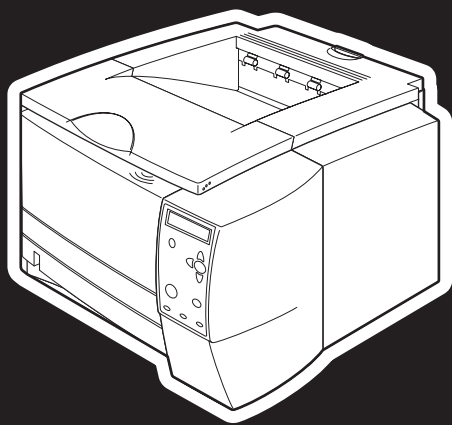


software
technical
reference



hp LaserJet 2300



hp LaserJet 2300 series printers

software technical reference

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Edition 1, 3/2003

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1 Purpose and scope

Introduction

This Software Technical Reference (STR) provides information about and troubleshooting tips for the printing system software for the HP LaserJet 2300 printer.

This document is prepared in an electronic format to serve as a quick-reference tool for Customer Care Center (CCC) agents, support engineers, system administrators, management information systems (MIS) personnel, and HP LaserJet printer end-users, as appropriate.

The following information is included in this technical reference:

- descriptions of drivers and platforms with system modifications
- procedures for installing and uninstalling software components
- descriptions of problems that can arise while using the printer, and known solutions to those problems

Note System modification information and descriptions of known software issues and workarounds are included an addendum to this software technical reference.

The following table contains descriptions of the printer models that are described in this STR. The printing system software for each printer model accommodates the differences between models.

Note Bundle configurations might vary among countries/regions.

HP LaserJet 2300 printer models

Table 1: Features of the HP LaserJet 2300 printer models

Model	Memory	Speed	Connectivity	Paper handling	Resolution and print cartridge
2300L	<ul style="list-style-type: none"> • 32 megabytes (MB) random-access memory (RAM) • Expandable to 288 MB RAM 	<ul style="list-style-type: none"> • 20 pages per minute (ppm) letter-size media • 19 ppm A4-size media 	<ul style="list-style-type: none"> • Parallel connection • USB connection 	<ul style="list-style-type: none"> • One 100-sheet multipurpose tray (tray 1); maximum paper size, legal (216 mm by 356 mm, 8.5 by 14 inches) • One 250-sheet tray (tray 2); maximum paper size, legal (216 mm by 356 mm, 8.5 by 14 inches) • Optional 250 sheet or 500 sheet tray (tray 3); maximum paper size, A4 (210 mm by 297 mm, 8.3 by 11.7 inches) 	<ul style="list-style-type: none"> • 1200 dots per inch (dpi) ProRes • 6,000-page print cartridge

Model	Memory	Speed	Connectivity	Paper handling	Resolution and print cartridge
2300	<ul style="list-style-type: none"> • 32 MB RAM • Expandable to 288 MB RAM 	<ul style="list-style-type: none"> • 25 ppm letter-size media • 24 ppm A4-size media 	<ul style="list-style-type: none"> • Parallel connection • USB connection 	<ul style="list-style-type: none"> • One 100-sheet multipurpose tray (tray 1); maximum paper size, legal (216 mm by 356 mm, 8.5 by 14 inches) • One 250-sheet tray (tray 2); maximum paper size, legal (216 mm by 356 mm, 8.5 by 14 inches) • Optional 250 sheet or 500 sheet tray (tray 3); maximum paper size, A4 (210 mm by 297 mm, 8.3 by 11.7 inches) 	<ul style="list-style-type: none"> • 1200 dpi ProRes • 6,000-page print cartridge

Model	Memory	Speed	Connectivity	Paper handling	Resolution and print cartridge
2300d	<ul style="list-style-type: none"> • 48 MB RAM • Expandable to 304 MB RAM 	<ul style="list-style-type: none"> • 25 ppm letter-size media • 24 ppm A4-size media 	<ul style="list-style-type: none"> • Parallel connection • USB connection 	<ul style="list-style-type: none"> • One 100-sheet multipurpose tray (tray 1); maximum paper size, legal (216 mm by 356 mm, 8.5 by 14 inches) • One 250-sheet tray (tray 2); maximum paper size, legal (216 mm by 356 mm, 8.5 by 14 inches) • built-in duplexing unit for automatically printing on both sides of paper • optional 250-sheet or 500-sheet tray (tray 3); maximum paper size, A4 (210 mm by 297 mm, 8.3 by 11.7 inches) 	<ul style="list-style-type: none"> • 1200 dpi ProRes • 6,000-page print cartridge

Model	Memory	Speed	Connectivity	Paper handling	Resolution and print cartridge
2300n	<ul style="list-style-type: none"> • 48 MB RAM • Expandable to 304 MB RAM 	<ul style="list-style-type: none"> • 25 ppm letter-size media • 24 ppm A4-size media 	<ul style="list-style-type: none"> • Parallel connection • USB connection • HP Jetdirect 10/100Base-TX print-server card for network connection 	<ul style="list-style-type: none"> • One 100-sheet multipurpose tray (tray 1); maximum paper size, legal (216 mm by 356 mm, 8.5 by 14 inches) • One 250-sheet tray (tray 2); maximum paper size, legal (216 mm by 356 mm, 8.5 by 14 inches) • Optional 250 sheet or 500 sheet tray (tray 3); maximum paper size, A4 (210 mm by 297 mm, 8.3 by 11.7 inches) 	<ul style="list-style-type: none"> • 1200 dpi ProRes • 6,000-page print cartridge

Model	Memory	Speed	Connectivity	Paper handling	Resolution and print cartridge
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2 Software description

Introduction

The HP LaserJet 2300 printer comes with software and installers for Microsoft (R) Windows (R) and Apple Computer, Inc., Macintosh systems. UNIX (R) and OS/2 systems are supported, and software is available on the Web. For specific information about a system's installer, drivers, and components, locate the section that corresponds to that system.

Supported operating systems

The following operating systems (OSs) support the HP LaserJet 2300 printing-system software, including standard printer command language (PCL) drivers and PostScript (R) (PS) emulation drivers. Windows OSs support a full-featured configuration of the HP LaserJet 2300 printer; other OSs support varying levels of functionality.

- Windows 95
- Windows 98
- Windows Millennium Edition (Me)
- Windows NT (R) 4.0 (Service packs 3 through 6)
- Windows 2000 (Service packs 1 and 2)
- Windows XP Professional, Windows XP Home Edition, and Windows 2003 server (Windows XP), including Service pack 1

Additional operating environments

The following operating environments also support the HP LaserJet 2300 printing system:

- IBM OS/2 2.0 or later (available on the IBM Web site at <http://www.ibm.com>)
- Mac OS 8.6 to 9.x, Mac OS X Classic, and Mac OS X
- UNIX
- Linux
- Windows Terminal Server
- Citrix Terminal Server
- Windows Cluster Server

See the following Web site for more information:

<http://www.hp.com/support/lj2300>

Technology background information

This section contains information about the following topics:

- HP LaserJet printer drivers
- HP LaserJet user documentation
- Bidirectional communication
- Driver Autoconfiguration
- HP Embedded Web Server
- Printer Status and Alerts
- Euro character

HP LaserJet printer drivers

HP LaserJet printer drivers for the HP LaserJet 2300 printer control the print settings. These printer drivers differ, depending on the operating system environment. The following drivers are available on the printing-system software CD-ROM.

- HP traditional PCL 5e driver for Windows 95, Windows 98, Windows Me, and Windows NT 4.0.
- HP traditional PCL 6 driver for Windows 95, Windows 98, Windows Me, and Windows NT 4.0. This is the default driver for these operating systems when performing a Typical Installation.
- HP traditional PS driver for Windows 95, Windows 98, Windows Me, and Windows NT 4.0.
- HP PCL 5e unidriver for Windows 2000 and Windows XP.
- HP PCL 6 unidriver for Windows 2000 and Windows XP. This is the default driver for these operating systems when performing a Typical Installation.
- HP PS unidriver for Windows 2000 and Windows XP.

You gain access to the drivers through onscreen windows, or driver tabs, that offer dialog boxes with printer settings. The driver tabs are available in the software application from which you send your print jobs to the printer and from your computer's control panel.

The graphical user interface (GUI) of the driver tabs differs from driver to driver. The GUI of the HP traditional PS driver is significantly different from the GUI of the HP traditional PCL 5e and PCL 6 drivers. The HP PCL 5e, HP PCL 6, and HP PS unidrivers for Windows 2000 and Windows XP have a uniform general appearance.

See Chapter 3, "Driver features," for detailed information about each of the HP printer drivers.

HP LaserJet user documentation

Adobe (R) Acrobat Reader (R)

The HP LaserJet software compact disk read-only memory (CD-ROM) includes Adobe Acrobat Reader for viewing online documentation. When you click any of the documentation links on the HP LaserJet 2300 software CD-ROM, the installer scans the system for an installed portable document format (PDF) reader. If the installer cannot find a reader, the installer presents the option to install the Adobe Acrobat Reader.

Note Adobe Acrobat Reader 4.0 or later is required in order to view the documents on the HP LaserJet 2300 software CD-ROM.

HP LaserJet user guide

On the CD-ROM that came with the printers, the *HP LaserJet 2300 User Guide* is supplied in an Adobe Acrobat Reader PDF file for viewing on your computer.

You can either view the guide from the HP LaserJet 2300 software CD-ROM or install it on your system. To view the user guide from the HP LaserJet 2300 software CD-ROM, click **printer documentation** on the main installer screen, and then click **user guide**. To install the online user guide, select the **User Guide** check box during a Custom Installation. The guide is installed in the **Manuals** folder on the target system. You can also choose to install the guide later, or to read the guide on the printing system software CD-ROM by navigating to the folder for your language, and then opening the **Manuals** folder.

In accordance with the Americans with Disabilities Act (ADA), Hewlett-Packard provides readable, onscreen versions of the *HP LaserJet 2300 User Guide* at the following HP Web site:

<http://www.hp.com/support/lj2300>

A hyperlinked, screen-readable version of the *HP LaserJet 2300 User Guide* is available on the printer software CD-ROM. To view the user guide, navigate to the folder for your language, open the **Manuals** folder, and then open the file with this file name:

LJ2300_USE_GUIDE.CHM

HP LaserJet 2300 series printing-system installation notes

The HP LaserJet 2300 Printing System Installation Notes are available on the HP LaserJet software CD-ROM. The installation notes (filename LJ2300_INSTALL_NOTES.RTF for the HP LaserJet 2300 printer) contain important information about printer features, instructions for installing the printing-system software, and technical assistance.

To view this text file from the HP LaserJet 2300 software CD-ROM, click **printer documentation** from the main installer screen, and then click **install notes**.

You can also gain access to the file by inserting the CD-ROM, navigating to the folder for your language, and then clicking the filename (LJ2300_INSTALL_NOTES.RTF for the HP LaserJet 2300 printer). When you have the file open in WordPad, you can click **File**, and then click **Save As** to save a copy of the file to another location.

HP LaserJet 2300 printing-system release notes

The Hewlett-Packard LaserJet 2300 Printing System Release notes, late-breaking information, and other technical assistance, are available at the following Web site:

<http://www.hp.com/support/lj2300>

HP Jetdirect Administrator's Guide

The Hewlett-Packard Jetdirect Administrator's Guide can be viewed from the HP LaserJet 2300 software CD-ROM browser by clicking **printer documentation** and then clicking **hp jetdirect guide**. The guide is installed in the **Manuals** folder on the target system. You can also choose to install the guide later, or to read the guide on the printing system software CD-ROM by navigating to the folder for your language, opening the **Manuals** folder, and then clicking the file name, HPJDAG.PDF.

Bidirectional communication

Bidirectional communication is the printer's ability to respond to data inquiries from the computer and report back information, such as what type of print media is available or what accessories are connected to the printer. If a printer does not have this capability (that is, if it has no bidirectional mode), it can only accept commands from the host and cannot report information back.

Driver Autoconfiguration and Printer Status and Alerts use bidirectional communications software. The Typical Installation installs Driver Autoconfiguration in supported environments that contain the bidirectional communication software. Use Custom Installation when you do not want these features.

Bidirectional communication depends on the operating system on which your network runs and on the type of connection you have between your computer and your printer.

The following tables provides information about bidirectional communication availability in various operating systems and network environments.

Table 2: Bidirectional-communication availability in Microsoft Windows and Microsoft Share

Method	Connection type		Microsoft Windows						Microsoft Share		
			95	98	Me	NT 4.0	2000	XP	9x/NT 4.0 host	2000/XP host ²	
Installer	Direct connect	USB (DOT4)		x	x	x	x	x	x	x	x ³
		Parallel		x	x	x	x	x	x	x	x ³
	Network	Jetdirect	TCP/IP	x	x	x	x	x	x	x	x ³
			IPX/SPX	x	x	x	x	x	x	x	x ³
		Standard	TCP/IP (HP)	x	x	x	x	x	x	x	x ³
			TCP/IP (MS ¹)	x	x	x	x	x	x	x	x ³
			IPX/SPX (HP)	x	x	x	x	x	x	x	x ³

¹Bidirectional functionality is supported only with the client software from Novell. It is not supported with Microsoft Client Service for NetWare.

²In Windows 2000 and Windows XP, the bidirectional-communication components that are installed for HP PCL 5e, PCL 6, and PS unidrivers are limited. EAC is used for autoconfiguration.

³During installation, Auto Configure works. The Update Now feature is not supported in environments where shared Windows NT 4.0, Windows 2000, or Windows XP clients are connected to Windows NT 4.0, Windows 2000, or Windows XP hosts.

Table 3: Bidirectional-communication availability in Novell Netware environments

Method	Connection type		Novell				
			Netware 4.x		Netware 5.x		
Installer	Direct connect	USB (DOT4)		x (98, Me ²)	x (98, Me ²)	x (98, Me ²)	x (98, Me ²)
		Parallel		x (98, Me ²)	x (98, Me ²)	x (98, Me ²)	x (98, Me ²)
	Network	Jetdirect	TCP/IP	x (NT 4.0)	x (NT 4.0)	x (NT 4.0)	x (NT 4.0)
			IPX/SPX	x (2000 ³)	x (2000)	x (2000 ³)	x (2000 ³)
		Standard	TCP/IP (HP)	x (XP ³)	x (XP ³)	x (XP ³)	x (XP ³)
			TCP/IP (MS ¹)				
			IPX/SPX (HP)				

¹Bidirectional functionality is supported only with the client software from Novell. It is not supported with Microsoft Client Service for NetWare.

²Novell does not support Windows Me.

³In Windows 2000 and Windows XP, the bidirectional-communication components that are installed for HP PCL 5e, PCL 6, and PS unidrivers are limited. EAC is used for autoconfiguration.

The following tables show the availability Enterprise Autoconfiguration for various operating systems and network environments that support bidirectional communication.

Table 4: Enterprise Autoconfiguration availability in Microsoft Windows and Microsoft Share

Method	Connection type		Microsoft Windows						Microsoft Share		
			95	98	Me	NT 4.0	2000	XP	9x/NT/4.0 host with 4.0/2000/XP	2000/XP host with 9x/Me client	
Installer	Direct connect	USB (DOT4)		x	x	x	x	x	x	x ³	x
		Parallel		x	x	x	x	x	x	x ³	x
	Network	Jetdirect	TCP/IP	x	x	x	x	x	x	x ³	x
			IPX/SPX	x	x	x	x	x	x	x ³	x
		Standard	TCP/IP (HP)	x	x	x	x	x	x	x ³	x
			TCP/IP (MS ²)	x	x	x	x	x	x	x ³	
			IPX/SPX (HP)	x	x	x	x	x	x	x ³	x
Add Printer	Direct connect	USB		x	x	x	x			x ³	x
		Parallel		x	x	x	x			x ³	x
	Network	Jetdirect	TCP/IP	x	x	x	x	x	x	x ³	x
			IPX/SPX	x	x	x	x	x	x	x ³	x
		Standard	TCP/IP (HP)	x	x	x	x			x ³	x
			TCP/IP (MS ²)					x	x	x ³	
			IPX/SPX (HP)	x	x	x	x	x	x	x ³	x

¹The host systems might or might not have used EAC when setting up the host drivers.

²Bidirectional functionality is supported only with the client software from Novell. It is not supported with Microsoft Client Service for NetWare.

³In this environment, client machines essentially use Point and Print to download the configured driver from the host.

Table 5: Enterprise Autoconfiguration availability in Novell Netware environments

Method	Connection type		Novell				
			Netware 4.x		Netware 5.x		
			Bindery queue	NDS queue	Bindery queue	NT 4.0	
Installer	Direct connect	USB					
		Parallel					
	Network	Jetdirect	TCP/IP	x	x	x	x
			IPX/SPX				
		Standard	TCP/IP (HP)				
			TCP/IP (MS ²)				
	IPX/SPX (HP)						
Add Printer	Direct connect	USB					
		Parallel					
	Network	Jetdirect	TCP/IP				

Method	Connection type		Novell			
			Netware 4.x		Netware 5.x	
			Bindery queue	NDS queue	Bindery queue	NT 4.0
	Standard	IPX/SPX				
		TCP/IP (HP)				
		TCP/IP (MS ¹)				
		IPX/SPX (HP)				

¹Bidirectional functionality is supported only with the client software from Novell. It is not supported with Microsoft Client Service for NetWare.

The following tables provides information about the availability of Printer Status and Alerts in various operating systems and network environments.

Table 6: Printer Status and Alerts availability in Microsoft Windows and Microsoft Share

Method	Connection type		Microsoft Windows						Microsoft Share		
			95	98	Me	NT 4.0	2000	XP	9x/NT 4.0 host	2000/XP host	
Installer	Direct connect	USB (DOT4)	x	x	x	x	x	x	x ²	x ²	
		Parallel	x	x	x	x	x	x	x ²	x ²	
	Network	Jetdirect	TCP/IP	x	x	x	x	x	x	x	x ²
			IPX/SPX	x	x	x	x	x	x	x	x ²
		Standard	TCP/IP (HP)	x	x	x	x	x	x	x	x ²
			TCP/IP (MS ¹)	x	x	x	x	x	x	x	x ²
			IPX/SPX (HP)	x	x	x	x	x	x	x	x ²

¹Bidirectional functionality is supported only with the client software from Novell. It is not supported with Microsoft Client Service for NetWare.

²Printer Status and Alerts is not supported with direct-connect shares.

³Novell does not support Windows Me.

Table 7: Printer Status and Alerts availability in Novell Netware environments

Method	Connection type		Novell				
			Netware 4.x		Netware 5.x		
Installer	Direct connect	USB (DOT4)		x (98, Me ²)	x (98, Me ²)	x (98, Me ²)	x (98, Me ²)
		Parallel		x (98, Me ²)	x (98, Me ²)	x (98, Me ²)	x (98, Me ²)
	Network	Jetdirect	TCP/IP	x (NT 4.0)	x (NT 4.0)	x (NT 4.0)	x (NT 4.0)
			IPX/SPX	x (2000)	x (2000)	x (2000)	x (2000)
		Standard	TCP/IP (HP)	x (XP)	x (XP)	x (XP)	x (XP)
			TCP/IP (MS ¹)				
IPX/SPX (HP)							

¹Bidirectional functionality is supported only with the client software from Novell. It is not supported with Microsoft Client Service for NetWare.

²Novell does not support Windows Me.

Driver Autoconfiguration

The HP LaserJet PCL 6 and PCL 5e drivers for Windows and the PS drivers for Windows 2000 and Windows XP feature bidirectional communication technology which, in supported environments, provides automatic discovery and driver configuration for printer accessories at the time of installation. Some accessories the Driver Autoconfiguration supports are the duplexing unit, optional paper trays, and dual inline memory modules (DIMMs).

If the environment supports bidirectional communication, the installer presents Driver Autoconfiguration as an installable component by default for a Typical Installation and for a Custom Installation. The Driver Autoconfiguration component installs the bidirectional communication software. If the installation environment does not support bidirectional communication, the Driver Autoconfiguration option does not appear during installation. However, installed drivers are configured automatically in accordance with the HP printer bundle that is selected during installation of the printing-system software, except in Windows 2000 and Windows XP.

Driver Autoconfiguration works in the following ways:

- In environments that support bidirectional communication, the computer communicates with the printer during installation, determines the physical configuration, and then configures the driver accordingly.
- If the configuration of the HP LaserJet 2300 series printer changes after installation, the driver can be automatically updated with the new configuration in environments that support bidirectional communication. For example, if the base printer model is installed and an optional paper tray is added later, you can automatically configure the paper tray in the driver by clicking the **Update Now** button on the driver's **Configuration** tab (except in Windows 2000 and Windows XP). The **Update Now** button activates the HP Network Registry Agent (HPNRA) and triggers the driver to recheck the registry for new information. The HPNRA automatically updates the registry and changes the configuration information that appears on the **Configuration** tab in the **Printer** folder.

Note

The bidirectional communication software that is necessary for the two preceding methods of Driver Autoconfiguration is included in a Typical Installation and a Custom Installation when installing a network printer in supported environments.

- In environments that do not support bidirectional communication, the driver automatically configures options based on the HP LaserJet 2300 printer bundle that is selected during the installation of the printing-system software (except in Windows 2000 and Windows XP). Configuration is based solely on the definition of the printer model.
- Enterprise AutoConfiguration (EAC) uses bidirectional communication to provide autoconfiguration functionality for an Add Printer wizard installation over a network. An Add Printer wizard installation that includes EAC is configured with the same settings as the physical configuration of the device. Configuration occurs without user interaction. If bidirectional communication software has been installed previously, EAC will not be activated, and

the Add Printer Wizard uses the pre-existing bidirectional communication software to configure the printer driver. If bidirectional communication software has not been installed, EAC installs the bidirectional communication software. It communicates with the printer and automatically matches the printer driver with the actual printer configuration. EAC is activated only once to use the autoconfiguration utility, and is then shut off. The files required to install EAC remain on your system.

Note

When you use the Add Printer wizard to install drivers, you must select the HP LaserJet model that corresponds to your printer. The Add Printer wizard installs the driver using the correct settings for the model without communicating with the printer. If you do not select the model that corresponds to your printer, the driver settings will not match the actual printer.

- HP Driver Preconfiguration is a software architecture and set of tools that permits HP software to be customized and distributed in managed corporate printing environments. Using HP Driver Preconfiguration, information technology (IT) administrators in corporate and enterprise environments can preconfigure the printing and device defaults for HP printer drivers before installing the drivers in the network environment. For more information, see the *HP Driver Preconfiguration Support Guide*, which is available at the following Web site:
<http://www.hp.com/support/lj2300>

The following table lists drivers that support EAC in Windows operating systems.

Table 8: Drivers that support Enterprise AutoConfiguration

Product	Windows 95, 98, Me	Windows NT 4.0	Windows 2000, XP
HP LaserJet 2300	Yes	Yes	Yes
HP Color LaserJet 2500	Yes	Yes	Yes
HP LaserJet 4100 and 4100mfp	No	Yes	Yes
HP LaserJet 4200 and 4300	Yes	Yes	Yes
HP Color LaserJet 4550	No	Yes	Yes
HP Color LaserJet 4600	Yes	Yes	Yes
HP LaserJet 5100	No	Yes	Yes
HP Color LaserJet 5500	Yes	Yes	Yes
HP Color LaserJet 8150	No	Yes	Yes
HP LaserJet 9000mfp	No	Yes	Yes

HP Embedded Web Server

The HP Embedded Web Server (EWS) contains the following components:

- embedded virtual machine for Java (TM) applications
- Web pages
- storage space

The HP Embedded Web Server is a standard feature for the HP LaserJet 2300 printer.

The HP Embedded Web Server provides a simple, easy-to-use solution for one-to-one printer management. In offices that have a limited number of printers, remote management of printing devices can be accomplished without installing any management software, such as HP Web JetAdmin. The only requirement is that the management console have a supported Web browser.

In environments that have a larger number of printers, where one-to-one management is impractical, the HP Embedded Web Server and HP Web JetAdmin work together to provide scalable remote printer management. HP Web JetAdmin is used for consolidated management tasks, where operations are performed on a selected set of printers instead of on individual printers. For such environments, HP has provided hooks between the HP Embedded Web Server and HP Web JetAdmin so that EWS features can be configured on multiple printers in one operation. For example, the security password for the HP Embedded Web Server can be set on a population of printers simultaneously.

For additional information and a copy of the *HP Embedded Web Server User Guide*, go to the following Web site:

<http://www.hp.com/support/lj2300>

To view information about the printer by using the HP Embedded Web Server, open a supported Web browser and type in the printer transmission control protocol/Internet protocol (TCP/IP) address or host name. To find the TCP/IP address, look for "IP Address" on the enhanced input/output (EIO) Jetdirect page, in the "TCP/IP" section under "Protocol Information". To find the host name of the printer, look for "Host Name" in the "TCP/IP" section.

You also can view information about an installed HP Jetdirect print server by clicking the **Networking** tab in the HP Embedded Web Server window.

To print a copy of the EIO Jetdirect page from the printer control-panel display, follow these steps:

1. Press the SELECT button (the one with the check mark) to open the menus.
2. Press the up and down buttons to scroll to INFORMATION, and then press the SELECT button.
3. Press the up and down buttons to scroll to PRINT CONFIGURATION.
4. Press the SELECT button to print the configuration page.
5. Look in the configuration page section marked "Printer Information" for the Firmware Datecode. The firmware date code will look something like this: 20030502 03.002.0

Information tab

The HP Embedded Web Server offers the following additional features. To view the information, click the items on the menu that is on the left side of the HP Embedded Web Server **Information** tab:

- **Device Status.** This page provides current status information about your printer.
- **Configuration Page.** This page provides information about the configuration for your printer.
- **Supplies Status.** This page provides information about the print cartridge and the total pages printed, and the serial number of the printer.
- **Event Log.** This page provides information about reported printer errors.
- **Device Information.** This page shows device information, such as the printer TCP/IP address and serial number.
- **Control Panel.** This page shows the layout of the control panel.

Device status

If a printer problem exists, status information (such as whether the printer is online or the toner is low) is available through your Web browser on a computer that is linked directly to the printer. You can view this information without physically going to the printer to identify the status. The following illustration shows how this information is presented on the printer's Web page.

Figure 1: Device Status page

hp LaserJet 2300 series / 192.168.0.10
hp LaserJet 2300 series

Information Settings Networking

Device Status
Configuration Page
Supplies Status
Event Log
Usage Page
Device Information
Control Panel

Other Links
[hp instant support](#)
[Order Supplies](#)
[Product Support](#)

Device Status

Powersave on

● Pause/Resume Button ● Continue

Supplies

Toners: (% remaining)

Black Print Cartridge: 63%
Q2610A

[Supplies Details](#)

Media

Input/Output	Status	Size	Type
Tray 1		ANY SIZE	ANY TYPE
Tray 2		LETTER	PLAIN
Tray 3		LETTER	PLAIN
STANDARD OUTPUT		N/A	N/A

[Change Settings](#)

Configuration information

The HP LaserJet printer configuration page is available remotely through the HP Embedded Web Server. The HP Embedded Web Server configuration page provides configuration information about the printer in the same way as the configuration page printed from the printer. The following illustration shows an example of a configuration page viewed remotely through the HP Embedded Web Server.

Figure 2: Configuration page

The screenshot displays the HP Embedded Web Server interface for an HP LaserJet 2300 series printer. The top navigation bar includes 'Information', 'Settings', and 'Networking'. The left sidebar contains links for 'Device Status', 'Configuration Page', 'Supplies Status', 'Event Log', 'Usage Page', 'Device Information', and 'Control Panel'. Below the sidebar are 'Other Links' for 'hp instant support', 'Order Supplies', and 'Product Support'. The main content area is titled 'Configuration Page' and is divided into several sections:

- Device Information:**

Product Name:	hp LaserJet 2300 series
Printer Name:	hp LaserJet 2300 series
Printer Model:	CXXXXA
Printer Serial Number:	XXXXXXXXXX
Firmware Datecode:	20021219 04.045.0
Service ID:	00000
PS Wait Time-out:	300 seconds
Page Count:	5492
- Installed Personalities and Options:**

PCL	(20010402)
PCLXL	(20010402)
POSTSCRIPT	(20010402)
DIMM Slot 1:	Side 1: 8 MB Flash Side 2: 64 MB SDRAM
DIMM Slot 2:	Empty
DIMM Slot 3:	Empty
EIO 1:	HP JetDirect J6057A
RAM DISK Storage:	7 MB Capacity
- Memory:**

Total Memory:	48 MB
DWS:	11.0
Automatic Resource Saving Enabled	
- Security:**

Control Panel Lock:	NONE
Control Panel Password:	DISABLED
Device Type: RAM DISK	Write Protect: DISABLED
- Paper Trays and Options:**

Default Paper Size:	LETTER
Tray 1 Size:	ANY SIZE
Tray 1 Type:	ANY TYPE
Tray 2 Size:	LETTER
Tray 3 Size:	LETTER
Duplex Unit:	

Note The difference between the Total Memory setting and the DIMM Slot 1 memory value is reserved for system use.

Links to off-printer solutions

Links within the home page of the HP Web Server provide an easy way to locate information or complete tasks.

- **hp instant support.** This link connects you to a set of dynamic Web resources that help you solve specific problems and determine additional services that might be available for your device. Specific status and configuration information about the printer is retained and directed to the "Solve a Problem" Web site. This site offers targeted support content and messages to help resolve problems as quickly as possible.
- **Order Supplies.** This link connects to an ordering page where you can order genuine HP supplies, such as print cartridges and paper.
- **Product Support.** This link connects you to an HP product support page from which you can search for information, contact the HP customer care home page, or find additional resources for your printer.

Settings tab

The options on the left of the **Settings** tab are as follows:

- Configure Device
- Email Server
- Alerts
- AutoSend
- Security
- Edit Other Links
- Device Information
- Language
- Time Services

Remote printer configuration

Printer configuration information can be obtained through a Web browser by opening the printer HP Embedded Web Server page and changing any of the basic configuration information on the **Settings** tab. Security and password controls give management information system managers the level of control that they require within their environments. The following illustration shows an example of printer options that can be configured remotely.

Some configuration tasks cannot be performed remotely because printed pages must be examined.

Figure 3: Configure Device

The screenshot displays the HP Embedded Web Server interface for an hp LaserJet 2300 series printer. At the top, the HP logo and 'invent' tagline are visible on the left, and the printer model 'hp LaserJet 2300 series' is shown on the right. Below this, there are three tabs: 'Information', 'Settings' (which is active), and 'Networking'. The main content area is titled 'Configure Device' and includes a navigation tree on the left with the following items: 'Configure Device', 'Email Server', 'Alerts', 'AutoSend', 'Security', 'Edit Other Links', 'Device Information', 'Language', and 'Time Services'. The 'Configure Device' section is expanded to show a tree structure: 'INFORMATION', 'PAPER HANDLING', 'CONFIGURE DEVICE' (expanded), 'PRINTING', 'PRINT QUALITY', 'SYSTEM SETUP', 'IO' (expanded), 'PARALLEL INPUT', 'EIO 1 JETDIRECT MENU', 'RESETS', and 'DIAGNOSTICS'. The 'IO' section is further expanded to show a configuration field for 'IO TIMEOUT' set to '15' seconds, with a range of '(5 - 300)'. At the bottom right, there are 'Apply' and 'Cancel' buttons. An 'Other Links' section on the left provides links for 'hp instant support', 'Order Supplies', and 'Product Support'.

Networking tab

The following illustration shows the **Network Settings** option on the HP Embedded Web Server **Networking** tab.

Figure 4: Networking tab

The screenshot displays the HP Embedded Web Server interface for an HP LaserJet 2300 series printer. The top header shows the printer model and IP address: NPI80D0AD / 192.168.0.10. Below this, there are tabs for Information, Settings, and Networking, with Networking being the active tab. The Networking tab has sub-tabs for TCP/IP, IPX/SPX, AppleTalk, DLC/LLC, and SNMP, with TCP/IP selected. The IP Configuration Method is set to Manual. A note states: "Note: A change in IP Address will result in loss of connectivity to the browser." The settings are as follows:

Setting	Value
IP Configuration Method	Manual
Host Name	NPI80D0AD
IP Address	192.168.0.10
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1
Domain Name	
Primary WINS Server	192.168.0.200
Secondary WINS Server	192.168.0.201
Syslog Server	
Syslog Maximum Messages	10
Syslog Priority	7
Idle Timeout	270 Seconds
TTL/SLP	4
System Contact	
System Location	
LPD Banner Page	Enable

At the bottom right, there are buttons for Apply and Cancel.

The menu on the left side of the screen contains other networking options under three categories: configuration, security, and diagnostics. For more information, see the *HP Jetdirect Administrator's Guide*.

Configuration

- **Network Settings.** Use these pages to enable or disable network protocols, or set values for HP Jetdirect configuration parameters. If you type a value, click **Apply** to set it, or click **Cancel** to ignore the entry.

Note

When changing the TCP/IP address, the connection to the HP Embedded Web Server is closed, and client printing might be affected. To re-establish a connection, use the new TCP/IP address.

- **Other Settings.** This link appears if the Web pages support multiple languages. (Optionally, supported languages can be selected through language preference settings in your browser. See your browser's Help).
- **Support Info.** Use this page to configure the Support page. Designate a support contact or phone number, or specify URL addresses for product and technical support.
- **Select Language.** This link appears if the Web pages support multiple languages. (Optionally, supported languages can be selected through language preference settings in your browser. See your browser's Help).

Security

- **Admin Password.** Set an administrative password to control access to the HP Embedded Web Server. This password can also be set using Telnet and HP Web JetAdmin. If a password is set, you are prompted for a user name and this password in order to gain access to the HP Embedded Web Server configuration pages.
- **SSL/TLS.** Enable or disable Secure Sockets Layer/Transport Layer Security (SSL/TLS) advanced security protocol for HP Jetdirect print-server management. Use these pages to specify SSL/TLS digital certificates and encryption level.
- **SNMPv3.** Set up an Simple Network Management Protocol, version 3 (SNMPv3) account to allow management software access to the SNMPv3 agent on the HP Jetdirect print server.
- **Telnet.** Enable or disable access to the print server's configuration parameters through Telnet.
- **Access Control.** Specify one or more host systems that can have access to the device. Each entry consists of a TCP/IP address and a mask (a mask typically specifies a group of host systems). Up to ten entries can be specified. If the list is empty, any supported system can gain access to the device.

Diagnostics

- **Network Statistics.** This page shows network statistics that have been collected and stored on the HP Jetdirect print server. Network statistics are often useful to diagnose network performance and operational problems.
- **Protocol Info.** This page provides a list of network configuration settings on the HP Jetdirect print server for each protocol.
- **Configuration Page.** This page shows the HP Jetdirect Configuration Page, which contains HP Jetdirect status and configuration information. See the HP Jetdirect documentation on your printing-system software CD-ROM for a detailed description of its contents.
- **Refresh Rate.** This page specifies the time interval (in seconds) for HP Jetdirect diagnostic page updates. To disable the refresh rate, set this value to "0" (zero).

