2 malfunction	Clear the error by turning the printer off and then on. If the problem persists, call HP Support.
57.3 FAN ERROR alternates with CLOSE UPPER FRONT DRAWER	The upper front drawer may not be completely closed preventing a connection to fan motor 3.	Verify that the upper front drawer is completely closed.
58.X PRINTER ERROR alternates with CYCLE POWER TO CONTINUE	A temporary printing error occurred.	Clear the error by turning the printer off and then on. If this message persists, call HP Support.
59.X PRINTER ERROR alternates with CYCLE POWER TO CONTINUE	A temporary printing error occurred.	Clear the error by turning the printer off and then on. If this message persists, call HP Support.
62 NO SYSTEM	There is a printer firmware error.	Clear the error by turning the printer off and then on. If the problem persists, call HP Support.
62.X PRINTER ERROR	Indicates a problem with internal memory. X indicates the location as follows: X <u>Description</u> 0 Internal memory 1 Memory in DIMM slot 1 2 Memory in DIMM slot 2 3 Memory in DIMM slot 3	Clear the error by turning the printer off and then on. If the problem persists, call HP Support.
64 PRINTER ERROR alternates with CYCLE POWER	A temporary printing error occurred.	Clear the error by turning the printer off and then on. If the problem persists, call HP Support.

Printer control panel messages (continued)

Message	Description	Recommended action						
66.00.XX SERVICE ERROR alternates with CHECK CABLES AND CYCLE POWER	A failure has occurred in an external paper handling output device.	Make sure the cables from the external paper handling output device are securely plugged into the printer. Clear the error by turning the printer off and then on.						
68 NVRAM ERROR CHECK SETTINGS alternates with PRESS GO TO CONTINUE	One or more settings saved in the non-volatile storage device are invalid. Some settings may have been reset to factory defaults.	Check printer settings to determine which values have changed. Clear the message by pressing Go . If the problem persists, call HP Support.						
68 NVRAM FULL CHECK SETTINGS alternates with PRESS GO TO CONTINUE	Indicates that a non-volatile storage device is full. Some settings may have been reset to factory defaults.	Check printer settings to determine which values have changed. Clear the message by pressing Go . If the problem persists, call HP Support.						
69.X PRINTER ERROR alternates with CYCLE POWER TO CONTINUE	An error has occurred in X, where X is: <table border="0"> <tr> <td>X</td> <td><u>Description</u></td> </tr> <tr> <td>0</td> <td>Duplex mechanism has failed</td> </tr> <tr> <td>1</td> <td>Duplexer slide adjust has failed</td> </tr> </table>	X	<u>Description</u>	0	Duplex mechanism has failed	1	Duplexer slide adjust has failed	Clear the error by turning the printer off and then on. If the problem persists, call HP Support.
X	<u>Description</u>							
0	Duplex mechanism has failed							
1	Duplexer slide adjust has failed							
79.XXXX PRINTER ERROR	The printer has detected an error. The numbers (XXXX) indicate the specific type of error.	Turn the printer off, and then on. Try printing a job from a different software application. If the job prints, go back to the first application and try printing a different file. If the message appears with a specific software application or print job, contact the software vendor for assistance. If the message persists with different software applications and print jobs, record the numbers that appear for XXXX, and call HP Support.						
8X.YYYY EIO ERROR	The EIO accessory card in slot X has encountered a critical error as specified by YYYY.	Record the numbers that appear for YYYY, and call HP Support.						

Control panel messages for external devices

Some control panel messages will only occur if an external device attached to the printer has caused or created an error. The following table contains these control panel messages. For more information regarding the external device error, see the documentation that came with the device.

Control panel messages for external devices

Message	Description	Recommended action
CHECK FINISHER DEVICE alternates with CLEAR JAM	A finishing device, such as a stapler, a binder, or a 3-hole punch device has a paper jam.	Clear the specified paper jam.
CHECK FINISHER DEVICE alternates with FINISHER ALIGN ERROR	This message indicates an alignment error occurred in the external paper handling finishing device.	Clear the specified paper jam and the finisher's paper path.
CHECK INPUT DEVICE alternates with PAPER PATH OPEN PLEASE CLOSE IT	The optional input tray cannot feed paper to the printer because a door or paper guide is open.	Check the doors and paper guides.
CHECK OUTPUT DEVICE alternates with CLOSE OUTPUT DELIVERY PATH	The optional output device is not properly connected to the printer.	A proper connection must be made for printing to continue.
EXTERNAL DEVICE INITIALIZING	When an external paper handling device is connected to the printer, it must initialize after the printer boots or after coming out of PowerSave mode.	No action required.
INPUT DEVICE CONDITION XX.YY	An input paper handling device has a condition that needs attention before printing can resume.	See the documentation that came with the paper handling device for assistance.
OUTPUT DEVICE CONDITION XX.YY	An external output device has a condition that needs attention before printing may resume.	See the documentation that came with the paper handling device for assistance.

Control panel messages for external devices (continued)

Message	Description	Recommended action
TOO MANY PAGES IN JOB TO FINISH	The finisher device attempted to finish a job that contained more pages than the finisher device was capable of processing.	Remove the excess pages and retry finishing the print job.
66.XX.YY FINISHER FAILURE alternates with CHECK CABLES AND CYCLE POWER	A failure has occurred in an external paper handling output device.	Make sure the cables from the external paper handling output device are securely plugged into the printer. Clear the error by turning the printer off and then on.
66.00.XX INPUT DEVICE FAILURE alternates with CHECK CABLES AND CYCLE POWER	A failure has occurred in an external paper handling input device.	Make sure the cables from the external paper handling input device are securely plugged into the printer. Clear the error by turning the printer off and then on.
66.00.XX OUTPUT DEVICE FAILURE alternates with CHECK CABLES AND CYCLE POWER	A failure has occurred in an external paper handling output device.	Make sure the cables from the external paper handling output device are securely plugged into the printer. Clear the error by turning the printer off and then on.
FINISHER LOW ON FINISHING AGENT	The finishing devices is running out of its finishing material	Refill the finishing device with the specified finishing agent.

9 Solving problems with the printer

Overview

This chapter provides information on solving and preventing printer problems such as paper jams and image defects. The chapter includes the following sections:

- [Basic troubleshooting checklist](#)
- [Paper jam locations](#)
- [Paper jam recovery](#)
- [Common causes of paper jams](#)
- [Clearing paper jams](#)
- [Media-handling problems](#)
- [Printer response problems](#)
- [Printer control panel problems](#)
- [Print quality troubleshooting](#)
- [Overhead transparency defects](#)
- [Color printing problems](#)
- [Incorrect printer output](#)
- [Software application problems](#)

Basic troubleshooting checklist

If you are experiencing problems with the printer, this checklist may help identify the cause of the problem.

- Is the printer connected to power?
- Is the printer in the **READY** state?
- Are all necessary cables connected?
- Are any messages displayed on the control panel?
- Were recently replaced toner cartridges installed correctly? Was the pull tab on the cartridge removed?
- Were recently installed consumable items (fuser kit, transfer kit, imaging drum kit) installed correctly?
- Is the power switch (standby button) pushed in?

If you cannot find solutions to printer problems in this guide, contact an HP service and support center. (See [“Support information” on page 250.](#))

For additional information on installation and setup of the printer, see the getting started guide for this printer.

Paper jam locations

Use this illustration to troubleshoot paper jams in the printer. For instructions on clearing paper jams, see [“Clearing paper jams” on page 178](#).

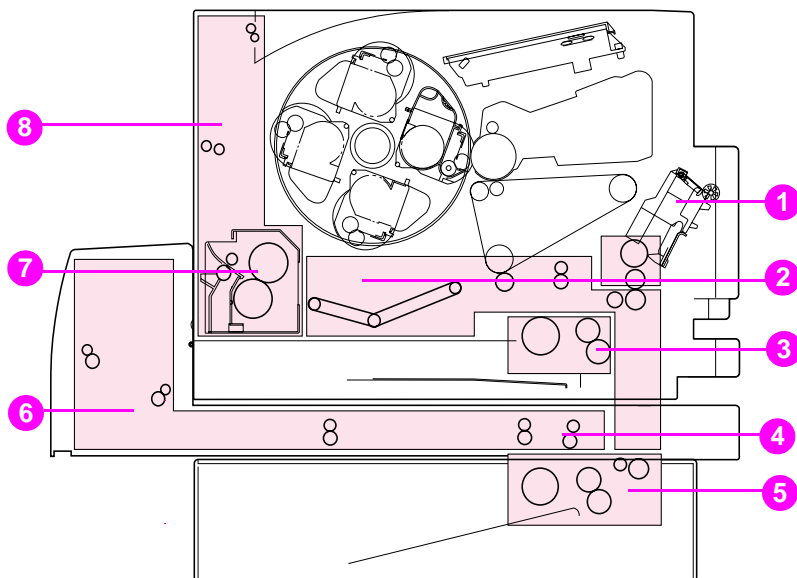


Figure 9-1 Paper jam locations (shown with the optional 500-sheet paper feeder and duplex printing accessory installed)

- 1 Input Tray 1 area
- 2 Transfer belt area
- 3 Input Tray 2 area
- 4 Front duplex drawer area
- 5 Tray 3 (500-sheet paper feeder) area
- 6 Rear duplex cover area
- 7 Fuser area
- 8 Rear paper path area

Paper jam recovery

This printer provides Paper Jam Recovery, a feature that allows you to set whether the printer should attempt to automatically recover from paper jams. If Paper Jam Recovery is enabled, when a paper jam occurs, all pages affected by the jam will be reprinted. The options are:

ON	Printer will attempt to reprint jammed pages.
OFF	Printer will not attempt to reprint jammed pages.

Note

During the recovery process, the printer may reprint several good pages that were printed before the paper jam occurred. Be sure to remove any duplicated pages.

To enable Paper Jam Recovery

- 1 Press **MENU** until CONFIGURATION MENU displays.
- 2 Press **ITEM** until JAM RECOVERY displays.
- 3 Press **VALUE** until ON displays.
- 4 Press **SELECT** to save the setting.
- 5 Press **GO** to return the printer to the READY state.

To improve print speed and increase memory resources, you may want to disable Paper Jam Recovery. To disable Paper Jam Recovery, select OFF in step 3 above. If Paper Jam Recovery is disabled, the pages involved in a jam will not be reprinted.

Common causes of paper jams

The following table lists common causes of paper jams and suggested solutions for resolving them.

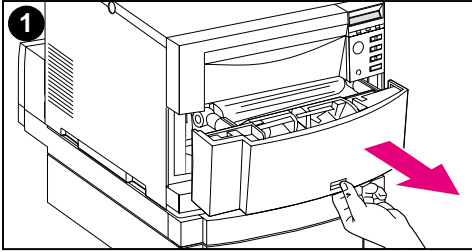
Cause	Solution
Print media does not meet HP-recommended media specifications.	See “Selecting print media” on page 66 .
A consumable item is installed incorrectly, causing repeated jams.	Verify that the consumable item is correctly installed.
You are reloading paper that has already passed through a printer or copier.	Do not use media that has been printed or copied.
An input tray is loaded incorrectly.	Remove any excess media from the input tray. Press media down in the input tray so it fits below the tabs, and within the media width guides. See Chapter 3 for instructions on loading media.
Print media is skewed and jams.	Input tray guides are not adjusted correctly. Adjust input tray guides so they hold media firmly in place without bending it.
Print media is binding or sticking together.	Remove media, flex it, rotate it 180 degrees or flip it over. Reload media into the input tray. Do not fan media.
Media size specified in software does not match the input tray’s media size configuration.	Verify that the media size selected in your software application or printer driver matches the media size specified in the printer control panel for the tray you are printing from.
Print media is in poor condition.	Replace the print media.
Printer consumable items have reached the end of their useful life.	Check the printer control panel for messages prompting you to replace consumable items, or print a configuration page to verify the remaining life of the consumable items. See Chapter 3 for information on consumable items.
Media was not stored correctly.	Replace the print media. Media should be stored in its original packaging in a controlled environment.

Note

If the printer still continues to jam, contact HP Customer Support or your authorized HP service provider. See [“HP Customer Care options worldwide” on page 252](#).

Clearing paper jams

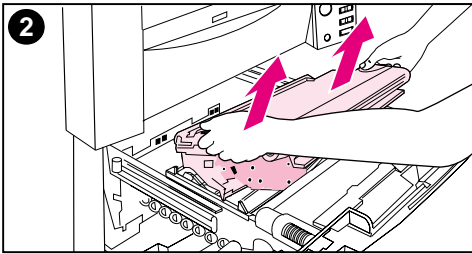
Clearing jams in the middle front drawer area



- 1 Pull open the middle front drawer to access the media.

Note

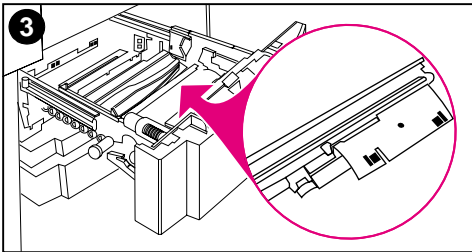
When removing the transfer belt assembly, do not touch the transfer belt material.

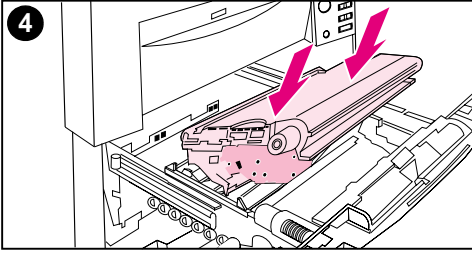


- 2 Remove the transfer belt assembly by lifting up on its blue handles.
- 3 Remove any jammed or torn media. Be sure to lift the metal flap by its green tab and remove any media.

Note

Be sure to inspect the rear area inside the drawer and remove jammed or torn media.

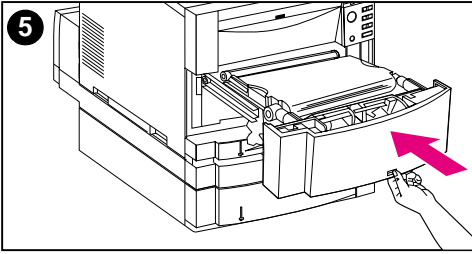




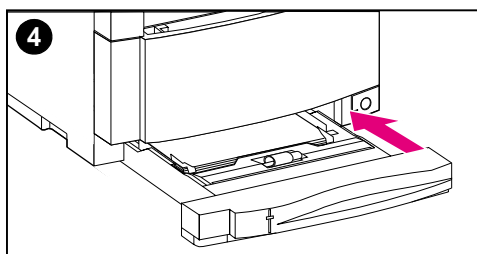
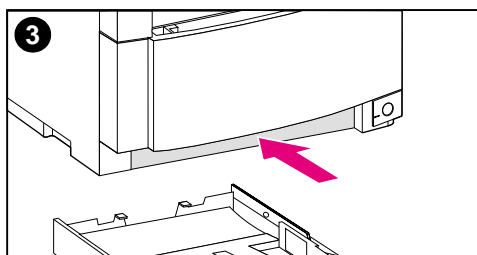
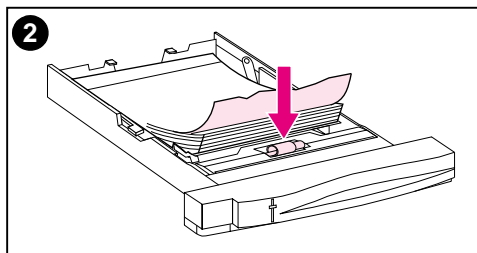
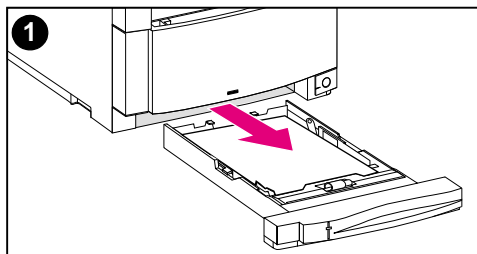
- 4 Reinstall the transfer belt.
- 5 Close the drawer. The printer will warm up and return to the `READY` state.

Note

If this action does not resolve the problem, the printer will display an alternate message.



Clearing jams in the Tray 2 area

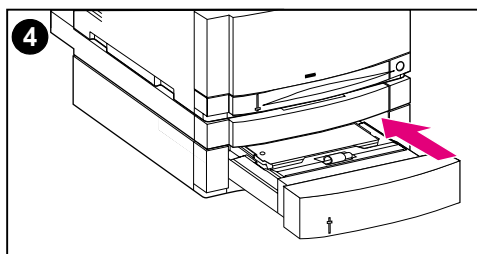
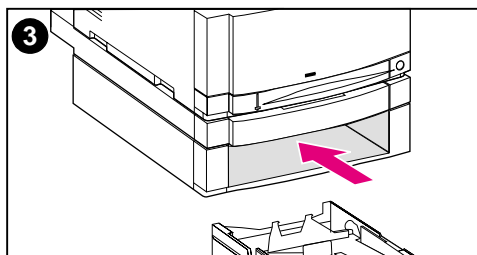
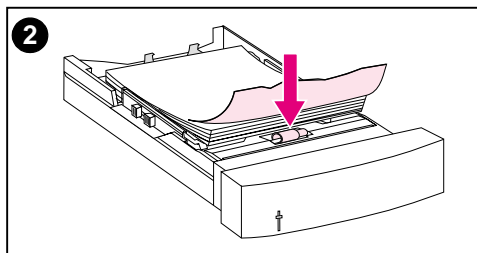
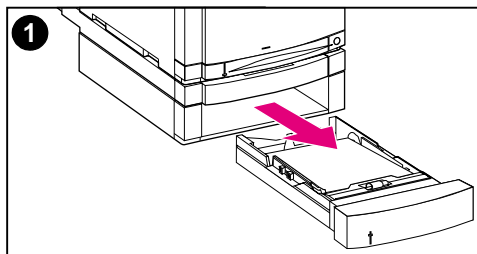


Note

It is a good idea to inspect the input trays when clearing paper jams. However, opening and closing input trays has no effect on clearing paper jam messages.

- 1 Pull out Tray 2 and place it on a flat surface.
- 2 Inspect the rollers and remove any partially fed media. Be sure to remove all pieces of media.
- 3 Inspect inside the printer and remove all media.
- 4 Close Tray 2.

Clearing jams in the optional Tray 3 area

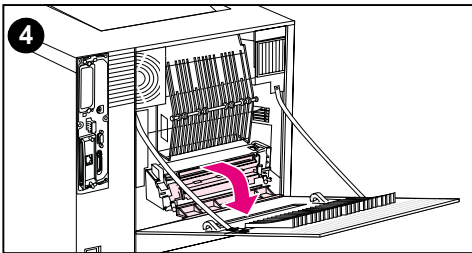
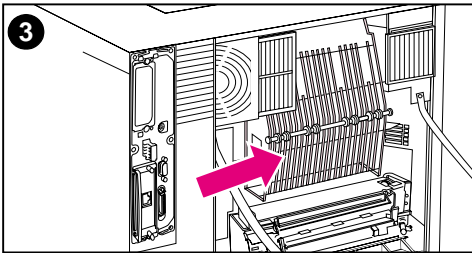
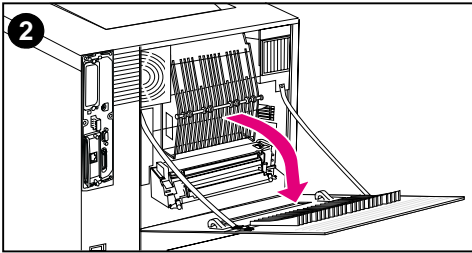
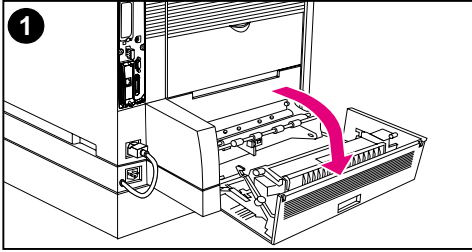


Note

It is a good idea to inspect the input trays when clearing paper jams. However, opening and closing input trays has no effect on clearing paper jam messages.

- 1 Pull out Tray 3 and place it on a flat surface.
- 2 Inspect the rollers and remove any partially fed media. Be sure to remove all pieces of media.
- 3 Inspect inside the printer and remove all jammed or torn media.
- 4 Close Tray 3.

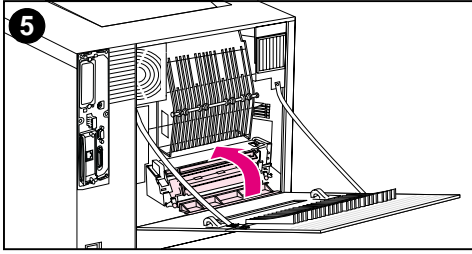
Clearing jams in the rear door areas



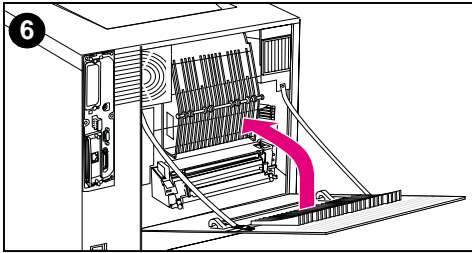
WARNING!

Do not touch the fuser: it is hot and could cause burns! The fuser's operating temperature is 190° C (374° F). Wait 30 minutes to allow the fuser to cool down before touching the fuser.

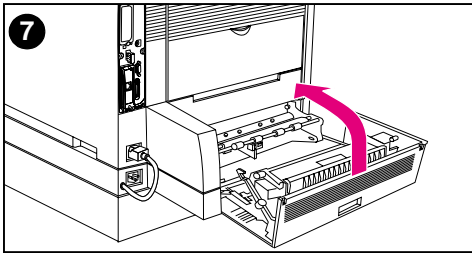
- 1 If the duplex printing accessory is installed, open the rear duplex cover.
- 2 Open the upper rear door.
- 3 Inspect the upper paper path area inside the rear door and remove any jammed or torn media.
- 4 Open the fuser door and remove any media.



5 Close the fuser door.



6 Close the upper rear door.

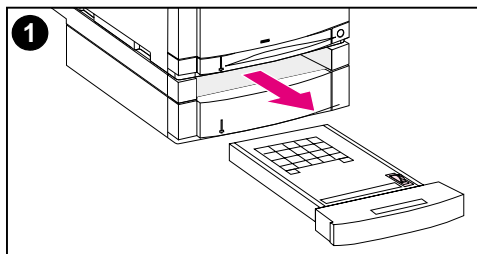


7 Close the rear duplex cover if it was opened. The printer will warm up and return to the `READY` state.

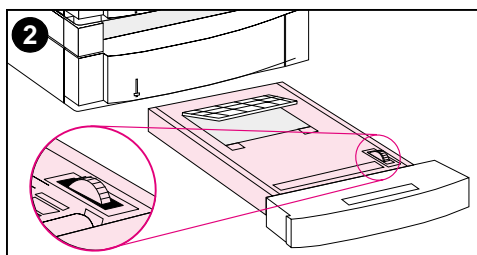
Note

If these actions do not resolve the problem, the printer will display an alternate jam message.

Clearing jams in the front duplex drawer area



1 Pull out the duplex drawer and place it on a flat surface.



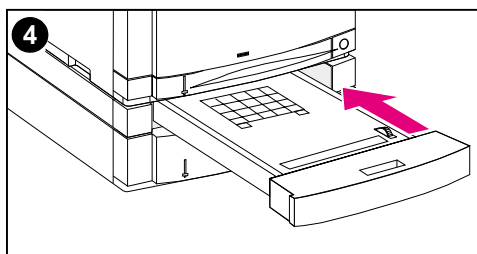
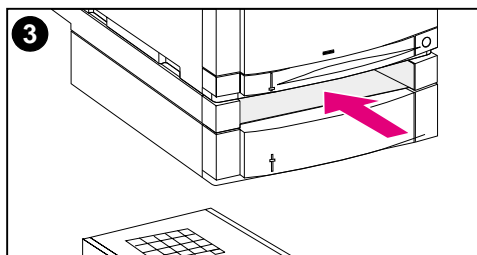
2 Remove media from the duplex drawer. Rotate the thumbwheel to eject media. Be sure to remove any torn pieces of media.

3 Inspect inside the printer and remove media. Be sure to remove any torn pieces of media.

4 Close the duplex drawer. The printer will return to the READY state within a few minutes.

Note

If these actions do not resolve the problem, the printer will display an alternate jam message.



Media-handling problems

Use only media that meets the specifications outlined in the *HP LaserJet Printer Family Paper Specification Guide*.

For media specifications for this printer, see [“Supported media weights and sizes” on page 67](#).

Printer feeds multiple sheets

Cause	Solution
The input tray is overfilled.	Remove excess media from the input tray.
The media is not under the tabs in the input tray (Trays 2 and 3).	Open the input tray and verify that the media is seated under the metal tabs.
Print media is sticking together.	Remove media, flex it, rotate it 180 degrees or flip it over, and then reload it into the tray. Note: Do not fan media. Fanning can cause static electricity, which can cause media to stick together.
Media does not meet the specifications for this printer.	Only use media that meets the media-use specifications for this printer (see “Supported media weights and sizes” on page 67).

Printer feeds incorrect page size

Cause	Solution
The correct media size is not loaded in the input tray.	Load the correct size media in the input tray.
The correct media size is not selected in your software application or printer driver.	Select the correct media size from your software application or printer driver.
The correct media size for Tray 1 is not selected in the printer control panel.	From the control panel, select the correct media size for Tray 1 (only available with TRAY=CASSETTE).
Media-size knob is incorrectly set (Tray 3).	Verify that the media-size knob on the side of Tray 3 is set to the proper media size.

Media does not feed automatically

Cause	Solution
Manual feed is selected in the software application.	This printer does not support manual feed. Do not select manual feed in your software application.
The correct size of media is not loaded.	Load the correct size of media.
The input tray is empty.	Load media into the input tray.
Media from a previous jam has not been completely removed.	Open the printer and remove any media in the paper path. Closely inspect the fuser area for jams. See "Clearing paper jams" on page 178 .

Media does not feed from Input Trays 2 or 3

Cause	Solution
Manual feed is selected in the software application.	This printer does not support manual feed. Do not select manual feed in your software application.
The correct size of media is not loaded.	Load the correct size of media.
The input tray is empty.	Load media in the input tray.
The correct media type for the input tray is not selected in the printer control panel.	From the printer control panel, select the correct media type for the input tray.
Media from a previous jam has not been completely removed.	Open the printer and remove any media in the paper path. Closely inspect the fuser area for jams. See "Clearing paper jams" on page 178 .
Tray 3 (500-sheet paper feeder) does not appear as an input tray option.	Tray 3 only displays as an option if it is installed. Verify that Tray 3 is correctly installed. Verify that the printer driver has been configured to recognize Tray 3.
The tray is incorrectly installed.	Reinstall Tray 3. Print a configuration page to confirm that Tray 3 is configured properly.

Transparencies or glossy paper will not feed

Cause	Solution
The correct media type is not specified in your software or printer driver.	Verify that the correct media type is selected in your software or printer driver.
The input tray is overfilled.	Remove excess media from the input tray. Do not load more than 50 transparencies in any tray.
Media in another input tray is the same size as the transparencies and the printer is defaulting to the other tray.	Make sure that the input tray containing the transparencies or glossy paper is selected in your software application or printer driver. Use the printer control panel to configure the tray to the media type loaded.

Envelopes jam or will not feed in the printer

Cause	Solution
Envelopes are loaded in an unsupported tray. Envelopes should only be printed from Tray 1.	Load envelopes into Tray 1.
Envelopes are curled or damaged.	Try using different envelopes.
Envelopes are sealing because the moisture content is too high.	Try using different envelopes.
Envelope orientation is incorrect.	Verify that the envelope is loaded correctly. See " Loading envelopes into Tray 1 " on page 80 .
The envelopes being used are not supported by this printer.	See " Supported media weights and sizes " on page 67 or the <i>HP LaserJet Printer Family Paper Specification Guide</i> .

Output is curled or wrinkled

Cause	Solution
Media does not meet the specifications for this printer.	Only use media that meets the media-use specifications for this printer (see “Supported media weights and sizes” on page 67).
Media is damaged or in poor condition.	Remove media from the input tray and load media that is in good condition.
Printer is operating in an excessively humid environment.	Verify that the printing environment is within humidity specifications.
You are printing large, solid-filled areas.	Large, solid-filled areas can cause excessive curl. Try using a different pattern.
Media used was not stored correctly and may have absorbed moisture.	Remove media and replace it with media from a fresh, unopened package.
Media has poorly cut edges.	Remove media, flex it, rotate it 180 degrees or turn it over, and then reload it into the input tray. If the problem persists, replace the media.
You are printing to the top output bin.	Use other output bin.

Printer will not duplex

Cause	Solution
Printer is not recognizing the duplex printing accessory.	Print a configuration page to verify configuration. Set up the printer driver to recognize the duplex printing accessory. Verify that the duplex printing accessory power cord is plugged in.
You are trying to duplex on an unsupported media.	Verify that the media you are using is supported for duplex printing.
The door to the rear output bin is open.	Close the door to the rear output bin.

Printer response problems

No display message

Cause	Solution
The printer's power switch (standby button) is in the standby position.	Verify that the printer is on. Fans may run while the printer is in standby mode (off).
The printer's memory DIMMs are defective or installed incorrectly.	Verify that the printer's memory DIMMs are correctly installed and are not defective. See "Installing DIMMs" on page 217 .
The power cord is not firmly plugged into both the printer and the power receptacle.	Turn off the printer and then disconnect and reconnect the power cord. Turn the printer back on.
The line voltage is incorrect for the printer power configuration.	Connect the printer to a proper voltage source, as specified on the Power Rating Label on the back of the printer.
The power cord is damaged or excessively worn.	Replace the power cord.
The power source receptacle is not working correctly.	Connect the printer to a different power receptacle.