Network settings

From the **Networking** tab, you can enable and configure the following network protocols:

- TCP/IP
- IPX/SPX
- AppleTalk
- Data link control/logical link control (DLC/LLC)
- Simple network management protocol (SNMP)

Configurable e-mail alerts

The printer can automatically send e-mail alerts about printer problems or job status to specified e-mail addresses. For example, if toner is low, the printer can notify the person who is responsible for ordering or changing the cartridge. If a printer failure occurs, an e-mail alert can be sent directly to the person who is responsible for fixing the problem. These e-mail alerts can be configured to be sent to any device that can accept e-mail, such as digital phones, pagers, and personal digital assistants. In large environments, administrators can route e-mail addresses to list-servers or URLs for expanded notification.

Figure 5: Configurable Alerts page

hp LaserJet 2300 series / 192.168.0.10
hp LaserJet 2300 series

Information **Settings** Networking

Configure Device
Email Server
Alerts
AutoSend
Security
Edit Other Links
Device Information
Language
Time Services

Alerts

Step 1. Enter Alert Destinations

Example 1: an email address > (your_name)@(your_company).com
Example 2: a mobile device > 208-555-5555@(mobile_company).net
Example 3: a URL > http://www.(your_server).com

Destination 1
Destination 2

Step 2. Choose Alerts

Choose alert categories to send to lists or click category link to select individual alerts.

Alert Category	Destination 1	Destination 2
Supplies	<input type="checkbox"/>	<input type="checkbox"/>
Service	<input type="checkbox"/>	<input type="checkbox"/>
Paper Path	<input type="checkbox"/>	<input type="checkbox"/>
Advisory	<input type="checkbox"/>	<input type="checkbox"/>

Choose Attachments

Apply Cancel

E-mail command and response

The HP LaserJet 2300 printer can send e-mail messages directly. However, you must configure the e-mail information to initiate this feature. One use for this feature is to send diagnostic information to solve a printer problem. An e-mail sent to the printer requests configuration information. The printer automatically sends that information back to the service provider. In many cases, the problem can be identified quickly and solved remotely. For more information about e-mail command and response, see the *HP Embedded Web Server for HP LaserJet Printers* guide.

To configure your printer to send e-mail messages, follow these steps:

1. Take note of your printer's TCP/IP address on the EIO X Jetdirect page (this is the second page of the Configuration Page printout. The number indicated by "X" can vary. To print a configuration page, see "Determining the current level of firmware.")
2. Launch your Web browser.
3. In the **Address:** or **Go to:** field, type the TCP/IP address that is assigned to the printer (for example, 192.168.0.20) or the host name (for example, http://myprinter). The HP Embedded Web Server home page appears.
4. From the top of the HP Embedded Web Server screen, click **Device**.
5. On the navigational bar on the left, click **Alerts**.
6. Under Notification Recipients, type your e-mail address (for example, name@company.com).
7. Click **Apply**.
8. Under **Select Events**, click **Media Path**.
9. Select the **List1** check box next to CLOSE DRAWERS/DOORS/COVERS.
10. Click **Apply**. A screen stating that your selections have been accepted should appear. Click **OK**.
11. In the **SMTP Server:** field under Outgoing Mail, type the TCP/IP address for the SMTP server (for example, 192.168.0.201).
12. In the **Domain Name:** field under **Outgoing Mail**, type the domain name.
13. Click **Apply**.
14. Click **Security**.
15. Under **Security**, select the **Outgoing Mail** check box.
16. Click **Apply**.
17. To test the configuration, open the top cover of the printer, and then go to your computer and verify that you have received an e-mail message from the printer.

Printer Status and Alerts

The HP LaserJet printing-system software includes a utility called Printer Status and Alerts that you can use to monitor print jobs and printer status from the desktop. The Printer Status and Alerts feature provides printer and job status information such as printing history, job progress, toner and paper levels, and consumables and supplies reorder information, and presents a simulated view of the printer control panel. This utility offers several options for configuring pop-up windows to view the status of the printer and of individual print jobs.

Printer Status and Alerts is a selectable component of Custom Installation. To install Printer Status and Alerts, select **Custom Installation** and then select the **Printer Status and Alerts** check box.

Printer Status and Alerts features are available for printers that have a connection, whether direct or over a network, that supports bidirectional functionality. The Printer Status and Alerts feature cannot be installed over infrared (IR) or serial ports. See "Bidirectional communication."

For Windows 95, the Microsoft Winsock2 patch must first be installed. To download the Microsoft Winsock2 patch, go to the following web site:

http://www.microsoft.com/windows95/downloads/contents/WUAdminTools/S_WUNetworkingTools/W95Sockets2/Default.asp

For all operating systems, the computer must have Internet Explorer version 4.72 or later installed; version 5.0 or later is recommended.

Printer Status and Alerts communicates with the printer only during an active print job, which minimizes network traffic.

The following restrictions apply to HP products that use Printer Status and Alerts:

- Windows NT 4.0, Windows 2000, and Windows XP do not support Printer Status and Alerts with terminal servers.
- For Device Status (printer icons in the status window), the computer must have Internet Explorer version 4.72.x or later installed. To find the version number, open Internet Explorer, click **Help**, and then click **About Internet Explorer**. No Internet Explorer is necessary for getting status about jobs. Internet Explorer can be installed after installing Printer Status and Alerts.
- Netscape browsers do not support Printer Status and Alerts.
- On a few programs, such as Microsoft Excel and Seagate Crystal Reports, multiple copies of the same document show up in the Printer Status and Alerts window as separate jobs. This is because these programs actually send each copy as a separate job.
- For Windows screen-reader programs, such as Job Access With Speech from Freedom Scientific, the computer must have Internet Explorer version 5.0 or later installed. To find the version number, open Internet Explorer and click **Help**, and then click **About Internet Explorer**. Version 5.0 is reported as Version 5.00.x or later. No Internet Explorer is necessary for getting status about jobs for network-connected printers. Internet Explorer can be installed after installing Printer Status and Alerts.
- When a driver is renamed, job and device status will not be tracked until the computer is restarted.
- Drivers that are added after Printer Status and Alerts is installed are not recognized until the computer is restarted.
- Clicking the **Cancel** button in the Printer Status and Alerts window does not always cancel a job. This button sends a cancel request to the printer, but if the job has already been processed, it might not be possible to cancel the job. (This is commonly the case with smaller jobs.)

When using Printer Status and Alerts with Microsoft printer sharing, the following items apply:

- The Microsoft patch "Vredir" is required if you want to use Printer Status and Alerts on a Windows 98 or Windows Me computer for a printer that has been shared directly from a computer with Windows NT 4.0, Windows 2000, or Windows XP installed. Failure to install the patch could cause an intermittent blue screen to appear on the client computer. For Windows 95 operating systems, you must load DSCLIENT.EXE, copy VREDIR.VXD into the system folder, and restart your computer.
- For Microsoft shared printers, the host system must have either **Printer Status and Alerts** or the **HP Driver Autoconfiguration** option from the HP installer on the computer. Load Printer Status and Alerts on the computer that shares the printer before loading Printer Status and Alerts on the client computer.
- For Windows 95, Windows 98, and Windows Me client computers that have Printer Status and Alerts installed, installing a printer by using the Point and Print method does not activate Printer Status and Alerts.

When the Printer Status and Alerts feature is installed, a status icon in the form of a printer is included in the Windows system tray in the lower-right corner of the screen (in the Systray). The printer icon remains unchanged until you send a print job to the HP LaserJet 2300 printer. When you send a print job, the icon changes to alert you to the status of the print job. Eight icons exist in this feature. The eight icons in the following illustration show current job status. Neither the **Receiving** nor the **Waiting** icon ever shows up in the Systray. When the print job is in a receiving or waiting state, the **Printing** icon appears in the Systray.

The icons behave differently, depending on whether the printer is connected through a direct connection (USB or parallel) or through a network.

Figure 6: Printer Status and Alerts icons



Double-click the status icon to open the Printer Status and Alerts window, shown in the following illustration.

Figure 7: Printer Status and Alerts window



Note The appearance on the screen varies according to the HP LaserJet printer and its configuration.

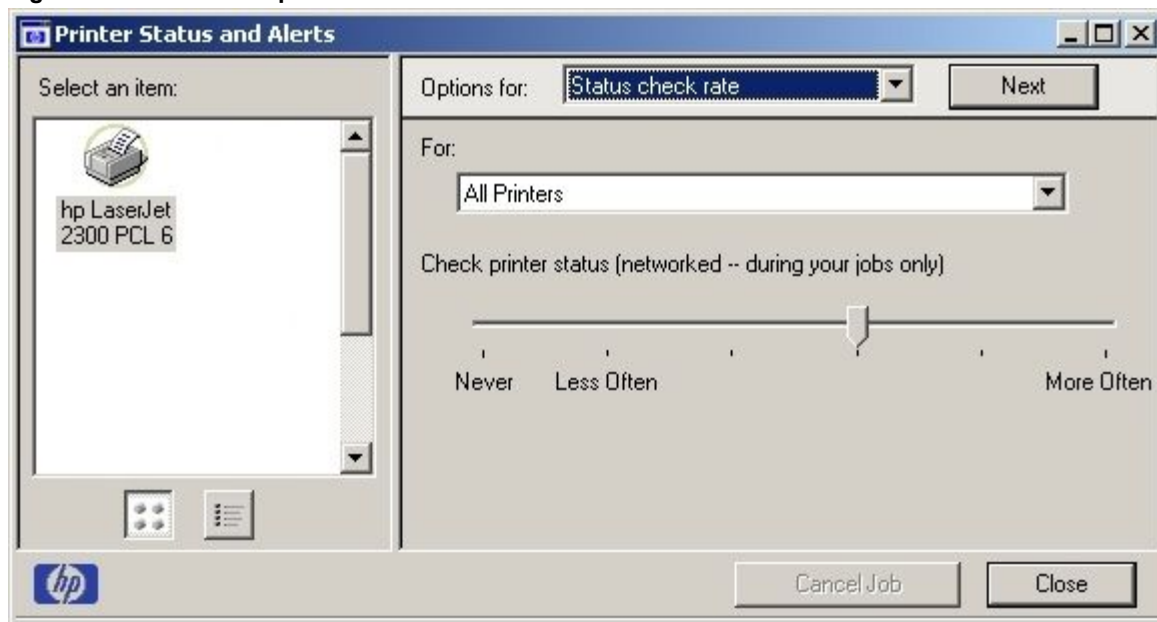
The Printer Status and Alerts window consists of two panes. The left pane shows icons for the available printers, an icon for each current print job in progress, and an **Options** icon. The right pane provides information based on what is selected in the left pane. The buttons at the top can be used to perform the following functions:

- **Left arrow:** Return to the previous pane.
- **Right arrow:** Go to the next pane.
- **Circular arrows:** Refresh the pane.
- **Home:** Return to the device status.
- **Clock face:** Show print-job history.

Click a printer icon in the left pane to view information about the printer and supplies or to view a history of recent print jobs. The following printer information is available:

- **Device Status** indicates the current status of the HP LaserJet 2300 printer.
- **Supplies** shows information about the percentage of print-cartridge life remaining.
- **Media** provides information about paper-handling devices and the status of each device. For example, this section of the window shows the level of media in each input device, as well as the status of output devices. This section also provides information about the type and size of media in each input device.
- **Capabilities** provides information about such things as installed trays, paper-handling devices, and disk storage. Also listed are DIMM slots, the printer serial number, and the firmware date code. Click a print job icon to see information about the progress and status of the print job. Click the **Options** icon to select options for configuring pop-up status windows that contain document alerts and to set the refresh rate for showing printer status information.

Figure 8: Refresh rate option



Note The appearance of the screen varies according to the HP LaserJet 2300 printer and its configuration.

Six settings for the refresh rate are available. The default setting is halfway between **Less Often** and **More Often**.

The **Less Often** setting specifies the least frequent update intervals, which have minimal impact on network traffic. The **More Often** setting updates the status more frequently, but also has the most impact on traffic. The **Never** setting disables the job-status monitoring mechanism for the selected printer. If the refresh rate for a given printer is set to **Never**, then subsequent jobs sent to that printer will not appear in the Printer Status and Alerts window. If the **Never** setting is selected when the scope control is set to **All Printers**, then all job-status monitoring will be disabled. However, even when job-status monitoring is disabled, you can open the status window and view the printer status panels.

Changes to the refresh rate settings affect any subsequent jobs that are submitted to the affected printer. Existing jobs that are already being processed have a fixed refresh rate that was determined (according to the setting in the Refresh Rate panel) when the job was submitted.

Refresh-rate intervals for direct-connect printers are as follows:

- Less Often setting: 5 minutes
- One setting to the right of Less Often: 2 minutes
- Two settings to the right of Less Often: 1 minute
- Three settings to the right of Less Often: 30 seconds
- More Often setting: 10 seconds

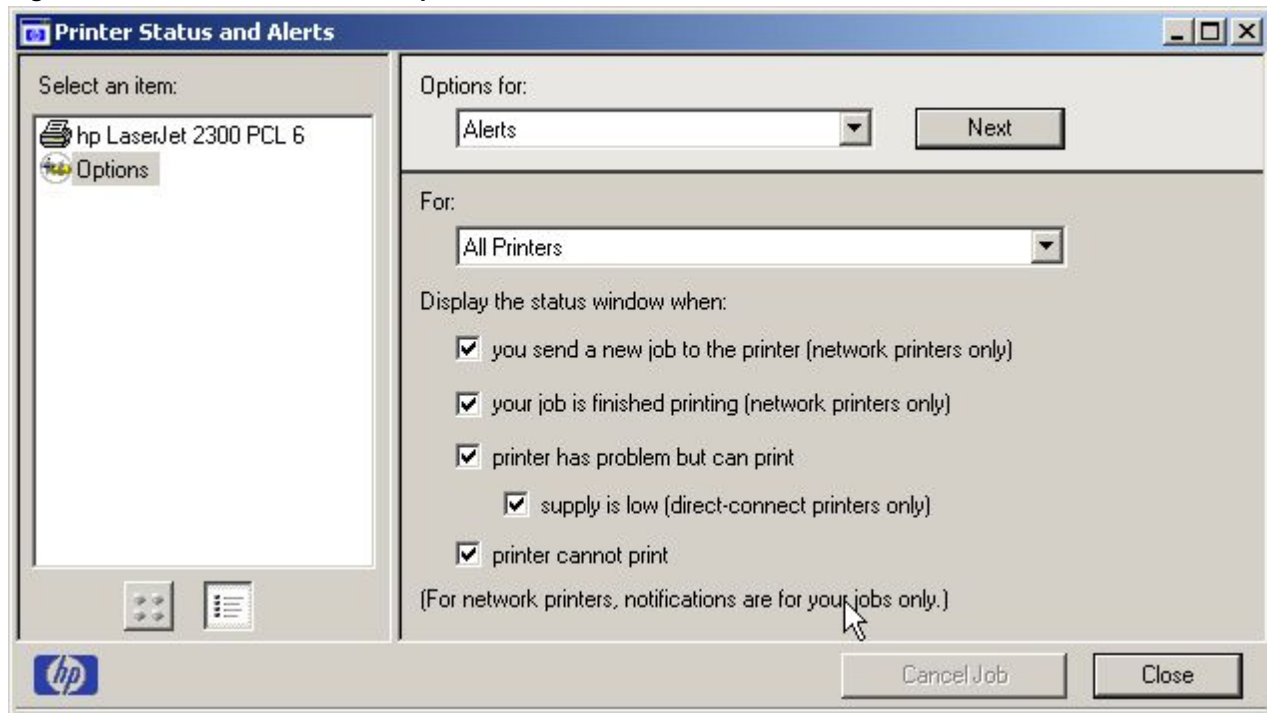
On network printers, the refresh-rate interval changes, depending on the stage of the print job.

The **Alerts** options panel has controls to determine when the Printer Status and Alerts window automatically appears for each printer that has an icon in the left pane. The drop-down menu provides a list of available printers for which to make the selection. An option for all printers is included as the default selection. Each of the three, four, or five available selections, depending on the printer connection type, causes the Printer Status and Alerts window to automatically appear when that alert condition arises.

Printers that are involved with at least one active print job are queried for job status periodically according to the **Status Check Rate** setting. If an error or a warning condition is detected, the Printer Status and Alerts window will automatically appear according to the **Alerts** options.

Note Depending upon the options you select, information in the status window changes for each job printed, each job completed, and each warning condition detected.

Figure 9: Printer Status and Alerts options



Note The appearance of the screen varies according to the HP LaserJet 2300 printer and its configuration.

Euro character

The euro is the name for the currency of the European Union (EU). Use of this unit was launched on January 1, 1999. The euro has changed the way business is conducted in Europe and has affected every company and industry in the world. It is vital that companies understand and prepare for the changes the euro brings.

This HP LaserJet 2300 printer includes euro characters for each of the internal fonts. The printer can print the euro character in the Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP operating systems. Hewlett-Packard is committed to maximizing document portability through supporting and promoting euro-symbol standards.

Printing-system components

Printing system and installer

HP LaserJet 2300 software CD-ROM for Windows systems

In previous versions of the printing-system software, the installer was started by locating and running the SETUP.EXE file. For the Microsoft Windows environment (Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP), the HP LaserJet software CD-ROM provides an interactive software window that you can use not only to install the printer drivers and related components, but also to gain access to online product registration, user documentation, a customization utility, Adobe Acrobat Reader software, and optional HP software.

The following illustration shows the main screen of the HP LaserJet 2300 software CD-ROM, which appears when you insert the printing software CD-ROM in your CD-ROM drive. If the screen does not appear when you insert the CD-ROM, click **Start**, click **Run**, click **Browse...**, navigate to the root directory of the CD-ROM, and then double-click the SETUP.EXE file to start the CD-ROM.

Figure 10: Installation software CD-ROM main screen



The HP LaserJet 2300 software CD-ROM contains the following options. The text that follows each of the following options is approximately the same text that appears when you put the cursor on the option button.

Note The options on your printer might vary from the illustration.

install printer - This wizard guides you through the installation of your HP LaserJet printing system. You are given the choice of performing a Typical Installation or a Custom Installation. If you select Typical Installation, only the necessary software will be installed. If you select Custom Installation, you can select the components you want to install.

customization utility - This utility can be used to create a custom software installer for the HP LaserJet 2300 printer that can then be copied to other media, such as a local hard drive or a network drive.

register product - This option can be used to register your HP LaserJet 2300 printer now and to receive the following information at no cost:

- notification of driver updates
- technical support updates
- news about emerging technologies

printer documentation - This option can be used to view the HP LaserJet 2300 printer documentation. The following document options are available:

- Install Notes
- User Guide
- hp Jetdirect Guide

Note

For systems that do not have Adobe Acrobat Reader 4.0 or later installed, you are given the option to install that software. Clicking any of the links to documentation that is provided in the Adobe Acrobat PDF file format opens a dialog box from which you can install Adobe Acrobat Reader software from the HP LaserJet 2300 software CD-ROM.

support - To increase productivity and get the most out of your HP LaserJet 2300 printer, view a list of optional software available for installation and links to HP Web sites. The following options are available:

- Click **HP Web Jetadmin** to download HP Web JetAdmin software from the Web for a Web browser-based network-printer-management tool.
- Click **product information** for HP LaserJet 2300 support information and updates.
- Click **supplies** for information about ordering HP LaserJet 2300 printing supplies.
- Click **hp.com** to go to the HP home Web page for products and services, support, drivers, and HP online stores.

Installer features

The common installer is designed to provide a simple and consistent installation method for the product line. The common installer is available for the Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP operating systems.

The common installer offers the following features:

- The HP LaserJet 2300 software CD-ROM features an interactive software interface. See "HP LaserJet 2300 software CD-ROM for Windows systems."
- Acrobat Reader is available.
- The installer is Web-enabled, providing access to the HP Web site for the latest software components and drivers.
- Network connection is integrated so that you can install drivers and connect to a network printer in a single process.
- The selection dialog box sets the operating-system language as the default language (for Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP only). You can use the installer to select any of the languages on the HP LaserJet software CD.

The HP LaserJet 2300 software CD-ROM also includes the following features:

- the HP LaserJet Uninstaller Utility
- product registration, using the Web and e-mail
- the Customization Utility for custom installations

All of the Windows system components are installed by using the HP LaserJet printing-system installer. The installer automatically senses your language of choice and your operating system. It offers selections for each printer model. You can select the type of installation you prefer: Typical Installation or Custom Installation.

When performing a Web installation, the installer compares the versions of the software components on the HP LaserJet software CD-ROM to those on the HP Web site. If newer versions are on the HP Web site, the installer downloads them.

Installable components

This section provides information about the various installable components that are available either with the HP LaserJet software CD-ROM or from the HP Web site.

Printer drivers

HP supports the use of older drivers with new printers. Because earlier (legacy) HP LaserJet printers might have different versions of the PCL language, new drivers are not supported with legacy printers. The drivers associated with each printer use the version of PCL language that is installed in the printer.

The printing system for the HP LaserJet 2300 printer includes the following printer drivers.

PCL 5e, PCL 6, and PS drivers

The PCL 5e, PCL 6, and PS drivers are included with the HP LaserJet software CD-ROM. The PCL 5e and PCL 6 drivers feature a graphical user interface that has a shared look and feel.

Note The PCL 5e driver is not supported in Asian languages.

If a Typical Installation is selected during installation of the printing system software, the PCL 6 driver is set as the default driver.

All three drivers provide access to the printer paper-handling and print-quality features.

Windows 95, 98, Me, NT 4.0, 2000, and XP driver versions

The PCL 5e and PCL 6 support for Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP operating systems is provided by using the HP LaserJet 2300 printer drivers for the HP LaserJet 2300 printer. For Windows 2000 and Windows XP, the HP LaserJet 2300 generic printer description (GPD) provides information about printer features for the PCL 5e and PCL 6 drivers. The HP LaserJet 2300 PS printer description (PPD) provides PS feature support for the HP LaserJet 2300 product.

If you are using an HP traditional driver, you can view the printer driver version number by clicking the HP logo in the lower-left corner of the following HP PCL 5e and PCL 6 printer-driver tabs:

- Configure
- NT Forms
- Finishing
- Effects
- Paper
- Destination
- Basics

If you are using an HP unidriver in Windows 2000 and Windows XP environments, follow these steps to find driver version information:

1. Click **Start**.
2. Click **Settings**.
3. Right-click the printer icon.
4. Click **Properties**.
5. Click the **About** tab.

Macintosh and Macintosh-compatible system-driver versions

The HP LaserJet printing solution for Macintosh is composed of the Apple LaserWriter driver, which is provided with the operating system, and HP-created PPD files. The driver uses these files to determine the features and PS commands that the printer supports. Bidirectional support in AppleTalk and USB connections supports autoconfiguration of the software. The installable components are:

- the HP LaserJet Installer for Mac OS 8.6, Mac OS 9, and Mac OS X.
- the HP LaserJet Screen Fonts Installer.
- SYSTEM/EXTENSIONS/PRINTER DESCRIPTIONS (for Mac OS 8 and Mac OS 9).
- LIBRARY/PRINTERS/PPDS/CONTENTS/RESOURCES/LANGUAGE.LPROJ (for Mac OS X).
- the HP LaserJet Utility, an HP printer utility that is installed in the HP LaserJet folder of Mac OS 8 and Mac OS 9. It provides configuration and management support for PS and PCL printers.
- online Help, an HTML-based printer and utility help that can be viewed through a browser or in the Macintosh OS Help Center (English only).
- installation notes.

Additional driver availability

Additional drivers are available from your Hewlett-Packard distributor or from the Web site.

These drivers are:

- OS/2 PCL 5e, OS/2 PS, and OS/2 PCL 6 printer drivers. The OS/2 drivers are available from IBM and are packaged with OS/2.
- UNIX model scripts. Go to http://www.hp.com/support/net_printing, and then select **hp printer installation software** for further information about UNIX drivers.
- Linux drivers. Go to <http://www.hp.com/go/linux> for further information about Linux drivers for HP LaserJet printers, or to <http://hp.sourceforge.net> (HP Linux support home page).

Macintosh components

- HP LaserJet PPDs for past projects
- Screen fonts

Additional productivity tools

HP Web Registration

You can use this component to register your HP LaserJet 2300 printer on the HP Web site or through e-mail. After you have successfully installed the software, the installer prompts you to register your HP LaserJet printer. Also, you can gain access to HP Web Registration from the HP LaserJet 2300 software CD-ROM by clicking **Register Product**. You can choose to complete the online registration at that time or later. If you want to register your printer later, click **Register Product** from the HP LaserJet program group when you decide to complete your registration.

HP Web JetAdmin

Use HP Web JetAdmin to manage HP Jetdirect connected printers within your intranet by using a browser. HP Web JetAdmin is a browser-based management tool and should be installed only on the network administrator's computer.

When it is installed on a host server, any client can use HP Web JetAdmin through a supported Web browser (such as Microsoft Internet Explorer 4.x or later, or Netscape Navigator 4.x or later) by browsing to the HP Web JetAdmin host. HP Web JetAdmin 6.2 and later have the following features:

- task-oriented user interface that provides configurable views for network managers
- customizable user profiles that can be customized to let network administrators include only the function that is being viewed or used
- routing of instant e-mail notification of hardware failure, low supplies, and other printer problems to different people
- remote installation and management from anywhere by using only a standard Web browser

- advanced automatic discovery of peripherals on the network without manually typing information about each printer into a database
- simple integration into enterprise-management packages
- capacity to find peripherals based on parameters such as the Internet protocol (IP) address, color capability, and model name
- capacity to organize peripherals into logical groups, with an option that provides virtual office maps for easy navigation

HP Web JetAdmin can be used for access to the HP Embedded Web Server, ordering supplies, and remote firmware updates (for supported printers).

The HP LaserJet 2300 software CD-ROM browser provides a link to the HP Web site (<http://www.hp.com/go/webjetadmin>) to download the latest version of the HP Web JetAdmin software. Click **support** from the CD-ROM browser, and then click **hp web jetadmin**. The following table shows the network operating and printing environments that support HP Web JetAdmin:

Table 9: Network protocols that support

Network protocol	Network printing environments ¹
TCP/IP	<ul style="list-style-type: none"> • Microsoft Windows 95, 98, Me, NT 4.0, 2000, XP (32-bit and 64-bit) • UNIX and Linux, including: <ul style="list-style-type: none"> • Hewlett-Packard HP-UX • Sun Microsystems Solaris (SPARCsystems only) • IBM AIX² • HP MPE-iX² • Red Hat Linux 7.1 • SuSE Linux 7.1 • Line Printer Daemon (LPD) • Internet Printing Protocol (IPP) • File Transfer Protocol (FTP)
IPX/SPX and compatible protocols	<ul style="list-style-type: none"> • Novell NetWare • Windows 95, 98, Me, NT 4.0, 2000, XP (32-bit only)
AppleTalk (EtherTalk only)	<ul style="list-style-type: none"> • Apple Mac OS
DLC/LLC	<ul style="list-style-type: none"> • Microsoft Windows NT² • Artisoft LANtastic²

¹See the current HP Jetdirect product data sheets for additional network systems and versions. For operation with other network environments, consult your system vendor or authorized HP dealer.

²For these network systems, contact your network system vendor for software, documentation, and support.

3 Driver features

Introduction

This chapter describes the features of the the HP LaserJet 2300 series printer drivers. The chapter contains the following major sections:

- HP traditional PCL 5e and PCL 6 driver features. This section describes the PCL 5e and PCL 6 drivers for Windows 95, Windows 98, Windows Me, and Windows NT 4.0.
- The HP traditional PS driver features. This section describes the PS driver for Windows 95, Windows 98, Windows Me, and Windows NT 4.0.
- HP PCL 5e, PCL 6, and PS unidriver features. This section describes the PCL 5e, PCL 6, and PS drivers for Windows 2000 and Windows XP.
- Structure and availability of the HP LaserJet 2300 printing-system software CD-ROM. This section describes the three printing-system software CD-ROMs that are included with the HP LaserJet 2300 printer.
- Driver feature comparison in Windows and Macintosh operating systems. The tables in this section provide an overview of printer driver features.

Print jobs can be controlled from several places: at the printer control panel, from within a software program, and through the driver UI. Generally, for features that are common to two or more of these places (for instance, you can select the media input tray from any of them), settings made at the printer control panel are overridden by settings made from within a software application, and settings made from within an application are overridden by settings made to driver properties through the driver UI.

HP traditional PCL 5e and PCL 6 driver features

When you install the printer in Windows 95, Windows 98, Windows Me, or Windows NT 4.0, use the HP traditional PCL 5e and PCL 6 drivers. The graphical user interface of these drivers differs from that of the PCL 5e, PCL 6, and PS unidrivers that are installed if your operating system is Windows 2000 or Windows XP.

This section describes the options that are available on each tab of the HP traditional PCL 6 and PCL 5e driver interfaces.

Access to drivers

To gain access to driver settings from within most applications (software programs), click **File**, click **Print**, and then click **Properties**. The appearance and names of the driver tabs that appear vary, depending on the printer model and the driver.

You can also control the drivers directly from your computer. In Windows 95, Windows 98, Windows Me, and Windows NT 4.0, click **Start**, click **Settings**, click **Printers**, right-click the printer name, and then click **Printing Preferences** or **Document Defaults** (depending on the OS and driver), to gain access to the same set of driver tabs that application controls.

If, after right-clicking the printer name, you click **Properties**, you gain access to a different set of tabs that control the driver and driver connections.

Help system

The HP LaserJet PCL 6 and PCL 5e drivers include a full-featured Help system to provide assistance with printing and configuration options.

What's this? Help

What's this? Help is supported by Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP. You can gain access to What's this? Help messages in any of the following ways:

- Right-click a control and click **What's this?**, and a pop-up Help window appears.
- Click the ? button at the upper-right corner of the frame, next to the X, to change the cursor to an arrow with a question mark. Use this special cursor to select a control, and the pop-up Help window for that feature appears.
- Press the F1 key, and the Help window for the currently selected control appears.

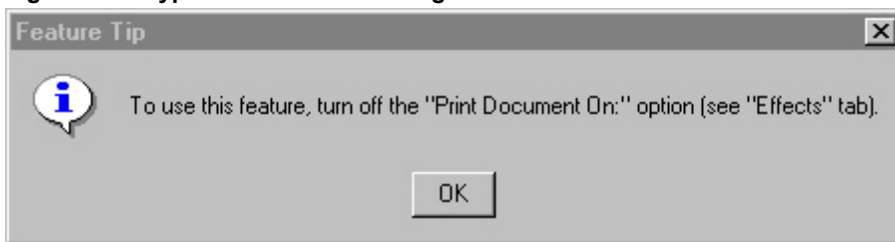
Context-sensitive Help

Press the **Help** button on a driver tab or in a dialog box, and context-sensitive Help appears.

Constraint messages

Constraint messages are unsolicited messages that appear in response to specific actions you take. These messages alert you to selections that are illogical or impossible given the capabilities of the printer or the current settings of other controls. For example, if you click **Print on Both Sides** and then change the paper type to transparencies, a message appears asking you to resolve this conflict.

Figure 11: A typical constraint message with an OK button



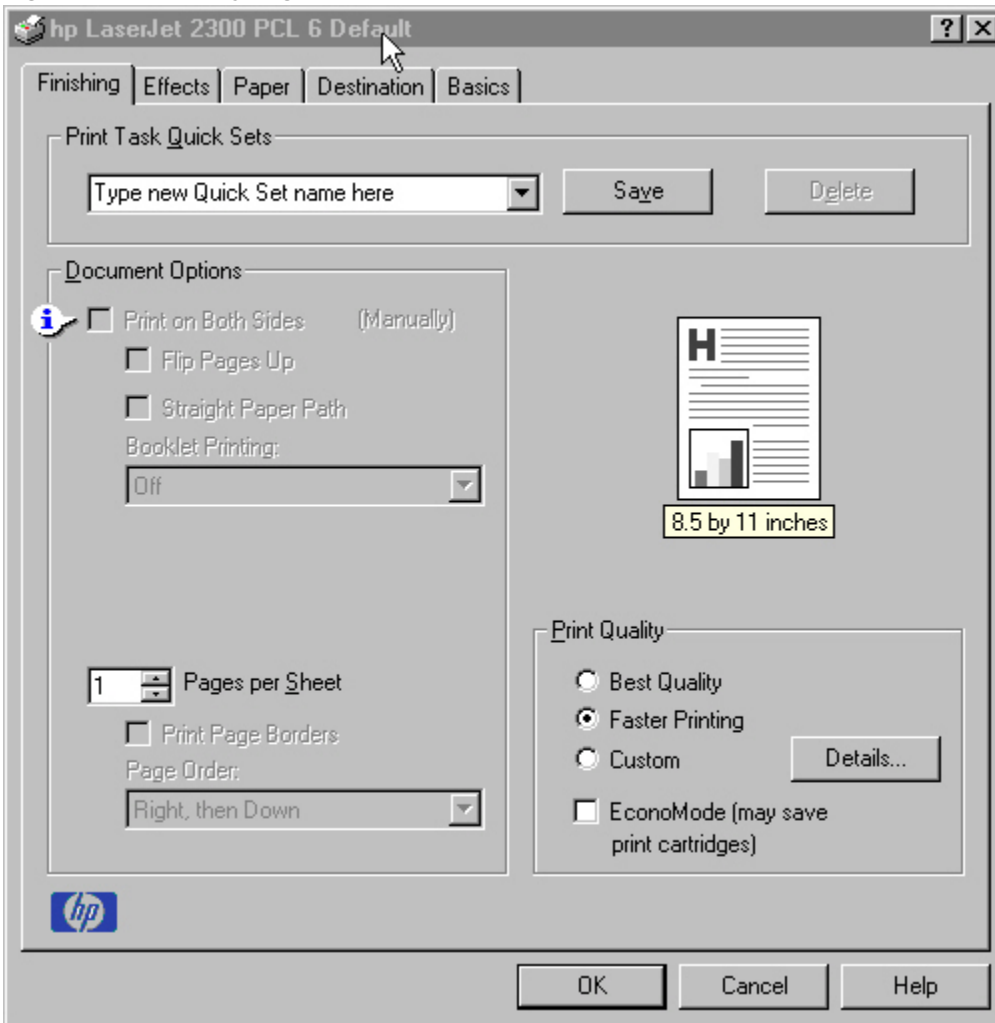
Whenever a constraint message appears with the **OK** or **Cancel** button, the interpretation of the button is as follows:

- Clicking **OK** accepts the change that was just made, and the driver then resets the conflicting control to a setting that is compatible with the new value.
- Clicking **Cancel** rejects the change that was just made, and the control returns to its previous value.

Bubble Help

Bubble Help features a graphical icon that resembles a cartoon speech bubble with a small i in it, representing the international symbol for information. The following illustration shows Bubble Help icons on a driver tab.

Figure 12: A property page with Bubble Help icons

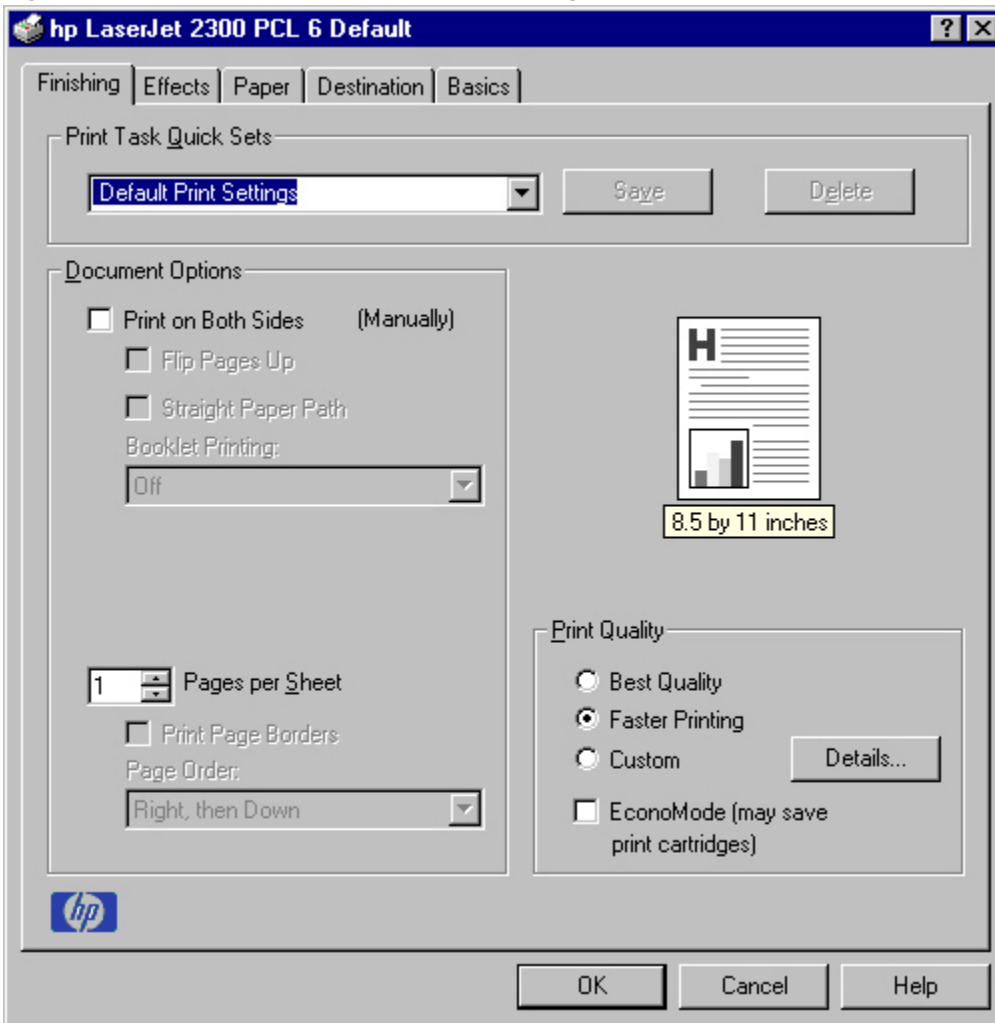


The bubble typically appears next to a disabled control, although it can also accompany an enabled control if there is an important note concerning its use. Moving the pointer over the bubble changes the arrow to a gloved hand, which indicates that the area underneath the pointer is selectable. When the bubble is selected by using either the mouse or the keyboard, a message box appears that contains a brief explanation about why the control is disabled and what can be done to enable it. If the control is not disabled, the message is a tip or a precaution to be aware of when using that particular feature.

Finishing tab features

The following illustration shows the **Finishing** tab.

Figure 13: The default appearance of the **Finishing** tab



The options in the **Print Quality** group box might vary, depending on your HP LaserJet 2300 printer model. The **Finishing** tab contains a document preview image and three group boxes:

- **Print Task Quick Sets**
- **Document Options**
- **Print Quality**

Document preview image

The preview image is a line-drawn image of a page that represents graphics and text. For color printers the bitmap contents appear in color, while for monochrome printers the contents appear in tones of gray. The image is always oriented so that the contents of the page are right-side up. The preview image appears in the upper-right corner of all properties tabs except for the **Configure** tab.

Switching between tabs does not change the location or appearance of the preview image. When you move the mouse over the preview image, the mouse cursor changes from an arrow to a gloved hand. You can toggle between

portrait and landscape page orientation by clicking on the image. The light-yellow dimensions label that appears below the preview image reflects the selected page size. The horizontal dimension is always first, so the order of the numbers reverses when the orientation changes. Click on the label to toggle between English and metric units.

Print Task Quick Sets

Print Task Quick Sets is a setting that is available on all tabs except the **NT Forms** and **Configure** tabs and that is used to store the current combination of driver settings that are found on all other tabs (except the **NT Forms** and **Configure** tabs). Print task quick sets are either preset or user-defined printing specifications (such as paper size, pages per sheet, and so on).

Print Setting Defaults

The default setting is **Defaults**. Other settings are **User's Manual** and **Untitled**. When **Defaults** is selected, nearly all of the settings are restored to the combination that existed after the driver was installed (the original settings). However, if the attribute combinations that are associated with watermark definitions, custom paper sizes, or the **User Manual Print Settings** quick set have been changed or deleted, the original settings are not restored.

The **Defaults** setting appears automatically if no other driver settings have been changed since the driver was installed, or if all driver settings match the original settings. Otherwise, the setting in the **Print Task Quick Sets** menu have the same label that appeared when you last closed the printing **Properties** dialog box by clicking **OK**.

The following table shows the default settings for **Print Task Quick Sets**. See "HP Driver Preconfiguration" for information about preconfigurable driver settings.

Table 10: Print Task Quick Set default values for the HP LaserJet 2300 printer

Driver feature	U.S. English Print Task Quick Sets default values	Other language default setting (if different)	Preconfigurable ¹
Print on both sides	Off		Yes
Flip pages up	Off		Yes
Booklet printing	Off		Yes
Pages per sheet	1		Yes
Print page border	Off		Yes
Page order	Right, then down		Yes
Print quality	Best quality		Yes
EconoMode	Off		Yes
Current setting	PCL 6: This is the "Faster Printing" setting PCL 5e: This is the "Best Quality" setting		No
Rendering mode (PCL 5e only)	Automatic		No
Resolution	PCL 6: FastRes 1200 PCL 5e: 600 dpi		No
REt	On		No
Scale patterns (WYSIWYG)	On		No
Print text as black	Off		Yes
TrueType as bitmaps	Off - send TrueType fonts as outlines	On (in Thai only)	Yes (except in Thai)
Print document on	Off - print on the size specified in the Paper tab		Yes
Size to print on	Letter	Default value depends on regional paper size	Yes
Scale to fit	On		Yes

Driver feature	U.S. English Print Task Quick Sets default values	Other language default setting (if different)	Preconfigurable ¹
% of normal size	100		Yes
Watermarks	(none)		Yes ²
Watermarks first page only	Off		Yes ²
Current watermarks	(none), Confidential, Draft, SAMPLE		Yes ²
Watermark message	(none)		Yes ²
Watermark message angle	Diagonal		Yes ²
Watermark message custom angle	52		No
Watermark font name	Arial (R)		Yes ²
Watermark font color	Gray		Yes ²
Watermark font shading	Very Light		Yes ²
Watermark font size	80		No
Watermark font style	Regular		Yes ²
Mini pages tab	All pages		No
Use different paper for first page	Off - all pages use the same paper		No
All pages and first page size is	Letter	Default value depends on regional paper size	Yes
All pages and first page source is	Auto Select		Yes
All pages and first page type is	Unspecified		Yes
Other pages source is	Auto Select		No
Other pages type is	Unspecified		No
Back cover	No back cover		No
Back cover source is	Auto Select		No
Back cover type is	Unspecified		No
Custom width	8.50 inches	210 mm	No
Custom paper size height	11.0 inches	297 mm	No
Paper size units	Inches	Millimeters	No
Destination features	Job Storage		No
Job storage mode	Off		No
Job storage require PIN to print	Off		No
Job storage user name	User logon name ³ , UNTITLED		No
Job storage job name	UNTITLED		No
Job storage PIN to print	0000		No
Output bin	Top bin (face-down)		Yes
Output bin option	(none)		Yes
Copies	1		Yes
Orientation	Portrait		Yes
Rotate by 180 degrees	Off		Yes

¹Preconfigurable by using an HP Preconfiguration tool. For more information, see the following Web site: <http://www.hp.com/support/lj2300>

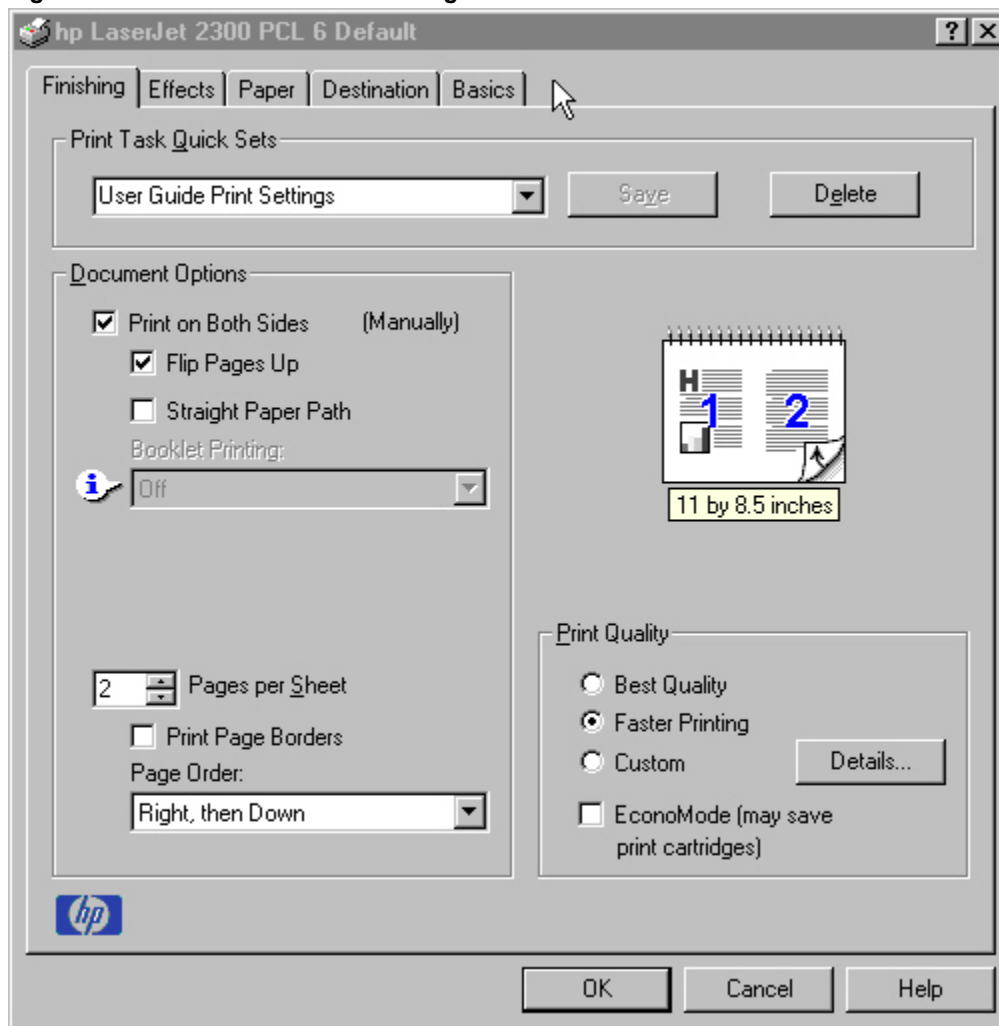
²Not supported in Windows 95, Windows 98, and Windows Me

³Windows NT 4.0 only

User Guide Print Settings

The **User Guide Print Settings** option provides a Print Task Quick Set for optimal printing of the *HP LaserJet 2300 User Guide*.

Figure 14: The User Guide Print Settings Print Task Quick Set



Custom Print Task Quick Sets (Untitled)

When you change any of the default settings on the **Finishing** tab or any of the other tabs, the name in the **Print Task Quick Set** drop-down menu dynamically changes to **Untitled**. If you want to save this configuration as a Print Task Quick Set, highlight the word **Untitled**, type the name you want for your new Print Task Quick Set, and click **Save**. Print Task Quick Sets are saved in the system registry. To delete a Print Task Quick Set, select it from the drop-down menu and click **Delete**.

You can store a maximum of 25 user-defined Print Task Quick Sets on a particular system. If you attempt to save too many, a message box appears that reads, "There are too many Print Task Quick Sets defined. Please delete some before adding new ones."

Document Options

Print on Both Sides option

The default setting for the **Print on Both Sides** option is OFF (not selected). **Print on Both Sides** is available when the following conditions exist:

- **Type is** on the **Paper tab** is not set to **Transparency, Cardstock, or Labels**.
- **Size is** Letter, Legal, A4, A5, B5 (Japanese Industry Standard, or JIS), Executive, or custom sizes greater than or equal to 76 mm by 127 mm (3.0 inches by 5.0 inches) and less than or equal to 148 mm by 216 mm (8.5 inches by 14.0 inches).

When **Paper Size** is set to Letter, Legal, or A4, clicking **Print on Both Sides** makes the **Flip Pages Up** and **Booklet Printing** options available.

Automatically printing on both sides

Use the duplexing unit in the printer to automatically print on two sides of the paper when that option is specified in the job (available on HP LaserJet 2300d, 2300dn, and 2300dtn, but not available on the HP LaserJet 2300, 2300L, and 2300n printers).

To achieve the best print quality when printing on the second side of the page, the printer needs to make adjustments to its print modes. When you select a media type, you are, in effect, instructing the printer to use a group of printer settings (such as fuser temperature and print speed) to print the media with the best possible quality. This group of settings is known as a mode or print mode, and a different print mode associated with each media type.

Print-mode adjustments are automatic when the duplexing unit is used. Media sizes supported by the duplexing unit are Letter, A4, Legal, 8.5 x 13, and Executive (JIS) only. All other media sizes must be duplexed manually. The following media types cannot be automatically duplexed:

- Transparencies
- Labels
- Heavy media
- Envelopes
- Cardstock greater than 164 g/m²

Caution

Do not use the manual duplex function for transparencies or labels. Duplexing transparencies or labels can damage the printer.

Manually printing on the both sides

Manually printing on the second side of a page is available when you are using the HP traditional PCL 5e or PCL 6 driver (the HP traditional PS driver and the HP PCL 5e, PCL 6, and PS unidrivers do not support the feature). If a duplexing unit is installed and manual duplexing is enabled in the driver, the printer automatically duplexes media types that are supported by automatic duplexing (Letter, A4, Legal, 8.5 x 13, and Executive (JIS) only), and forces manual printing on both sides for media types that are not supported.

It is important to select the paper type that corresponds to the media you are using for the print job. The following media types have a different print modes when you manually print on the second side:

- Plain
- Preprinted

- Letterhead
- Prepunched
- Bond
- Recycled
- Colored
- Rough

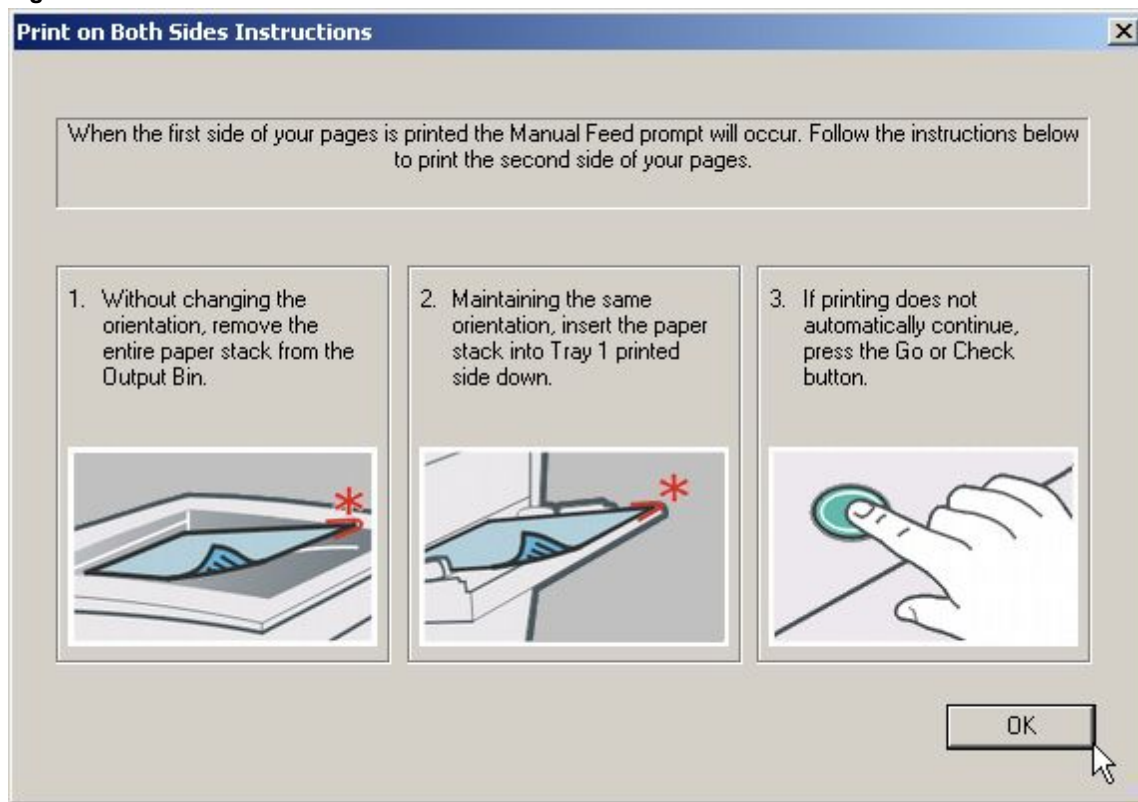
Heavy and Cardstock media can be manually printed on the second side, but there is no change to the print mode. Transparencies and labels should not be manually printed on the second side.

Select the **Print on Both Sides (Manually)** check box to print on the second side of the paper for the base HP LaserJet 2300, 2300L, and 2300n printers. Also select **Print on Both Sides (Manually)** on the other HP LaserJet 2300 models for media types that are not available when using the automatic duplexing unit, such as cardstock, labels, and thick media.

To print a multiple-page document, follow these steps:

1. Print the even-numbered pages of the document.
2. Select the **Print on Both Sides (Manually)** check box.
3. When the printer's control panel shows the MANUALLY FEED message, insert the stack of paper (on which the even-number pages have been printed) as indicated in the following figure.

Figure 15: Print on Both Sides Instructions



When you have completed the steps that appear in the dialog box, the second half of the print job prints on the back side of the stack of paper. The driver does not require the application to specifically support odd- and even-page printing, because the driver coordinates this function.

Flip Pages Up

The **Flip Pages Up** check box, enabled only when **Print on Both Sides** is selected, is used to specify the duplex-binding option. By default, the **Flip Pages Up** check box is not selected. The following table demonstrates the results of selecting this box, depending on the paper orientation selected on the **Basics** tab.

Table 11: Page orientation

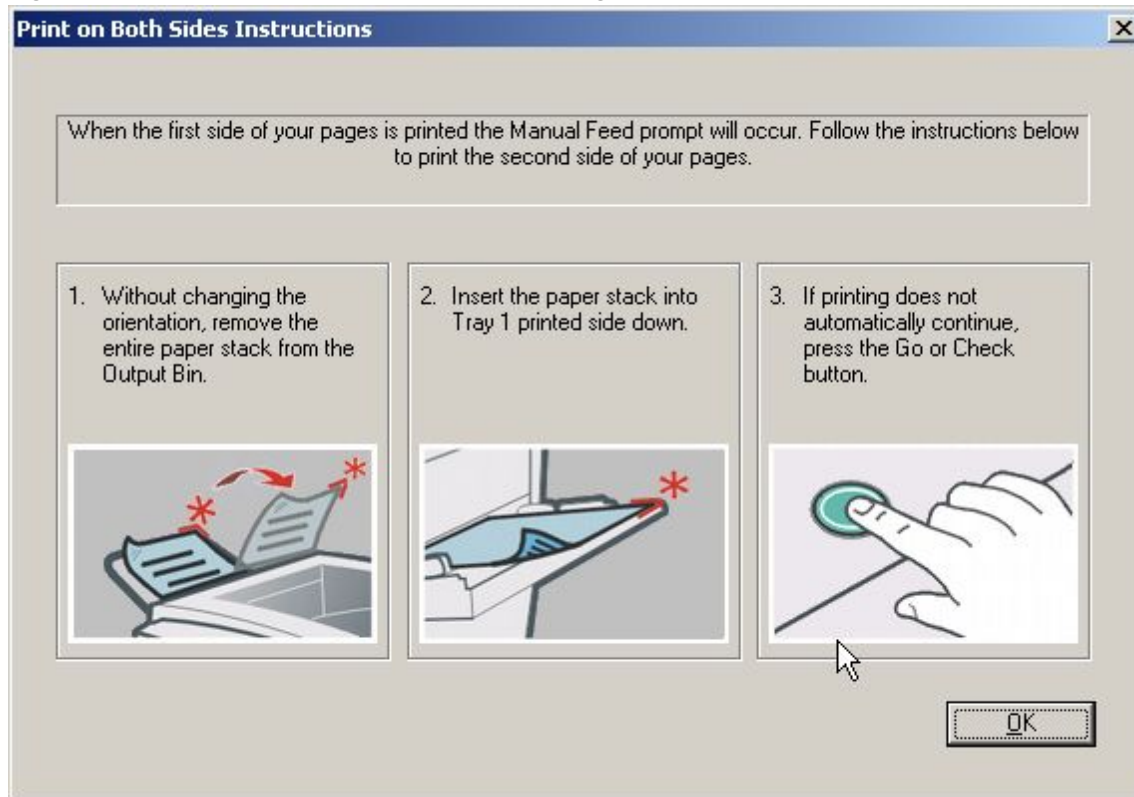
Orientation (Basics tab)	Flip Pages Up selected	Flip Pages Up not selected
Portrait	Short-edge binding	Long-edge binding
Landscape	Long-edge binding	Short-edge binding

When **Print on Both Sides** is selected, the document preview image changes to show a spiral binding along either the left or the top edge of the page. In addition, a folded-over corner appears in the lower-right portion of the preview image, indicating that printing will occur on the back side. An arrow on the folded-over corner points in the direction that the pages would be flipped if they were bound together.

Straight Paper Path

The HP LaserJet 2300 printer has a door in the back that can be opened to allow the paper to go through the printer without being bent very much. This is useful for printing on stiff media like cardstock. If you have opened this door and want to print on both sides of the paper, select the **Straight Paper Path** check box. The printer will print the first side of the pages, then wait for you to re-insert the paper. It then prints the second side of the pages. The following figure, which shows the window that appears when you give the print command, demonstrates how to orient the paper when you re-insert it.

Figure 16: Print on Both Sides Instructions for straight paper path



Book and booklet printing

Book and booklet printing are both supported by the HP LaserJet 2300 printer.

A book is a print job consisting of at least two pages that can have a different media type for the first page (front cover) or last page (back cover). Use the **First Page** and **Back Cover** minitabs on the **Paper** tab (available when you select the **Use different paper for first page** check box) to select different media for the first and last pages.

A booklet is a print job that places two pages on each side of a sheet and that can be folded into a booklet that is half the size of the media type. Use the **Booklet Printing** drop-down menu on the **Finishing** tab to control booklet settings.

The **Booklet Printing** drop-down menu, visible when **Print on Both Sides** is selected, offers choices that are based on the current paper size. The default setting for the **Booklet Printing** drop-down menu is **Off**. The other settings have the following format:

- [paper size] (Left Binding)
- [paper size] (Right Binding)

where [paper size] depends on the paper size set on the **Paper** tab.

Booklet printing is disabled when the following paper sizes are selected: Executive, A3, A5, B4, B5, and 11 by 17, and envelopes and postcards of any size.

The **Booklet Printing** drop-down menu appears only when:

- **Print on Both Sides** is selected.
- **% of Normal Size** (on the **Effects** tab) is 100.
- **Pages per Sheet** is 1.
- **Print Document On**<media type> (on the **Effects** tab) is not selected.

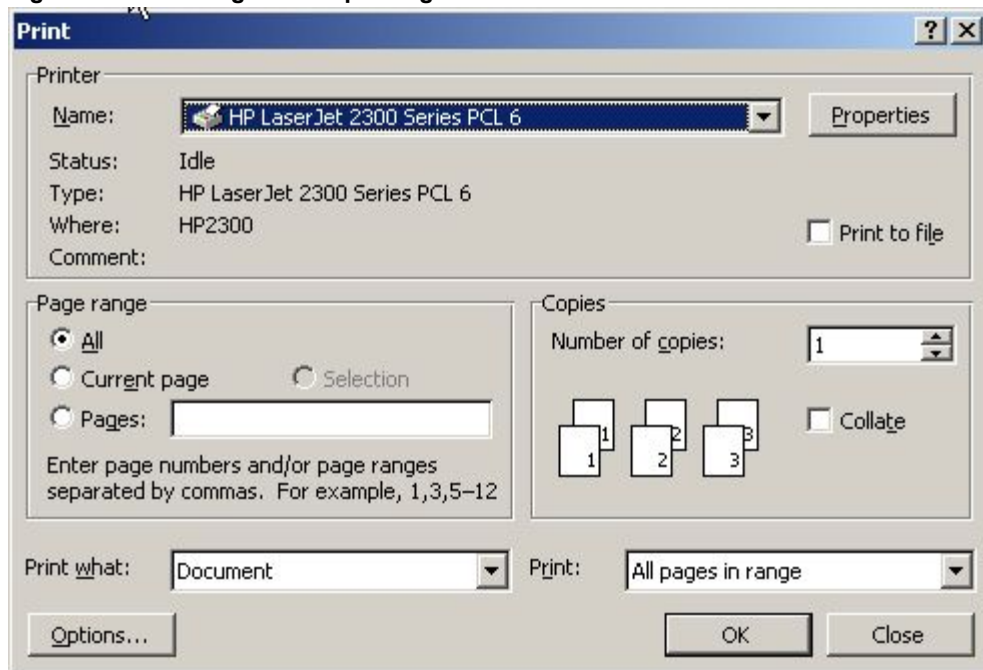
If any except the first of these conditions is not met, a Bubble Help appears next to **Booklet Printing** to tell you why it is disabled.

Activating Booklet Printing

Note The following instructions apply only to the HP traditional PCL 5e and PCL 6 drivers. The HP traditional PS driver supports booklet printing through Windows programs that provide booklet-printing configuration settings.

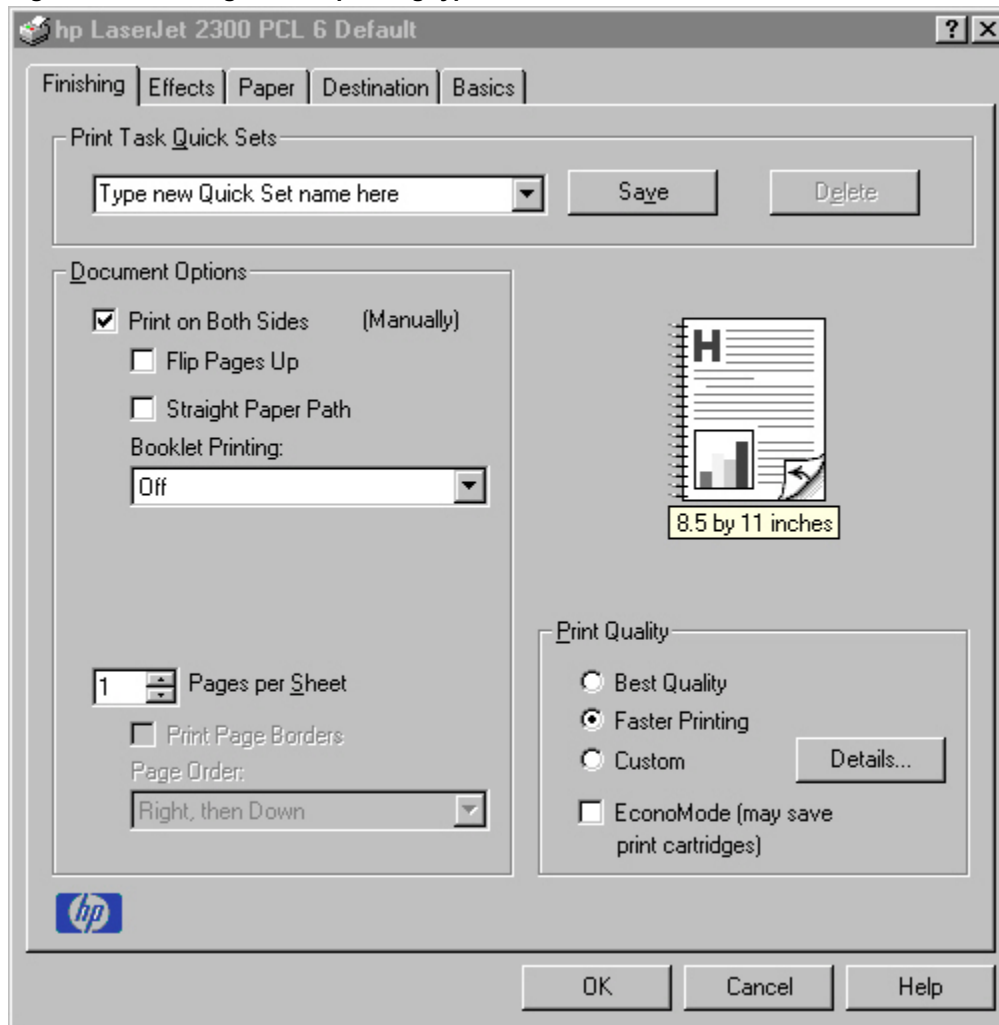
1. Click **File**, click **Print**, and then click **Properties**.

Figure 17: Activating booklet printing



2. Click the **Finishing** tab. On the drop-down menu, select **Print on Both Sides**.
3. In the **Booklet Printing** drop-down menu, select the type of booklet printing that you want. The booklet printing type consists of the media size and the location of the binding (for example, Letter [Left binding]).

Figure 18: Selecting booklet printing type



Note The appearance of the screen might vary from product to product. Print Quality settings, for example, can be "600 dpi", or "Faster Printing", or "Default".

Selecting a book cover

The booklet cover must be the same size as the inside sheets.

1. Click **File**, click **Print**, and then click **Properties**.
2. Click the **Paper** tab, and then select the **Use different paper for first page** check box.
3. Click the **First Page** tab. On the **Size is**, **Source is**, and **Type is** menus, select the size, source, and type settings for your cover.
4. Click the **Other Pages** tab. On the **Size is** and **Source is** menus, select the size and source settings for the inside sheets of your print job.
5. Click the **Back Cover** tab. The back cover, if there is one, must be the same size as the booklet cover and the inside sheets. The **No back cover** is the default setting. If your print job has a back cover that uses the same source and type settings you selected in the **First Page** tab, select **Use the first page source**. If not, select **Use an alternate source**, and then select the back-cover settings in the **Source is** and **Type is** menus.

Whenever you make changes to all pages (that is, when **Use different paper** is cleared), these changes are reflected in both the **First Page** and **Other Pages** settings whenever the user sets "Use different paper".

Note

If you are making a booklet (as opposed to a book), you can use the Paper tab to select a different first page for the print job, but the Back Cover minitab is not available. This is because the last page of the print job is printed when the printer runs the print job, and when the print job is folded into a booklet, the "last" page would in fact fall in the middle of the booklet.

Pages per Sheet

The **Pages per Sheet** drop-down menu provides six settings: 1 (default), 2, 4, 6, 9, and 16. If you type another value into the box (for example, 3), the control will round that value to the nearest valid value (in this example, 4).

Print Page Borders

Related controls indented beneath the **Pages per Sheet** edit box are **Print Page Borders** and **Page Order**, which become active when **Pages Per Sheet** is greater than 1.

Print Page Borders sets a line around each page image on a printed sheet to help visually define the borders of each logical page.

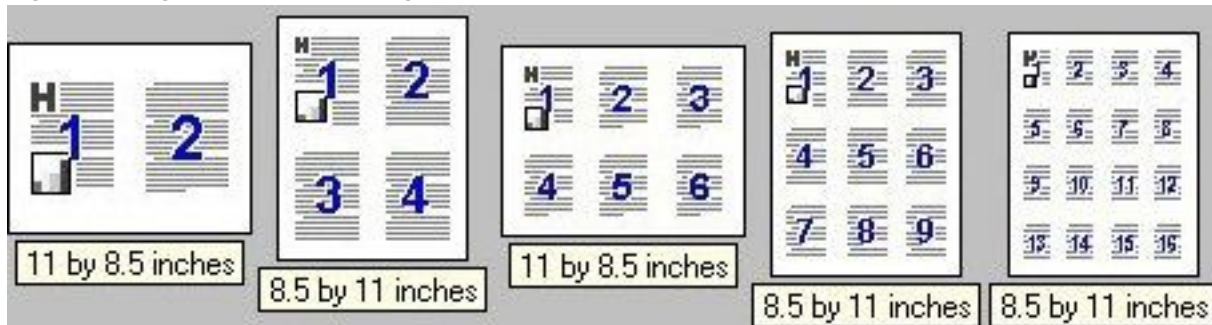
Page Order

The **Page Order** drop-down menu contains four selections:

- **Right, then Down**
- **Down, then Right**
- **Left, then Down**
- **Down, then Left**

The preview document image changes to reflect alterations in these settings, as shown by the examples in the following illustration.

Figure 19: Page-order preview images



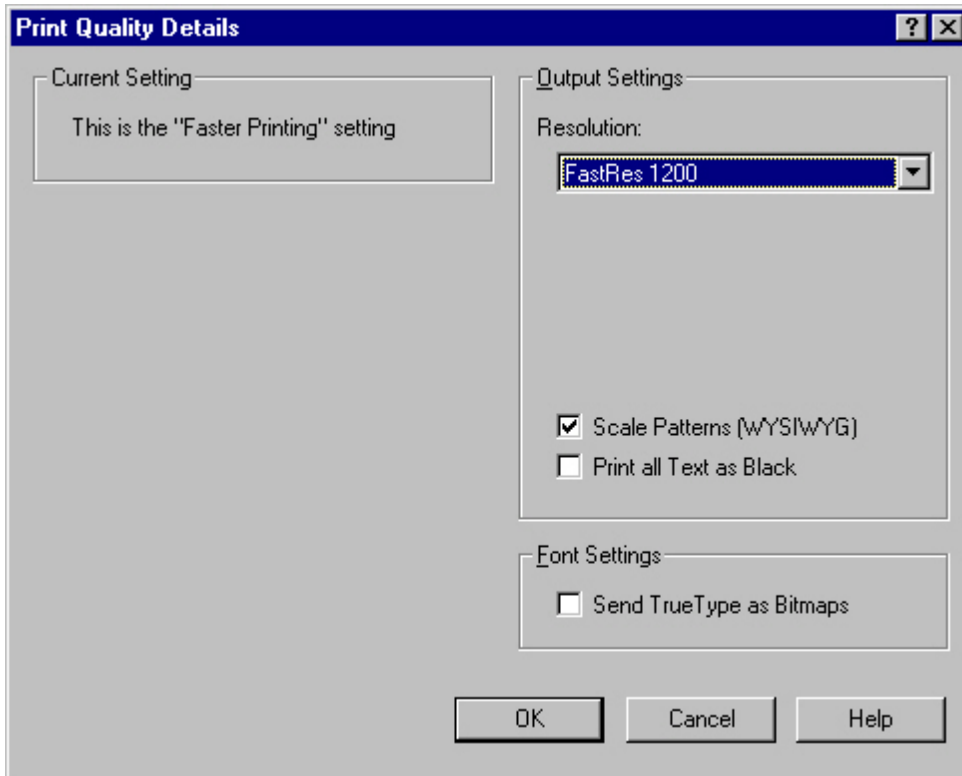
- **2 pages per sheet**
- **4 pages per sheet**
- **4 pages per sheet, with Print Page Borders selected**
- **6 pages per sheet**
- **9 pages per sheet**
- **9 pages per sheet, with Down, then Right selected**
- **16 pages per sheet**

Print Quality

The HP LaserJet printer driver **Print Quality** group box provides options that control resolution, graphics settings, and font settings.