Printer is on, but nothing prints

Cause	Solution
The printer's READY indicator light is not lit.	Press Go to return the printer to the READY state.
The top cover is not closed properly.	Close the top cover firmly, verifying that it is properly latched.
The DATA indicator is flashing.	The printer is probably still receiving data. Wait for the DATA indicator to stop flashing.
[COLOR] TONER OUT appears on the printer display.	Replace the toner cartridge specified on the printer display.
A printer message other than READY appears on the printer control panel.	See Chapter 8 for an explanation of printer control panel messages.
Your parallel port may have a DOS timeout error.	Add a MODE command to your AUTOEXEC.BAT file. See your DOS manual for additional information.
The PS (PostScript Emulation) personality is not selected.	Select PS or AUTO for the printer language (see Chapter 2).
The correct driver is not selected in your software application or printer driver.	Select the driver for PostScript Emulation for this printer in your software application or printer driver.
The printer is not properly configured.	See Chapter 6 for configuration information.
The computer port is not configured or is not working properly.	Run another peripheral connected to this port to verify that the port is working properly.
The printer has not been correctly named for your network or for a Macintosh computer.	Use the appropriate utility to name the printer on the network. For Macintosh computers, name the printer from within the Chooser menu.

Printer is on, but is not receiving data

Cause	Solution
The printer's READY indicator light is not lit.	Press Go to return the printer to the READY state.
The top cover is not closed properly.	Close the top cover firmly.
A printer message other than READY appears on the printer control panel.	See Chapter 8 for troubleshooting information.
The interface cable is not correct for this configuration.	Select the correct interface cable for your configuration. See Chapter 6 for more information on printer interfaces.
The interface cable is not securely connected to both the printer and the computer.	Disconnect and reconnect the interface cable.
The printer is not configured correctly.	See Chapter 6 for configuration information.
The interface configurations on the printer's configuration page do not match the configurations on the host computer.	Configure the printer to match your computer configuration.
Your computer is not working properly.	Try using an application that you know works properly to check your computer, or, in DOS, type <code>Dir > Prn</code> at the DOS prompt.
The computer port that the printer is connected to is not configured or is not working properly.	Run another peripheral connected to this port to check the port operation.
The printer has not been correctly named for your network or Macintosh computer.	Use the appropriate utility to name the printer on the network. For Macintosh computers, name the printer from within the Chooser menu.

Unable to select the printer from the computer

Cause	Solution
If you are using a switch box, the printer may not be selected for your computer.	Select the correct printer through your switch box.
The printer's READY indicator light is not lit.	Press Go to return the printer to the READY state.
The input tray specified is empty.	Load the correct size media into the input tray.
A printer message other than READY appears on the printer control panel.	See Chapter 8 .
The correct printer driver is not installed in your computer.	Install the correct printer driver.
The correct printer and port are not selected on your computer.	Select the correct printer and port.
Your network is not configured properly for this printer.	Use your network software to verify the printer's network configuration, or consult with your network administrator.
The power source receptacle is not working correctly.	Connect the printer to a different power receptacle.

Printer control panel problems

Control panel settings work incorrectly

Problem	Solution
The printer control panel display is blank or is not lit, even when the fan is running.	Fans may run while the printer is in standby mode (off). Press the printer's power switch to turn the printer on.
Printer settings in your software application or printer driver are different from the printer control panel settings.	Settings in your software application or printer driver override printer control panel settings. Verify that the settings in your software application or printer driver are correct.
Control panel settings were not correctly saved after they were changed.	Reselect the control panel settings and then press SELECT . An asterisk (*) should appear to the right of the setting.
The Data indicator is lit and there are no pages printing.	Buffered data exists in the printer. Pressing Go prints the buffered data using current control panel settings and then activates the new control panel settings.
If you are on a network, another user may have changed printer control panel settings.	Consult your network administrator to coordinate changes to printer control panel settings.

Unable to select Tray 3 (optional 500-sheet paper feeder)

Problem	Solution
Tray 3 (500-sheet paper feeder) does not appear as an input tray option.	Tray 3 only displays as an option if it is installed. Verify that Tray 3 is correctly installed. Verify that the printer driver has been configured to recognize Tray 3.

Print quality troubleshooting

Unless otherwise specified, all references in this section to horizontal or vertical directions of print quality problems refer to problems found on letter and A4-sized media in portrait orientation.

Additional defect information is found in the following sections:

- Repetitive defects troubleshooting ([see page 194](#))
- Image defects troubleshooting ([see page 196](#))
- Overhead transparency defects ([see page 207](#))

Repetitive image defects

Repetitive defects are defects that occur on the page. Most repetitive defects are caused by problems with one of the following:

- Developer roller
- Charge roller
- Cleaning roller
- Transfer roller
- Fuser
- Imaging drum
- Transfer belt

CAUTION

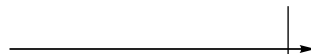
Do not expose the imaging drum to light, and be careful not to scratch or get fingerprints on the drum surface during cleaning. Do not blow on the imaging drum.

Image defect ruler

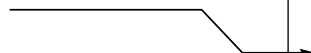
The image defect ruler is a tool that can be used to find the printer component that is causing a repeating image defect. To use the image defect ruler, print it on a transparency, Then place the ruler over the printed page containing the image defect.

Image defect ruler

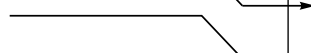
First occurrence of print defect



Color toner cartridge 30 mm (1.2 in)



Black toner cartridge 37 mm (1.5 in)



Transfer belt 40 mm (1.6 in)



Transfer roller 53 mm (2.1 in)



Fuser 131 mm (5.2 in)








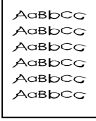


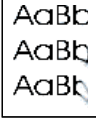

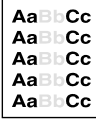
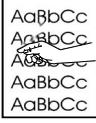


Imaging drum 152 mm (6 in)



Image defects

For more information on a specific image defect, see the page numbers below each image in the table below.

Image defect table

 <p>Background scatter (see page 197)</p>	 <p>Banding and horizontal lines (see page 197)</p>	 <p>Black lines (see page 198)</p>	 <p>Blank page(s or missing color) (see page 199)</p>
 <p>Character voids (see page 199)</p>	 <p>Distorted image (see page 200)</p>	 <p>Dropouts (see page 200)</p>	 <p>Faded print, random faded areas (see page 201)</p>
 <p>Toner smear (see page 202)</p>	<p>No image available</p> <p>Ghosting (see page 203)</p>	<p>No image available</p> <p>Gray streaks (see page 203)</p>	 <p>Irregular raised spots or stray toner (see page 203)</p>
 <p>Light, dark, faded print (see page 204)</p>	 <p>Non-adhering toner (see page 204)</p>	<p>No image available</p> <p>Marbled output (see page 205)</p>	 <p>Random black spots (see page 205)</p>
<p>No image available</p> <p>Sharkskin (see page 205)</p>	<p>No image available</p> <p>Sunburn (see page 205)</p>	 <p>Imaging drum defects (see page 206)</p>	

Background scatter



- The media does not meet HP specifications. Use media that meets HP specifications ([see page 67](#)).
- The toner cartridge is defective, replace the toner cartridge.
- There is excess toner inside of the printer. Clean the printer ([see page 148](#)).
- The transfer roller is dirty or worn.

Banding and horizontal lines

Banding occurs when solid fill areas show streaks or bands of shade variations. This can be caused by:



- Consumables that are beyond their life.
- Improper consumable storage.

If the problem persists:

- Print a configuration page to check the life of the consumables. Replace any consumable that is past its rated life.
- Banding is more visible in some halftone patterns than others. If the defect occurs only once on a letter- or A4-size sheet, try printing the pattern on a legal- or A3-size sheet.
- Observe the following from the test sample:
 - Check to see if the defect spans all color planes.
 - If the defect is in all color planes, does the defect produce a straight line through all color planes, or does it move from one color plane to the next?
 - If the defect moves from one color plane to the next, measure the amount it moves. This movement amount is called the “procession.” Keep in mind the print order is K-M-C-Y. Measure the procession from K to M or M to C, not K to C.

CAUTION

Do not expose the imaging drum to light for more than 15 seconds. The drum is light sensitive, and exposure to light can cause permanent damage.

Banding — horizontal

No image available

- The imaging drum may have been exposed to light, and will need to be replaced.
- The transfer belt may accumulate excess toner on its rollers causing a random mechanical banding. If you notice buildup on the rollers, replace the transfer kit.

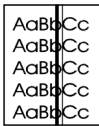
Banding — vertical

No image available

The blade on the toner cartridge can develop notches over time. If you observe severe notching, replace the toner cartridge.

As the imaging drum gets older, the charge roller doesn't charge the imaging drum as well as it used to. If you notice buildup or contamination on the charge roller, replace the imaging drum.

Black lines



- The toner cartridge is defective, and should be replaced.
- The toner cartridge is not installed properly. Reinstall the toner cartridge.
- The fusing assembly is contaminated or damaged. Replace the fuser kit.
- The imaging drum is damaged or the waste toner collection in the drum is full. Replace the imaging drum.

Blank pages or missing a color



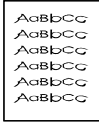
- Your software application is sending an extra page-eject command.
 - Verify that a separator page is not enabled in the printer driver by accessing the driver properties.
 - Check to verify that an extra page has not been inserted within the document.
- There is a problem with the network configuration. Some sharing devices on networks may generate a blank page as a separator.
 - Check with the network administrator.
- The printer may be feeding two or more pages at once because the paper is difficult to separate.
- The sealing tape has been left in the toner cartridge. Remove the sealing tape from the toner cartridge color that is missing from the printed image.
- The toner cartridge is empty or defective. Replace the toner cartridge color that is missing from the printed image.

Character voids



- Use paper that meets HP paper specifications ([see page 67](#)).
 - The surface of the media is too rough or the media's surface is too smooth for proper toner adhesion.
 - The media you are using is too heavy for the printer, and the toner is not fusing to the media.
 - Printing is on the wrong side of the paper.
 - The transparencies are not designed for proper toner adhesion. Only use transparencies designed for HP Color LaserJet printers.
 - The humidity content of your media is too high or too low. Try a freshly opened ream or try a different type of paper.

Distorted image



- The paper does not meet HP paper specifications or is stored improperly ([see page 67](#)).
- The printer operating environment does not meet HP specifications ([see page 235](#)).

Dropouts

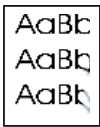


- The paper does not meet HP paper specifications ([see page 67](#)).
- The printer's operating environment does not meet specifications ([see page 235](#)).
- The print density is set incorrectly. Change to a darker setting and retry printing.
- The humidity content of your media is too high or too low. Try a freshly opened ream or try a different type of paper.

Faded print, faded areas, or faded vertical streaks



- The message TRANSFER KIT LOW ORDER KIT appears on the printer control panel. Print out a configuration page to verify the remaining life of the transfer belt. Replace the transfer belt if necessary.
- The moisture content of your paper is uneven or too low. Use paper from a different source or from an unopened ream of paper.
- Some areas of the paper reject toner. Use paper from a different source or from an unopened ream of paper.
- Your paper is excessively rough. Use a smoother, xerographic paper.
- The letterhead you are using is printed on rough paper. Use a smoother, xerographic paper. If this solves your problem, consult with the printer of your letterhead to verify that the paper used meets the specifications for this printer ([see page 67](#)).
- Media does not meet the specifications for this printer ([see page 67](#)).
- The printer is operating in excessively humid or dry conditions. Verify that the printing environment is within humidity specifications ([see page 235](#)).
- If a TONER LOW or TONER OUT message is displayed on the printer control panel, replace the appropriate toner cartridge. If the problem persists, call for service.
- Excess toner may have been deposited on the transfer belt. Use a lint-free cloth to clean any excess toner from the transfer belt surface.
- The cap on the ITB lift mechanism might be missing.



Toner smear

- There is excess toner on the paper. Reprint the page.
- The fusing rollers have excess toner on them. Print 5 to 10 pages to clean the excess toner from the rollers.
- The media does not meet HP specifications ([see page 67](#)). Use media that meets HP media specifications.
- The toner cartridge is defective. Replace the toner cartridge for the color that is smearing.
- The fusing assembly is defective. Replace the fuser kit.
- There is excess toner in the printer. Print 5 to 10 pages to clear the excess toner, and clean the printer ([see page 148](#)).
- The transfer roller is not seated correctly. Remove and reseal the transfer roller.
- A label or a piece of paper may be stuck to the transfer belt or a roller on the transfer belt. Remove the label or piece of paper.

Ghosting

Full-page ghosting occurs when an image prints in full color on one page, but a faded copy of it is also seen on the following page.

No image available

- Replace the transfer kit.
- If the imaging drum is near end of life, replace it.
- If the toner cartridge is near end of life, replace it.
- The media you are using is not within specifications. Try a different type of paper.

Gray streaks

No image available

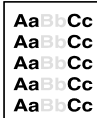
- The paper does not meet HP paper specifications or is stored improperly.
- The printer operating environment does not meet specifications.
- The toner cartridge is defective. Replace the black toner cartridge.
- There is excess toner inside of the printer. Clean the printer ([see page 148](#)).
- The imaging drum is defective or at the end of its life. Replace the drum kit.

Irregular, raised streaks

To diagnose this print quality problem, lay the printed page on a hard smooth surface, and feel the streaks of toner. The spots or streaks will not look raised, but will feel raised to the touch.



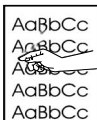
- Make sure that all media is cleared from the paper path ([see page 176](#)).
- The fuser roller is damaged. Replace the fuser kit.
- If one toner color is streaking, that toner cartridge has been damaged. Replace the toner cartridge for the streaking color.
- The paper does not meet HP paper specifications ([see page 67](#)). Use media that meets HP media specifications.



Light, dark, or faded print

- The message `TRANSFER KIT LOW REPLACE TRANSFER KIT` appears on the printer control panel. Print out a configuration page ([see page 49](#)) to verify the remaining life of the transfer belt. Replace the transfer belt if necessary.
- The moisture content of your paper is uneven or too low. Use paper from a different source or from an unopened ream of paper.
- Some areas of the paper reject toner. Use paper from a different source or from an unopened ream of paper.
- Your paper is excessively rough. Use a smoother, xerographic paper.
- The letterhead you are using is printed on rough paper. Try a smooth xerographic paper. If this solves your problem, consult with the printer of your letterhead to verify that the paper used meets the specifications for this printer ([see page 67](#)).
- Media does not meet the specifications for this printer. Only use media that meets the media specifications for this printer ([see page 67](#)).
- The printer is operating in excessively humid or dry conditions. Verify that the printing environment is within humidity specifications ([see page 235](#)).
- If a `TONER LOW` or `TONER OUT` message is displayed on the printer control panel, replace the appropriate toner cartridge. If the problem persists, call for service.
- Excess toner may have been deposited on the transfer belt. Use a lint-free cloth to clean any excess toner from the transfer belt surface.