The **Print Quality** group box also includes a **Details** button. Clicking this button opens the dialog box. The **Print Quality Details** dialog box provides options for various print-quality settings, as shown in the following illustration.

Figure 20: Print Quality Details



Default

For the HP LaserJet PCL 6 and PCL 5e drivers, the Default mode contains the following options:

- Resolution is **FastRes 1200 (600 dpi for the PCL 5e driver)**
- **Rendering mode is automatic** (PCL 5e only)
- **Scale Patterns (WYSIWYG)** is selected
- **Print all Text as Black** is **not** selected
- **Send TrueType as Bitmaps** is **not** selected

Output Settings group box

The **Output Settings** group box contains controls for selecting resolution and other print-job settings, including pattern scaling and printing all text as black.

Resolution

The resolution setting for the HP LaserJet 2300 printer is 1200 dpi for the PCL 6 driver and 600 dpi for the PCL 5e driver.

Scale Patterns (WYSIWYG)

The **Scale Patterns (WYSIWYG)** feature is implemented to address the moiré effect created when certain programs encounter certain patterns. Use this feature to turn off the pattern scaling. What you lose is WYSIWYG with patterns, but the printed result might look better. The feature works only with programs that use vector hatch patterns. This option is on by default.

Print all Text as Black

The **Print all Text as Black** feature is off by default. When selected, this option causes the driver to print all text as black regardless of the original document text color. By design, however, white text remains white, as a fail-safe method of printing reverse typeface against a dark background. This setting does not affect graphic images on the page. **Print all Text as Black** remains selected only for the current print job. When the current print job is completed, **Print all Text as Black** is automatically turned off.

Font Settings group box

In the **Font Settings** group box, the only available option is **Send TrueType as Bitmaps**, which provides a safety net for programs that cannot easily use TrueType (TM) fonts for special graphic purposes, such as shading, rotation, or slanting.

EconoMode

Use the **EconoMode** check box to turn this toner-saving feature on and off independently of the other **Print Quality** tab settings. When this check box is selected, the preview image lightens to show the expected appearance of the printed page when this feature is applied. The option is off by default.

The **EconoMode** option can also be activated from the printer control panel. The **EconoMode** setting on the **Print Quality** tab (on or off) might not override the setting on the printer control-panel display, as shown on the following table. If a genuine HP cartridge is not used, EconoMode is not available, regardless of the driver or control-panel setting.

Table 12: EconoMode Settings

Driver setting for print job	HP cartridge	Front panel reports	Actual result for print job
ON	Yes	ON	ON
ON	No	OFF	OFF
OFF	Yes	ON	ON
OFF	No	OFF	OFF
ON	Yes	OFF	ON
ON	No	OFF	OFF
OFF	Yes	OFF	OFF
OFF	No	OFF	OFF

Effects tab features

Use the **Effects** tab to create unique paper effects such as scaling and watermarks.

Figure 21: Effects tab



Print Document On setting

Use **Print Document On** to format the document for one paper size and then print the document on a different paper size, with or without scaling the image to fit the new paper size.

The **Print Document On** control is disabled by either of the following conditions:

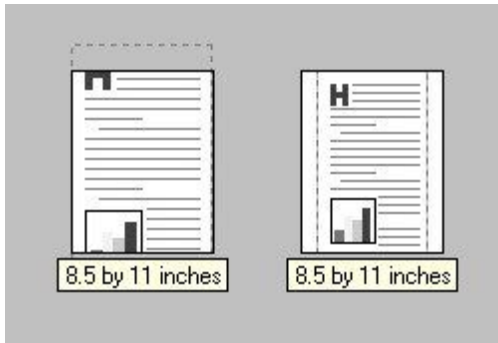
- **Percent of Normal Size** is not 100
- **Pages per Sheet** (on the **Finishing** tab) is not 1

When **Print Document On** is selected, the drop-down menu shows the media sizes on which you can print. The list contains all the standard media sizes that are supported by the selected media source and any custom sizes that you have created (if the currently selected media source is manual, auto, or any tray). When **Print Document On** is selected, **Scale to Fit** is automatically selected.

Scale to Fit option

The **Scale to Fit** option specifies whether each formatted document page image is scaled to fit the target paper size. By default, **Scale to Fit** is selected when **Print Document On** is selected. If the setting is turned off, then the document page images will not be scaled, and are instead centered at full size on the target paper. If the document size is larger than the target paper size, then the document image is clipped. If it is smaller, then it is centered within the target paper. The following illustration shows preview images for a document formatted for legal-size paper with the **Print Document On** option selected, and the target size specified as **Letter**.

Figure 22: Preview images - Legal on Letter; Scale to Fit off (left) and on (right)



When the size for which the document is formatted (that is, the logical size) differs from the target size, the preview image uses a dashed gray line to show the boundaries of the logical page in relation to the target page size.

% of Normal Size option

The **% of Normal Size** option provides a slider bar to use for scaling the percentage setting. The default setting in the entry box is 100 percent of normal size. Normal size is defined as the paper size that is selected within the driver or what the driver receives from the program (if the program does not negotiate the paper size with the driver). The driver scales the page by the appropriate factor and sends it to the printer.

The limits of the range are from 25 percent to 400 percent, and any values outside the range are adjusted to those limits as soon as the focus is removed from the control (that is, when the TAB key is pressed or another control is selected).

Any change to the scale also changes the page preview, which increases or decreases from the top-left corner of the preview.

The slider bar controls the scale directly. The value in the edit box changes as the scroll bar indicator is dragged, and the preview image is updated to the new image scale. Each click on the scroll bar arrows increases or decreases the scale by one percent. Each click on the slider bar affects the scale by 10 percent.

You cannot achieve an exact value by dragging the scroll bar indicator at the default Windows resolution; use the scroll bar indicator to approximate the desired value, and then use the scroll bar arrows to refine the value.

The following settings disable **% of Normal Size**:

- **Print Document On** is selected
- **Pages per Sheet** is not 1

Watermarks

Use the **Watermarks** feature to choose a watermark, create your own custom watermarks (text only), or edit an existing watermark. The following watermarks are preset in the driver:

- (none)
- Confidential

- Draft
- SAMPLE

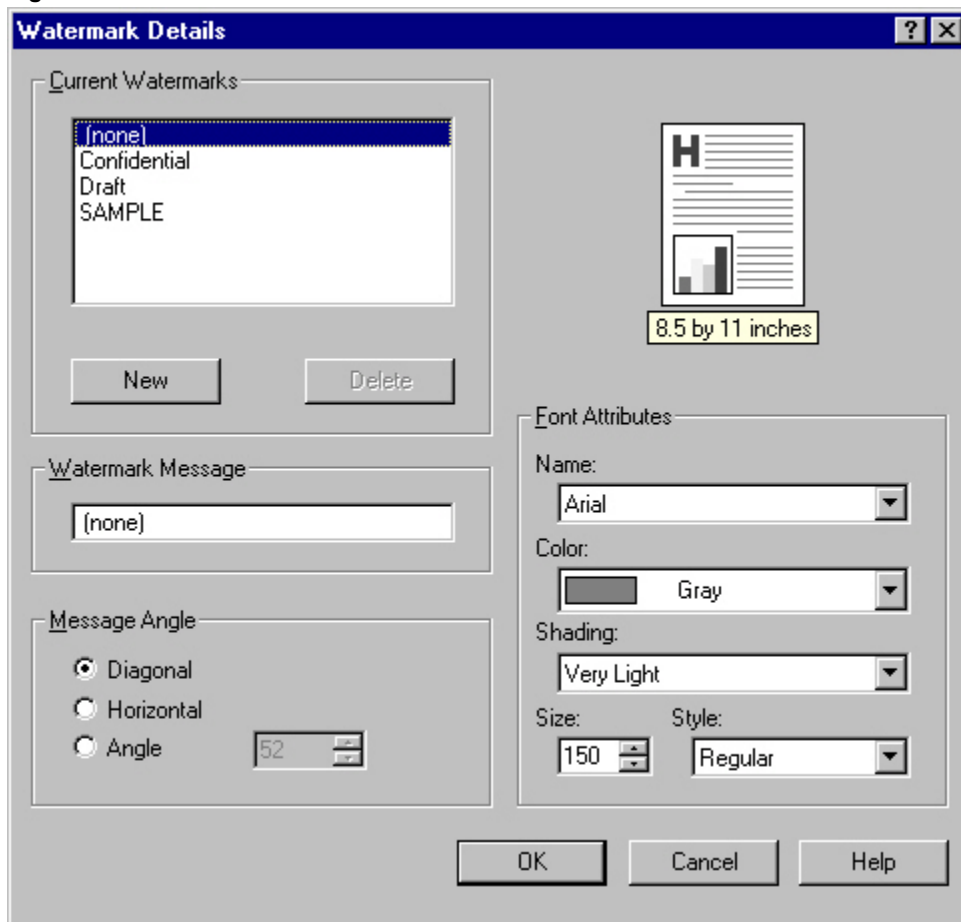
The drop-down menu shows alphabetically sorted watermarks that are currently available on the system, plus the string "(none)", which indicates that no watermark is selected. This is the default setting. Any watermark selected from this list appears in the preview image.

When **First Page Only** is selected, the watermark is printed only on the first page of the document. The **First Page Only** check box is disabled when the current watermark selection is "(none)".

Watermarks are applied to logical pages. For example, when **Pages per Sheet** is set to "4" and **First Page Only** is turned off, four watermarks appear on the physical page (one on each logical page).

Click **Edit**, and the **Watermark Details** dialog box appears.

Figure 23: Watermark details



The dialog box shows a preview image and provides options for creating a new watermark and controlling the message angle and font attributes.

Click **OK** to accept all changes that are made in the **Watermark Details** dialog box. However, clicking **Cancel** does not cancel all changes. If you make changes to a watermark, and then select a different watermark or click **New**, all changes made to the previous watermark are saved, and only the current, unsaved changes can be canceled.

Current watermarks

The **Current Watermarks** group box contains a list of available watermarks, both predefined watermarks made available in the driver and any new watermarks you have created. To create a new watermark, click **New**. The new

watermark appears in the **Current Watermarks** list and in the **Watermark Message** edit box as "Untitled" until you name it. To name the new watermark, type the selected watermark text in the **Watermark Message** edit box. To delete a watermark, select the watermark in the **Current Watermarks** list and click **Delete**.

Note You can have no more than 30 watermarks in the Current Watermarks list at one time. When the limit of 30 watermarks is reached, the New button is disabled, and a Bubble Help appears that explains why the button is disabled and how to enable it.

To edit an existing watermark, select the watermark in the **Current Watermarks** list. If you change the Watermark Message for that watermark, you are, in effect, creating a new watermark.

Watermark message

The Watermark Message is also the name that identifies the watermark in the **Current Watermarks** list, except when more than one watermark has the same message. For example, you might want several different watermarks with the message DRAFT, each with a different font or size. When this occurs, the string is appended with a space, a pound sign, and a number (for example, **Draft #2**). When a number is added, the number two is used first, but if the resulting name is also in the list, then the number increases until the name is unique.

Message angle

Use the controls in the **Message Angle** group box to print the watermark in different orientations in relation to the page's text. The settings are **Diagonal**, **Horizontal**, or **Angle** (custom). The default is **Diagonal**. All three settings automatically center the watermark string within the page; the selection of a particular setting affects only the angle of the string placement. **Diagonal** places the text along a line that spans the lower-left to upper-right corners of the page. **Horizontal** places the text along a line that spans the mid-left and mid-right edges of the page. **Angle** places the text at the specified angle across the page.

Font attributes

Use controls in the **Font Attributes** group box to change the font and the color, shading, size, and style of the font.

Name

The **Name** drop-down menu lists TrueType fonts that are currently installed on the system. The default is language-dependent.

Color

The **Color** drop-down menu lists the fixed, unalterable color choices for the watermark. **Gray** is the only color option for the HP LaserJet 2300 printer.

Shading

The following range of shades is available from the **Shading** drop-down menu:

- **Lightest**
- **Very Light** (default)
- **Light**
- **Medium Light**
- **Medium**
- **Medium Dark**
- **Dark**

- **Very Dark**
- **Darkest**

These values represent the intensity of the gray that is used for the **Color** attribute. A choice of **Light** plus **Gray** (from the **Color** attribute) produces a lightly saturated gray watermark. A choice of **Lightest** plus **Gray** produces the lightest shade of watermark; **Darkest** plus **Gray** produces a black watermark.

Size

Font sizes from 1 to 999 points are available from the **Size** menu. The default point size is language-dependent. The choice of regular, bold, italic, and bold italic is available from the **Style** drop-down menu.

Default settings

The default settings for new watermarks are **Arial** font, **Gray** color, **Very Light** shading, **80**points, and **Regular** style. The default settings for preset watermarks are **Arial** font, **Gray** color, **Very Light** shading, and **Bold** style. The default point size for preset watermarks is language-dependent, and varies.

Paper tab features

Use the **Paper** tab to specify the size, type, and source of the media, as well as to define a custom paper size. If you want to, you can indicate different paper-selection choices for the first page and back cover of the document.

The first group box in the upper-left portion of the **Paper tab** view is **Print Task Quick Sets**. This feature is described in the "Finishing tab features" section. Any change to the **Print Task Quick Sets** group box that is made on the **Paper** tab affects the group box on the **Finishing** tab and on the **Destination** tab, and vice versa - they are all one and the same control.

Printer image

The bitmap image in the lower-right portion of the **Paper** tab represents the current physical configuration of the printer and corresponds to its configuration data, either obtained automatically through bidirectional communication or configured manually. It should look the same as the image that appears in the same location on the **Destination** tab and the **Configure** tab.

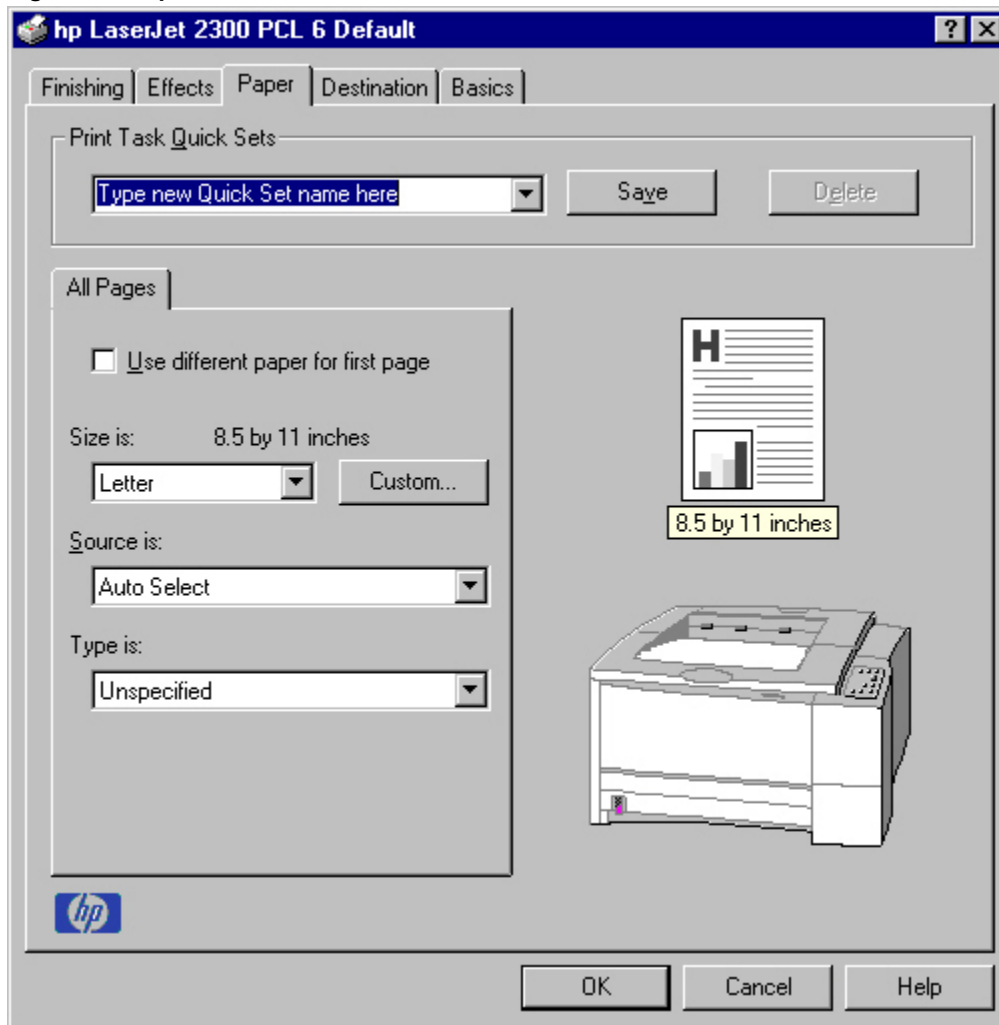
On the **Paper** tab, the printer image contains hot spots where you can select a paper source. When the pointer moves over a hot spot, the arrow reverts to the gloved hand used in the Bubble Help, the preview image, and other areas. The current paper source, whether selected from the drop-down menu or from a printer-image hot spot, is highlighted in bright green on the printer bitmap. The following points are worth noting:

- Auto Select does not have a corresponding area to highlight in the printer image.
- Selecting **in the drop-down menu** highlights the corresponding part in the printer image.
- Selecting the area that represents tray in the bitmap always selects the corresponding tray in the **Source Is** option. Manual Feed, which is available from the Source is option, cannot be selected by selecting the bitmap.
- On the **Paper** tab, only input trays have printer-image hot spots and can be highlighted. Output bins must be selected from the **Destination** tab.

Note

The printer image shown in the following illustration might differ from your HP LaserJet 2300 printer, depending on the model number and accessory devices.

Figure 24: Paper tab



All Pages

The controls on this minitab are contained in an **All Pages** minitab. As the name implies, this means that the settings specified on that minitab apply to all pages of the document. However, when you select the **Use different paper for first page** check box, the **All Pages** minitab is replaced by three minitabs. These three minitabs are:

- **First Page**, which contains the same controls as **All Pages**.
- **Other Pages**, which contains different controls, as noted in the following sections.
- **Back Cover**, which also contains different controls, as noted in the following sections.

First page and other pages

A cover can have two forms, depending on the type of booklet a user is printing:

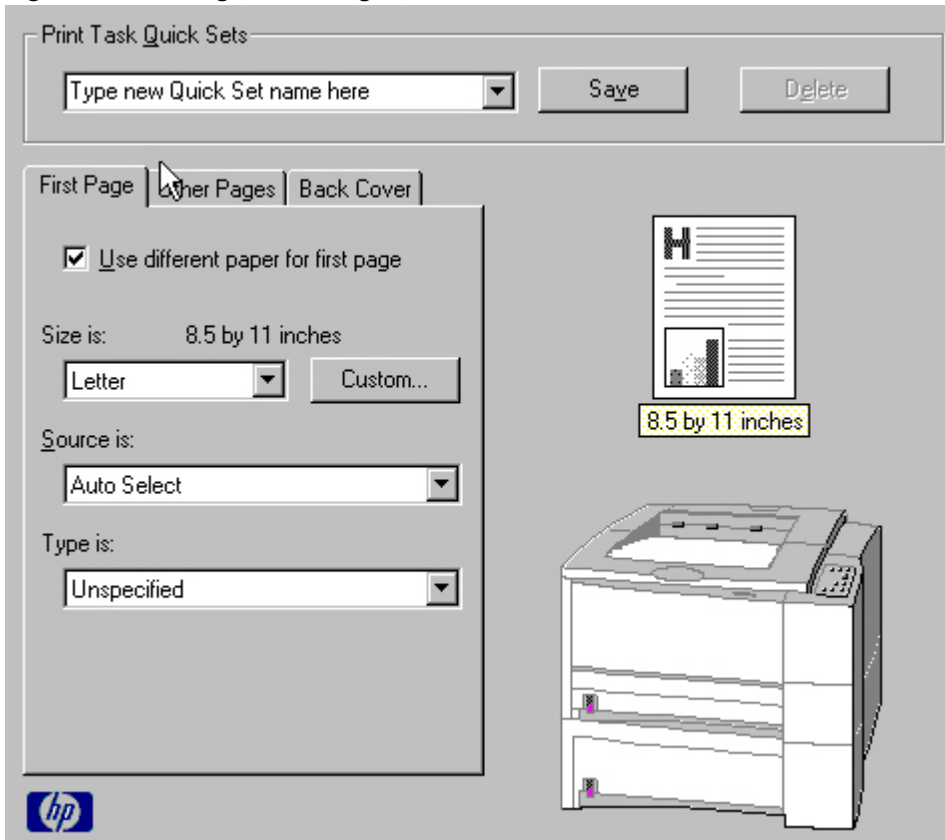
- For full-size (e.g., LETTER size, Letter type) book, select a different media for the first page and add an extra blank back page. The front cover can contain print or be a blank page, and can either be pulled from a different paper source or be of another media type. The back cover can be printed on a different media from the front cover.
- For two-page-per-sheet (2-up) booklet printing, a cover is obtained by selecting a different media for the first page only. The back cover setting is hidden, because this page would otherwise be printed in the middle of a booklet.

Whenever you make changes to all pages (that is, when **Use different paper** is cleared), these changes are reflected in both the **First Page** and **Other Pages** settings whenever the user sets “Use different paper”.

First Page

The **All Pages** minitab turns into three minitabs when you select the **Use different paper for first page** check box: **First Page**, **Other Pages**, and **Back Cover**. The **First Page** minitab is shown in the following illustration.

Figure 25: First Page, Other Pages, and Back Cover minitabs



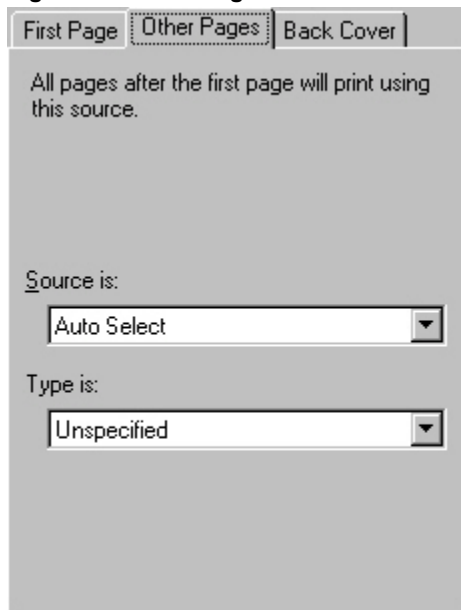
To select different media for the first page of a print job, follow these steps:

1. Click **File**, click **Print**, and then click **Properties**.
2. Click the **Paper** tab, and then select the **Use different paper for first page** check box.
3. Click the **First Page** tab. On the **Size is**, **Source is**, and **Type is** menus, select the size, source, and type settings for your cover.

Other Pages

Use the **Other Pages** minitab to select an alternative media type or source for the pages that follow the first page of a document. The choices and defaults for **Source is** and **Type is** are the same as for **First Page**.

Figure 26: Other Pages minitab



The image shows a software interface with three tabs: 'First Page', 'Other Pages', and 'Back Cover'. The 'Other Pages' tab is selected. Below the tabs, there is a text box containing the message: 'All pages after the first page will print using this source.' Below this text box, there are two dropdown menus. The first dropdown menu is labeled 'Source is:' and has 'Auto Select' selected. The second dropdown menu is labeled 'Type is:' and has 'Unspecified' selected.

Back Cover

Use this feature to include a blank back cover on a document, or include a back cover from a paper source different from that used for the remainder of the document. Use the **Back Cover** minitab to select an alternative media source (or the same source as **First Page**) from which a blank page is drawn and placed after the final page of the body of the document. The minitab contains three option buttons and two drop-down menus. Three option buttons are available:

- No back cover (default)
- Use the first page source
- Use an alternate source

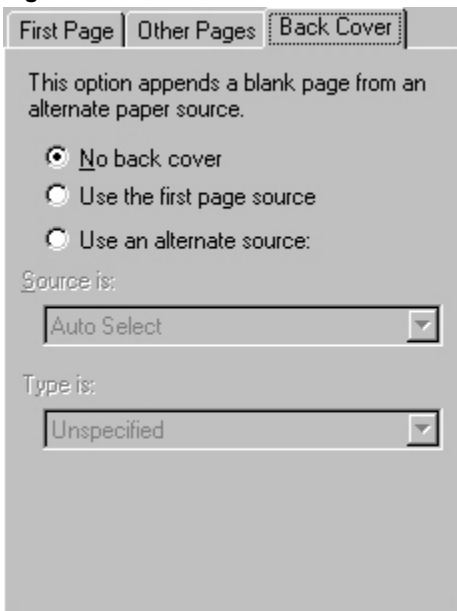
The two drop-down menus become available when **Use an alternate source** is selected:

- Source is (default)
- Type is

No back cover is selected as the default, with the drop-down **Source is** and **Type is** selection boxes disabled. Clicking **Use an alternate source** activates the drop-down menus. The drop-down menu value defaults to the same source as that chosen for the **First Page** minitab. Clicking **Use the first page source** changes the drop-down value to match the first page, if necessary, but the drop-down menus remain inactive.

When the **Back Cover** minitab is active, clicking **No back cover** deactivates the drop-down menus, but does not change their value. No Bubble Help is available for the inactive drop-down menus. The settings revert to defaults when **Use different paper for first page** is selected again.

Figure 27: Back Cover minitab



Note The Back Cover minitab is available only when the setting for Booklet Printing on the Finishing tab is Off.

Size is

This feature actually functions as two controls: a drop-down menu that contains all the supported media sizes (including any user-defined custom sizes) and a text label that indicates the dimensions of the selected size.

Moving the pointer over the text label causes the arrow to change to a gloved hand, which indicates that the area beneath the pointer is selectable. Clicking here toggles the units of measure between inches and millimeters, offering the same options on the dimensions label in the preview image. Selecting a new size from the drop-down menu

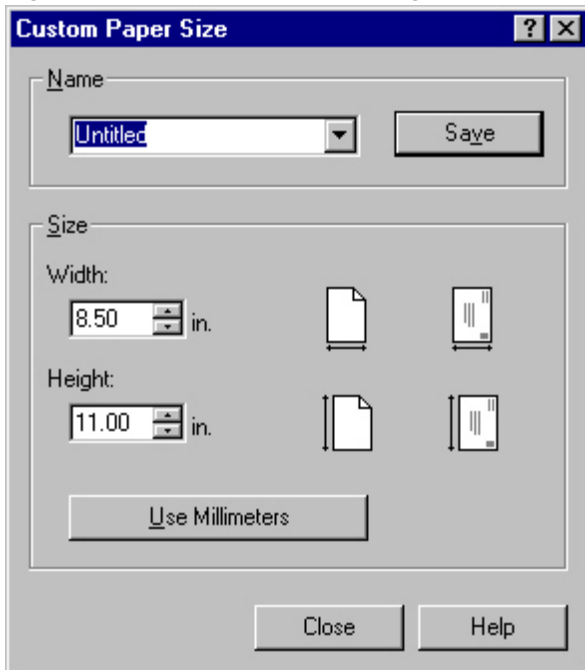
updates the media-dimensions text label as well as the preview image. Changing the orientation (on the **Basics** tab) also updates the dimensions text label.

Size can be specified only for the first page or for all pages. On the **Other Pages** and **Back Cover** minitabs, the **Size is** drop-down menu does not appear because the media size must be consistent for all pages of the job. Certain software programs can override this command and specify different media sizes within a single document. Any change in the media size selection causes the Booklet Printing feature to be turned off.

Custom

The **Custom Paper Size** dialog box appears when you click the **Custom** button on the **Paper** tab. The following illustration shows the initial appearance of the **Custom Paper Size** dialog box.

Figure 28: Custom Paper Size dialog box



When the **Custom Paper Size** dialog box appears, the drop-down menu in the **Name** group contains one of two things, depending on the current paper size selection in the **Paper** tab:

- If the paper size selection is a previously defined custom size, then the drop-down menu contains the name of that custom size.
- If the paper size selection is a standard paper size, then the drop-down menu shows the default name **Untitled** for a custom paper size.

Note

In Windows 95, Windows 98, and Windows Me, two names for the same size media can coexist (for example, "big" and "BIG" can both be used as names for custom-size paper measuring 8.4 inches by 11 inches). In Windows NT 4.0, Windows 2000, and Windows XP, both upper and lower-case names can be used, but they cannot be used to name the same paper size.

The new name is compared only against the list of user-defined custom paper-size names, and not against the standard paper-size names.

The complete set of titles for this button and the specific characteristics that determine its title and capabilities are discussed in the dynamic command button section.

Name drop-down menu

The **Name** drop-down menu shows the name of the last selected custom paper size. Use the **Name** drop-down menu to type new names for custom paper sizes and to select from the list of currently defined custom paper sizes.

The name that appears in the **Name** drop-down menu is one of three things, depending on the following conditions:

- If a saved custom paper size has been selected from the drop-down menu and the other controls in the dialog box have not been changed since then, the **Name** drop-down menu shows the name of the last selected custom paper size.
- If the width or height controls have been changed since a custom size was selected or saved, or if a saved paper size has just been deleted, then the **Name** drop-down menu shows the default name of "Untitled."
- If a new name has been typed into the **Name** drop-down menu for the purpose of saving a new size or renaming an existing size, then that new name will remain in the drop-down menu until a saved custom paper size has been selected from the drop-down menu.

If you type a new name into the **Name** drop-down menu, but then do not click the **Save** button, you should be able to change the width and height values without losing the name. However, if a saved paper-size name is selected from the drop-down menu, any unsaved name or size values are lost without warning, and replaced by the values of the selected custom paper size.

Dynamic command button

The button located to the right of the **Name** drop-down menu has three possible labels: **Save**, **Delete**, and **Rename**.

- **Save** is the button title whenever the height and width values have been changed since the last save or since the selection of an existing custom paper size. Clicking the button causes the name in the **Name** drop-down menu to be compared against each of the saved names. If a duplicate is found, a dialog box appears, asking if it is okay to replace the existing item. If you click **Yes**, the old item is updated with the new values. If you click **No**, the driver returns to the **Custom Paper Size** dialog box, where you can type a different name. The new name is compared only against the list of user-defined custom paper names, and not against the standard paper-size names. Whenever the command button has the **Save** title, it is the default button.
- **Delete** is the button title whenever the name of an existing (previously saved) custom paper size appears in the **Name** drop-down menu, such as immediately after selecting an item from the drop-down menu or clicking the **Save** button. Clicking the **Delete** button causes the saved custom paper size to be deleted, after which the **Name** drop-down menu changes to **Untitled**, the height and width controls are unchanged, and the button title changes to **Save**.
- **Rename** is the button title when you type something into the **Name** drop-down menu after selecting an existing custom paper size from the drop-down menu. If no duplicate is found, the name of the stored custom paper size changes to match the contents of the **Name** drop-down menu. Whenever the command button has the **Rename** title, it is also the default button.

The following table illustrates the relationships between the **Name** drop-down menu, the command button, and the actions that take users from one state to another.

Table 13: Name drop-down menu text strings

State	Drop-down menu contents	Button label	Action	Next state
1	Untitled	Save	Click Save	3
			Type something into the Name drop-down menu	2
			Change the width or height values	1
			Select a saved item from the drop-down menu	3
2	<user-typed text>	Save	Click Save	3
			Type something into the Name drop-down menu	2
			Change the width or height values	2
			Select a saved item from the drop-down menu	3
3	<name of saved item>	Delete	Click Delete	1
			Type something into the Name drop-down menu	4
			Change the width or height values	1
			Select a saved item from the drop-down menu	3
4	<user-typed text>	Rename	Click Rename (when the name is unique)	3
			Click Rename (when the name is a duplicate)	4
			Type something into the Name drop-down menu	4
			Change the width or height values	2
			Select a saved item from the drop-down menu	3

Width and height controls

The width and height values can be changed either by typing numeric strings into the edit boxes, or by using the up and down arrows.

Any entry that is greater than the maximum limits of the width and height control is rounded down to the maximum valid entry, while any entry that is smaller than the minimum limits of the width and height control is rounded up to the minimum valid entry. See "Custom width and height control limits."

If units are in millimeters, the custom paper-size range minimum is the limit rounded up to the nearest whole millimeter. The custom paper-size range maximum is the limit rounded down to the nearest whole millimeter. Any non-numerical entry reverts to the last valid entry. Width and height entries are validated when the focus has changed.

The resolution of each control is one millimeter or one-tenth of an inch, depending on the current measurement units. Clicking the up and down arrows increases or decreases the current value by the increment amount (within the allowed range of values). The computer determines the rate at which the values change.

Unit indicator labels change dynamically to indicate inches or millimeters, depending on the measurement units the driver is currently using. To change measurement units, click the **Measurement Units** button.

Custom width and height control limits

The minimum paper size for the HP LaserJet 2300 printer is 76 mm by 127 mm (3.0 inches by 5.0 inches) and the maximum is 216 mm by 356 mm (8.5 inches by 14.0 inches). The following table summarizes paper size limits for each paper-handling device.

Table 14: Custom width and height limits for the HP LaserJet 2300 printer

Media source or paper-handling accessory	Minimum size - width by height	Maximum size - width by height
Tray 1 (multipurpose)	76 mm by 127 mm (3.0 inches by 5.0 inches)	216 mm by 356 mm (8.5 inches by 14.0 inches)

Media source or paper-handling accessory	Minimum size - width by height	Maximum size - width by height
Tray 2	148 mm by 210 mm (5.8 inches by 8.3 inches)	216 mm by 330 mm (8.5 inches by 13.0 inches)
Tray 3	210 mm by 279 mm (8.3 inches by 11.0 inches)	216 mm by 297 mm (8.5 inches by 11.7 inches)
Duplex printing accessory	210 mm by 279 mm (8.3 inches by 11.0 inches)	216 mm by 356 mm (8.5 inches by 14.0 inches)

Paper and envelope icons

The paper and envelope icons visually define width and height.

Measurement Units button

Use the **Measurement Units** button to toggle the unit of measurement between standard (inches) and metric (millimeters) units of measurement.

Close button

The **Close** button closes the **Custom Paper Size** dialog box according to the logic in the following table. In all cases, any custom paper sizes that are successfully saved (and not renamed or deleted) while the dialog box is open will remain in the paper size list in the **Paper** tab. The following table lists options that appear when you click the **Close** button.

Table 15: Close dialog box text strings

If the drop-down menu contains ...	And the button says ...	Then this happens when the Close button is clicked
Untitled	Save	The dialog box closes, but you lose the changes that were not saved. The current paper size remains the same as it was when the Custom button was selected.
<user-typed text>	Save	The dialog box closes, but you lose the changes that were not saved. The current paper size remains the same as it was when the Custom button was selected.
<name of saved item>	Delete	The dialog box closes, and the current paper size is set to that which was last shown in the drop-down menu.
<user-typed text>	Rename	The dialog box closes, but you lose the changes that were not saved. The current paper size remains the same as it was when the Custom button was selected.

Source Is

The **Source Is** drop-down menu shows the input trays available according to **Configure** tab settings. The list contains the following options:

- Auto Select
- Manual Feed

- Tray 1
- Tray 2
- Tray 3 (if installed - this can be a 250-sheet or 500-sheet tray)

The default setting is **Auto Select**, which allows the printer firmware to select the media source. Any optional paper trays that are installed through the **Configure** tab are also shown here.

If a conflict exists among paper source, size, and type, and you choose to keep the conflicting settings, the settings are processed in the following order: paper size, paper type, and then paper source.

For information about media types and sizes, see "Media attributes".

Type Is

The **Type Is** drop-down menu shows all the paper types that the HP LaserJet 2300 series printer supports, as well as any user-defined types that have been created by a network administrator. The default setting is **Unspecified**, which allows the program to select the paper type.

No mechanism exists for manually adding custom paper types through the driver. Custom sizes can be added only by using the bidirectional communication mechanism, so they must already exist in the printer when the bidirectional query occurs. If bidirectional communication is enabled, then the information returned is an updated list of paper types. If bidirectional communication is not enabled, then the driver looks for custom paper types saved from a previous bidirectional communication query, and uses those. Otherwise, no custom paper types are available through the driver.

The following standard types appear in the lists:

- Bond
- Cardstock
- Color
- Labels
- Letterhead
- Plain
- Preprinted
- Prepunched
- Recycled
- Rough
- Transparency
- Unspecified
- Envelope

For more information about media types and sizes, see "Media attributes".

Printer image

The bitmap image in the lower-right portion of the **Paper** tab screen represents the current physical configuration of the printer according to the driver configuration data (obtained automatically through bidirectional communication, or configured manually through the driver). It should have the same appearance as the image in the same location on the **Destination** tab and the **Configure** tab.

On the **Paper** tab, the printer image contains hot spots for selecting a media source. When the pointer moves over a hot spot, the arrow reverts to the gloved hand used in the Bubble Help, the preview image, and other areas. The current media source is highlighted in a bright green color on the printer bitmap.

Destination tab features

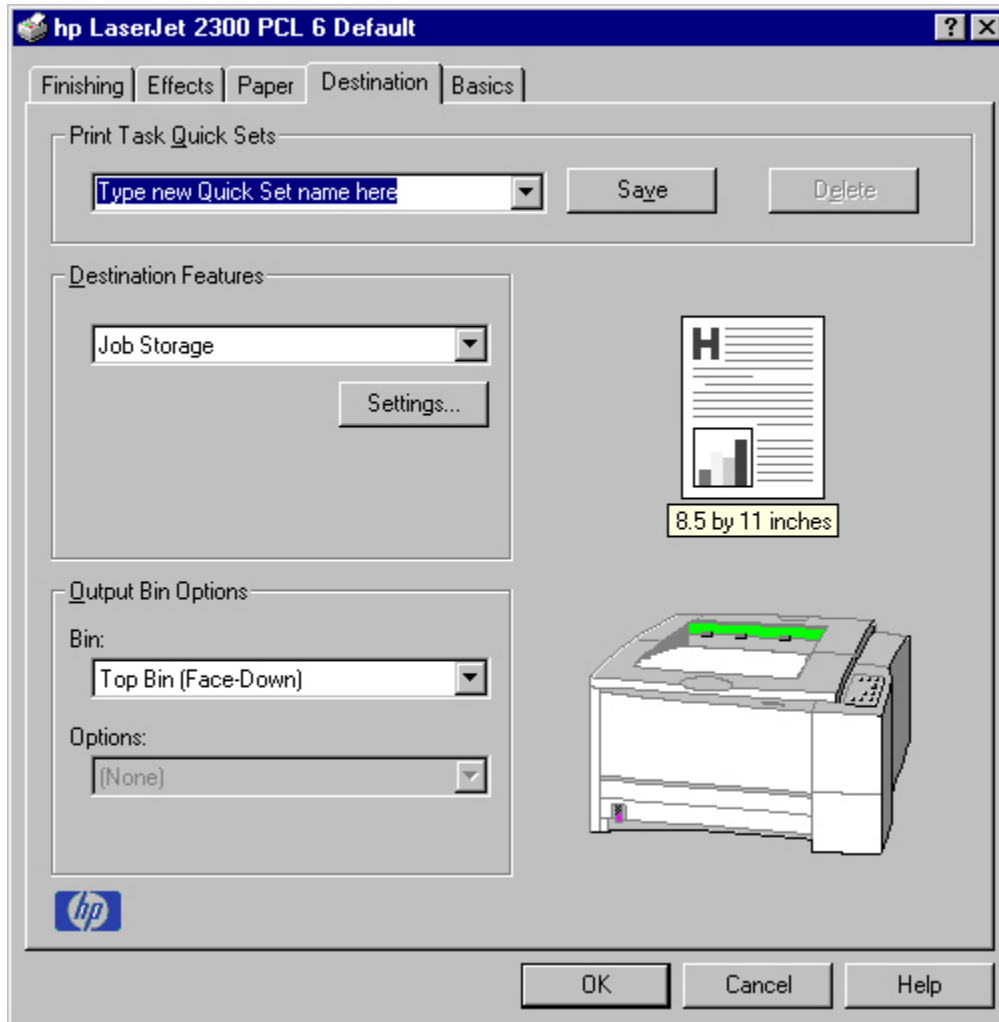
The **Destination** tab provides options for job storage and output bin.

The printer image in the lower-right portion of the **Destination** tab represents the current physical configuration of the printer and corresponds to its configuration data, either obtained automatically through bidirectional communication or configured manually. It should look the same as the image that appears in the same location on the **Paper** tab and the **Configure** tab.

Note

The printer image shown in the illustration might differ from your HP LaserJet 2300 printer, depending on the model number and the installed accessory devices.

Figure 29: Destination tab



Destination Features

The **Destination Features** group box provides controls for Job Storage. This group box is only visible if the **Job Storage Enabled** check box is selected in the **More . . . Configuration Options** dialog box that is available on the **Configure** tab.

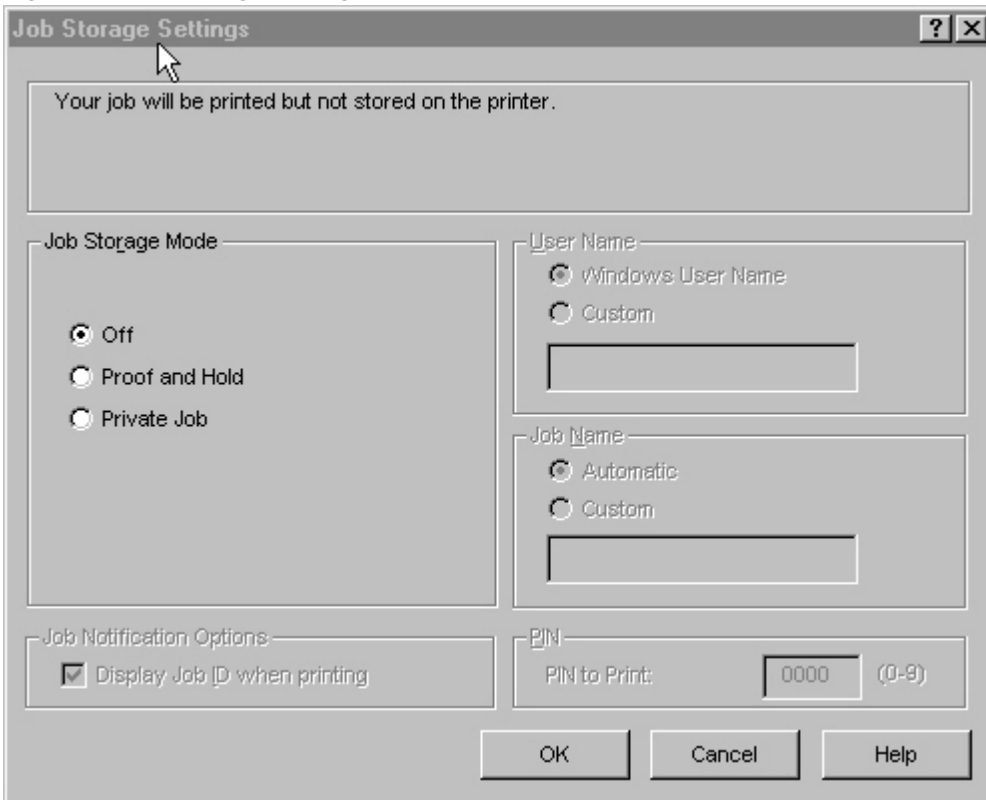
Hardware configuration and availability of Job Storage options

The HP LaserJet 2300 printer can accommodate the following Job Storage options:

- **Proof and Hold**
- **Private Job**

The following illustration shows the Job Storage Settings window.

Figure 30: Job Storage Settings window



Job Storage modes

Using the **Job Storage** feature on the HP LaserJet 2300 printer, you can store documents at the printer and then control their printing at the printer control panel. This feature is intended to provide greater flexibility, convenience, security, and cost savings.

After the Job Storage feature has been enabled, you can use its features by clicking **Settings** on the **Destination** tab of the printer driver.

The HP LaserJet 2300 printer offers the following **Job Storage** options:

- Off
- Proof and Hold
- Private Job

These features and the settings that control them are described below.

Off

This option turns the Job Storage feature off (disables the feature), which means that the print job will not be stored in the printer.

Proof and Hold

This option stores the print job and prints only the first copy of the job, allowing you to check the first copy. If the document prints correctly, you can print the remaining copies of the print job at the printer control panel. The number of proof-and-hold print jobs that can be stored in the printer is set at the printer control panel.

After it is released for printing, the proof-and-hold job is immediately deleted from the printer. If more copies are needed, you must reprint the job from the program. If you send a second proof-and-hold job to the printer with the same user name and job name as an existing proof-and-hold job (and you have not released the original job for printing), the job will overwrite the existing job. Proof-and-hold jobs are deleted if power to the printer is removed.

Private Job

Use this option to send a print job directly to the printer memory. Selecting **Private Job** activates the **PIN** field. The print job can be printed only after you type a PIN at the printer control panel. After the job is printed, the printer removes the job from the printer memory. This feature is useful when you are printing sensitive or confidential documents that you do not want to leave in an output bin after printing.

After it is released for printing, the private job is immediately deleted from the printer. If more copies are needed, you must reprint the job from the program. If you send a second private job to the printer with the same user name and job name as an existing private job (and you have not released the original job for printing), the job will overwrite the existing job, regardless of the PIN. Private jobs are deleted if power to the printer is removed.

Using a PIN for Private Job

The **Private Job** option can be secured by a four-digit personal identification number (PIN). This number must be typed in the printer control panel before the printer prints the job.

The box labeled **PIN** is usually inactive. Selecting **Private Job** activates the **PIN** box. The Private Job/PIN coupling has a PIN restriction of four ASCII numeric characters (ASCII 0-30 through 0-39). If you type non-numeric characters, they are removed immediately. If you type more than four characters, the characters past the fourth are truncated. The field temporarily accepts fewer than four digits in the string, but when the edit field loses focus, the zeroes pad the left end until there are exactly four digits. The default initialized value for the PIN is 0000 for **Private Job**.

Document identifiers used in Job Storage

When you use a job storage feature, your document is identified at the printer control panel by user name and job name.

User Name

Use the **User Name** edit box to identify the job at the printer control panel. When the driver is first installed (or when **Default Print Settings** in the **Print Task Quick Sets** drop-down menu is selected), this string initializes to the empty string (""), but the dialog box detects this condition and replaces the string with your login name. Restrictions for the **User Name** field are described in the "Job Name" section.

Job Name

Use the **Job Name** edit box to specify a name to identify the job at the printer control panel. When the driver is first installed (or when **Default Print Settings** in the **Print Task Quick Sets** drop-down menu is selected), this string initializes to the empty string (""), but the dialog box detects this condition and replaces the string with "Untitled".

The **Job Name** and the **User Name** fields can contain no more than 16 characters each, and are limited to A through Z and 0 through 9, because the name appears on the printer control-panel display. If you try to type a lowercase character, it automatically shifts to uppercase. If you try to type a character with an ASCII code of fewer than 32 or more than 126 characters, the character is removed from the edit field, along with all characters that follow it. If you try to type more than 16 characters, any character beyond 16 is truncated.

When the dialog box is closed, or the edit box loses focus, an empty string is replaced with "Untitled". In those languages for which "Untitled" cannot be translated without the use of invalid characters, the driver uses a string of three dashes. The acceptable characters for job name and user name vary for each operating system. The string must meet requirements to be able to appear on the printer control-panel display.

Using Job Storage options when printing

You can use **Job Storage** options in the **Destination** tab of the printer driver.

Note The printer driver that is installed on your computer must be configured to use the Job Storage features. To enable Job Storage, click Start, click Settings, click Printers, and right-click the printer icon. Click Properties, click the Configure tab, and select the Job Storage Enabled check box.

1. Click **Print** from the software program. The **Print** dialog box appears.
2. Click **Properties**. The **Properties** dialog box appears.
3. Click the **Destination** tab to show the destination options.
4. Click **Job Storage** on the drop-down menu under **Destination Features**.
5. Click **Settings**. The **Job Storage Settings** dialog box appears.

You can then select one of the Job Storage options described above by clicking the appropriate option button.

Note These instructions are specific to the Windows 95, Windows 98, Windows Me, and Windows NT 4.0 environments when using the latest available PCL 5e and PCL 6 drivers. While the basic concepts of Job Storage are the same for PS print jobs, there are significant differences in the driver user interface. Also, there are some limitations in naming and PIN selection.

Releasing private jobs stored at the printer

Once you send a print job using **Job Storage**, you can release the job to print at the printer control panel.

1. Press the select button (the one with the check mark) to open the menus.
2. Press the up and down buttons to scroll to RETRIEVE JOB, and then press the select button.
3. Press the up and down buttons to scroll to the user or job name, and then press the select button.
4. Press the up and down buttons to scroll to PRINT. The PRINT selection has an icon next to it indicating that the job is locked, type. If so, type the PIN, and then press the select button.) Press the select button.

Note Type the PIN one digit at a time. Use the up or down arrow to obtain the first digit, and then press the select button. The cursor in the control panel then moves to the place for the next digit. Proceed likewise for each digit, and press the select button when the PIN is complete.

Deleting a print job

Sometimes it is necessary to delete a print job from the printer memory. This can be done at the printer control panel.

Random text again.

1. Press the select button (the one with the check mark) to open the menus.
2. Press the up and down buttons to scroll to **RETRIEVE JOB**.
3. Press the up and down buttons to scroll to the user or job name, and then press the select button.
4. Press the up and down buttons to scroll to **DELETE**. (The **DELETE** selection might have an icon next to it indicating that the job is locked. If so, type the PIN number, and then press the select button.)

Note Type the PIN one digit at a time. Use the up or down arrow to obtain the first digit, and then press the select button. The cursor in the control panel then moves to the place for the next digit. Proceed likewise for each digit, and press the select button when the PIN is complete.

Output bin options

The **Output Bin Options** group box contains a drop-down menu that you can use to select from a list of configured output bins. Only output bins that are configured on the **Configure** tab appear in this drop-down menu.

The HP LaserJet 2300 printer comes with two output bins. Print jobs use the top output bin when the rear output bin is closed. When the rear output bin is open, print jobs use this bin and emerge face-up from the printer.

Only one output bin can be selected in the driver, so one item appears in the **Bin:** drop-down menu: **Top Bin (Face-Down)**.

Top Bin (Face-Down) refers to the main output bin at the top of the printer and is the only setting for the HP LaserJet 2300 printer driver. Jobs sent to this bin are delivered face-down. This option is always available and has no paper size or type constraints beyond those determined by the printer hardware.

Note When using the face-down output bin, you must manually switch the bin between face-down and face-up output.

Options

The **Options** drop-down menu is inactive. This setting can be used to enable non-HP paper-handling devices.

Printer image

The bitmap image in the lower-right portion of the **Destination** tab represents the current physical configuration of the printer according to the driver configuration data (obtained automatically through bidirectional communication, or configured manually through the driver). It should have the same appearance as the image in the same location on the **Paper** tab and the **Configure** tab.

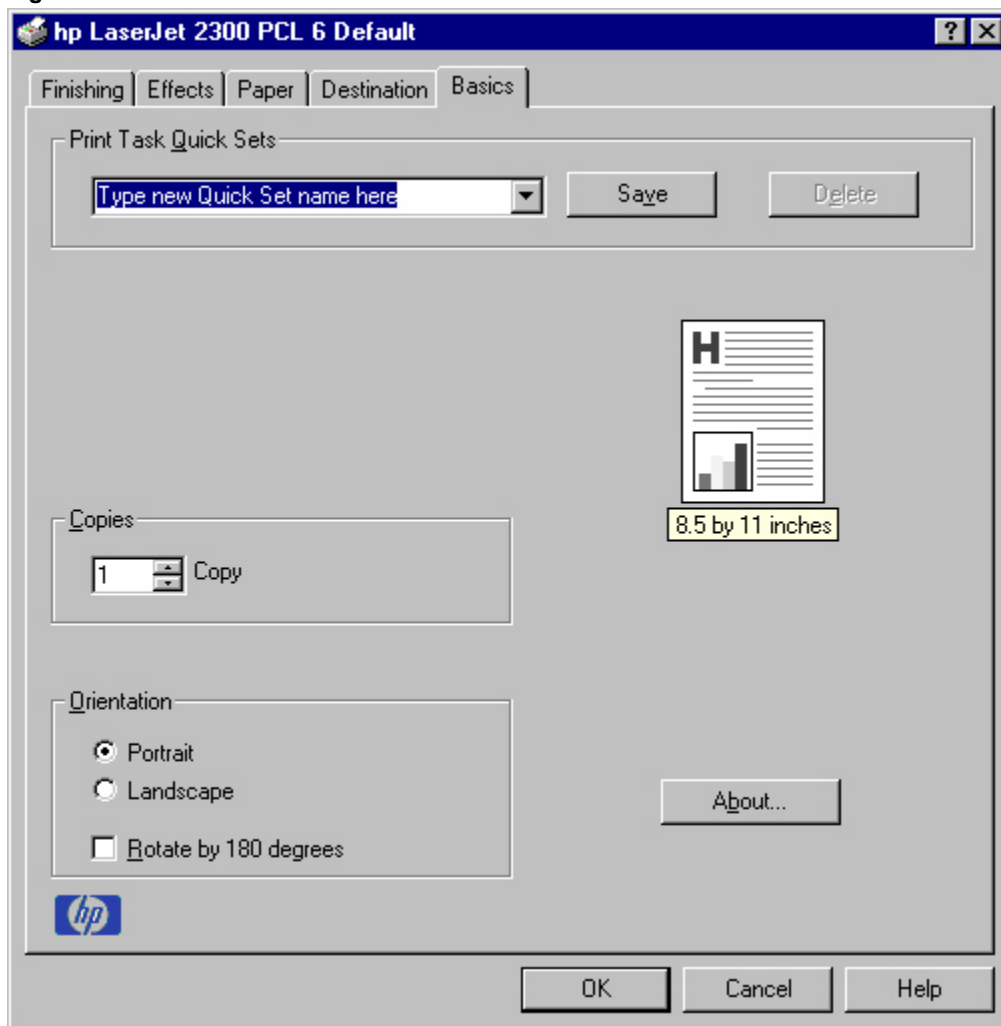
On the **Destination** tab, the printer image contains hot spots for selecting an output bin. When the pointer moves over a hot spot, the arrow reverts to the gloved hand used in the Bubble Help, the preview image, and other areas. The current output bin is highlighted in a bright green color on the printer bitmap.

Note On the Destination tab, only output bins have hot spots and can be highlighted; source trays must be selected from the Paper tab.

Basics tab features

The **Basics** tab provides options for setting the number of copies to be printed and for the orientation of the print job. You can also use it to retrieve information about the driver.

Figure 31: Basics tab



Copies

Use the Copies feature to specify the number of copies to print.

The number of copies you request appears in the **Copies** box. You can select the number by typing in the box or by using the up and down arrows to the right of the edit box. Valid entries are numbers from 1 to 9999 for the HP LaserJet 2300 printer. The copies value will not advance from the maximum number (9999) to 1 when the up arrow is used, or change from 1 to the maximum number (9999) when the down arrow is used. When you click another group box or leave the **Basics** tab, invalid entries into the edit box (such as non-numerical input, numbers less than 1, or numbers greater than the maximum allowed) are changed to the last valid value that appeared in the box. The default number of copies is 1.

Because you can set the number of copies you want from some programs, conflicts between the program you are using and the driver can arise. In most cases, the program and the driver communicate, so that the number of copies set in one location (such as the program) will appear in the other (such as the driver). For some programs, this communication does not take place, and the copies values are treated independently. For these programs, setting 10 copies in the program and then setting 10 copies in the driver will result in 100 copies (10 x 10) being printed. It is recommended that you set the number of copies in the program, wherever possible.

Orientation

Orientation refers to the layout of the image on the page, and does not affect the manner in which media is fed into the printer. You can specify the orientation of the print job. The three available orientations are portrait, landscape, and rotated. The default orientation is Portrait.

The three orientation options have these configurations:

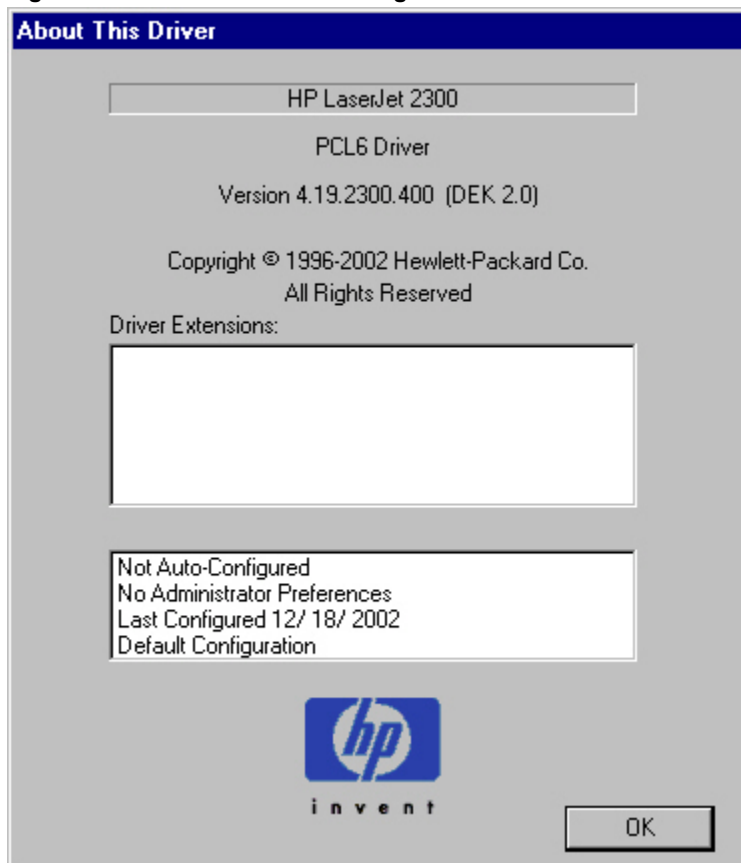
- **Portrait.** The top edge of the document is the shorter edge of the paper.
- **Landscape.** The top edge of the document is the longer edge of the paper.
- **Rotate by 180 degrees.** This creates a landscape or portrait orientation in which the image is rotated 180 degrees. This setting is useful for printing envelopes and when using some third-party paper-handling devices.

You can toggle orientation between portrait and landscape by left-clicking the preview image. If you select the **Rotate by 180 degrees** check box, there is no change in the preview image.

About

By clicking the **About** button on the **Basics** tab or clicking the HP logo on any of the driver property pages, the **About** box appears. To close the **About** box, click **OK**, press ESC, press ALT + F4, or press ENTER. The following figure shows the **About** box. The information it contains varies according to HP LaserJet model number, driver, date, and versions.

Figure 32: About This Driver dialog box



The **About** tab indicates whether the driver was autoconfigured, whether administrator preferences were set, the date the driver was last configured, and whether the configuration is default or user-defined.

Driver extensions

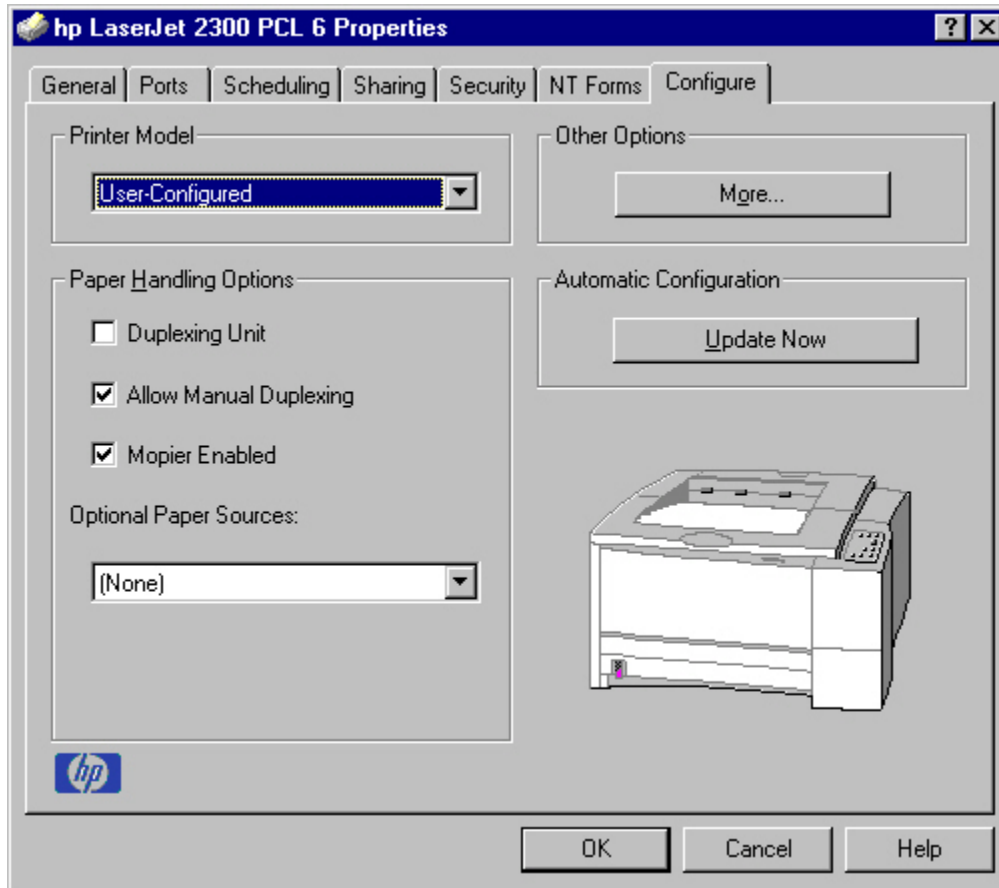
The **Driver Extensions** text box provides you with some information about any extended driver functionality. It can contain a brief description of the driver extension and a version number.

Configure tab features

Use the **Configure** tab to tell the driver about the hardware configuration of the printer. If bidirectional communication is enabled in a supported environment, set up this tab by clicking the **Update Now** button. If your environment does not support bidirectional communication, the **Update Now** button is unavailable, so you must manually configure the options on this tab.

The **Configure** tab is available when the driver is opened from the **Printers** folder by clicking **Properties**. When you open the driver from within a program, the **Configure** tab is not visible (with a few exceptions, such as when using Excel 5.0 or Corel (R) Chart 4.0). When opened from the **Printers** folder, the **Configure** tab looks like the following illustration.

Figure 33: Configure tab



The printer image in the lower-right portion of the **Configure** tab represents the current physical configuration of the printer and corresponds to its configuration data, either obtained automatically through bidirectional communication or configured manually. It should look the same as the image that appears in the same location on the **Paper** tab and the **Destination** tab. For more information, see "Paper tab features."

Note The printer image shown in the illustration might differ from your HP LaserJet 2300 printer, depending on the model number and the installed accessory devices.

Printer Model group box

In the **Printer Model** group box, the driver title remains HP LaserJet 2300 for all models. Selection of another printer bundle makes the appropriate changes to other configuration options on the tab.

When the HP LaserJet 2300 or HP LaserJet 2300L model is selected, the following settings apply:

- The **Total Printer Memory** value is 32 MB.
- The value shown in the **(DWS)**(driver work space) dialog box is 3.0 MB.
- The **Duplexing Unit** check box is *not* selected.
- The **Allow Manual Duplexing** check box is selected.
- The **Mopier Enabled** check box is not available, and a Bubble Help message icon appears beside the check box. The message states that 48 MB of memory is required to enable the feature.
- The **Job Storage Enabled** check box (on the **More Configuration Options** subtab of the **Configure** tab) is *not* selected, and a Bubble Help message icon appears beside the check box. The message states that 48 MB of memory is required to enable the feature.
- The **Allow Scaling from Large Paper** check box (on the **More Configuration Options** subtab of the **Configure** tab) is not selected.
- No optional paper source is selected.

When the HP LaserJet 2300d model is selected, the following settings apply:

- The **Total Printer Memory** value is 48 MB.
- The value shown in the **(DWS)** dialog box is 11.0 MB.
- The **Duplexing Unit** check box is selected.
- The **Allow Manual Duplexing** check box is selected.
- The **Mopier Enabled** check box is selected.
- The **Job Storage Enabled** check box (on the **More Configuration Options** subtab of the **Configure** tab) is selected.
- The **Ignore Application Collation** check box (on the **More Configuration Options** subtab of the **Configure** tab) is selected.
- The **Allow Scaling from Large Paper** check box (on the **More Configuration Options** subtab of the **Configure** tab) is not selected.
- No optional paper source is selected.

When the HP LaserJet 2300n model is selected, the following settings apply:

- The **Total Printer Memory** value is 48 MB.
- The value shown in the **(DWS)** dialog box is 11.0 MB.
- The **Duplexing Unit** check box is *not* selected.
- The **Allow Manual Duplexing** check box is selected.
- The **Mopier Enabled** check box is selected.
- The **Job Storage Enabled** check box (on the **More Configuration Options** subtab of the **Configure** tab) is selected.
- The **Ignore Application Collation** check box (on the **More Configuration Options** subtab of the **Configure** tab) is selected.
- The **Allow Scaling from Large Paper** check box (on the **More Configuration Options** subtab of the **Configure** tab) is not selected.
- No optional paper source is selected.

When the HP LaserJet 2300dn is selected, the following settings apply:

- The **Total Printer Memory** value is 48 MB.
- The value shown in the **(DWS)** dialog box is 11.0 MB.
- The **Duplexing Unit** check box is selected.

- The **Allow Manual Duplexing** check box is selected.
- The **Mopier Enabled** check box is selected.
- The **Job Storage Enabled** check box (on the **More Configuration Options** subtab of the **Configure** tab) is selected.
- The **Ignore Application Collation** check box (on the **More Configuration Options** subtab of the **Configure** tab) is selected.
- The **Allow Scaling from Large Paper** check box (on the **More Configuration Options** subtab of the **Configure** tab) is not selected.
- No optional paper source is selected.

When the HP LaserJet 2300dtn is selected, the following settings apply:

- The **Total Printer Memory** value is 48 MB.
- The value shown in the **(DWS)** dialog box is 11.0 MB.
- The **Duplexing Unit** check box is selected.
- The **Allow Manual Duplexing** check box is selected.
- The **Mopier Enabled** check box is selected.
- The **Job Storage Enabled** check box (on the **More Configuration Options** subtab of the **Configure** tab) is selected.
- The **Ignore Application Collation** check box (on the **More Configuration Options** subtab of the **Configure** tab) is selected.
- The **Allow Scaling from Large Paper** check box (on the **More Configuration Options** subtab of the **Configure** tab) is not selected.
- **HP 500-Sheet Paper Tray** becomes available and is selected in the **Optional Paper Sources:** drop-down menu of the **Configure** tab.

Paper-handling options

The **Paper Handling Options** group box provides options for configuring most of the paper-handling device features.

Duplexing unit

Select this option if a duplexing unit is installed in the printer. When it is selected, additional controls appear in the **Document Options** group box on the **Finishing** tab. Unlike most options in this group box, the **Duplexing Unit** option does not affect the printer image because the duplexing unit is contained within the printer. To print on both sides, click **Print** from the program, click the **Properties** button, click the **Finishing** tab, and then click **Print on Both Sides**.

Allow Manual Duplexing

With manual duplexing, you can print on both sides of any size or weight of paper that is supported by the printer (although this is not recommended for transparencies). When you use this feature, the printer prints out one side of the paper for each page of the job. You must reinsert the paper stack into the input tray (Tray 1) to print the second side. The printer pauses while you make this adjustment. The **Allow Manual Duplexing** check box on the **Configure** tab is selected by default for all models of the HP LaserJet 2300 printer.

Mopier enabled

A mopier is an HP-designed printer that produces multiple, collated copies from a single print job. Multiple-original printing (mopying) increases printer performance and reduces network traffic by sending the job to the printer once, then storing it. The remainder of the copies are printed at the printer's fastest speed. All documents can be created, controlled, managed, and finished from the desktop, which eliminates the extra step of using a photocopier.

All HP LaserJet 2300 printer models except the HP LaserJet 2300 and the HP LaserJet 2300L support the Transmit Once mopying feature. The **Mopier Enabled** option is selected by default, if the printer has at least 48 MB of total memory.

Optional paper destinations

The **Optional Paper Destinations** drop-down menu contains only the following option:

- **(None)**

Optional paper sources

The **Optional Paper Sources** drop-down menu lists optional paper sources for the HP LaserJet 2300 printer. The list of available paper sources varies, depending on your printer, its input accessories, and the printer configuration settings on the **Configure** tab.