Non-adhering toner



- There is excess toner in the printer. Clean the printer ([see page 148](#)).
- The toner cartridge is defective. Replace the toner cartridge color that is not adhering to the media.
- The paper is too smooth. Use media that meets HP media specifications ([see page 67](#)).
- The driver setting is set incorrectly. Change the paper type setting to heavy or glossy.
- The fuser is defective. Replace the fuser kit.

Marbled output

No image available

- Print a configuration page ([see page 49](#)), and refer to the color blocks at the bottom of the page. Replace the toner cartridge of the color or colors that are marbled.

Random spots

- The media does not meet HP media specifications ([see page 67](#)). Use paper that meets HP media specifications.
- The printer requires cleaning ([see page 148](#)).
- If the random spots are one color, replace the toner cartridge for that color. If the random spots are multiple colors, replace the drum kit.



Sharkskin

Images with sharkskin have a rough, mottled finish.

- Use media that meets HP media specifications ([see page 67](#)).
- Make sure the humidity and temperature are within specifications ([see page 235](#)).
- Do not use automatic duplex mode. Duplex manually or not at all.

No image available

Sunburn

The imaging drum might have been exposed to light. Characteristics of sunburn are streaked or blurred lines across the length of the page (side-to-side on portrait, or top-to-bottom on landscape).

- Print 50 to 100 pages on the imaging drum to remove the sunburn.
- If sunburn characteristics are still occurring, allow the imaging drum to sit in a dark place for two to three days.
- If sunburn is severe (the characteristics don't go away), replace the imaging drum.

No image available

CAUTION

Do not expose the imaging drum to light for more than 15 seconds. The drum is light sensitive, and exposure to light can cause permanent damage.

Imaging drum defects

Causes:



- Damage such as scratches or dents on the imaging drum. These usually appear as black or white marks on the page.
- Paper dust adhering to the imaging drum. These usually appear as white marks in the dark printed areas of the page.
- Exposure of portions of the imaging drum to light. This causes light sections in the printed output. The life of the imaging drum is shortened by exposure to light.

Actions:

- Print at least four configuration pages to determine if the defect repeats in the same horizontal orientation.
- Inspect the imaging drum for scratches, dents, or other damage. Replace if needed.
- If the problem is dust, remove the dust with isopropyl alcohol applied with a lint-free, static-free wipe. Try this only if the print defect is unacceptable and the only other alternative is replacing the imaging drum.
- Defects caused by exposure to light might clear up over time. If severe, replace the imaging drum.

Overhead transparency defects

Overhead transparencies may display any of the image quality defects shown in the previous samples. In addition, because transparencies are pliable while in the print path, they are subject to being marked by the media-handling components.

Note

Allow transparencies to cool at least 30 seconds before handling them.

- Make sure that “transparency” is checked as the media type in the Paper Tab in the printer driver. Also, make sure that the media input tray is correctly configured for transparencies. When Transparency is selected as the media type and ColorSmart II is selected on the Color tab, the printer will use a color treatment optimized for projection.
- If transparencies show lines and creases in the media and/or the printed output, compare the defect against the repetitive defect ruler ([page 195](#)) to help isolate the cause to a particular component.
- Check that the transparencies meet the specifications listed in the *HP LaserJet Family Paper Specification Guide*.

WWW

See [Appendix D](#) or <http://www.hp.com/support/lj4550> for *HP LaserJet Family Paper Specification Guide* ordering information.

For downloadable manuals, go to <http://www.hp.com/support/lj4550>. When you connect, select **Manuals**.

- If the transparencies have spots or smudges, reprint them being careful not to touch the surface of the media. Skin oils can contaminate transparencies, causing spots and smudges.
- Small random dark areas on the trailing edge of solid fill pages may be caused by transparencies sticking together in the face up bin. Try printing the job in smaller batches.
- Send transparencies only to the face-down output bin.

Transparencies created on the printer may look rough, but they can still be used successfully on reflective-type (portable) transparency projectors.

Dull or dark transparencies



- If the transparency colors are dull or dark, ensure the transparencies meet the specifications for this printer (part number C2934A for letter, and C2936A for A4).
- The selected colors are undesirable when printed. Select different colors in your software application or printer driver.
- Spots and smudges appear in the background areas of transparencies when they are projected. Oil from your hands can cause spots or smudges on transparencies. Reprint the transparencies, being careful not to touch the surface of the transparencies.
- You are using a reflective overhead projector. Use a standard overhead projector.

Rippled or wavy transparencies

No image available

You are using transparencies that do not meet the specifications for this printer. Use only transparencies that meet the media specifications for this printer ([see page 67](#)).

Incorrect image on transparencies

No image available

This might occur even though the correct media is loaded in the correct tray. Toner might not adhere to the media and an image might show up on pages where it isn't meant to appear. For more information see [“Ghosting” on page 203](#).

Repetitive defects on transparencies



- Unwanted marks of the same size and shape appear in the same vertical area on most pages. Print out a configuration page to verify the remaining life of the imaging drum. If the printer control panel displays `DRUM LIFE OUT REPLACE KIT`, replace the imaging drum.
- Unwanted marks of the same size and shape appear more than once in the same vertical area on transparencies or glossy media only. The fuser roller is damaged or the fuser is beyond its useful life. Print out a configuration page to verify the remaining life of the fuser. If the printer control panel displays `FUSER LIFE OUT REPLACE KIT`, replace the fuser.
- Repetitive defects appear only in one color. Check the corresponding toner cartridge.

Streaking or smudges on transparencies



- The printer recently jammed. Print 5 to 10 pages to clean the printer.
- You recently changed to a different media size. Print 5 to 10 pages to clean the printer.
- You are using transparencies that do not meet the media specifications for this printer. Use only transparencies that meet the media specifications for this printer ([see page 67](#)).
- The imaging drum has exceeded its useful life. Print out a configuration page to verify the remaining life of the imaging drum. If the printer control panel displays `DRUM LIFE OUT REPLACE KIT`, replace the imaging drum.

Color printing problems

Printing black instead of color

Problem	Solution
Color mode is not selected in your software application or printer driver.	Select color mode instead of grayscale or monochrome mode in your software application or printer driver.
The correct printer driver is not selected in your software application.	Select the correct printer driver.
The printer is not properly configured.	Verify the printer configuration by printing a configuration page.
No color appears on the configuration page.	Consult your service representative.

Missing color or incorrect shade

Problem	Solution
Your media does not meet the specifications for this printer.	<p>See the <i>HP LaserJet Printer Family Paper Specification Guide</i>.</p> <p>See Appendix D or http://www.hp.com/support/lj4550 for <i>HP LaserJet Family Paper Specification Guide</i> ordering information.</p> <p>For downloadable manuals, go to http://www.hp.com/support/lj4550. When you connect, select Manuals.</p>
You are operating the printer in excessively humid conditions.	Verify that the printer's environment is within humidity specifications.
The toner density sensor may need cleaning.	Clean the toner density sensor (see " Cleaning the toner density sensor " on page 149).

Inconsistent colors after loading toner

Problem	Solution
Another toner color may be low.	Check the printer control panel for a TONER LOW message and replace the toner cartridge if necessary.
Toner cartridges may be improperly installed.	Verify that each toner cartridge is installed properly.

Printed colors do not match screen colors

Problem	Solution
Extremely light screen colors are not being printed.	Your software application may interpret extremely light colors as white. If so, avoid using extremely light colors.
Extremely dark screen colors are being printed in black.	Your software application may interpret extremely dark colors as black. If so, avoid using extremely dark colors.
The colors on your computer monitor differ from the printer output.	Try selecting Screen Match in the color control tab of your printer driver.
The toner density sensor may need cleaning.	See "Cleaning the toner density sensor" on page 149 .

Note

Several factors can influence your ability to match printed colors to those on your monitor. These factors include print media, overhead lighting, software applications, operating system palettes, monitors, and video cards and drivers.

Incorrect printer output

Incorrect fonts are printed

Problem	Solution
The font has not been correctly selected in your software application.	Re-select the font in your software application.
The font is not available to the printer.	Download the font to the printer or use another font. (In Windows, the driver does this automatically.)
The correct printer driver is not selected.	Select the correct printer driver.

Unable to print all characters in a symbol set

Problem	Solution
The correct font is not selected.	Select the correct font.
The correct symbol set is not selected.	Select the correct symbol set.
The selected character is not supported by your software application.	See the documentation for your software application.
The selected symbol is not supported by the font.	Use a font that supports the selected symbol.

Drifting text between printouts

Problem	Solution
Your software application is not resetting the printer to the top of the page.	See the user guide for your software application or the <i>PCL/PJL Technical Reference Package</i> for specific information. (See page 32 for ordering information.)

Erratic, missing characters or interrupted printout

Problem	Solution
The interface cable is of poor quality.	Try using a different, higher-quality, IEEE-compliant cable. Parallel cables can be no longer than 10 meters (30 feet).
The interface cable is loose.	Disconnect and reconnect the interface cable.
The interface cable is damaged or bad.	Try using a different interface cable.
The power cable is loose.	Disconnect and reconnect the power cable.
You are attempting to print a PCL job with the printer configured for PostScript Emulation.	From the printer control panel, select the correct printer personality and then resend the print job.
You are attempting to print a PostScript job with the printer configured for PCL.	From the printer control panel, select the correct printer personality and then resend the print job.

Partial printout

Problem	Solution
A memory error message appears on the printer control panel.	1) Free up printer memory by deleting unneeded downloaded fonts, style sheets, and macros from printer memory; or 2) Add more memory to the printer.
The file you are printing contain errors.	Check your software application to verify that the file does not contain errors. To do so: 1) Print another file that you know is error-free from within the same application; or 2) Print the file from another application.

Software application problems

Unable to change system selections through software

Cause	Solution
System software changes are locked out by the printer control panel.	See Chapter 6 "Printer Interfaces" . Consult with your network administrator.
Your software application does not support system changes.	See the documentation for your software application.
The correct printer driver is not loaded.	Load the correct printer driver.
The correct application driver is not loaded.	Load the correct application driver.

Unable to select a font from the software

Cause	Solution
The font is not available in your software application.	See the documentation for your software application.

Unable to select colors from the software

Cause	Solution
Your software application does not support color.	See the documentation for your software application.
Color mode is not selected in your software application or printer driver.	Select color mode instead of grayscale or monochrome mode.
The correct printer driver is not loaded.	Load the correct printer driver.

Printer driver does not recognize Tray 3 or the Duplex Printing Accessory

Cause	Solution
The printer driver has not been configured to recognize Tray 3 or the duplex printing accessory.	See the online Help for the printer driver for instructions on how to configure the driver to recognize printer accessories.
The accessory may not be installed.	Verify that the accessory is properly installed.

A

DIMM Installation

Overview

The printer is designed for easy installation of additional memory. This chapter provides information on installing memory.

DIMM configuration

This printer supports up to 192 MB of memory. You can add additional Random Access Memory (RAM) to this printer by installing Dual Inline Memory Modules (DIMMs). The printer uses 168-pin, non-parity, synchronous DRAM memory modules. Extended Data Output (EDO) DIMMs are not supported.

You can install 64 or 128 MB DIMMs into either of the printer's available 168-pin DIMM slots.

CAUTION

Do not attempt to remove the DIMM in slot #1 (see [figure A-1](#)). The DIMM in slot #1 is part of the printer's firmware. Removing it will affect printer operation.

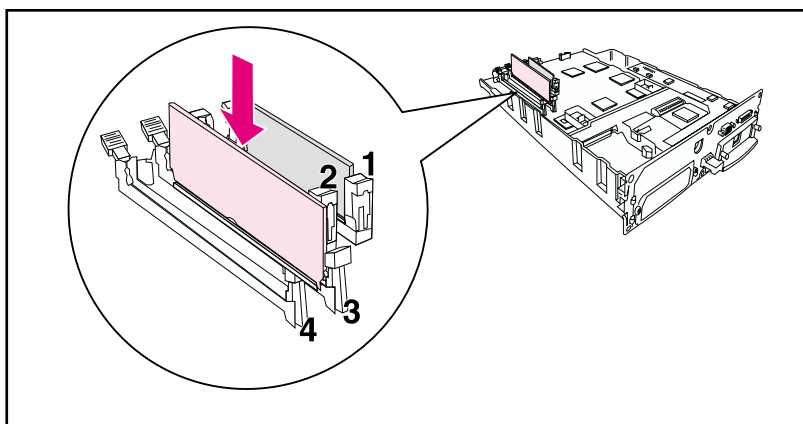
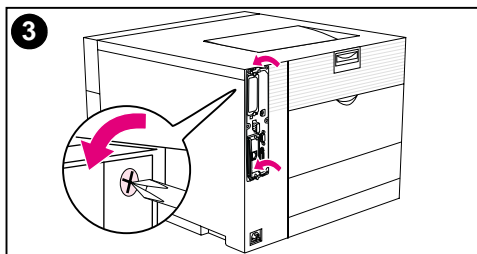
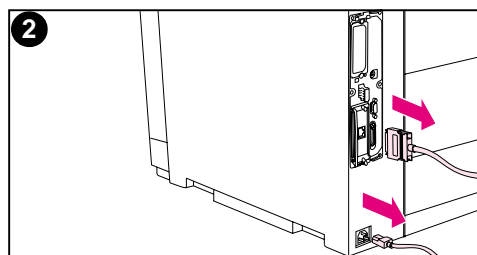
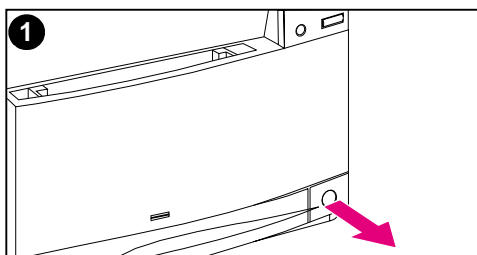
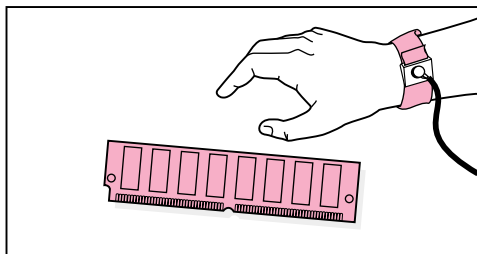


Figure A-1 Do not remove the DIMM in slot #1.

Installing DIMMs



To install a DIMM

CAUTION

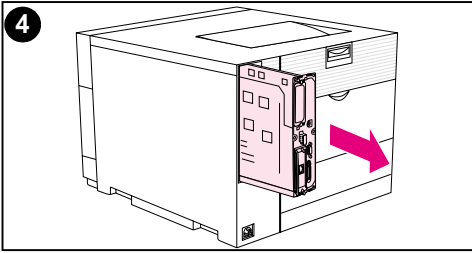
To reduce the possibility of damage caused by static electricity, always wear an electrostatic discharge (ESD) wrist strap or touch the surface of the antistatic package before handling DIMMs. When handling the formatter board, wear an antistatic wrist strap or frequently touch bare metal on the printer.