For the HP LaserJet 2300 printer, two optional paper sources are available. The settings in the **Optional Paper Sources** drop-down menu are as follows:

- **(None)** (the default setting for the HP LaserJet 2300, 2300L, 2300n, 2300d, and 2300dn printer models)
- **HP 250-Sheet Input Tray**
- **HP 500-sheet Input Tray** (the default setting for the HP LaserJet 2300dtn printer model)

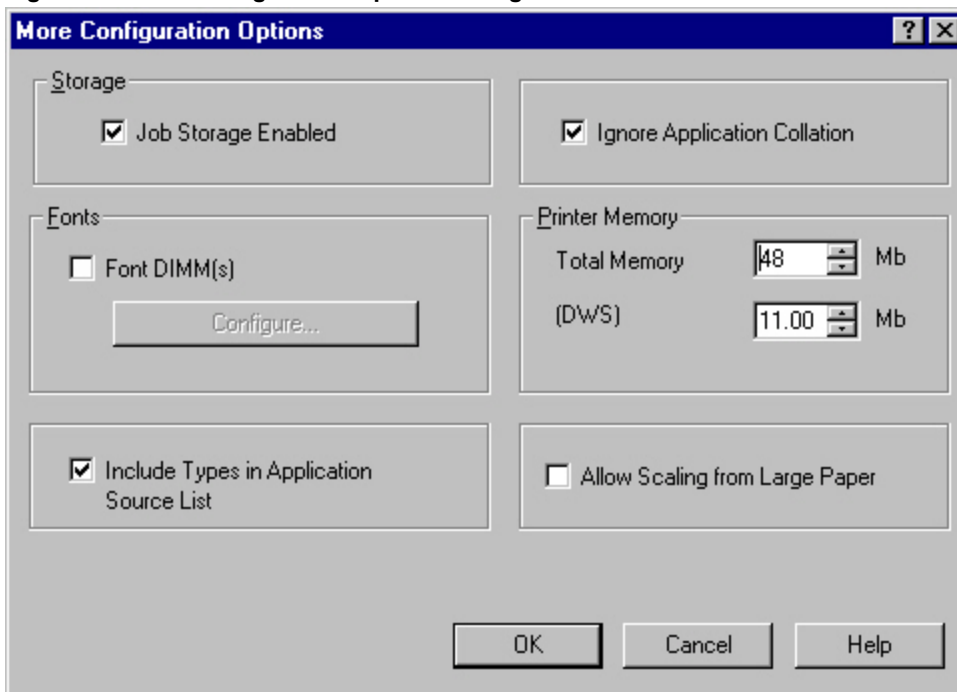
Other options

The **Other Options** group box contains a single **More** command button. Clicking the **More** button opens the **More Configuration Options** dialog box.

More configuration options

When you press the **More...** button under Other Options, more configuration options are available. The **More Configuration Options** dialog box is shown in the following illustration.

Figure 34: More Configuration Options dialog box



Storage

You can use the **Storage** section to specify whether **Job Storage** is enabled. **Job Storage** is automatically enabled if the printer has 48 MB of total memory or more. **Job Storage Enabled** determines whether **Job Storage** appears as a feature on the **Destination** tab (for HP LaserJet 2300 printers that have at least 48 MB of total printer memory).

Ignore Application Collation

The **Ignore Application Collation** setting in the printer properties is used to allow the driver manage collation. You cannot use the **Ignore Application Collation** setting alone to print non-collated copies. If you want to print multiple copies of non-collated copies, make sure that the **Mopier Enabled** setting is **Off** and that that the **Collate** check box in your application's **Print** dialog box is not selected.

Note

The Ignore Application Collation feature is not selected on the HP LaserJet 2300 and HP LaserJet 2300L models unless 48 MB of memory is installed.

The following table shows the expected behavior for a two-page print job when the number of copies is three. In some instances, the application collation setting overrides the **Ignore Application Collation** setting on the driver.

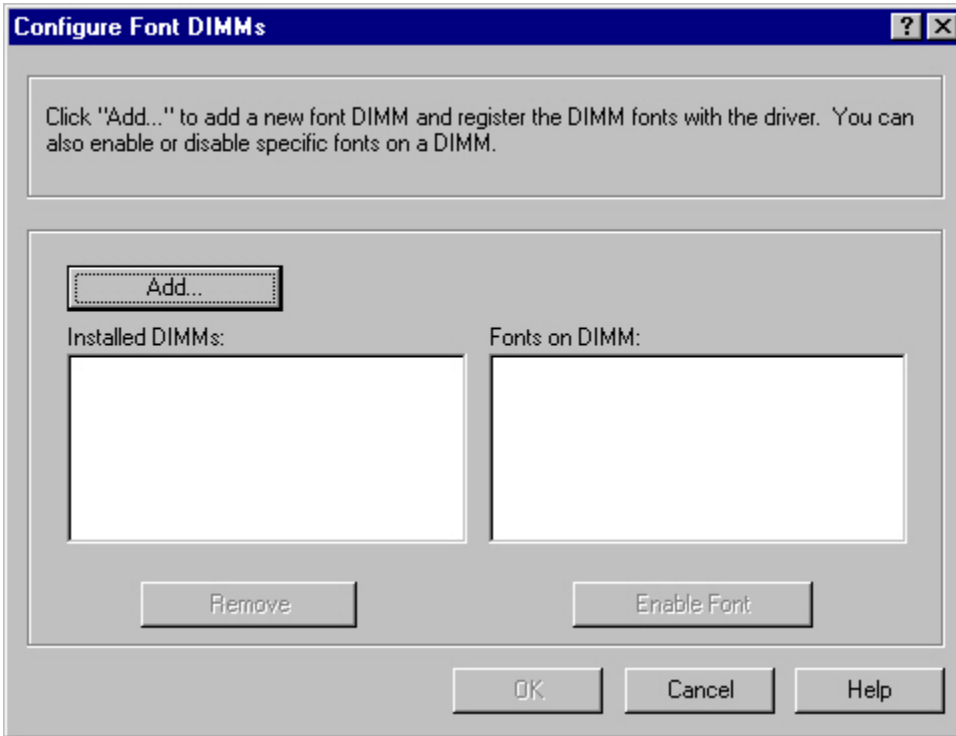
Table 16: Printer behavior with Ignore Application Collation settings

Mopier Enabled setting	Ignore Application Collation check box	Application Collation check box in Print dialog box	Commands sent by printer	Pages sent to printer	Pages output from printer
On	On	On Off None	QTY=3	1,2	1,2,1,2,1,2
On	On	On	QTY=3	1,2	1,2,1,2,1,2
On	Off	Off	Copies=3	1,2	1,1,1,2,2,2
Off	Off	On	Copies=1	1,2,1,2,1,2	1,2,1,2,1,2
Off	Off	Off	Copies=3	1,2	1,1,1,2,2,2
Off	Off	None	Copies=1	1,2,1,2,1,2	1,2,1,2,1,2
Off	Off	None	Copies=3	1,2	1,1,1,2,2,2
On	On	On Off None	QTY=3	1,2	1, 2
On	Off	On Off None	QTY=3	1,2	1, 2

Fonts

The **Fonts** group box contains a **Font DIMM** check box and a corresponding **Configure** button. Selecting the **Font DIMM** check box tells the driver that a Font DIMM is installed, and that stored data about the fonts on the DIMM is available. When the check box is selected, the **Configure** button is enabled. Click the **Configure** button to open the **Configure Font DIMMs** dialog box. If the **Font DIMM** check box was not selected when you opened the **More Configuration Options** dialog box, selecting that check box automatically opens the **Configure Font DIMMs** dialog box.

Figure 35: Configure Font DIMMs dialog box



Use the **Configure Font DIMMs** dialog box to perform the following tasks:

- Add up to two font DIMMs by clicking the **Add** button.
- Specify a unique font DIMM name.
- Select specific font DIMM data files that contain lists of fonts on specified DIMMs.
- Select one or more installed DIMMs in the Installed DIMM list, and based on the selected DIMM(s). The list to the right (Fonts on DIMM) shows all of the fonts available on the selected DIMM(s).
- Enable or disable one or more of the selected font(s).

Use the following procedure to configure a font DIMM.

1. Make sure that the font DIMM is properly installed.
2. Click **Add**. The **Add Font DIMM** dialog box appears.
3. Click **Browse**. The **Font DIMM Files** dialog box appears.
4. Find and select the appropriate printer cartridge metrics (PCM) file that came with the font DIMM.
5. Click **Open**.
6. If you want to, specify a Font DIMM Name in the **Add Font DIMM** dialog box.

7. Click **OK**. The selected .PCM file appears in the **Installed DIMMs** list. Select the .PCM file to see a list of available fonts in the **Fonts on DIMM** list.
8. Click **OK** to close the **Add Font DIMM** dialog box. The fonts on the DIMM should now be available on the system.

Note

When using font DIMMs with the PCL 5e and PCL 6 drivers: To install screen fonts that match the font DIMM, use the .HPB file specifically designed to work with that DIMM. If there are no screen fonts for the DIMM, use the .PCM file specifically designed to work with that DIMM.

Printer memory

Total Memory shows the total amount of memory physically installed in the printer. The default values for total printer memory are based on the printer model and are specified in the **Printer Model** setting of the **Configuration** tab. Total printer memory is updated through a successful bidirectional query, or can be set manually.

The **(DWS)** value shows the amount of memory available for keeping track of fonts that are downloaded from the driver. The driver deletes downloaded fonts if it has exceeded the available memory value. The **(DWS)** value is a dynamic value that varies, depending on the product, the product model, the specific configuration of the printer, and the print job. An accurate **(DWS)** value optimizes driver performance.

The **(DWS)** value is configured automatically by the PCL 5e and PCL 6 drivers in Windows 95, Windows 98, Windows Me, and Windows NT 4.0 environments that support bidirectional communication. Use the **(DWS)** option to specify the amount of work-space memory that is available to the printer. To manually set the **(DWS)** value, print a configuration page and find the **DWS** value in the Memory section of the configuration page. Then, click the **More...** button on the **Configuration** tab, and type the DWS value in the **(DWS)** field of the **More Configuration Options** dialog box. The **(DWS)** value might change if you switch printer-model settings.

Allow scaling from large paper

Select **Allow Scaling from Large Paper** to allow additional larger-than-supported paper sizes to appear in the **Paper** tab **Size Is** drop-down list. By default, the **Allow Scaling from Large Paper** check box is not selected.

The **Allow Scaling from Large Paper** selection can be helpful, for example, when printing a document with a large media size of 11 by 17 or A3. You can use the **Print Document On:** setting on the **Effects** tab to print the document on a media size that is supported by the printer.

Include types in application source list

When the **Include types in application source list** check box is selected, all paper types (such as envelopes and transparencies) are available from the **Source is:** list on the **Paper** tab. When you are in an application (also called a program), you can open the **Paper** tab by clicking **Print** from the **File** menu, and then clicking **Properties**.

Note

This option is available only when using a computer that is running Windows NT 4.0.

Automatic configuration

If you have modified the configuration of the HP LaserJet 2300 printer since installation, click the **Update Now** button to automatically reflect the new configuration in the driver. For more information about the Driver Automatic Configuration feature, see "Driver Autoconfiguration."

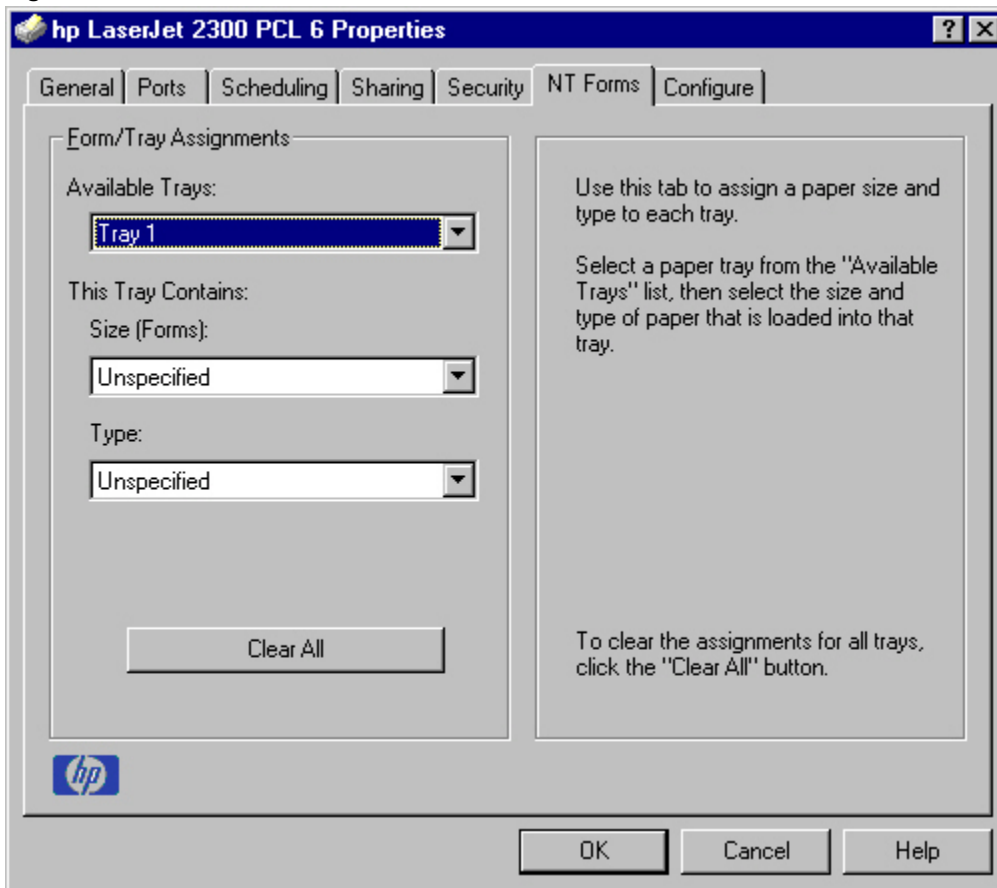
Printer image

The bitmap image in the lower-right portion of the **Configure** tab represents the current physical configuration of the printer according to the driver configuration data (which can be obtained automatically through bidirectional communication, or configured manually in the **Paper-Handling Options** group box). It should have the same appearance as the image in the same location on the **Paper** tab and the **Destination** tab.

NT Forms tab features

The **NT Forms** tab appears only in the Microsoft Windows NT 4.0 operating environment. The **NT Forms** tab (like the **Configure** tab) can be viewed only from the Properties window.

Figure 36: Driver NT Forms tab



Use the **NT Forms** tab to specify which media sizes and types are loaded in each of the available paper trays. This constrains the choices available in the **Size** and **Type** lists on the **Paper** tab. This constraint prevents information overload if you request unavailable sizes or types.

Available Trays is a drop-down menu that contains all the printer trays that are specified on the **Configure** tab. The **This Tray Contains/Size (Forms)** drop-down menu contains a list of standard paper sizes the HP LaserJet 2300 printer supports, as well as any custom forms that are defined in the **NT Forms** tab. The **This Tray Contains/Type** drop-down menu lists all of the media types that the HP LaserJet 2300 printer supports. The **Clear All** button removes all the size and type constraints on the **Paper** tab.

Configuring the trays

1. Select the appropriate tray from the **Available Trays** list.
2. Use the **This Tray Contains/Size (Forms)** drop-down menu to select the paper size (or form) that is loaded in that tray.
3. Use the **This Tray Contains/Type** drop-down menu to select the paper type that is configured for the tray.
4. Repeat steps 1 through 3 for the remaining trays.
5. If necessary, click the **Clear All** button to reconfigure all the trays, and remove the size and type constraints that have been imposed on the **Paper** tab.

HP traditional PS driver features

This section provides information about the features of the HP traditional PS printer driver.

PS 3 emulation support for the HP LaserJet 2300 series printer

A set of 92 PS 3 emulation soft fonts is included with the printing-system software. If you want to permanently install the fonts in the printer, PS 3 fonts are also available from HP in an optional font DIMM. The PS 3 emulation maintains full compatibility with Adobe PS 3 when PS 3 fonts are purchased from Adobe.

Users of Adobe-licensed programs might also have the right to use the Adobe PS 3 printer drivers from Adobe with the HP LaserJet printer PS 3 emulation PPD, available on the HP LaserJet printer software CD-ROM or from the HP Web site. When using the Adobe PS 3 printer driver, users must comply with all Adobe licensing agreements, as stated on the Adobe Web site at <http://www.adobe.com/support/downloads/license.html>. See "Font support" for a list of the additional fonts.

Note

The driver interface shown in this section is for Windows NT 4.0. The order and appearance of tabs can vary among operating systems.

What's this Help

In Windows 95, Windows 98, Windows Me, and Windows NT 4.0, What's this? Help is supported. You can gain access to What's this? Help messages in any of the following ways:

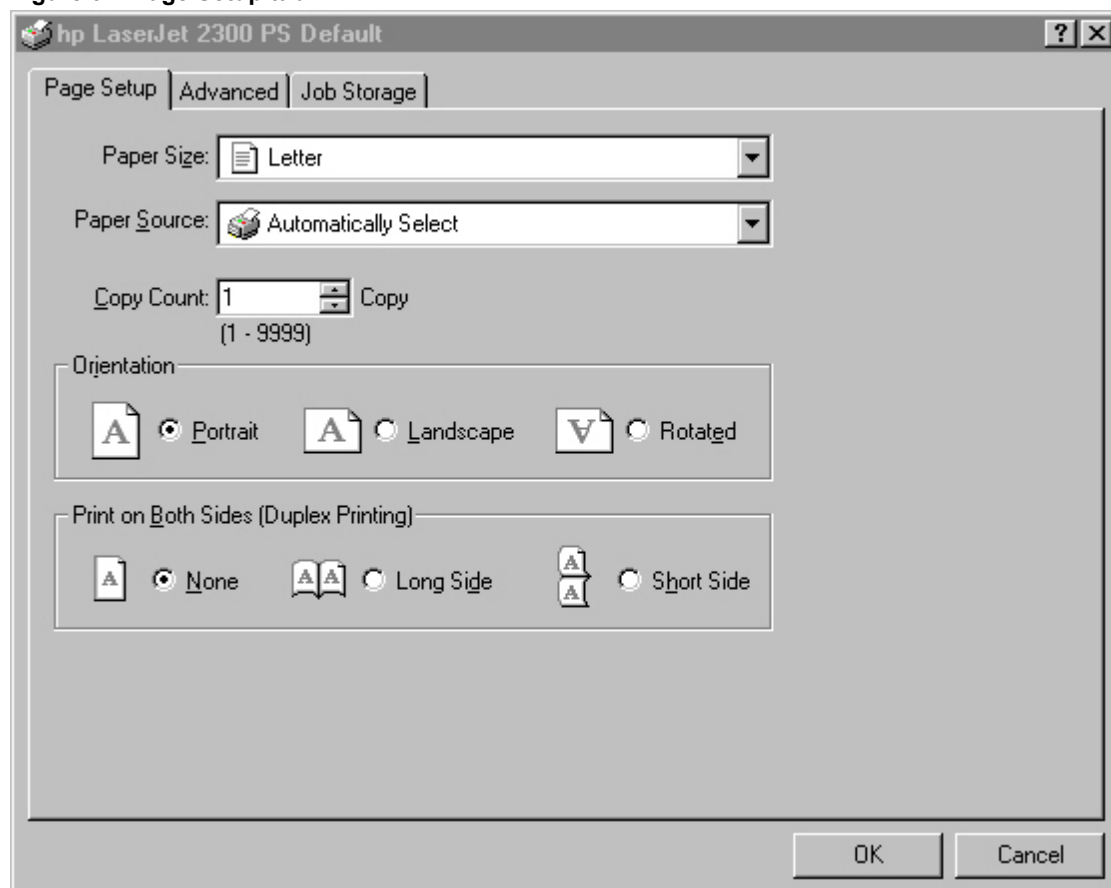
- Right-click a control and click **What's this?**, and a pop-up Help window appears.
- Click the **?** button at the upper-right corner of the frame, next to the X, to change the cursor to an arrow with a question mark. Use this special cursor to select a control, and the pop-up Help window for that feature appears.
- Press the F1 key, and the Help window for the currently selected control appears.

Page Setup tab features

The **Page Setup** tab contains controls for the following options:

- **Paper Size**
- **Paper Source**
- **Copy Count**
- **Orientation**

Figure 37: Page Setup tab

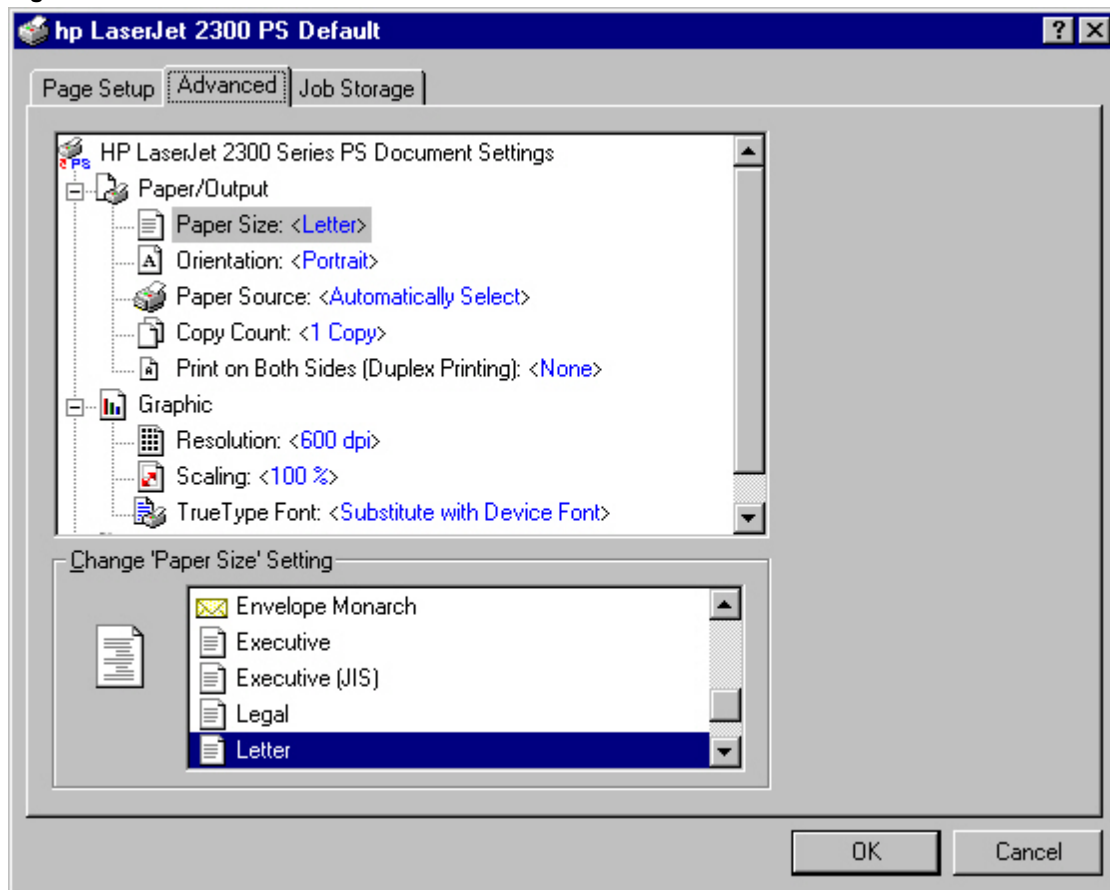


Advanced tab features

The **Advanced** tab contains controls for the following types of options:

- **Paper/Output** (advanced control over the options available on the **Page Setup** tab)
- **Graphic** (including resolution, scaling, and TrueType font controls)
- **Document Options** (including printer features and PS options)

Figure 38: Advanced tab

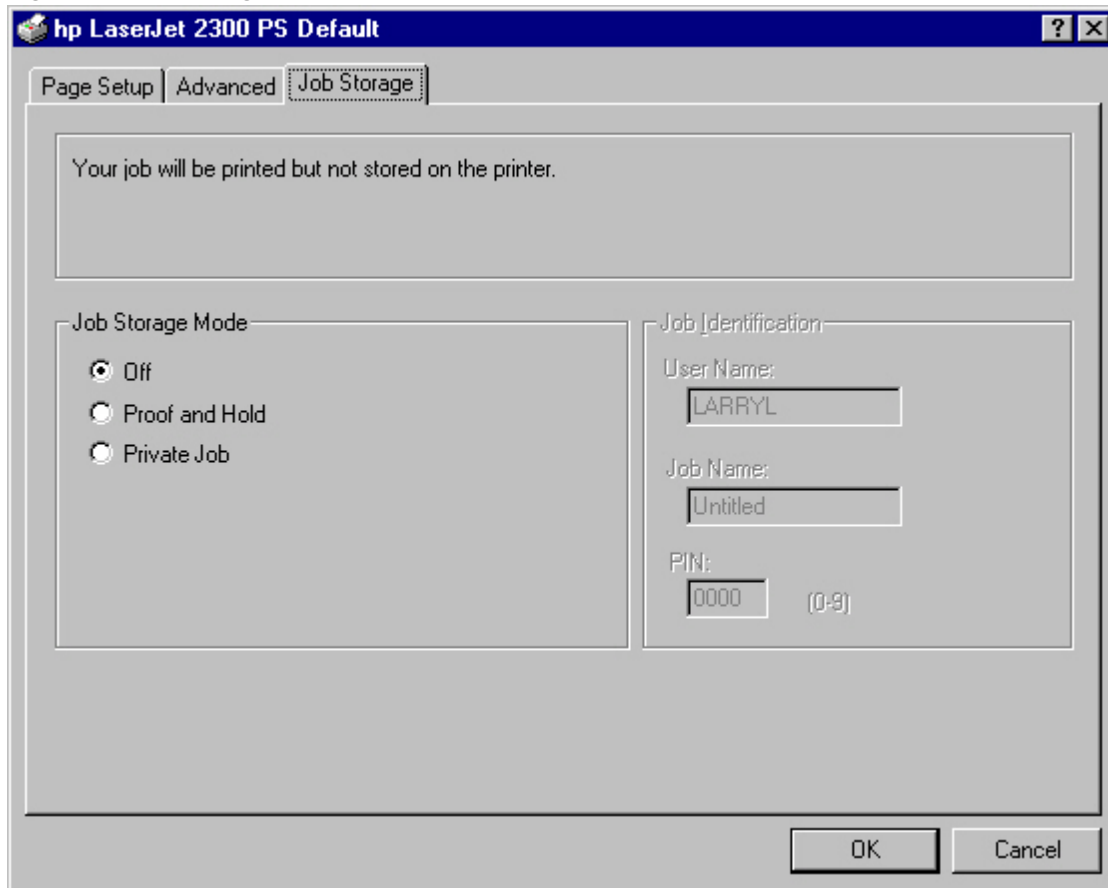


Job Storage tab features

The **Job Storage** tab for the PCL 6 driver (for Windows NT 4.0, Windows 2000, or Windows XP operating systems) is shown in the following figure.

Note Limited Job Storage functions for Windows 95, Windows 98, and Windows Me operating systems are available under Printer Features on the PS driver Advanced tab.

Figure 39: Job Storage tab



When **Job Storage** on the **Device Settings** tab is enabled, the **Job Storage** tab appears in the driver user interface. In the **Job Storage Mode** group box, the following **Job Storage** options are available:

- Off
- Proof and Hold
- Private Job

The **Job Storage** tab appears when **Job Storage** is enabled on the **Device Settings** tab.

Note The printer driver that is installed on your computer must be configured to use the Job Storage features. To enable Job Storage, click Start, click Settings, click Printers, and right-click the printer icon. Click Properties, click the Device Settings tab, and select the Enabled setting for Job Storage.

Off

This option turns the Job Storage feature off (disables the feature), which means that the print job will not be stored in the printer.

Job Storage modes

Using the **Job Storage** feature on the HP LaserJet 2300 printer, you can store documents at the printer and then control their printing at the printer control panel. This feature is intended to provide greater flexibility, convenience, security, and cost savings.

After the Job Storage feature has been enabled, you can use its features by clicking **Settings** on the **Destination** tab of the printer driver.

The HP LaserJet 2300 printer offers the following **Job Storage** options:

- Off
- Proof and Hold
- Private Job

These features and the settings that control them are described below.

Off

This option turns the Job Storage feature off (it is disabled), which means that the print job will not be stored in the printer.

Proof and Hold

This option stores the print job and prints only the first copy of the job, allowing you to check the first copy. If the document prints correctly, you can print the remaining copies of the print job at the printer control panel. The number of proof-and-hold print jobs that can be stored in the printer is set at the printer control panel.

After it is released for printing, the proof-and-hold job is immediately deleted from the printer. If more copies are needed, you must reprint the job from the program. If you send a second proof-and-hold job to the printer with the same user name and job name as an existing proof-and-hold job (and you have not released the original job for printing), the job will overwrite the existing job. Proof-and-hold jobs are deleted if power to the printer is removed.

Private Job

Use this option to send a print job directly to the printer memory. Selecting **Private Job** activates the **PIN** field. The print job can be printed only after you type a PIN at the printer control panel. After the job is printed, the printer removes the job from the printer memory. This feature is useful when you are printing sensitive or confidential documents that you do not want to leave in an output bin after printing.

After it is released for printing, the private job is immediately deleted from the printer. If more copies are needed, you must reprint the job from the program. If you send a second private job to the printer with the same user name and job name as an existing private job (and you have not released the original job for printing), the job will overwrite the existing job, regardless of the PIN. Private jobs are deleted if power to the printer is removed.

Using a PIN for Private Job

The **Private Job** option can be secured by a four-digit personal identification number (PIN). This number must be typed in the printer control panel before the printer prints the job.

The box labeled **PIN** is usually inactive. Selecting **Private Job** activates the **PIN** box. The Private Job/PIN coupling has a PIN restriction of four ASCII numeric characters (ASCII 0-30 through 0-39). If you type non-numeric characters, they are removed immediately. If you type more than four characters, the characters past the fourth are truncated. The field temporarily accepts fewer than four digits in the string, but when the edit field loses focus, the zeroes pad the left end until there are exactly four digits. The default initialized value for the PIN is 0000 for **Private Job**.

Document identifiers used in Job Storage

When you use a job storage feature, your document is identified at the printer control panel by user name and job name.

User Name

Use the **User Name** edit box to identify the job at the printer control panel. When the driver is first installed (or when **Default Print Settings** in the **Print Task Quick Sets** drop-down menu is selected), this string initializes to the empty string (""), but the dialog box detects this condition and replaces the string with your login name in Windows 95, Windows 98, and Windows NT 4.0. Restrictions for the **User Name** field are described in the "Job Name" section.

Job Name

Use the **Job Name** edit box to specify a name to identify the job at the printer control panel. When the driver is first installed (or when **Default Print Settings** in the **Print Task Quick Sets** drop-down menu is selected), this string initializes to the empty string (""), but the dialog box detects this condition and replaces the string with "Untitled".

The **Job Name** and the **User Name** fields can contain no more than 16 characters each, and are limited to A through Z and 0 through 9, because the name appears on the printer control-panel display. If you try to type a lowercase character, it automatically shifts to uppercase. If you try to type a character with an ASCII code of fewer than 32 or more than 126 characters, the character is removed from the edit field, along with all characters that follow it. If you try to type more than 16 characters, any character beyond 16 is truncated.

When the dialog box is closed, or the edit box loses focus, an empty string is replaced with "Untitled". In those languages for which "Untitled" cannot be translated without the use of invalid characters, the driver uses a string of three dashes. The acceptable characters for job name and user name vary for each operating system. The string must meet requirements to be able to appear on the printer control-panel display.

Using Job Storage options when printing

You can use **Job Storage** options in the **Destination** tab of the printer driver.

Note The printer driver that is installed on your computer must be configured to use the Job Storage features. To enable Job Storage, click Start, click Settings, click Printers, and right-click the printer icon. Click Properties, click the Configure tab, and select the Job Storage Enabled check box.

1. Click **Print** from the software program. The **Print** dialog box appears.
2. Click **Properties**. The **Properties** dialog box appears.
3. Click the **Device Settings** tab to show the destination options.
4. Click **Job Storage** on the under **Installable Options**.
5. Click **Settings**. The **Change Job Storage Settings** dialog box appears.

You can then select one of the **Job Storage** options described above by clicking the appropriate option button.

Note These instructions are specific to the Windows 95, Windows 98, Windows Me, and Windows NT 4.0 environments when using the latest available HP traditional PS driver. While the basic concepts of Job Storage are the same for PCL 5e and PCL 6 print jobs, there are significant differences in the driver user interface. Also, there are some limitations in naming and PIN selection.

Releasing private jobs stored at the printer

Once you send a print job using **Job Storage**, you can release the job to print at the printer control panel.

1. Press the select button (the one with the check mark) to open the menus.
2. Press the up and down buttons to scroll to RETRIEVE JOB, and then press the select button.

3. Press the up and down buttons to scroll to the user or job name, and then press the select button.
4. Press the up and down buttons to scroll to PRINT. The PRINT selection has an icon next to it indicating that the job is locked, type. If so, type the PIN, and then press the select button.) Press the select button.

Note

Type the PIN one digit at a time. Use the up or down arrow to obtain the first digit, and then press the select button. The cursor in the control panel then moves to the place for the next digit. Proceed likewise for each digit, and press the select button when the PIN is complete.

Deleting a print job

Sometimes it is necessary to delete a print job from the printer memory. This can be done at the printer control panel.

Random text again.

1. Press the select button (the one with the check mark) to open the menus.
2. Press the up and down buttons to scroll to **RETRIEVE JOB**.
3. Press the up and down buttons to scroll to the user or job name, and then press the select button.
4. Press the up and down buttons to scroll to **DELETE**. (The **DELETE** selection might have an icon next to it indicating that the job is locked. If so, type the PIN number, and then press the select button.)

Note

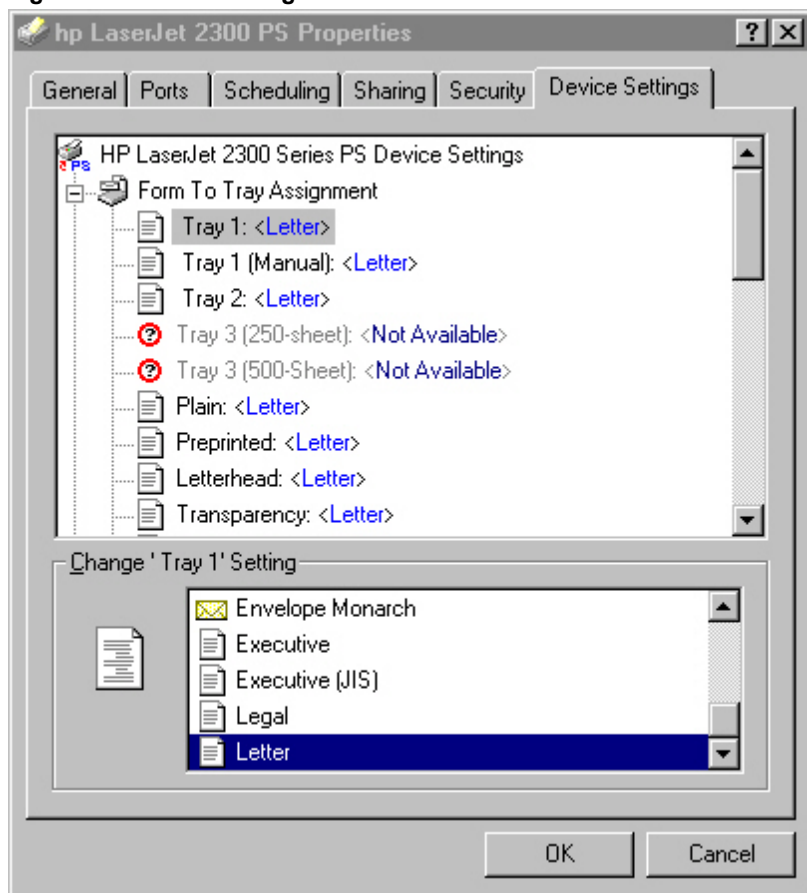
Type the PIN one digit at a time. Use the up or down arrow to obtain the first digit, and then press the select button. The cursor in the control panel then moves to the place for the next digit. Proceed likewise for each digit, and press the select button when the PIN is complete.