- 1 Turn the printer off and wait for the fans to stop. This will take a few minutes.

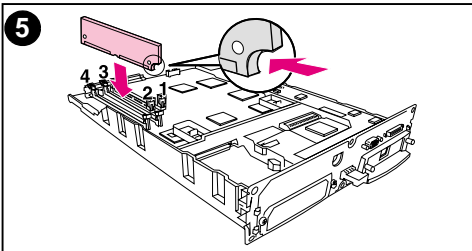
CAUTION

Wait for the printer's fans to turn off before unplugging the printer.

- 2 Disconnect all power and interface cables.
- 3 Locate the formatter board in the upper-left corner of the rear of the printer and loosen the six screws.



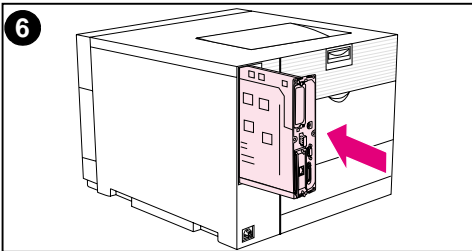
4 Slide out the formatter board and set it on a clean, flat, grounded surface.



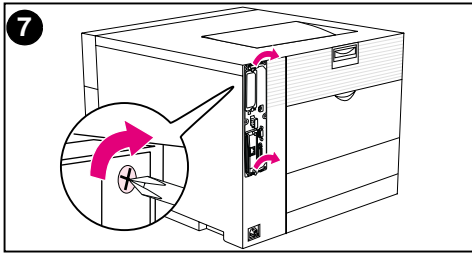
5 Align the connectors on the DIMM with the notches in the DIMM slot. Insert the DIMM into the slot and then firmly push the DIMM lift locking levers into position.

Note

Repeat step 5 for each DIMM you are installing.



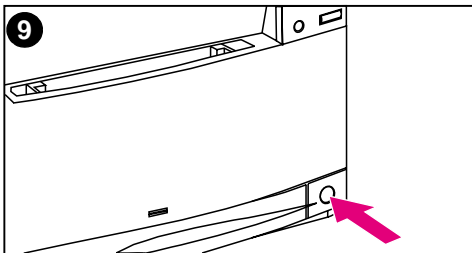
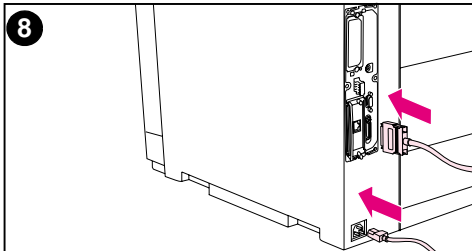
6 Insert the formatter board into the printer.



7 Tighten the screws.

8 Reconnect the power and interface cables.

9 Turn the power on. The printer automatically updates the memory configuration to include the newly installed DIMMs.



Verifying DIMM installation

To verify that the DIMM installation was successful, print out a configuration page (see [Chapter 2](#)). If the DIMM has been installed properly, the figure in the Memory section of the configuration page will reflect the new total amount of memory. If the DIMM contains resources such as fonts or macros, those will be displayed on the printer's test pages.

If the printer control panel displays an error message, see [Chapter 8](#) for descriptions of printer control panel messages.

Resource saving/permanent resources

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

Use the following guidelines if you make use of the PDL (page description language) ability to mark resources as permanent. For technical details, see an appropriate PDL reference for PCL or PS.

- Mark resources as permanent only when it is absolutely necessary that they remain in memory while the printer's power is turned on.
- Send permanent resources to the printer only at the beginning of a print job and not while the printer is printing.

Note

Overusing permanent resources or downloading them while the printer is printing might decrease the printer's performance or its ability to print complex pages.

Installing EIO cards/mass storage

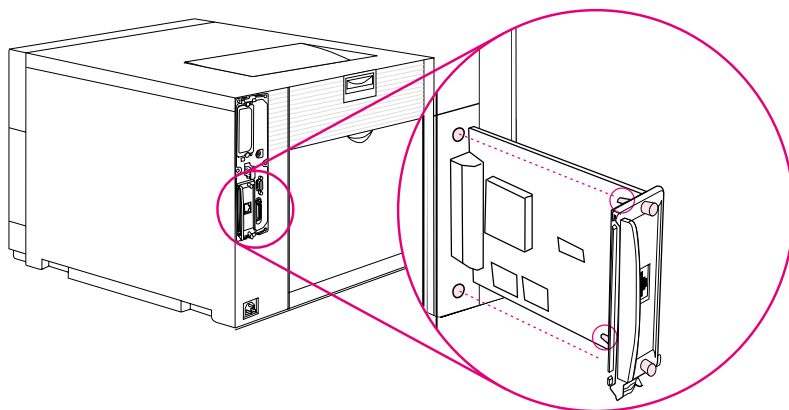
Turn off the printer before installing the EIO card or mass storage device.

See the following figure for orientation and location of the EIO card or optional mass storage device, such as a hard disk.

Use HP Resource Manager to manage fonts on a mass storage device ([page 27](#)). For more information, see the printer software help.

HP is constantly introducing new software tools for use with your printer. These tools are available from the Internet free of charge. See [page 12](#) for how to visit the HP website for more information.

After you have installed a new device, print a configuration page (see [page 49](#)).



B

PCL commands

Overview

This printer supports the use of the Printer Control Language (PCL). Most software applications provide the printer with necessary language information. However, some applications do not provide the printer with language information and require the user to enter printer commands. See your software application documentation for instructions on entering printer commands.

This appendix is not intended to provide comprehensive information about PCL commands. Rather, it provides a quick reference for users who are already familiar with the PCL command structure.

WWW

For more information, see the *PCL/PJL Technical Reference Package*. See [page 32](#) for ordering information or visit <http://www.hp.com/support/lj4550>.

PCL commands

PCL printer commands instruct the printer which tasks to perform or which fonts to use for specific print jobs.

PJL commands

The HP Printer Job Language (PJP) provides control above PCL and other printer languages. The four major functions provided by PJP are:

- printer language switching
- job separation
- printer configuration
- status feedback from the host

PJP commands can be used to change printer default settings.

Interpreting PCL printer command syntax

Before using printer commands, compare the following characters:

Lowercase L:	<i>ℓ</i>	Uppercase O:	O
Number one:	1	Number zero:	Ø

Note

You must use the exact character and case specified for PCL printer commands.

Many printer commands use the lowercase letter L (*ℓ*) and the number one (1), or the uppercase letter O (O) and the number zero (Ø). These characters may not appear on your screen as shown here.

Figure B-1 shows the elements of a typical printer command (in this example, a command for page orientation).

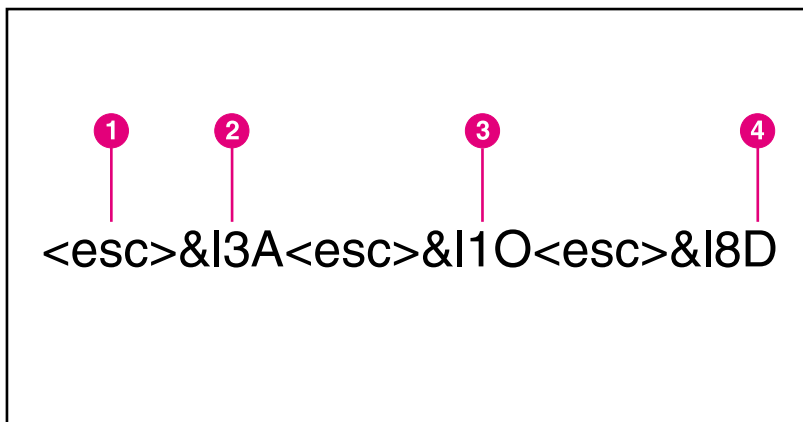


Figure B-1

Printer command elements

- 1 Escape character (begins the escape sequence)
- 2 Value field (contains both alpha and numeric characters)
- 3 Category of command
- 4 Uppercase letter (terminates the escape sequence)

Combining escape sequences in PCL Printer command syntax

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

- The first two characters after the <esc> character must be the same.
- When combining sequences, change the uppercase (termination) character in each individual escape sequence to lowercase.
- The final character of the escape sequence must be in uppercase.

The following escape sequence would be sent to the printer to select legal paper, landscape orientation, and eight lines per inch:

```
<esc>&l3A<esc>&l1O<esc>&l8D
```

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

```
<esc>&l3a1o8D
```

Entering escape characters

Note

PCL printer commands always begin with the escape character (<esc>).

The following table lists the escape character entries for various applications.

Application	Escape Character Entry	What Appears
Lotus 1-2-3 and Symphony	Type \027	027
Microsoft Word for DOS	Hold down ALT and type 027	<—
WordPerfect for DOS	Type <27>	<27>
MS-DOS Editor	Hold down CTRL-P then Esc	<—
MS-DOS Edlin	Hold down CTRL-V then [^[
dBase	?? CHR(27)+“command”	?? CHR(27)+“ ”
UNIX VI Editor	Hold down CTRL-V then Esc	^[

Selecting PCL fonts

The printer font list provides PCL printer commands for selecting fonts. (See [“Printing a list of available printer fonts” on page 121.](#)) A sample section of a font list is shown below.

There is one variable box for entering symbol sets and one for entering point size. Unless these variables are entered, 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 “Common PCL Printer Commands” section of this chapter.

Font	Size	Symbol	Symbol	Symbol	Symbol	Symbol	Symbol
10-Courier	10	need	100	100	100	100	100
10-Courier BOLD	10	need	100	100	100	100	100
10-Courier BIOL	10	need	100	100	100	100	100
10-Courier 360 Font	10	need	100	100	100	100	100
10-Courier	10	need	100	100	100	100	100
10-Courier 500	10	need	100	100	100	100	100
10-Courier 400	10	need	100	100	100	100	100
10-Courier 240	10	need	100	100	100	100	100

Figure B-2 Font list

- 1 Symbol set
- 2 Point size

Note

Fonts are either fixed or proportional in spacing. This printer supports fixed fonts (Courier, Letter Gothic, and Lineprinter) and proportional fonts, including CG Times, Arial®, and Times New Roman.

Fixed-space fonts are best 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 word processing applications.

Common PCL commands

The following table lists the most common PCL commands.

PCL Commands

Function	Command	Option(s)
Job Control Commands		
Reset	<esc> E	n/a
Number of Copies	<esc> &l#X	1 to 999
Duplex/Simplex	<esc> &l#S	0 = Simplex (single-sided) printing 1 = Duplex (two-sided) with long-edge binding 2 = Duplex (two-sided) with short-edge binding

PCL Commands (continued)

Function	Command	Option(s)
Page Control Commands		
Paper Destination	<esc> &l#G	0 = Automatic Selector 1 = Top Output Bin (face-down) 2 = Rear Output Bin (face-up)
Paper Source	<esc> &l#H	0 = Prints or ejects current page 1 = Tray 2 4 = Tray 1 5 = Tray 3 (500-sheet paper feeder)
Paper Size	<esc> &l#A	1 = Executive 2 = Letter 3 = Legal 25 = A5 26 = A4 100 = B5 101 = Custom 80 = Monarch 81 = Commercial 10 90 = DL 91 = International CS
Paper Type	<esc> &n#	5WdBond = Bond 6WdPlain = Plain 6WdColor = Color 7WdLabels = Labels 9WdRecycled = Recycled 10WdCardstock = Cardstock 11WdLetterhead = Letterhead 11WdPrepunched = Prepunched 11WdPreprinted = Preprinted 13WdTransparency = Transparency #WdCustompapertype = Custom 7WdRough = Rough 6WdVellum = Vellum 6WdHeavy = Heavy 6WdGloss = Gloss 8WdDefault = Default

PCL Commands (continued)

Function	Command	Option(s)
Orientation	<esc> &l#O	0 = Portrait 1 = Landscape 2 = Reverse Portrait 3 = Reverse Landscape
Top Margin	<esc> &l#E	# = Number of lines
Text Length (bottom margin)	<esc> &l#F	# = Number of lines from top margin
Left Margin	<esc> &a#L	# = Column number
Right Margin	<esc> &a#M	# = Column number from left margin
Horizontal Motion Index	<esc> &k#H	1/120 inch increments (compresses print horizontally)
Vertical Motion Index	<esc> &l#C	1/48 inch increments (compresses print vertically)
Line Spacing	<esc> &l#D	# = lines per inch (1, 2, 3, 4, 5, 6, 12, 16, 24, 48)
Perforation Skip	<esc> &l#L	D = Disable 1 = Enable
Cursor Positioning		
Vertical Position (Rows)	<esc> &a#R	# = Row number
Vertical Position (Dots)	<esc> *p#Y	# = Dot number (300 dots = 1 inch)
Vertical Position (Decipoints)	<esc> &a#V	# = Decipoint number (720 decipoints = 1 inch)
Horizontal Position (Columns)	<esc> &a#C	# = Column number
Horizontal Position (Dots)	<esc> *p#X	# = Dot number (300 dots = 1 inch)
Horizontal Position (Decipoints)	<esc> &a#H	# = Decipoint number (720 decipoints = 1 inch)

PCL Commands (continued)

Function	Command	Option(s)
Programming Hints		
End of Line Wrap	<esc> &s#C	0 = Enable 1 = Disable
Vector Graphics Switching		
Enter PCL Mode	<esc> %#A	0 = Use previous PCL cursor position 1 = Use current HP-GL/2 pen position
Enter HP-GL/2 Mode	<esc> %#B	0 = Use previous HP-GL/2 pen position 1 = Use current PCL cursor position
Font Selection		
Symbol Sets	<esc> (#U etc.	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	<esc> (s#P	0 = Fixed 1 = Proportional

PCL Commands (continued)

Function	Command	Option(s)
Primary Pitch	<esc> (s#H	# = Characters/Inch
Set Pitch Mode	<esc> &k#S	0 = 10 4 = 12 (elite) 2 = 16.5 - 16.7 (compressed)
Primary Height	<esc> (s#V	# = Points
Primary Style ¹	<esc> (s#S	0 = Upright (solid) 1 = Italic 4 = Condensed 5 = Condensed Italic
Primary Stroke Weight ¹	<esc> (s#B	0 = Medium (book or text) 1 = Semi-bold 3 = Bold 4 = Extra Bold
Color Text	<esc> *r3U <esc> *v#S (*r3U - selects RGB palette, *v#S - selects foreground color)	0 = Black 1 = Red 2 = Green 3 = Yellow 4 = Blue 5 = Magenta 6 = Cyan
Typeface ¹	<esc> (s#T	Print the font list to find the command for each internal font.
¹ Order the <i>PCL/PJL Technical Reference Package</i> if you require symbol sets or want additional information.		



Specifications

Electrical specifications

	110-Volt Models	220-Volt Models
Power Requirements	100-127V (+/- 10%) 50/60 Hz (+/- 2 Hz)	220-240V (+/- 10%) 50/60 Hz (+/- 2 Hz)
Minimum recommended circuit capacity for typical product	10.2 Amps at 120V	5.1 Amps at 220V
Average power consumption (Watts)		
During printing	470 W	480 W
During standby	80 W	90 W
PowerSave Time mode	28 W	28 W
Off	0 W	0 W

Note PowerSave default activation time is 30 minutes.

This information is preliminary. See <http://www.hp.com/support/lj4550> for current information.

Operating environment specifications

Temperature Recommended Allowed	20 to 26° C/68 to 79° F 15 to 30° C/59 to 86° F
Humidity Recommended Allowed	20 to 50% RH 10 to 80% RH
Altitude Allowed	0 to 3100 m (0 to 10,000 ft)

Acoustic emissions

Operation Position Printing Standby	Per ISO 9296, DIN 45635, T.19 L _{PA} 56 dB(A) L _{PA} 48 dB(A)
Bystander 1m Printing Standby	Per ISO 7779, DIN 45635, T.19 L _{PA} 52 dB(A) L _{PA} 44 dB(A)
Sound Power Printing Standby	Per ISO 9296 L _{WAD} =6.7 bels(A) L _{WAD} =6.0 bels(A)

Environmental product stewardship program

Protecting the environment

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

This HP LaserJet printer design eliminates:

- **Ozone Emissions**—This product has been designed to minimize ozone emissions and avoid the need for an ozone filter.
- **CFC Usage**—Class I U.S. Clean Air Act stratospheric ozone-depleting chemicals (chlorofluorocarbons [CFCs], for example) have been eliminated from the manufacturing sites that produce this printer. This practice coincides with the 1987 “Montreal Protocol on Substances that Deplete the Ozone Layer” and its subsequent amendments. CFCs are not used in manufacturing of the packaging.

This HP LaserJet printer design reduces:

- **Energy Consumption**—Energy usage drops significantly from printing mode to PowerSave mode.
- **Paper Use**—The printer’s optional duplex printing accessory provides two-sided printing, reducing paper usage and the resulting demands on natural resources.

The design of this HP LaserJet printer facilitates the recycling of:

- **Plastics**—Major plastic parts have markings that enhance the ability to identify plastics for recycling purposes at the end of the printer’s life.
- **HP Toner Cartridges/Photoconductive Drum**—In many countries, this product’s toner cartridge/drum can be returned to HP at the end of its useful life. A prepaid shipping label and instructions on how to return the toner cartridge/drum are included with the replacement toner cartridge/drum. If your country is not listed in the replacement’s brochure, call your local HP Sales and Service Office for further instructions.

HP recycling program information:

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

- **HP LaserJet printing supplies**—In many countries, this product's printing supplies (e.g., toner cartridge, drum, fuser) can be returned to HP through the HP Planet Partners Printing Supplies Environmental Program. An easy-to-use takeback component of the program is available in over 25 countries. Multilingual program information and instructions are included in every new HP LaserJet Toner Cartridge and Consumables box.
- **HP Planet Partners printing supplies environmental program**—Since 1990, the HP LaserJet Toner Cartridge Recycling Program has collected more than 39 million used LaserJet toner cartridges that otherwise might have been discarded in the world's landfills. The HP LaserJet toner 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.
- **U.S. Recycling Returns**—For a more environmentally responsible return of used cartridges and consumables, HP encourages the use of bulk returns. Simply bundle two or more cartridges together and use a single, prepaid, and pre-addressed UPS label that is supplied in the package.

WWW

For more information, call (800) 340-2445 (U.S. only) or visit the HP LaserJet Supplies website at http://www.hp.com/ljsupplies/planet_index.html.

- **Non-U.S. Recycling Returns**—Non-U.S. customers should call the local HP Sales and Service Office for further information regarding availability of the HP Planet Partners LaserJet Toner Cartridge and Consumables Recycling Program.
- **Paper**—This printer is suited for the use of recycled papers (according to DIN 19 309) when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Paper Specification Guide*.

See [Appendix D](#) for *HP LaserJet Family Paper Specification Guide* ordering information.

For downloadable manuals, go to <http://www.hp.com/support/lj4550>. When you connect, select **Manuals**.

The user guide is provided on CD-ROM, which allows the same high-quality information to be provided without consuming the large quantities of energy and natural resources required to produce traditional paper manuals.

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. HP SupportPack must be purchased by the customer within 90 days of the HP product purchase.

Information on HP SupportPack is available on the Web at <http://www.hp.com/> under the HP Services and Support section. International customers can contact the nearest HP-authorized reseller about this service.

- **Spare Parts and Consumables Availability**—Spare parts and consumable supplies for this product will be made available for at least five years after production has stopped.

Regulatory statements

FCC regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient or relocate the receiving antenna.
- increase separation between equipment and receiver.
- connect equipment to an outlet on a circuit different from that to which the receiver is located.
- consult your dealer or an experienced radio/TV technician.

Note

Any changes or modifications to the printer that are not expressly approved by HP could void the user's authority to operate this equipment.

Use of a shielded interface cable is required to comply with the Class A limits of Part 15 of FCC rules.

Canadian DOC regulations

Complies with Canadian EMC Class A requirements.

« Conforme à la classe A des normes canadiennes de compatibilité électromagnétique (CEM). »

VCCI statement (Japan)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Korean EMI statement

사용자 안내문 (A급 기기)

이 기기는 업무용으로 전자파장해 검정을 받은 기기 이오니, 만약 잘못 구입하셨 을 때에는구입한 곳에 세 비업무용으로 교환하시기 바랍니다.

Declaration of Conformity

according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name: Hewlett-Packard Company
Manufacturer's Address: 11311 Chinden Boulevard
Boise, Idaho 83714-1021 USA

declares that the product

Product Name: HP Color LaserJet 4550/4550N/4550DN/4550HDN Printer
Including 500 sheet-feeder and Duplexer Accessory
Model Number: C7085A / C7086A / C7087A / C7088A Printer
C4082A 500 sheet-feeder, C4083A Duplexer Accessory
Product Options: ALL

conforms to the following Product Specifications:

Safety: IEC 60950:1991+A1+A2+A3+A4 / EN 60950:1992+A1+A2+A3+A4
IEC 60825-1:1993/EN 60825-1:1994 Class 1 (Laser/LED)

EMC: CISPR 22:1993 /EN 55022:1994+A1+A2 Class A1
EN 50081-1:1992
EN 50082-1:1992
IEC 801-2:1991 / prEN 55024-2:1992 - 4 kV CD, 8 kV AD
IEC 801-3:1984 / prEN 55024-3:1991 - 3 V/m
IEC 801-4:1988 / prEN 55024-4:1992 - 1.0 kV Power Lines
0.5 kV Signal Lines

FCC Title 47 CFR, Part 15 Class A² / ICES-002, Issue 2
AS / NZS 3548:1995

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC, and carries the CE-Marking accordingly

¹ The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.

² This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two Conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Hewlett-Packard Company
Boise, Idaho USA
June 1, 2000

For regulatory topics only:

Australia Contact: Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia.

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Straße 130, D-71034 Böblingen, Germany (FAX: +49-7031-14-3143).

USA Contact: Product Regulations Manager, Hewlett-Packard Company, P.O. Box 15, Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000).

Safety information

Laser safety

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. This printer is certified as a "Class 1" laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Since radiation emitted inside this printer is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

WARNING!

Using controls, making adjustments, or performing procedures other than those specified in this guide may result in exposure to hazardous radiation.

Laser Statement for Finland

LASERTURVALLISUUS

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP LaserJet 4550 -laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalisissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle.

Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (1994) mukaisesti.

VAROITUS !

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

WARNING !

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

HUOLTO

HP LaserJet 4550 -kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

VARO !

Mikäli kirjoittimen suojakotelo avataan, olet alttiina näkymättömälle lasersäteilylle laitteen ollessa toiminnassa. Älä katso säteeseen.

VARNING !

Om laserprinterns skyddshölje öppnas då apparaten är i funktion, utsätts användaren för osynlig laserstrålning. Betrakta ej strålen.

Tiedot laitteessa käytettävän laseriodin säteilyominaisuuksista:

Aallonpituus 765-795 nm

Teho 5 mW

Luokan 3B laser

Material Safety Data Sheet (MSDS)

WWW

Go to the HP LaserJet Supplies website to obtain the Toner Cartridge/Drum material safety data sheet (MSDS). The address is <http://www.hp.com/go/msds>. Once at the site, select the HP LaserJet icon.

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

- Within the U.S. and Canada call (800) 231-9300 from your touch-tone phone.
- Outside the U.S. and Canada call (404) 329-2009 from your fax machine.

Select an Index to view a listing of the available documents.

D

Warranty and support information

Hewlett-Packard Warranty Statement

HP Color LaserJet 4550,
4550N, 4550DN, 4550HDN
Printer

One-year limited warranty

- 1 HP warrants HP hardware, accessories and supplies against defects in materials and workmanship for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.
- 2 HP warrants that HP software will not fail to execute its programming instructions, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software media which does not execute its programming instructions due to such defects.
- 3 HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, customer will be entitled to a refund of the purchase price upon prompt return of the product.
- 4 HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.
- 5 The warranty period begins on the date of delivery or on the date of installation if installed by HP. If customer schedules or delays HP installation more than 30 days after delivery, warranty begins on the 31st day from delivery.
- 6 Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

- 7** TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.
- 8** HP will be liable for damage to tangible property per incident up to the greater of \$300,000 or the actual amount paid for the product that is the subject of the claim, and for damages for bodily injury or death, to the extent that all such damages are determined by a court of competent jurisdiction to have been directly caused by a defective HP product.
- 9** TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.
- 10** FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND: THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

HP Maintenance Agreements

HP has several types of maintenance agreements that meet a wide range of support needs.

On-site service agreements

To provide you with the support level best suited to your system usage and support budget, HP has on-site service agreements with three response times:

Priority On-Site Service is designed for production-critical applications, giving you four-hour service response to your site for calls made during normal HP business hours.

Next Day On-Site Service provides on-site support by the next working day following your service request. Extended coverage hours and extended travel beyond HP designated service zones are available for additional charges on most on-site service agreements.

Weekly (Volume) On-Site Service Agreement, for organizations with many HP LaserJet printers, provides economical, scheduled on-site coverage. Designated for customer sites using 25 or more workstation products, this service provides scheduled weekly repair visits to your central location. HP can write an agreement for any combination of 25 or more workstation products including printers, plotters, computers, and disk drives.

Note

See [“HP Service Agreements” on page 251](#) for HP service agreements phone numbers.

Support information

HP Customer Care

<p>Online Services: for 24-hour access to information over your modem, we suggest these services:</p>	<p>World Wide Web URL—Printer drivers, updated HP printer software, plus product and support information may be obtained from the following URLs:</p> <p>in the U.S. http://www.hp.com/support/lj4550 in Europe http://www2.hp.com Printer drivers may be obtained from the following sites: in Japan ftp://www.jp.hp.com/drivers/ in Korea http://www.hp.co.kr in Taiwan http://www.hp.com.tw or the local driver website http://www.dds.com.tw</p>											
	<p>America Online America Online/Bertelsmann is available in the U.S., France, Germany, and U.K.—Printer drivers, updated HP printer software, and support documentation to help answer your questions about HP products are available. Use Keyword HP to start your tour or call 1-800-827-6364 preferred customer # 1118 to subscribe. In Europe, call the appropriate number below:</p> <table> <tr> <td>Austria</td> <td>0222 58 58 485</td> </tr> <tr> <td>France</td> <td>++353 1 704 90 00</td> </tr> <tr> <td>Germany</td> <td>0180 531 31 64</td> </tr> <tr> <td>Switzerland</td> <td>0848 80 10 11</td> </tr> <tr> <td>United Kingdom</td> <td>0800 279 1234</td> </tr> </table>		Austria	0222 58 58 485	France	++353 1 704 90 00	Germany	0180 531 31 64	Switzerland	0848 80 10 11	United Kingdom	0800 279 1234
	Austria	0222 58 58 485										
France	++353 1 704 90 00											
Germany	0180 531 31 64											
Switzerland	0848 80 10 11											
United Kingdom	0800 279 1234											
<p>CompuServe—Printer drivers, updated HP printer software, and interactive sharing of technical information with other members is available on CompuServe's "HP User's forums" (GO HP), or call 1-800-524-3388 and ask for representative #51 to subscribe. (CompuServe is also available in the U.K., France, Belgium, Switzerland, Germany, and Austria.)</p>												
<p>Obtaining software utilities and electronic information for U.S.</p>	<p>Phone: (805) 257-5565 Fax: (805) 257-6995</p>	<p>Mail: Hewlett-Packard Co. P.O. Box 907 Santa Clarita, CA 91380-9007 U.S.A.</p>										
	<p>HP website: http://www.hp.com/</p>											
<p>For Canada</p>	<p>Phone: (905) 206-4663</p>											
<p>For Asia-Pacific countries/regions</p>	<p>Contact Mentor Media at (65) 740-4477 (Hong Kong, Indonesia, Philippines, Malaysia, or Singapore). For Korea, call (82) (2) 3270-0805 or (82) (2) 3270-0893.</p>											
<p>For Australia, New Zealand, and India</p>	<p>For Australia and New Zealand, call (61) (2) 565-6099. For India, call (91) (11) 682-6035.</p>											
<p>For European English</p>	<p>For U.K., call (44) (142) 986-5511. For Ireland and outside U.K., call (44) (142) 986-5511.</p>											

HP Customer Care

HP direct ordering for accessories or supplies	Call 1-800-538-8787 (U.S.) or 1-800-387-3154 (Canada) or link to U.S. – http://www.hp.com/go/ljsupplies or Worldwide – http://www.hp.com/ghp/buyonline.html to order supplies online.
HP Support Assistant compact disc	This support tool offers a comprehensive online information system designed to provide technical and product information on HP products. To subscribe to this quarterly service in the U.S. or Canada, call 1-800-457-1762. In Hong Kong, Indonesia, Malaysia, or Singapore, call Mentor Media at (65) 740-4477.
HP Service Information	To locate HP-authorized Dealers, call 1-800-743-8305 (U.S.) or 1-800-387-3867 (Canada)
HP Service Agreements	Call 1-800-835-4747 (U.S.) or 1-800-268-1221 (Canada). Extended Service 1-800-446-0522

HP Customer Care options worldwide

In addition to the phone numbers listed below, this guide contains worldwide sales and service addresses and phone numbers for countries/regions not listed here.