Device Settings tab features

The **Device Settings** tab contains controls for paper-handling devices and controls for managing the HP LaserJet 2300 printer. To gain access to the **Device Settings** tab, click **Start**, click **Settings**, and then click **Printers**. Right-click the printer name, click **Properties**, and then click the **Device Settings** tab.

When you select features in the Device Settings tab that can be changed, a **Change ... Setting** dialog box opens in the bottom of the Window. Available options depend on the feature.

Figure 40: Device Settings tab



The principal features of the **Device Settings** tab are described in the following sections.

Form to Tray Assignment

The HP LaserJet 2300 supports more than one source of paper, with at least two trays on all models and an optional 250-sheet or 500-sheet tray 3. You can assign a form (which defines the paper size and margins) to each of your printer's paper sources. When a form is matched to a source, you can select the form when you print. The printer prints from the tray to which that form is assigned.

Font Substitution Table

The Font Substitution Table setting shows the font substitution table and presents options for changing TrueType-to-PostScript font mapping.

Available PostScript Memory

The available PostScript memory is a subset of the printer's total physical memory. It is usually best to use the default setting, which is determined by the printer manufacturer.

Driver workspace is reflected in the **Available Postscript Memory** setting of the **Device Settings** tab in the HP traditional PS driver interface.

Output Protocol

The **Output Protocol** setting specifies the protocol that the printer uses for print jobs. The possible settings are:

- **ASCII**. When data is sent in ASCII (7-bit) format, the print job might take longer to print, but it can be sent through any I/O channel, such as a serial, parallel, or network port.
- **Binary** or **TBCP** (tagged binary communications protocol). When data is sent using these settings, all data except special control characters is sent in binary (8-bit) format. The binary formats can be sent over parallel or serial communications ports, and print jobs are faster than jobs sent with the data in ASCII format.

Send CTRL-D Before Each Tab

The **Send CTRL-D Before Each Job** setting specifies whether the printer is reset at the beginning of every PostScript document. **No** is the default setting. When you use the CTRL + D command, your printer is reset to its default setting to ensure that the configuration of jobs previously sent to the printer do not affect the current print job settings. Using CTRL + D may cause a print job to fail if your printer is connected to a network. If your document fails to print when sent to a printer connected through parallel or serial ports, change **No** to **Yes**.

Send CTRL-D After Each Job

The **Send CTRL-D After Each Job** setting specifies whether the printer is reset at the end of every PostScript document. **Yes** is the default setting. When you use the CTRL + D command, your printer is reset to its default setting to ensure that the configuration of future jobs sent to the printer are not affected by the current print job settings. Using CTRL + D may cause a print job to fail if your printer is connected to a network. If your document fails to print when sent to a network printer, change **Yes** to **No**.

Job Timeout

The **Job Timeout** setting specifies how long the document can take to get from the computer to the printer before the printer stops trying to print the document. If you specify **0 seconds** (the default setting), the printer continues trying to print indefinitely.

Wait Timeout

The **Wait Timeout** setting specifies how long the printer waits to get more PostScript information from the computer. After the specified time passes, the printer stops trying to print the document and prints an error message. If you are trying to print a very large or complicated document, you might want to increase this value. If you specify **0 seconds**, the printer waits indefinitely.

Minimum Font Size to Download as Outline

This setting specifies the minimum font size (in pixels) for which the PS driver downloads TrueType fonts as outline (Type 1) fonts. A font smaller than the minimum value is downloaded as a bitmap (Type 3) font.

Maximum Font Size to Download as Bitmap

This setting specifies the maximum font size (in pixels) for which the PS driver downloads TrueType fonts as bitmap (Type 3) fonts. A font larger than the maximum value is downloaded as an outline (Type 1) font.

Installable Options

The items listed under Installable Options are printer-specific printing options that you can install for your printer. The options for the HP LaserJet 2300 printer are:

- **Tray 3** (250-sheet or 500-sheet tray)
- **Duplex Unit (for 2-Sided Printing)**
- **Job Storage**
- **Printer Memory**

HP PCL 5e, PCL 6, and PS unidriver features

When you install your printer using Windows 2000 and Windows XP, the HP PCL 5e, PCL 6, and PS unidrivers are installed. The graphical user interface of these drivers differs from that of the HP traditional PCL 5e and PCL 6 drivers and the HP traditional PS driver that are installed if your operating system is Windows 95, Windows 98, Windows Me, or Windows NT 4.0.

This section describes the options available on each tab of the HP unidriver PCL 6 and PCL 5e interfaces.

Access to drivers

To gain access to driver settings from within most applications, click **File**, click **Print**, and then click **Properties**. The appearance and names of the driver tabs that appear vary, depending on the printer model and the driver.

You can also control the drivers directly from your computer. In Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000, click **Start**, click **Settings**, click **Printers**, right-click the printer name, and then click **Printing Preferences** or **Document Defaults** (depending on the OS and driver), to gain access to the same set of driver tabs that are controlled by the application.

In Windows XP, click **Start**, click **Control Panel**, click **Printers and Faxes** (Windows XP Professional) or **Printers and other hardware devices** (Windows XP Home), to gain access to the same set of driver tabs that are controlled by the application.

Help system

The HP LaserJet PCL 5e, PCL 6, and PS unidrivers include a full-featured Help system to provide assistance with printing and configuration options.

What's this? Help

In Windows 2000 and Windows XP, "What's this?" Help is supported. You can gain access to "What's this?" Help messages in any of the following ways:

- Right-click a control and click **What's this?**, and a pop-up Help window appears.
- Click the ? button at the upper-right corner of the frame, next to the X, to change the cursor to an arrow with a question mark. Use this special cursor to select a control, and the pop-up Help window for that feature appears.
- Press the F1 key, and the Help window for the currently selected control appears.

Context-sensitive Help

Press the **Help** button on a driver tab or in a dialog box, and context-sensitive Help appears.

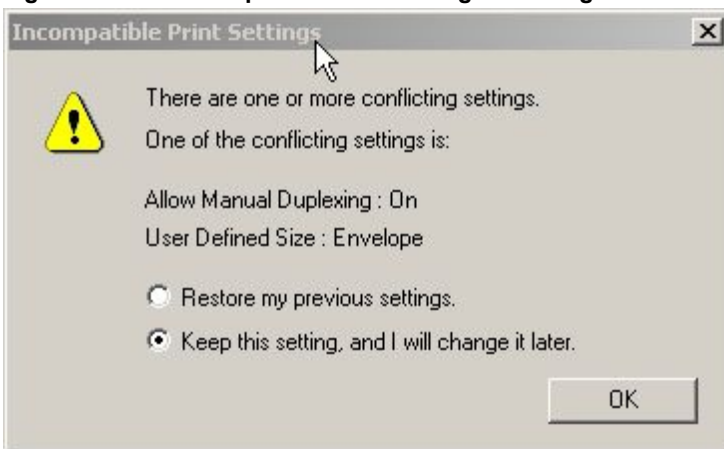
Constraint messages

Constraint messages are unsolicited messages that appear in response to specific actions you take. These messages alert you to selections that are illogical or impossible given the capabilities of the printer or the current settings of other controls.

Whenever a constraint message appears, clicking **OK** accepts the change that was just made, and the driver then resets the conflicting control to a setting that is compatible with the new value. If you want to keep the conflicting setting, click **Keep this setting, and I will change it later**.

In Windows 2000 and Windows XP operating environments, some technically invalid print-driver configurations can be set without resulting in the appearance of warning messages. Duplexing, for instance, is not possible when the Transparency media type is selected. In such cases, a message might appear stating that conflicting settings have been made. For instance, if you set the drivers to print on both sides of an envelope (an action that is not supported), an incompatible print settings message appears, as shown in the following illustration. You can choose to restore your previous settings, or keep the setting and change it later.

Figure 41: An "Incompatible Print Settings" message



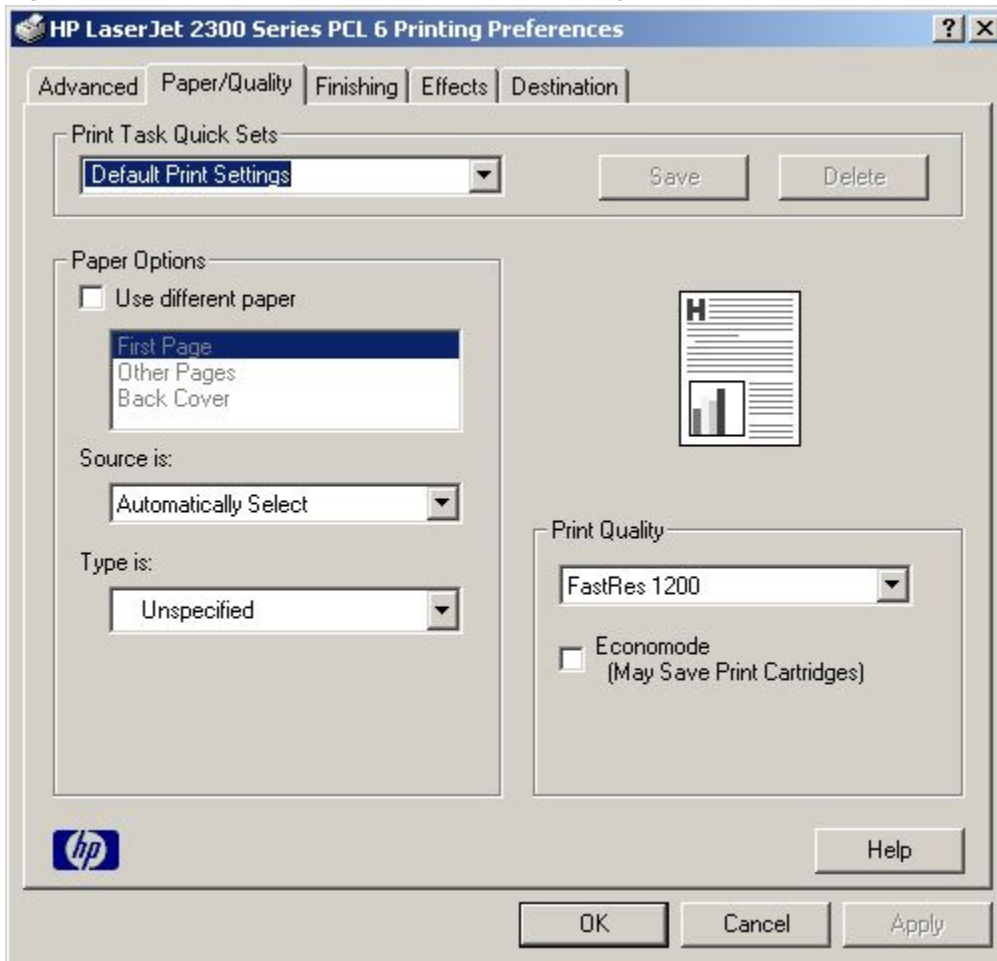
Note

Bubble Help, which shows driver constraint messages with an "i" icon, is a feature of the the HP traditional PCL 5e and PCL 6 drivers, and is not used by the HP traditional PS driver or the HP PCL 5e, PCL 6, or PS unidriver.

Paper/Quality tab features

Use the **Paper/Quality** tab to specify the type and source of your print media, as well as print-quality settings. You can also indicate paper selection choices for the first page of the document that are different from the choices for the other pages. The **Paper/Quality** tab is shown in the following illustration.

Figure 42: The default appearance of the **Paper/Quality** tab



Print Task Quick Sets

The following settings are available in the **Print Task Quick Sets** drop-down menu:

- **Default print settings**
- **User Guide**

Print Task Quick Sets

Print Task Quick Sets is a feature that is available on the **Paper/Quality**, **Finishing**, **Effects**, and **Destination** tabs. The feature is used to store the current combination of driver settings that are found on all other tabs. **Print Task Quick Sets** are either preset or user-defined printing specifications (such as paper size, pages per sheet, and so on).

Defaults

The default setting is **Default Print Settings**. Other settings are **User Guide Print Settings** and **Untitled**. When **Default Print Settings** is selected, nearly all of the settings are restored to the combination that existed after the driver

was installed (the original settings). However, if the attribute combinations that are associated with watermark definitions, custom paper sizes, or the **User Guide Print Settings** print task quick set have been changed or deleted, the original settings are not restored.

The **Default Print Settings** setting appears automatically if no other driver settings have been changed since the driver was installed, or if all driver settings match the original settings. Otherwise, the setting in the **Print Task Quick Sets** menu will be the same label that appeared when you last closed the printing **Properties** dialog box by clicking **OK**.

The following table shows the default settings for **Print Task Quick Sets**. See "HP driver preconfiguration" for information about preconfigurable driver settings.

Table 17: Print Task Quick Set default values for the HP LaserJet 2300 printer

Driver feature	U.S. English Print Task Quick Sets default values	Other language default setting (if different)	Preconfigurable ¹
Print on both sides	Off		Yes
Flip pages up	Off		Yes
Booklet printing	Off		Yes
Pages per sheet	1		Yes
Print page border	Off		Yes
Page order	Right, then down		Yes
Print quality	Best quality		Yes
EconoMode	Off		Yes
Current setting	PCL 6: This is the "Faster Printing" setting PCL 5e: This is the "Best Quality" setting		No
Rendering mode (PCL 5e only)	Automatic		No
Resolution	PCL 6: FastRes 1200 PCL 5e: 600 dpi		No
REt	On		No
Scale patterns (WYSIWYG)	On		No
Print text as black	Off		Yes
TrueType as bitmaps	Off - send TrueType fonts as outlines	On (in Thai only)	Yes (except in Thai)
Print document on	Off - print on size specified in Paper tab		Yes
Size to print on	Letter	Default value depends on regional paper size	Yes
Scale to fit	On		Yes
% of normal size	100		Yes
Watermarks	(none)		Yes ²
Watermarks first page only	Off		Yes ²
Current watermarks	(none), Confidential, Draft, SAMPLE		Yes ²
Watermark message	(none)		Yes ²
Watermark message angle	Diagonal		Yes ²
Watermark message custom angle	52		No
Watermark font name	Arial (R)		Yes ²

Driver feature	U.S. English Print Task Quick Sets default values	Other language default setting (if different)	Preconfigurable ¹
Watermark font color	Gray		Yes ²
Watermark font shading	Very Light		Yes ²
Watermark font size	80		No
Watermark font style	Regular		Yes ²
Mini pages tab	All pages		No
Use different paper for first page	Off - all pages use the same paper		No
All pages and first page size is	Letter	Default value depends on regional paper size	Yes
All pages and first page source is	Auto Select		Yes
All pages and first page type is	Unspecified		Yes
Other pages source is	Auto Select		No
Other pages type is	Unspecified		No
Back cover	No back cover		No
Back cover source is	Auto Select		No
Back cover type is	Unspecified		No
Custom width	8.50 inches	210 mm	No
Custom paper size height	11.0 inches	297 mm	No
Paper size units	Inches	Millimeters	No
Destination features	Job Storage		No
Job storage mode	Off		No
Job storage require PIN to print	Off		No
Job storage user name	User logon name ³ , UNTITLED		No
Job storage job name	UNTITLED		No
Job storage PIN to print	0000		No
Output bin	Top bin (face-down)		Yes
Output bin option	(none)		Yes
Copies	1		Yes
Orientation	Portrait		Yes
Rotate by 180 degrees	Off		Yes

1- Preconfigurable using an HP Preconfiguration tool. For more information, see the following Web site: <http://www.hp.com/support/lj2300>

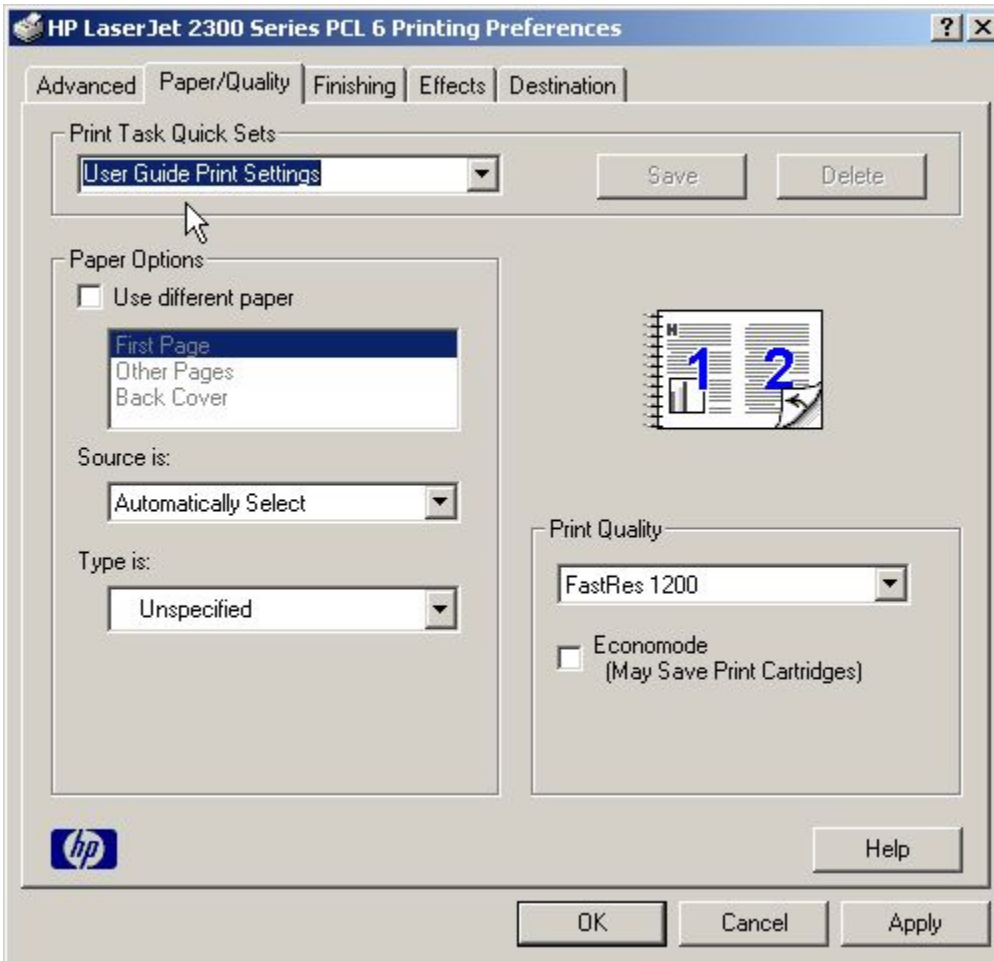
2- Not supported in Windows 95, Windows 98, and Windows Me

3- Windows NT 4.0 only

User guide print settings

The **User Guide Print Settings** setting provides a print task quick set for optimal printing of the *HP LaserJet 2300 use guide*.

Figure 43: The User Guide Print Settings Print Task Quick Set



Custom Print Task Quick Sets (Untitled)

When you change any of the default settings on the **Finishing** tab or any of the other tabs, the name in the **Print Task Quick Sets** drop-down menu dynamically changes to **Untitled**. If you want to save this configuration as a print task quick set, highlight the word **Untitled**, type the name you want for your new quick sand click **Save**. Print task Quick Sets are saved in the system registry. To delete a print task quick set, select it from the drop-down menu and click **Delete**.

You can store a maximum of 25 user-defined print task quick sets on a particular system. If you attempt to save too many, a message box appears that reads, "There are too many Quick Sets defined. Please delete some before adding new ones."

Paper options

The following settings are available in the **Paper Options** group box:

- **Use different paper**
- **Source is:**
- **Type is:**

First page and other pages

A cover can have two forms, depending on the type of booklet a user is printing:

- For full-size (e.g., LETTER size, Letter type) book printing, select a different media for the first page and add an extra blank back page. The front cover can contain print or be a blank page, and can either be pulled from a different paper source or be of another media type. The back cover can be printed on a different media from the front cover.
- For two-page-per-sheet (2-up) booklet printing, a cover is obtained by selecting a different media for the first page only. The back cover setting is hidden, because this page would otherwise be printed in the middle of a booklet.

Whenever you make changes to all pages (that is, when **Use different paper** is cleared), these changes are reflected in both the **First Page** and **Other Pages** settings whenever the user sets “Use different paper”.

Back cover

The **Back Cover** option allows the user to select an alternate paper source or media type from which a blank page will be drawn and placed after the last page of the document. The default selection is that no back cover is printed.

The settings for **Back Cover** are not retained when the **Use different paper** check box is cleared. If you select **Use different paper**, and then select **Back Cover**, the **Add a blank back cover** check box appears. When you clear the **Use different paper** check box, the source and media type for the first tab overwrites the other paper settings and the **Add a blank back cover** check box is cleared, and the option disappears. The setting for **Source is:** is set to **Automatically Select**, and the setting for **Type is:** is **Unspecified**.

Source is

The **Source Is:** setting specifies the paper source to use for printing a document. Different printer models support different paper sources, such as cassette and manual feed.

If you click **Automatically Select**, the printer uses the paper tray that supports the paper size you have selected. If you select a paper source other than **Automatically Select**, make sure that the correct paper size is loaded in the paper source.

All other options are printer-dependent. Consult the operating manual for your printer to determine what these settings do and which settings are appropriate for the task that you want to perform.

Type is

This drop-down menu contains the media types supported by the printer, as well as any user-defined types that a printer administrator might have created using Web JetAdmin. When the default setting, **Unspecified**, is used, the printer uses its default media type, usually **Plain**.

No mechanism exists for manually adding custom paper types from the driver - these can only be added with the bidirectional-communication mechanism, and they must already exist in the printer when the bidirectional-communication query occurs. If bidirectional communication is working, the information that is returned will be used to update the list of paper types. If bidirectional communication is not working, the driver will look for any custom paper types that it might have saved from a previous bidirectional communication query and use those. Otherwise, no custom paper types are available through the driver.

The standard types that appear in the lists are:

- Bond
- Cardstock
- Envelope

- Labels
- Letterhead
- Plain
- Preprinted
- Prepunched
- Recycled
- Rough
- Transparency
- Unspecified

Print Quality

For the HP LaserJet PCL 6 driver, the **Print Quality** group box contains the following resolution options:

- **ProRes 1200 (141 lpi)**
- **ProRes 1200 (180 lpi)**
- **FastRes 1200 (Faster)**
- **600 dpi**

FastRes 1200 (Faster) is the default setting.

For the HP LaserJet PCL 5e driver, the **Print Quality** group box contains the following resolution options:

- **600 dpi**
- **300 dpi**

600 dpi is the default setting.

For the HP LaserJet PS driver, the **Print Quality** group box contains the following resolution options:

- **ProRes 1200 (Best)**
- **FastRes 1200 (Faster)**
- **600 dpi**

FastRes 1200 (Faster) is the default setting.

EconoMode

Use the **EconoMode** check box to turn this toner-saving feature on and off independently of the other **Print Quality** tab settings. When this check box is selected, the preview image lightens to show the expected appearance of the printed page when this feature is applied. The option is off by default.

The **EconoMode** option can be activated from the printer control panel, from the **Print Quality** tab in the application's properties, or from the **Print Quality** tab in the driver. If the **EconoMode** option is selected from the control panel, and if the printer has a genuine HP cartridge, the ON setting overrides any setting made in the application or driver, as shown in the following table.

If an HP cartridge is not used, the **EconoMode** option is not available, regardless of the driver or control-panel setting.

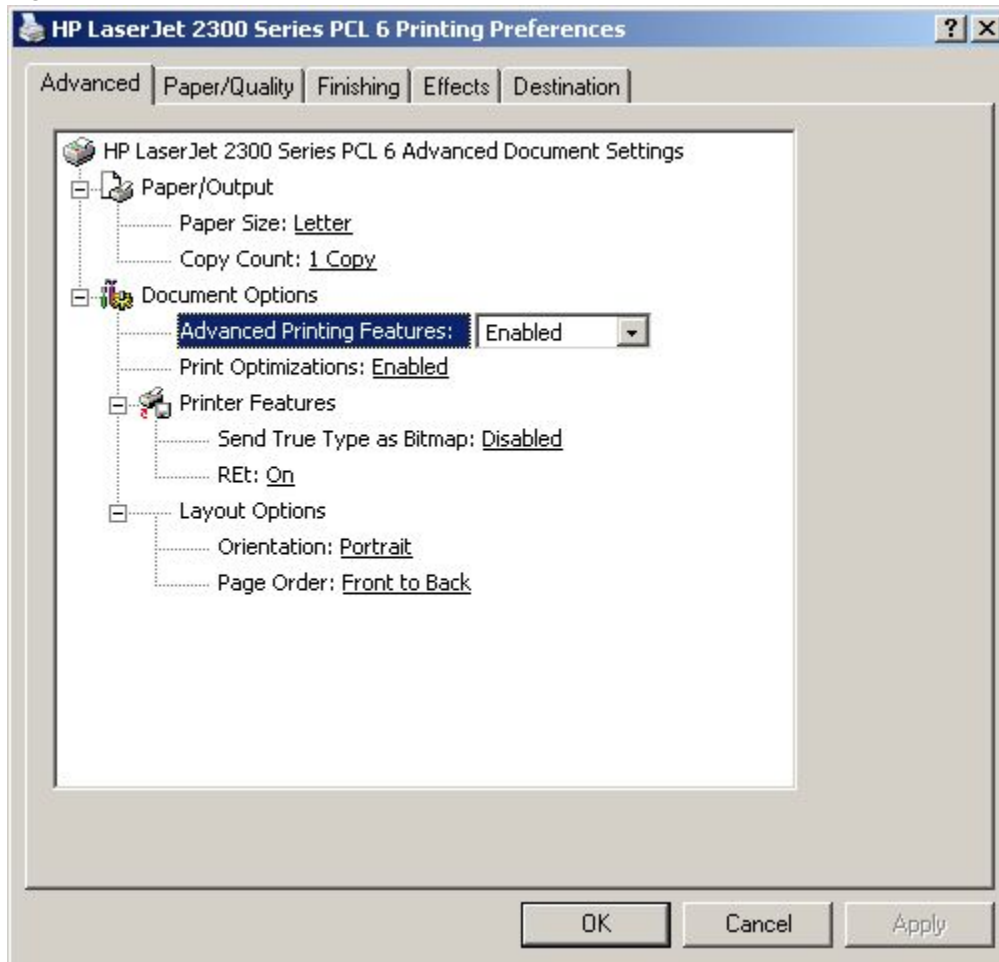
Table 18: EconoMode Settings

Driver setting for print job	HP cartridge	Front panel reports	Actual result for print job
ON	Yes	ON	ON
ON	No	OFF	OFF
OFF	Yes	ON	ON
OFF	No	OFF	OFF
ON	Yes	OFF	ON
ON	No	OFF	OFF
OFF	Yes	OFF	OFF
OFF	No	OFF	OFF

Advanced tab features

You can use the **Advanced** tab to change the layout of printed pages. Using this tab, you can select items such as paper size and copies in the driver (although most contemporary programs support these features in their print dialog box or through the program page settings) or special controls that are not commonly used. The main features of the **Advanced** tab are described in the following sections.

Figure 44: The default appearance of the Advanced tab



Paper Size

Paper Size sets the default paper size that the driver uses if the program does not specify a size. This list contains all standard printer-supported forms and any user-defined media sizes that the printer supports, as defined through the server properties. This setting is used by the driver to highlight the constraints that features have on paper size.

Creating custom paper sizes

To create a custom paper size, click **Start**, click **Settings**, and then click **Printers**. Click the **File** menu, click **Server Properties**, and then click **Create a New Form**. Specify a name and dimensions for your paper size, and then click **Save Form**. This new paper size will be included in any list of paper sizes in the driver and application tabs. Application print dialogs also often have settings that allow you to create custom paper sizes.

Copy Count and Collated

This driver setting is useful for applications that do not provide a copy count. The **Collated** check box appears beside the **Copy Count** setting when the **Copy Count** setting is greater than 1.

This setting is not synchronized with the collate setting in the application's print dialog. For instance, when using Microsoft Word, the **Collate** check box in the **Print** dialog box is selected by default, whereas, in the driver, the **Collated** check box in the **Advanced** tab is not selected by default. The application setting takes precedence over the driver setting, and the printed output is collated by default. To obtain uncollated printed output, the **Collate** setting must not be selected in the driver and in the application. Similarly, the **Collated** check box might be selected in the driver, but if the **Collate** setting is not enabled in the application, the printed output is uncollated.

Advanced Printing Features

When the **Advanced Printing Features** setting is **Enabled**, metafile spooling is turned on and options such as **Page Order**, **Booklet Printing**, and **Pages per Sheet** are available, depending on your printer. For normal printing, leave the **Advanced Printing Features** setting to the default (**Enabled**). If compatibility problems occur, you can disable the feature. When disabled, metafile spooling is turned off and the printing options might be unavailable.

Print Optimizations

The default setting for **Print Optimizations** is **Enabled**. When this feature is enabled and your document contains overlapping text and graphics, text placed on top of a graphic might not print correctly. If the printed output is not correct, you can disable this feature. When disabled, print optimization features, such as substituting device fonts for TrueType fonts and scanning for horizontal and vertical rules, are turned off.

Send TrueType as Bitmaps

Send TrueType as Bitmaps provides a safety net for those programs that have trouble dealing with TrueType fonts for special graphic purposes such as shading, rotation, or slanting. The setting is **Disabled (off)** by default. TrueType fonts are first converted to bitmap soft fonts prior to downloading. The **Enabled** setting causes the driver to send TrueType fonts to the printer as outlines, which retains the standard format (outline) of the fonts.

On PCL 5e drivers, the **Send TrueType as Bitmaps** setting is not available when the **Send Page as Raster** option is selected.

REt

Resolution Enhancement technology (REt) is a simple **On** or **Off** setting rather than the **Light**, **Medium**, **Dark**, or **Off** settings in some print drivers. The **On** setting corresponds to the "medium" setting found in other HP printer drivers.

Orientation

Orientation refers to the layout of the image on the page. It does not affect in any way the manner in which the media is fed into the printer. The default orientation is Portrait.

Note Nearly all programs establish the orientation for the printed page, so the page orientation in the driver is useful only for the few programs that do not set an orientation.

Page Order

Page Order specifies the order in which the pages of your document are printed. **Front to Back** prints the document so that page 1 prints first. **Back to Front** prints the document so that page 1 prints first. The **Back to Front** setting is useful if the user is printing to a face-up output bin to achieve output in the correct order.

Note The page-ordering operation works on whole sheets of paper rather than on individual logical pages. Accordingly, if you set N-up to be greater than one, the ordering of logical pages on a physical sheet of paper does not change.

Graphics Mode for PCL 5e

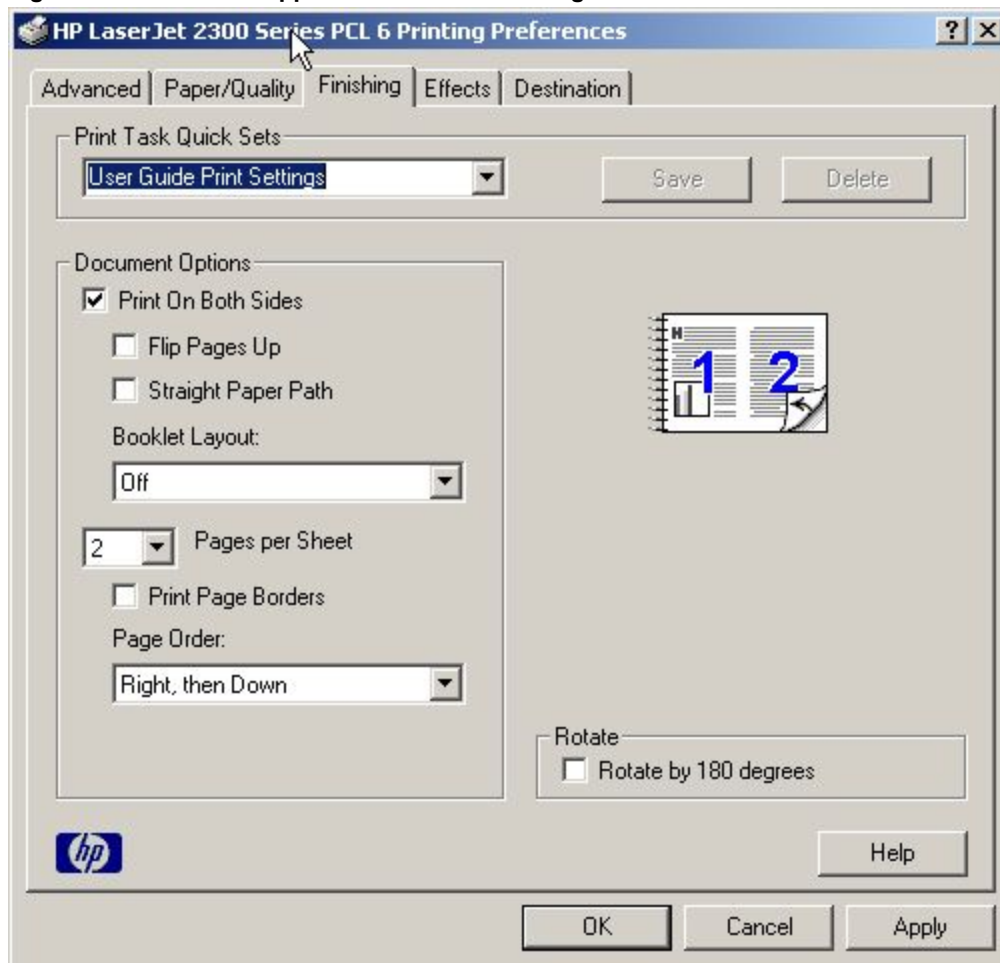
There are two settings under **Graphics Mode** (on the PCL 5e driver only) that control the way in which the driver expresses vector graphics on a page:

- Select **Send Graphics as Vector** to send graphics to the printer as a combination of HP-GL2 and raster images. This setting might produce higher-quality graphics output.
- Select **Send Graphics as Raster** to send all graphics to the printer as images composed of individual dots. This setting might improve printing speed.