HP Customer Care Centers Worldwide

<p>Customer Support and Product Repair Assistance for the U.S. and Canada:</p>	<p>Call 1-208-323-2551 Monday through Friday from 6 am to 6 pm (Mountain Time) free of charge during the warranty period. However, your standard long-distance phone charges still apply. Have your system nearby and your serial number ready when calling.</p> <p>If you know your printer needs repair, call 1-800-243-9816 to locate your nearest HP-authorized service provider, or call 1-208-323-2551 for HP centralized service dispatch.</p> <p>Post-warranty telephone assistance is available to answer your product questions. Call 1-900-555-1500 (\$2.50* per minute, U.S. only) or call 1-800-999-1148 (\$25* per call, Visa or MasterCard, U.S. and Canada) Monday through Friday from 7 am to 6 pm (Mountain Time). <i>Charges begin only when you connect with a support technician. *Prices subject to change.</i></p>
<p>European Customer Care Center Language and In-Country Options Available Open Monday through Friday 8:30 to 18:00 CET</p>	
<p>HP provides a free telephone support service during the warranty period. By calling a telephone number listed below, you will be connected to a responsive team waiting to help you. If you require support after your warranty has expired, you can receive support for a fee through the same telephone number. The fee is charged on a per-incident basis. When calling HP, have the following information ready: product number and serial number, date of purchase, and description of the problem.</p>	
<p>English Ireland: (353) (0) (1) 662-5525 U.K.: (44) (0) (171) 512-5202 International: (44) (0) (171) 512-5202</p> <p>Dutch Belgium: (32) (0) (2) 626-8806 Netherlands: (31) (0) (20) 606-8751</p> <p>French France: (33) (0) (1) 43-62-3434 Belgium: (32) (0) (2) 626-8807 Switzerland: (41) (0) (84) 880-1111</p>	<p>German Germany (49) (0) (180) 525-8143 Austria: (43) (0) 7114 201080</p> <p>Norwegian Norway: (47) 22 11-6299</p> <p>Danish Denmark: (45) 39 29-4099</p> <p>Finnish Finland: (358) (0) 203-47-288</p> <p>Swedish Sweden: (46) (0) (8) 619-2170</p> <p>Italian Italy: (39) (0) (2) 264-10350</p> <p>Spanish Spain: (34) (90) 232-1123</p> <p>Portuguese Portugal: (351) (0) (1) 317-6333</p>

Customer Care Centers Worldwide (continued)

In-country/region support numbers: HP provides a free telephone support service during the warranty period. By calling a telephone number listed below, you will be connected to a responsive team waiting to help you. If you require support after your warranty has expired, you can receive support for a fee through the same telephone number. The fee is charged on a per-incident basis. When calling HP, have the following information ready: product number and serial number, date of purchase, and description of the problem.

Argentina	(54) (1) 778-8380	Malaysia	(60) (3) 295-2566
Australia	(61) (3) 8877-8000	Mexico	01 800-472-6684
Brazil	(011) 829-6612	New Zealand	(64) (9) 356-6640
Canada	(1) (208) 323-2551	Philippines	(63) (2) 867-3551
China	(86) (0) (10) 6564-5959	Poland	(48) (22) 519-0600
Chile	800-360-999	Portugal	(351) (0) (1) 317-6333
Czech Republic	(420) (2) 6130-7310	Russia	(7) (0) (95) 797-3520
Greece	(30) (0) (1) 689-6411	Singapore	(65) 272-5300
Hong Kong	(852) 800-96-7729	South Africa	(27) (86) 000-1030
Hungary	(36) (0) (1) 382-1111	Taiwan	(886) (2) 2717-0055
India	(91) (11) 682-6035	Thailand	(66) (2) 661-4000
Indonesia	(62) (21) 350-3408	Turkey	(90) (212) 224-5925
Israel	(972) (0) (9) 952-4848	Venezuela	800-47-888
Japan	(81) (3) 3335-8333	Venezuela (Caracas)	207-8488
Korea	(82) (2) 3270-0700	Vietnam	(84) (0) 8 823-4530
Korea (outside Seoul)	(82) (080) 999-0700		

Worldwide Country/Region Sales and Service Offices

Note

Before calling an HP Sales and Service office, be sure to contact the appropriate Customer Care Center number listed in the [“HP Customer Care”](#) section. Products should not be returned to these offices. Product return information is also available through the appropriate Customer Care Center listed in the [“HP Customer Care”](#) section.

Argentina

Hewlett-Packard Argentina S.A.
Montañeses 2140/50/60
1428 Buenos Aires
Phone: (54) (1) 787-7100
Fax: (54) (1) 787-7213

Australia

Hewlett-Packard Australia Ltd.
31-41 Joseph Street
Blackburn, VIC 3130
Phone: (61) (3) 272-2895
Fax: (61) (3) 898-7831
Hardware Repair Center:
Phone: (61) (3) 272-8000
Extended Warranty Support:
Phone: (61) (3) 272-2577
Customer Information Center:
Phone: (61) (3) 272-8000

Austria

Hewlett-Packard GmbH
Liebgasse 1
A-1222 Vienna
Phone: (43) (1) 25000-555
Fax: (43) (1) 25000-500

Belgium

Hewlett-Packard Belgium S.A. NV
Boulevard de la Woluwe-Woluwedal
100-102
B-1200 Brussels
Phone: (32) (2) 778-31-11
Fax: (32) (2) 763-06-13

Brazil

Hewlett-Packard Brasil SA
R. Aruana 125
Tambore - Barueri-SP
06460-010
Phone: (55) (0) (11)- 829-6612
Fax: (55) (0) (11)- 829-0018

Canada

Hewlett-Packard (Canada) Ltd.
17500 Trans Canada Highway
South Service Road
Kirkland, Québec H9J 2X8
Phone: (1) (514) 697-4232
Fax: (1) (514) 697-6941

Hewlett-Packard (Canada) Ltd.
5150 Spectrum Way
Mississauga, Ontario L4W 5G1
Phone: (1) (905) 206-4725
Fax: (1) (905) 206-4739

Chile

Hewlett-Packard de Chile
Avenida Andres Bello 2777 of. 1
Los Condes
Santiago, Chile

China

China Hewlett-Packard Co. Ltd.
Level 5, West Wing Office
China World Trade Center
No. 1, Jian Guo Men Wai Avenue
Beijing 100004
Phone: (86) (10) 6505-3888,x. 5450
Fax: (86) (10) 6505-1033

Hardware Repair Center and Extended
Warranty Support:
Phone: (86) (10) 6262-5666x. 6101/2
(86) (10) 6261-4167

Colombia

Hewlett-Packard Colombia
Calle 100 No. 8A -55
Torre C Oficina 309
Bogota, Colombia

Czech Republic

Hewlett-Packard s. r. o.
Novodvorská 82
CZ-14200 Praha 4
Phone: (420) (2) 613-07111
Fax: (420) (2) 471-7611

Denmark

Hewlett-Packard A/S
Kongevejen 25
DK-3460 Birkerød
Denmark
Phone: (45) 3929 4099
Fax: (45) 4281-5810

Finland

Hewlett-Packard Oy
Piispankalliontie 17
FIN-02200 Espoo
Phone: (358) (9) 887-21
Fax: (358) (9) 887-2477

France

Hewlett-Packard France
42 Quai du Point du Jour
F-92659 Boulogne Cedex
Phone: (33) (146) 10-1700
Fax: (33) (146) 10-1705

Germany

Hewlett-Packard GmbH
Herrenberger Strasse 130
71034 Böblingen
Phone: (49) (180) 532-6222
(49) (180) 525-8143
Fax: (49) (180) 531-6122

Greece

Hewlett-Packard Hellas
62, Kifissias Avenue
GR-15125 Maroussi
Phone: (30) (1) 689-6411
Fax: (30) (1) 689-6508

Hong Kong/Far East Region

Hewlett-Packard Asia Pacific Ltd.
17-21/F Shell Tower, Times Square
1 Matheson Street, Causeway Bay
Hong Kong
Phone: (852) 2599-7777
Fax: (852) 2506-9261
Hardware Repair Center:
Phone: (852) 2599-7000
Extended Warranty Support:
Phone: (852) 2599-7000
Customer Information Center:
Phone: (852) 2599-7066

Hungary

Hewlett-Packard Magyarország Kft.
Erzsébet királyné útja 1/c.
H-1146 Budapest
Phone: (36) (1) 343-0550
Fax: (36) (1) 122-3692
Hardware Repair Center:
Phone: (36) (1) 343-0312
Customer Information Center:
Phone: (36) (1) 343-0310

India

Hewlett-Packard India Ltd.
Paharpur Business Centre
21 Nehru Place
New Delhi 110 019
Phone: (91) (11) 647-2311
Fax: (91) (11) 646-1117
Hardware Repair Center and Extended
Warranty Support:
Phone: (91) (11) 642-5073
(91) (11) 682-6042

Italy

Hewlett-Packard Italiana SpA
Via Giuseppe di Vittorio, 9
Cernusco Sul Naviglio
I-20063 (Milano)
Phone: (39) (2) 921-21
Fax: (39) (2) 921-04473

Japan

Hewlett-Packard Japan, Ltd.
3-29-21 Takaido-higashi
Suginami-ku, Tokyo 168
Phone: (81) (3) 3335-8333
Fax: (81) (3) 3335-8338
Hardware Repair Center:
Phone: (81) (4) 7355-6660
Fax: (81) (4) 7352-1848

Korea

Hewlett-Packard Korea
25-12,
Yoido-dong, Youngdeungpo-ku
Seoul 150-010
Phone: (82) (2) 769-0114
Fax: (82) (2) 784-7084
Hardware Repair Center:
Phone: (82) (2) 3270-0700
(82) (2) 707-2174 (DeskJet)
(82) (2) 3270-0710 (Hardware)
Extended Warranty Support:
Phone: (82) (2) 3770-0365 (Bench)
(82) (2) 769-0500 (Onsite)

Latin American Headquarters

5200 Blue Lagoon Drive Suite 950
Miami, FL 33126, USA
Phone: (1) (305) 267-4220

México

Hewlett-Packard de México, S.A. de C.V.
Prolongación Reforma No. 700
Lomas de Santa Fe
01210 México, D.F.
Phone: 01-800-22147
Outside Mexico City
Phone: 01 800-90529

Middle East/Africa

ISB HP Response Center
Hewlett-Packard S.A.
Rue de Veyrot 39
P.O. Box 364
CH-1217 Meyrin - Geneva
Switzerland
Phone: (41) (22) 780-4111

Netherlands

Hewlett-Packard Nederland
BV Startbaan 16
NL-1187 XR Amstelveen
Postbox 667
NL-1180 AR Amstelveen
Phone: (31) (020) 606-87-51
Fax: (31) (020) 547-7755

New Zealand

Hewlett-Packard (NZ) Limited
Ports of Auckland Building
Princes Wharf, Quay Street
P.O. Box 3860
Auckland
Phone: (64) (9) 356-6640
Fax: (64) (9) 356-6620
Hardware Repair Center and Extended
Warranty Support:
Phone: (64) (9) 0800-733547
Customer Information Center:
Phone: (64) (9) 0800-651651

Norway

Hewlett-Packard Norge A/S
Postboks 60 Skøyen
Drammensveien 169
N-0212 Oslo
Phone: (47) 2273-5600
Fax: (47) 2273-5610

Poland

Hewlett-Packard Polska
Al. Jerozolimskic 181
02-222 Warszawa
Phone: (48-22) 608-7700
Fax: (48-22) 608-76-00

Russia

AO Hewlett-Packard
129223, Moskva, Olimpiyskiy prospekt, 16
Phone: (7) (95) 916-9811
Fax: (7) (95) 974-7829

Singapore

Hewlett-Packard Singapore
(Sales) Pte Ltd
450 Alexandra Road
Singapore (119960)
Phone: (65)275-3888
Fax: (65)275-6839
Hardware Repair Center and
Customer Information Center:
Phone: (65) 272-5300
Extended Warranty Support:
Phone: (65) 272-5333

Spain

Hewlett-Packard Española, S.A.
Carretera de la Coruña km 16.500
E-28230 Las Rozas, Madrid
Phone: (34) (1) 626-1600
Fax: (34) (1) 626-1830

Sweden

Hewlett-Packard Sverige AB
Skalholtsgatan 9
S-164 97 Kista
Phone: (46) (8) 444-2000
Fax: (46) (8) 444-2666

Switzerland

Hewlett-Packard (Schweiz) AG
In der Luberzen 29
CH-8902 Urdorf/Zürich
Phone: (41) (084) 880-11-11
Fax: (41) (1) 753-7700
Warranty Support:
0800-55-5353

Taiwan

Hewlett-Packard Taiwan Ltd.
8th Floor
337, Fu-Hsing North Road
Taipei, 10483
Phone: (886)(02)717-0055
FAX : (886)(02)514-0276

Hardware Repair Center, call :
North (886)(02) 717-9673
Central (886)(04) 327-0153
South (886)(080)733-733
Extended Warranty Support Contact :
Phone: (886)(02) 714-8882

Thailand

Hewlett-Packard (Thailand) Ltd.
23-25/f Vibulthani Tower II
2199 Rama 4 Rd, Klongton
Klintoey, Bangkok 10110
Thailand
Phone: (66) (2) 666-3900-34
Fax: (66) (2) 666-3935-37
Hardware Repair Center and Extended
Warranty Support Contact:
Phone: (66) (2) 661-3900 ext. 6001/
6002
Customer Information Center:
Phone: (66) (2) 661-3900 ext. 3211
Fax: (66) (2) 661-3943

Turkey

Hewlett-Packard Company
Bilgisayar Ve ölçüm Sistemleri AS
19 Mayıs Caddesi Nova
Baran Plaza Kat: 12
80220 Sisli-Istanbul
Phone: (90) (212) 224-5925
Fax: (90) (212) 224-5939

United Kingdom

Hewlett-Packard Ltd.
Cain Road
Bracknell
Berkshire RG12 1HN
Phone: (44) (134) 436-9222
Fax: (44) (134) 436-3344

Venezuela

Hewlett-Packard de Venezuela S.A.
Los Ruices Norte
3A Transversal
Edificio Segre Caracas 1071
Phone: (58) (2) 239-4244
Fax: (58) (2) 239-3080

E

Embedded Web server

Introduction

This printer is equipped with an embedded Web server, which allows you to access information about printer and network activities. This chapter explains the features and functionality of the embedded Web server.

Using the embedded Web server

The embedded Web server allows you to view printer and network status and to manage printing functions from your PC instead of from the printer control panel. This service is designed for offices using an IP network and a standard Web browser. Below are examples of what you can do using the embedded Web server:

- view printer control panel messages
- determine the remaining life on all consumables
- order consumables
- view and change tray configurations
- view and change the printer control panel menu configuration
- view and print internal pages
- receive notification of printer events
- view and change network configuration

To use the embedded Web server, you must have an IP-based network and a Web browser. The embedded Web server can be used with Microsoft Internet Explorer 4 or above, and with Netscape Navigator 4 and above. IPX-based printer connections are not supported by the embedded Web server.

To access the embedded Web server

- 1 Open your Web browser.
- 2 Type the IP address assigned to the printer into the Address or Location field.

If you do not know the IP address for the printer, it is listed on the printer configuration page. For more information about printing a configuration page, see [“Printer configuration page” on page 49](#).

Embedded Web server page sets

The embedded Web server has three sets of internal Web pages for collecting information about the printer and for changing configuration options. These sets are:

- Home pages
- Device pages
- Networking pages

When the embedded Web server is active, each set of pages is listed on the browser screen. Click on the set that you want to view, and the selection expands to display a list of frequently accessed Web links.

Note

Each page in the embedded Web server has access to online Help. For more information regarding a particular page, click the Help button.

Home page set

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

- **Printer Status page**
This page displays printer capabilities, control panel messages, and status lights that currently appear on the printer control panel. From here, you can set the frequency at which the embedded Web server will check the printer status. This page also displays consumable life levels and the input tray configurations.
- **Configuration page**
This page displays the printer configuration page. For more information about interpreting and printing the configuration page, see [page 49](#).
- **Supplies status page**
This page displays the levels of the consumables for the printer. For more information about interpreting and printing the supplies status page, see [page 53](#).
- **Usage page**
This page displays the amount of each media type that has been used by the printer. For more information about interpreting and printing the usage page, see [page 55](#).
- **Event Log page**
This page displays the printer's event log. For more information about interpreting and printing the event log, see [page 56](#).

- **Device Identification page**
This page displays the name, asset number, network address, model number, and serial number for this printer. To set the name and asset number, see the description of the [“Device Identification page”](#) under “Device page set”.

Device page set

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

- **Configure Printer page**
Configure all printer settings from this page.
- **Alerts page**
Input a list of recipients for electronic notification of various printer events.
- **E-Mail page**
Configure the incoming and outgoing mail servers.
- **Security page**
Set a password for the embedded Web server. Passwords and features configuration should only be determined by the network administrator. If a password is set, users will require a password for entry into the device sections of the embedded Web server.
- **Other Links page**
Add or customize links to other websites. These links are displayed on the navigational bar throughout the embedded Web server pages.

There are two permanent links, “Ask a question” where the user can get help with the printer, and “Order Supplies” where you can order printer supplies. Order Supplies is only available from the Device page set.

- **Language page**
Determine the language in which to display the embedded Web server information.
- **Device Identification page**
Name the printer and assign an asset number to it. Input the name and email address of the primary point of contact for information about the printer. This page also shows the printer’s network names, addresses, and printer model information.

Networking page set

This set of pages allows the network administrator to configure the HP JetDirect card for the printer. Refer to the online Help and to the *HP JetDirect Print Server Administrator's Guide* for more information.

WWW

To download the *HP JetDirect Print Server Administrator's Guide*, go to <http://www.hp.com/support/lj4550>. When you connect, select **Manuals**.

Index

Numerics

- 500-sheet paper feeder
 - See *also* Tray 3
- ordering 31

A

- accessories
 - See *also* consumables
 - description 31
 - duplexer 89
 - ordering 31, 251
 - Tray 3 85
- acoustic emissions 236
- Adobe Acrobat Reader
 - using 14
- advanced functions, setting 63
- attention light, interpreting 37
- attention messages 152
- auto continue 43

B

- bidirectional parallel cable
 - specifications 128

C

- Calibration Menu
 - description 45
 - items 45
 - values 45
- Canadian DOC regulations 241
- Cancel Job 36
- cartridge
 - See toner cartridges
- color
 - See color printing
- color printing
 - control options 108
 - Detail option 108
 - halftones 108
 - PANTONE® colors 111
 - problems 210
 - Screen Match 108
- colored paper
 - using 71
- commands 223
- components, printer 21
- Configuration Menu
 - description 43
 - items 43
 - values 43
- configuration settings, changing 58
- configuring
 - DIMMs 216
 - input trays 76
 - LocalTalk 131
- consumables
 - availability 239
 - disposing 147
 - drum kit 145
 - error messages 145
 - fuser kit 145
 - overview 141
 - replacing 145
 - toner cartridges 145
 - transfer kit 145
- control panel
 - indicator lights 37
 - PowerSave settings 59
 - printer personalities 60
- control panel menus
 - Calibration Menu 45
 - Configuration Menu 43
 - I/O Menu 48
 - Information Menu 40
 - menu map 38
 - Paper Handling Menu 41
 - Resets Menu 46
 - using 38
- control panel, printer
 - configuration 58
 - default settings 58
 - features 35
 - help with 36
 - I/O Timeout, setting 61
 - indicator lights 37
 - keys 36
 - locking 132
 - menu locking 38
 - menu map 38
 - menus, descriptions 40
 - messages, description 153
 - messages, troubleshooting 153
 - messages, types 152
 - options 34
 - problems 193
 - selecting PCL fonts 119
 - settings 23, 193

- shared environments 57
- stopping a print job 94
- using 36
- controlling print jobs 23, 74
- critical error messages, defining 152
- customer support 252
 - obtaining software 250
 - worldwide 252
- custom-size media 93

D

- data light, interpreting 37
- Declaration of Conformity 242
- default settings
 - changing 58
 - resetting 64
- defects
 - image 194
- density sensor 155
- DIMMs (Dual Inline Memory Modules)
 - adding 25
 - configuring 216
 - installing 218
 - verifying installation 220
- DIN-8 printer cable 131
- display panel
 - See control panel 193
- driver
 - See printer driver
- Dual Inline Memory Modules (DIMMs)
 - See DIMMs
- duplex printing
 - accessory 89
 - settings 91

E

- EIO (Enhanced Input Output)
 - configuring 48
- electrical specifications 235
- embedded Web server 259
 - accessing 260
 - device page set 262
 - home page set 261
 - networking page set 263
- energy consumption 237
- Enhanced Input Output (EIO)
 - configuring 48, 129
- envelopes
 - avoiding printer jams 81
 - jamming 187
 - precautions 71
 - printing on 71, 80
 - using 71
 - weight 71
 - wrinkled 71

- environmental features 19
- Environmental Product Stewardship Program 237
- error messages
 - action 153
 - blank display panel 189
 - consumables 145
 - description 153
 - interpreting 145

F

- factory default settings, resetting 64
- FCC regulations 240
- Finnish laser statement 244
- font #, description 122
- fonts
 - adding support 125
 - custom 126
 - default font 117
 - list of 122
 - on a network 124
 - PCL fonts 119
 - pitch 122
 - PostScript emulation, using 123
 - printing font list 121
 - printing guidelines 124
 - problems 212
 - selecting 118
 - selecting default font 117
 - TrueType, internal 116
 - typeface 122

G

- glossy paper
 - ordering 31
 - using 70

H

- heavy paper
 - using 72
- HP custom font services 126
- HP JetDirect print server 129, 130, 131
- HP Service Agreements 251
- HP Service Information 251
- HP Worldwide Sales and Service Offices 254–257

I

- I/O cards 129
- I/O Menu 44
 - description 44
 - setting bidirectional communication 63
- I/O Timeout, setting 61

- image
 - defect table 196
 - defects 194
- indicator lights, interpreting 37
- input trays, configuring 41, 76
- interfaces, printer
 - Enhanced I/O configuration 129
- J**
- Japanese VCCI statement 241
- job cancel 36
- K**
- Korean EMI statement 241
- L**
- laser safety 243
- letterhead
 - precautions 73
 - printing on 93
- loading
 - 500-sheet paper feeder 86
 - Tray 1 78
 - Tray 2 82, 83
 - Tray 3 86
- LocalTalk interface 131
- locating control panel features 35
- locking 75
- M**
- Macintosh
 - DIN-8 printer cable 131
 - LocalTalk interface 131
 - LocalTalk Network Configuration 131
- maintenance
 - space required for 142
- Material Safety Data Sheet (MSDS) 246
- media
 - See also* paper
 - colored paper 71
 - configuring input trays 76
 - curled output 188
 - custom-size, printing on 93
 - envelopes jamming 187
 - envelopes, printing on 71
 - glossy paper 70
 - heavy paper 72
 - letterhead 73
 - loading Tray 1 78
 - loading Tray 2 82
 - loading Tray 3 86
 - ordering 31
 - precautions 73
 - preprinted forms 73
 - printing guidelines 69
 - problems 177
 - selecting 66, 75
 - sizes, setting 41
 - types to avoid 69
 - weights 67
- memory 18
 - adding 215
 - managing 25
- Memory Enhancement Technology (MEt) 25
- Menu
 - EIO 48
 - I/O Menu 44
 - Printing 42
 - Resets 46
- menu
 - Calibration 45
 - Configuration 43
 - locking 38, 132
 - Paper Handling 41
- menu map, printing 38
- messages
 - control panel 152
 - error 152
 - service 152
 - warning 152
- MEt (Memory Enhancement Technology) 25
- MSDS (Material Safety Data Sheet) 246
- N**
- network
 - securing 132
- network interface settings, adjusting 48
- O**
- online help 36
- operating environment specifications 236
- ordering
 - 500-sheet paper feeder 31
 - accessories 31
 - cables 32
 - media 31
 - memory 31
 - network connectivity 31
 - reference materials 32
 - toner 31
- output bins
 - capacity 74
 - selecting 74
- output, incorrect 212

P

- PANTONE® colors 111
- paper
 - See also media
 - curled output 188
 - custom-size, printing 93
 - glossy 70
 - handling 18
 - heavy 72
 - input trays, configuring 76
 - jams, locating 175
 - loading Tray 1 78
 - loading Tray 2 82
 - loading Tray 3 86
 - ordering 31
 - output 18
 - precautions 66
 - printing guidelines 69
 - recycling 239
 - selecting 66
 - sizes 67
 - trays, configuring 41
 - types to avoid 69
 - weights 68
- Paper Handling Menu
 - values 41
- paper handling menu
 - items 41
- Paper Jam Recovery
 - enabling 176
- paper jam recovery
 - description 176
- paper jams
 - causes 177
 - front duplex drawer 184
 - locating 175
 - upper rear door 182
- parallel cable
 - connecting 128
 - illustration 128
 - ordering 32
 - specifications 128
- parallel configuration 128
- parallel interface, disabling 62
- parts, ordering 31, 250
- PCL (Printer Control Language) 223
 - command syntax 225
 - commands 229
 - escape sequences 226
 - fonts, selecting 228
- PCL fonts, selecting 119
- permanent resources 221
- pitch 122
- PJL (Printer Job Language) 224
- point size 122
- PostScript Emulation
 - typefaces 123
- PostScript emulation
 - font list 122
- power requirements 235
- PowerSave
 - changing settings 59
 - description of 43
- prepunched paper
 - loading 79
- print
 - quality problems 194
- print jobs
 - controlling 23, 74
 - output bins, selecting 74
 - stopping 94
- print media
 - See envelopes
 - See media
 - See paper
 - See transparencies
- printer
 - accessories 31
 - adding memory 25
 - commands 24
 - components 21, 22
 - configuration page, interpreting 50
 - configuration page, printing 49
 - connectivity 19
 - control panel 33
 - default settings 64
 - driver, ordering 250
 - energy consumption 237
 - environmental features 19
 - feeding problems 185
 - fonts 18
 - in shared environment 18
 - incorrect output 212
 - input 18
 - interface settings, changing 44
 - languages 60
 - maintenance 141
 - memory 18, 20, 95
 - memory, adding 25, 216
 - memory, managing 25
 - memory, resetting 63
 - messages 145, 153
 - network security 132
 - output problems 212
 - paper handling 18
 - parallel cable 128
 - parallel interface, disabling 62
 - PCL commands 223, 229
 - performance 18
 - personalities, supported 18
 - personalities, switching 60

- power requirements 235
 - resetting factory defaults 64
 - response problems 189
 - settings 43
 - settings, selecting 23
 - shared environment 18
 - shared environments 57
 - software, ordering 250
 - supplies 31
 - troubleshooting 49
 - warranty 247
 - Printer Control Language (PCL)
 - command syntax 225
 - commands 223, 229
 - escape sequences 226
 - fonts, selecting 228
 - printer driver
 - settings 23
 - verifying 125
 - printer fonts
 - See fonts
 - printer interfaces
 - parallel configuration 128
 - Printer Job Language (PJM) 224
 - printer messages
 - See error messages
 - printer personalities 60
 - printer problems
 - See troubleshooting
 - printing
 - See *also* color printing
 - See *also* duplex printing
 - color, using 105
 - controlling print jobs 23
 - envelopes 80
 - font guidelines 124
 - internal TrueType fonts 116
 - on custom-size media 93
 - on letterhead 93
 - printer default fonts 117
 - problems 210
 - selecting fonts 118
 - selecting symbol sets 118
 - stopping a print job 94
 - using Tray 3 84
 - using type fonts 116
 - Printing Menu
 - descriptions 42
 - items 42
 - selections 42
 - problems
 - See error messages
 - See troubleshooting
 - product 237
 - acoustic emissions 236
 - customer support 252
 - extended warranty 239
 - features 18
 - maintenance agreements 249
 - recycling 238
 - safety 243
 - stewardship 237
 - warranty 247
 - worldwide sales and service 254
- R**
- RAM (random access memory) 18
 - random access memory (RAM) 18
 - ready light, interpreting 37
 - recycled paper, using 239
 - recycling toner cartridges 237
 - reference materials, ordering 32
 - regulatory information 240
 - repairs 249, 252
 - Resets Menu
 - description of 46
 - items 46
 - resource saving 221
- S**
- safety information
 - laser safety 243
 - toner material safety 243
 - sales and service offices 254–257
 - saving permanent resources 221
 - Screen Match 108
 - securing network 132
 - selecting
 - default font 117
 - fonts 118
 - media 66, 75
 - output bins 74
 - PCL fonts 119
 - printer settings 23
 - service agreements
 - customer support
 - types 249
 - sizes
 - media 67
 - paper 67
 - soft fonts, availability 126
 - software application problems 214
 - software, ordering 250
 - specifications
 - acoustic emissions 236
 - electrical 235
 - operating environment 236
 - stopping a print job 94
 - supplies, ordering 31, 251

T

- throughput 20
- toner
 - See also* toner cartridges
 - densities, setting 45
 - density sensor 149
 - ordering 31
- toner cartridges
 - replacement intervals 145
- toner cartridges, recycling 237
- transparencies
 - feeding problems 187
 - ordering 31
 - tray capacities 68
- tray
 - capacities 67
 - priority, configuring 77
- Tray 1
 - configuring 76
 - loading 78
 - printing from 78
- Tray 2
 - configuring 77
 - feeding problems 186
 - loading 82
- Tray 3
 - configuring 77
 - feeding problems 186
 - illustration 85
 - loading 86
 - ordering 31
 - troubleshooting 188
- trays 75
 - locking 75
 - multipurpose 78
- troubleshooting
 - See also* paper jams 175
 - checklist 174
 - color printing problems 210
 - control panel problems 193
 - envelopes jamming 187
 - image defects 196
 - paper jam recovery 176
 - paper jams 175
 - printer output 212
 - printer response problems 189
 - slow print speed 20
 - Tray 2 186
 - Tray 3 186, 188
- type
 - See also* fonts
 - available printer fonts 121
 - Postscript typefaces 123
 - printer default fonts 117
 - special effects 125

W

- warning messages, defining 152
- warranty 247
- worldwide sales and service 254



i n v e n t

copyright © 2001
Hewlett-Packard Company

www.hp.com/support/lj4550

english