Finishing tab features

The appearance of the **Finishing** tab differs, depending on the printer model and the installed paper-handling accessories. The following illustration shows the default appearance of the **Finishing** tab:

Figure 45: The default appearance of the Finishing tab



The **Finishing** tab contains the following controls:

- **Print Task Quick Sets**
- **Print on Both Sides** (available when the **Duplex Unit (for 2-Sided Printing)** setting on the **Device Settings** tab is **Installed**)
- **Flip Pages Up** (available when the **Duplex Unit (for 2-Sided Printing)** setting on the **Device Settings** tab is **Installed**)
- **Straight Paper Path** (available when the **Duplex Unit (for 2-Sided Printing)** setting on the **Device Settings** tab is **Installed**)
- **Booklet Layout** (available when the **Duplex Unit (for 2-Sided Printing)** setting on the **Device Settings** tab is **Installed**)

- **Pages per Sheet**
- **Print Page Borders**(activated when **Pages per Sheet** setting is greater than 1)
- **Page Order** (activated when the **Pages per Sheet** setting is greater than 1)
- **Rotate by 180 degrees**

Print Task Quick Sets

The **Print Task Quick Sets** control is available on the **Paper/Quality, Finishing, Effects,** and **Destination** tabs. The feature is used to store the current combination of driver settings that are found on all other tabs. Print task quick sets are either preset or user-defined printing specifications (such as paper size, pages per sheet, and so on). For more information, see "Print/Quality tab features".

Print on Both Sides option

The default setting for the **Print on Both Sides** option is OFF (not selected). **Print on Both Sides** is available when:

- **Type is** on the **Paper tab** is not set to **Transparency, Cardstock,** or **Labels.**
- **Size is** Letter, Legal, A4, A5, B5 (Japanese Industry Standard, or JIS), Executive, or custom sizes greater than or equal to 76 mm by 127 mm (3.0 inches by 5.0 inches) and less than or equal to 148 mm by 216 mm (8.5 inches by 14.0 inches).

When **Paper Size** is set to Letter, Legal, or A4, clicking **Print on Both Sides** makes the **Flip Pages Up** and **Booklet Printing** options available.

Automatically printing on both sides

Use the duplexing unit in the printer to automatically print on two sides of the paper when that option is specified in the job (available on HP LaserJet 2300d, 2300dn, and 2300dtn, but not available on the HP LaserJet 2300, 2300L, and 2300n printers).

To achieve the best print quality when printing on the second side of the page, the printer needs to make adjustments to its print modes. When you select a media type, you are, in effect, instructing the printer to use a group of printer settings (such as fuser temperature and print speed) to print the media with the best possible quality. This group of settings is known as a mode or print mode, and a different print mode associated with each media type.

Print-mode adjustments are automatic when the duplexing unit is used. Media sizes supported by the duplexing unit are Letter, A4, Legal, 8.5 x 13 (Custom), and Executive (JIS) only. All other media sizes must be duplexed manually. The following media types cannot be automatically duplexed:

- Transparencies
- Labels
- Heavy
- Envelope
- Cardstock greater than 164 g/m²

Manually printing on the both sides

Manually printing on the second side of a page is available when you are using the HP traditional PCL 5e or PCL 6 driver (the HP traditional PS driver does not support the feature). If a duplexing unit is installed and manual duplexing is enabled in the driver, the printer automatically duplexes media types that are supported by automatic duplexing (Letter, A4, Legal, 8.5 x 13 (Custom), and Executive (JIS) only), and forces manual printing on both sides for media types that are not supported.

When you print on both sides manually, the printer driver does not automatically select the appropriate print mode for best print quality. Consequently, it is important to select the paper type that corresponds to the media you are using for the print job. The following media types have a different print mode when you manually print on the second side:

- Plain
- Preprinted
- Letterhead
- Prepunched
- Bond
- Recycled
- Colored
- Rough

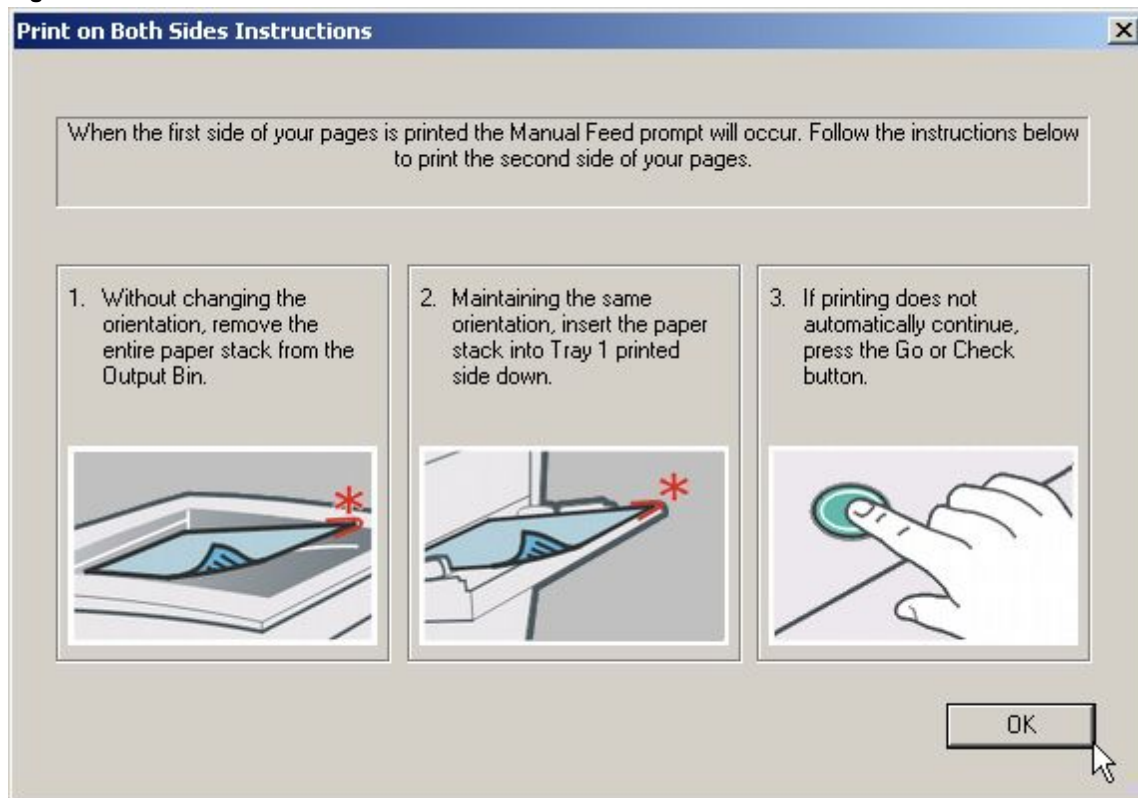
Heavy and Cardstock media can be manually printed on the second side, but there is no change to the print mode. Transparencies and labels should not be manually printed on the second side.

Select the **Print on Both Sides (Manually)** check box to print on the second side of the paper for the base HP LaserJet 2300, 2300L, and 2300n printers. Also select **Print on Both Sides (Manually)** on the other HP LaserJet 2300 models for media types that are not available when using the automatic duplexing unit, such as card stock, labels, and thick media.

To print a multiple-page document, follow these steps:

1. Select the **Print on Both Sides (Manually)** check box.
2. When the printer's control panel shows the MANUALLY FEED message, insert the stack of paper (on which the even-number pages have been printed) as indicated in the following figure.

Figure 46: Print on Both Sides Instructions



When you have completed the steps displayed on the dialog, the second half of the print job will print on the backside. The driver does not require the application to specifically support odd and even page printing, as it is in charge of coordinating this function.

Flip Pages Up

The **Flip Pages Up** check box, enabled only when **Print on Both Sides** is selected, is used to specify the duplex-binding option. By default, the **Flip Pages Up** check box is not selected. The following table demonstrates the results of selecting this box, depending on the paper orientation selected on the **Basics** tab.

Table 19: Page orientation

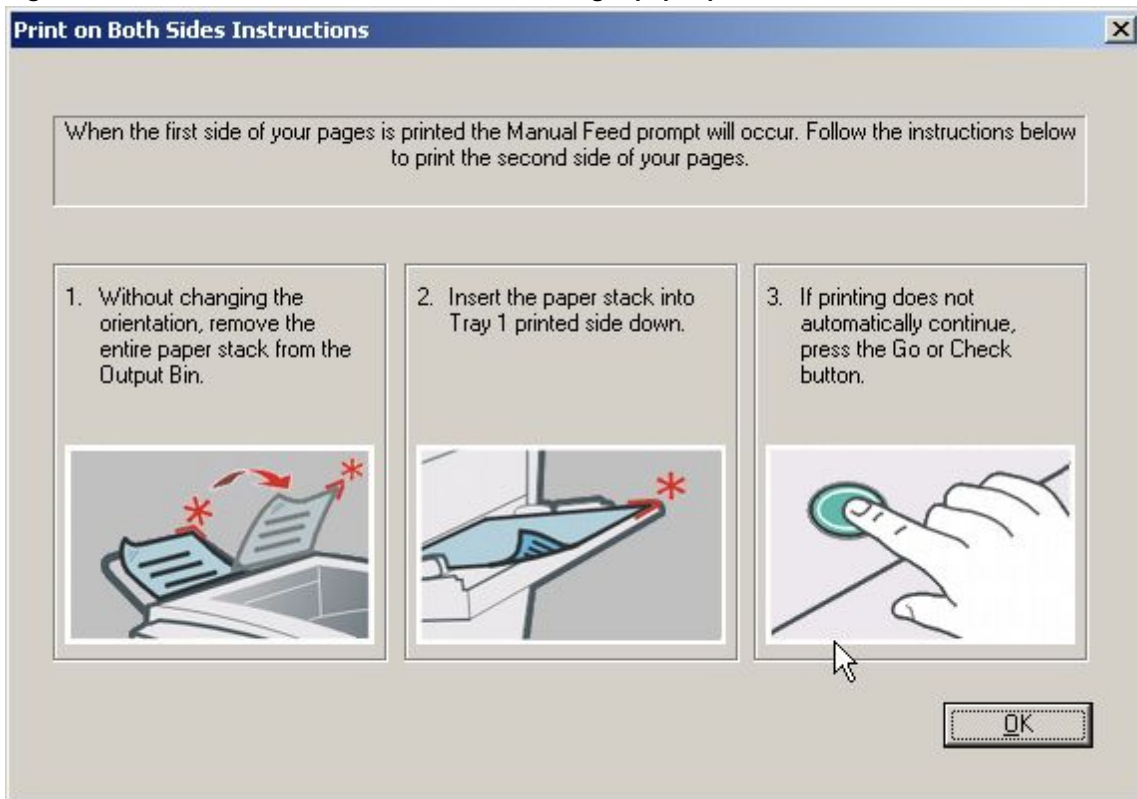
Orientation (Basics tab)	Flip Pages Up selected	Flip Pages Up not selected
Portrait	Short-edge binding	Long-edge binding
Landscape	Long-edge binding	Short-edge binding

When **Print on Both Sides** is selected, the document preview image changes to show a spiral binding along either the left or the top edge of the page. In addition, a folded-over corner appears in the lower-right portion of the preview image, indicating that printing will occur on the back side. An arrow on the folded-over corner points in the direction that the pages would be flipped if they were bound together.

Straight Paper Path

The HP LaserJet 2300 printer has a door in the back that can be opened to allow the paper to go through the printer without being bent very much. This is useful for printing on stiff media like cardstock. If you have opened this door and want to print on both sides of the paper, select the **Straight Paper Path** check box. The printer will print the first side of the pages, then wait for you to re-insert the paper. It then prints the second side of the pages. The following figure, which shows the window that appears when you give the print command, demonstrates how to orient the paper when you re-insert it.

Figure 47: Print on Both Sides Instructions for straight paper path



Book and booklet printing

Book and booklet printing are both supported by the HP LaserJet 2300 printer.

A book is a print job consisting of at least two pages that can have a different media type for the first page (front cover) or last page (back cover). Use the **First Page** and **Back Cover** minitabs on the **Paper** tab (available when you select the **Use different paper for first page** check box) to select different media for the first and last pages.

A booklet is a print job that places two pages on each side of a sheet and that can be folded into a booklet that is half the size of the media type. Use the **Booklet Layout** drop-down menu on the **Finishing** tab to control booklet settings.

The **Booklet Layout** drop-down menu, visible when **Print on Both Sides** is selected, offers choices that are based on the current paper size. The default setting for the **Booklet Layout** drop-down menu is **Off**. The other settings have the following format:

- [paper size] (Left Binding)
- [paper size] (Right Binding)

where [paper size] depends on the paper size set on the **Paper/Quality** tab.

Booklet printing is disabled when the following paper sizes are selected: Executive, A3, A5, B4, B5, and 11 by 17, and envelopes and postcards of any size.

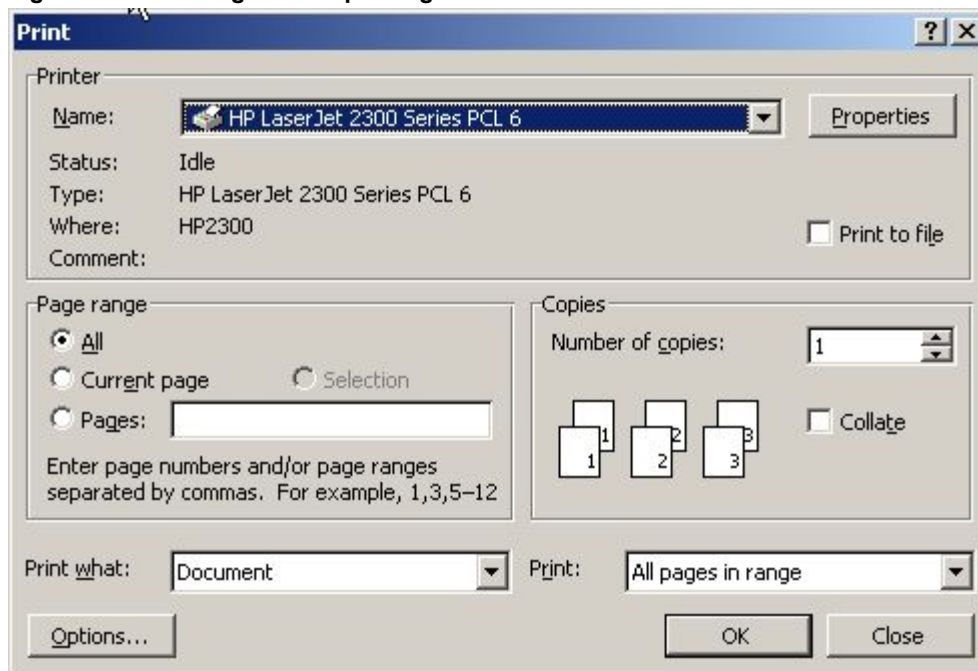
The **Booklet Layout** drop-down menu appears only when:

- **Print on Both Sides** is selected.
- **% of Normal Size** (on the **Effects** tab) is 100.
- **Pages per Sheet** is 1.
- **Print Document On**<media type> (on the **Effects** tab) is not selected.

Activating Booklet Layout

1. Click **File**, click **Print**, and then click **Properties**.

Figure 48: Activating booklet printing



2. Click the **Finishing** tab. On the drop-down menu, select **Print on Both Sides**.
3. In the **Booklet Layout** drop-down menu, select the type of booklet printing that you want. The booklet printing type consists of the media size and the location of the binding (for example, Letter [Left binding]).

Selecting a book cover

The booklet cover must be the same size as the inside sheets.

1. Click **File**, click **Print**, and then click **Properties**.
2. Click the **Paper/Quality** tab, and then select the **Use different paper for first page** check box.
3. Click the **First Page** option. On the **Source is:** and **Type is:** menus, select the size, source, and type settings for your cover.
4. Click the **Other Pages** option. On the **Source is:** and **Type is:** menus, select the source and type settings for the inside sheets of your print job.
5. Click the **Back Cover** option. The Add a blank back cover check box appears. If you select this check box, the **Source Is:** and **Type Is:** menus appear. Select the source and type settings for the back cover.

Whenever you make changes to all pages (that is, when **Use different paper** is not selected), these changes are reflected in both the **First Page** and **Other Pages** settings, if used.

Note

If you are making a booklet (as opposed to a book), you can use the Paper/Quality tab to select a different first page for the print job, but the Back Cover option is not available. This is because the last page of the print job is printed when the printer runs the print job, and when the print job is folded into a booklet, the "last" page would in fact fall in the middle of the booklet.

Booklet Layout

The **Booklet Layout** drop-down menu, visible when the **Duplex Unit (for 2-Sided Printing):** setting on the **Device Settings** tab is **Installed**, offers three choices:

- Off
- Left Edge Binding
- Right Edge Binding

When you select **Left Edge Binding** or **Right Edge Binding**, the document preview image changes to show the location of the binding, and, if the **Pages per Sheet** setting is on the default setting of 1, it automatically changes to 2. You may change the **Pages per Sheet** setting manually to 4, 6, 9, or 16.

Pages per Sheet

The **Pages per Sheet** drop-down menu provides six settings: 1 (default), 2, 4, 6, 9 and 16. If you type another value into the box (for example, 3), the control will round that value entered to the nearest valid value (in this example, 4).

Related controls indented beneath the **Pages per Sheet** edit box are **Print Page Borders** and **Page Order**, which become active when the Pages Per Sheet setting is greater than 1.

Print Page Borders

When you select the **Print Page Borders** check box, a line is set around each page image on a printed sheet to help visually define the borders of each logical page.

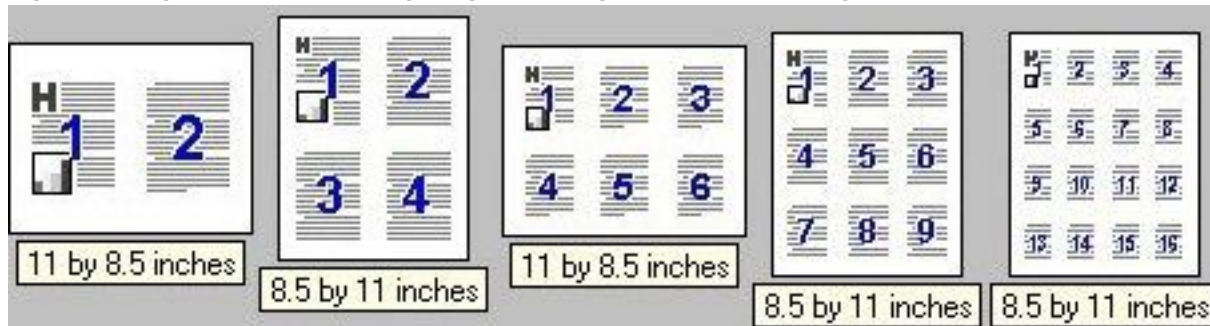
Page Order

The **Page Order** drop-down menu contains four selections:

- Right, then Down
- Down, then Right
- Left, then Down
- Down, then Left

The preview document image changes to reflect alterations in these settings, as shown by the examples in the following illustration.

Figure 49: Page-order preview images



- 2 pages per sheet
- 4 pages per sheet
- 4 page per sheet, with **Print Page Borders** selected
- 6 pages per sheet
- 9 pages per sheet
- 9 pages per sheet, with **Down, then Right** selected
- 16 pages per sheet

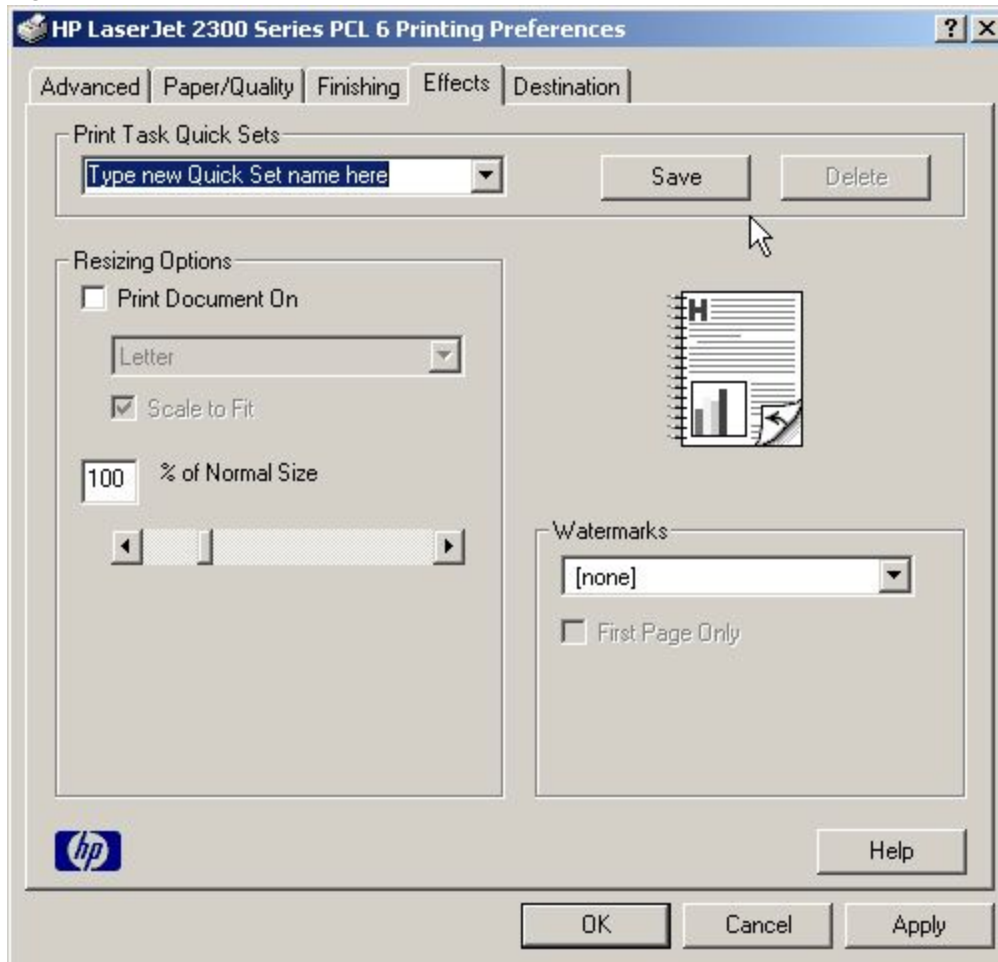
Rotate by 180 degrees

This feature causes the driver to rotate all page images 180 degrees. The purpose of this feature is to provide more control over the binding edge and for controlling the image on special media. For example, a printer might not fuse tone correctly near the trailing edge of an envelope. To correct this problem, rotate the media 180 degrees in the paper tray and select the **Rotate by 180 degrees** check box.

Effects tab features

The **Effects** tab is used to create unique paper effects such as scaling and watermarks.

Figure 50: Effects tab



Print Task Quick Sets

The **Print Task Quick Sets** option is available on the **Paper/Quality**, **Finishing**, **Effects**, and **Destination** tabs. The feature is used to store the current combination of driver settings that are found on all other tabs. Print task quick sets are either preset or user-defined printing specifications (such as paper size, pages per sheet, and so on). For more information about print task quick sets, see "Print/Quality tab features".

Print Document On setting

Use **Print Document On** to format the document for one paper size and then print the document on a different paper size, with or without scaling the page image to fit the new paper size.

The **Print Document On** control is disabled by either of the following conditions:

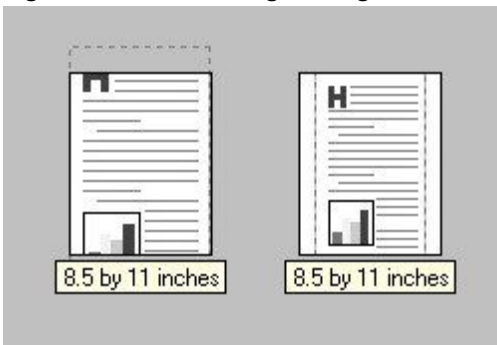
- **Percent of Normal Size** is not 100.
- **Pages per Sheet** (on the **Finishing** tab) is not 1.

When **Print Document On** is selected, the drop-down menu shows the media sizes on which you can print. The list contains all standard media sizes supported by the selected media source and any custom sizes that you have created (if the currently selected media source is manual, auto, or any tray). When **Print Document On** is selected, **Scale to Fit** is automatically selected.

Scale to Fit option

The **Scale to Fit** option specifies whether each formatted document page image is scaled to fit the target paper size. By default, **Scale to Fit** is selected when **Print Document On** is selected. If the setting is turned off, then the document page images will not be scaled, and are instead centered at full size on the target paper. If the document size is larger than the target paper size, then the document image is clipped. If it is smaller, then it is centered within the target paper. The following illustration shows preview images for a document formatted for Legal paper with the **Print Document On** option selected, and the target size specified as **Letter**.

Figure 51: Preview images - Legal on Letter; Scale to Fit off (left) and on (right)



When the size for which the document is formatted (that is, the logical size) differs from the target size, the preview image uses a dashed gray line to show the boundaries of the logical page in relation to the target page size.

% of Normal Size option

The **% of Normal Size** option provides a slider bar for scaling the percentage setting. The default setting in the entry box is 100 percent of normal size. Normal size is defined as the paper size selected within the driver or what the driver receives from the program (if the program does not negotiate paper size with the driver). The driver will scale the page by the appropriate factor and send it to the printer.

The limits of the range are from 25 percent to 400 percent, and any values outside the range are adjusted to those limits as soon as the focus is removed from the control (that is, when the TAB key is pressed or another control is selected).

Any change to the scale also changes the page preview, which increases or decreases from the top-left corner of the preview.

The slider bar controls the scale directly. The value in the edit box changes as the scroll bar indicator is dragged, and the preview image is updated to the new image scale. Each click on the scroll bar arrows increases or decreases the scale by one percent. Each click on the slider bar affects the scale by 10 percent.

You cannot achieve an exact value by dragging the scroll bar indicator at the default Windows resolution; use the scroll bar indicator to approximate the desired value, and then use the scroll bar arrows to refine the value.

The following settings disable **% of Normal Size**:

- **Print Document On** is selected.
- **Pages per Sheet** is not 1.

Watermarks

Use the **Watermarks** settings to choose a watermark, create your own custom watermarks (text only), or edit an existing watermark. The following watermarks are preset in the driver:

- (none)
- Confidential
- Draft
- SAMPLE

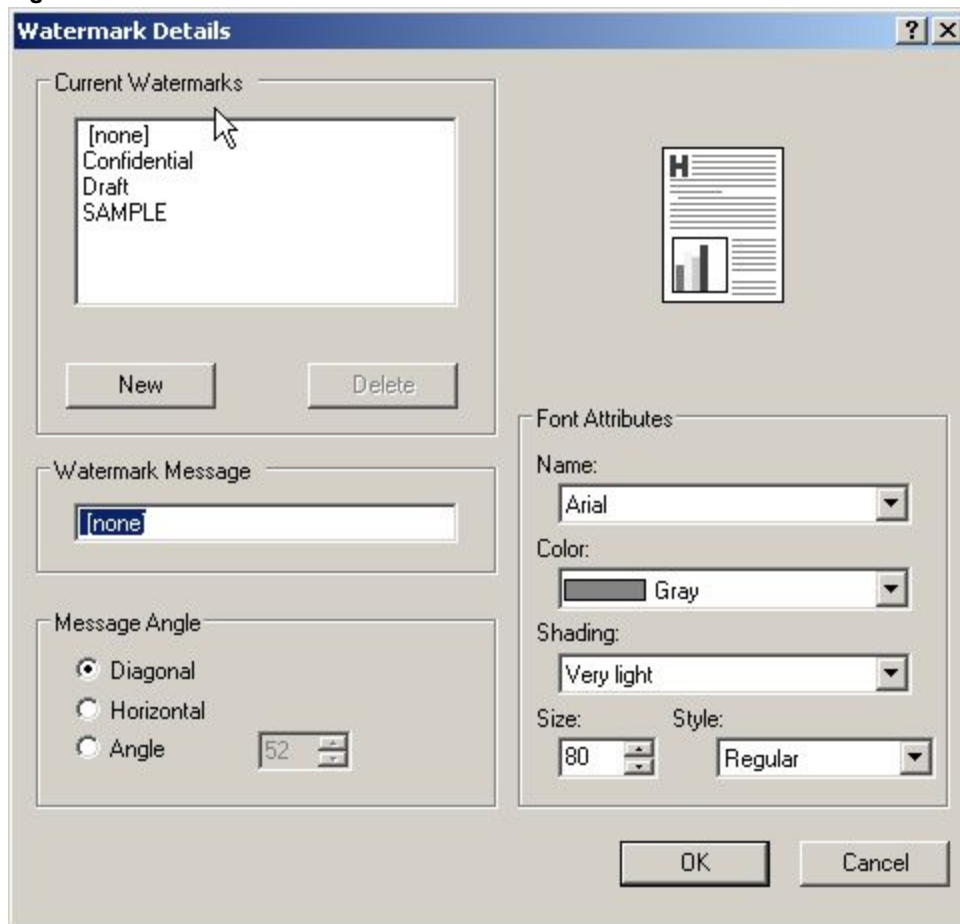
The drop-down menu shows alphabetically sorted watermarks that are currently available on the system, plus the string "(none)", which indicates that no watermark is selected. This is the default setting. Any watermark selected from this list appears in the preview image.

When **First Page Only** is selected, the watermark is printed only on the first page of the document. The **First Page Only** check box is disabled when the current watermark selection is "(none)".

Watermarks are applied to logical pages. For example, when **Pages per Sheet** is set to "4" and **First Page Only** is turned off, four watermarks appear on the physical page (one on each logical page).

Click **Edit**, and the **Watermark Details** dialog box appears.

Figure 52: Watermark Details



The dialog box shows a preview image and provides options for creating a new watermark and controlling the message angle and font attributes.

Click **OK** to accept all changes made in the **Watermark Details** dialog box. However, clicking **Cancel** does not cancel all changes. If you make changes to a watermark, and then select a different watermark or click **New**, all changes made to the previous watermark are saved, and only the current, unsaved changes can be canceled.

Current Watermarks

The **Current Watermarks** group box contains a list of available watermarks, both predefined watermarks made available in the driver and any new watermarks you have created. To create a new watermark, click **New**. The new watermark appears in the **Current Watermarks** list and in the **Watermark Message** edit box as "Untitled" until you name it. To name the new watermark, type the selected watermark text in the **Watermark Message** edit box. To delete a watermark, select the watermark in the **Current Watermarks** list and click **Delete**.

Note You can have no more than 30 watermarks in the Current Watermarks list at one time. When the limit of 30 watermarks is reached, the New button is disabled, and a Bubble Help message appears that explains why the button is disabled and how to enable it.

To edit an existing watermark, select the watermark in the **Current Watermarks** list. If you change the **Watermark Message** for that watermark, you are, in effect, creating a new watermark.

Watermark Message

The **Watermark Message** is also the name that identifies the watermark in the **Current Watermarks** list, except when more than one watermark has the same message. For example, you might want several different watermarks with the message DRAFT, each with a different font or size. When this occurs, the string is appended with a space, a pound sign, and a number (for example, **Draft #2**). When a number is added, the number two is used first, but if the resulting name is also in the list, then the number increases until the name is unique.

Message Angle

Use the controls in the **Message Angle** group box to print the watermark in a diagonal, horizontal, or angle (custom) orientation to the page's text. The default is **Diagonal**. All three settings automatically center the watermark string within the page; the selection of a particular setting affects only the angle of the string placement. **Diagonal** places the text along a line that spans the lower-left to upper-right corners of the page.

Font Attributes

Use controls in the **Font Attributes** group box to change the font and the color, shading, size, and style of the font.

Name

The **Name** drop-down menu lists TrueType (TM) fonts that are currently installed on the system. The default is language-dependent.

Color

The **Color** drop-down menu lists the fixed, unalterable color choices for the watermark. **Gray** is the only color option for the HP LaserJet 2300 printer.

Shading

The following range of shades is available from the **Shading** drop-down menu:

- **Lightest**
- **Very Light** (default)
- **Light**
- **Medium Light**

- **Medium**
- **Medium Dark**
- **Dark**
- **Very Dark**
- **Darkest**

These values represent the intensity of the color selected in the **Color** attribute setting.

Size

Font sizes from 1 to 999 points are available from the **Size** menu. The default point size is language-dependent. The choice of regular, bold, italic, and bold italic is available from the **Style** drop-down menu.

Default settings

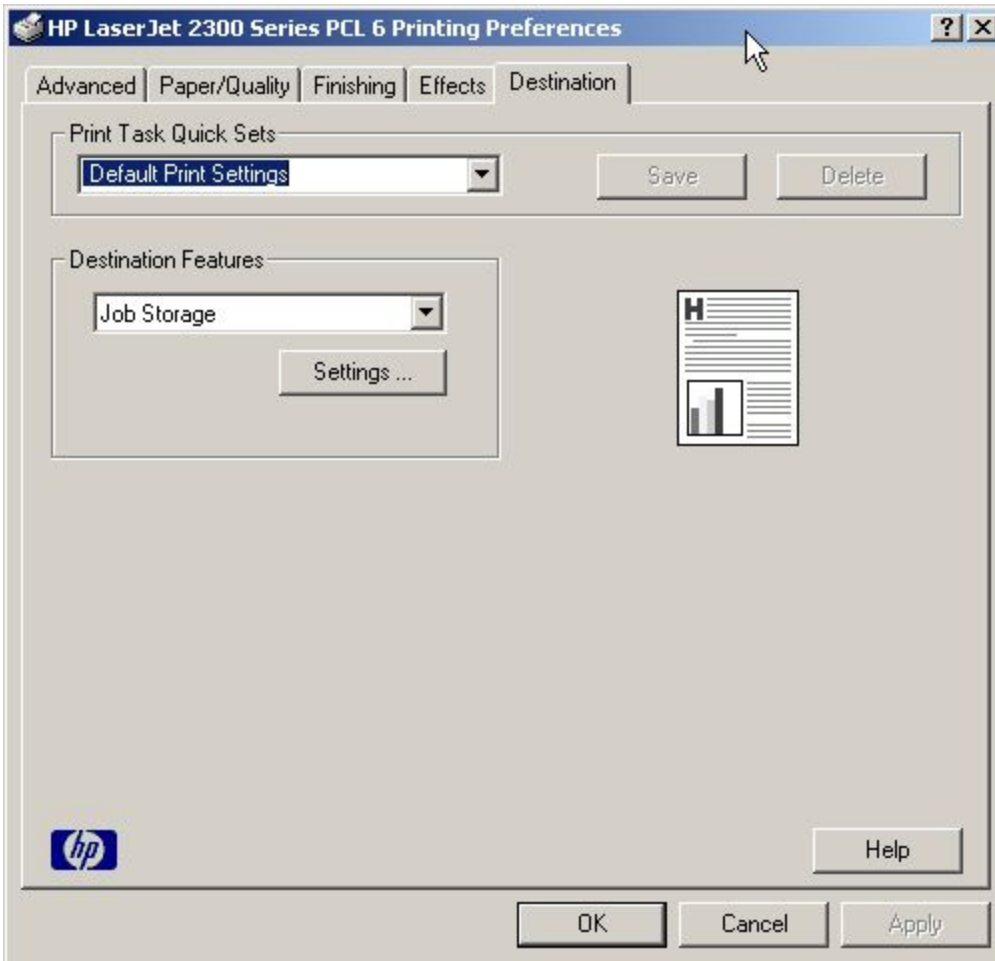
The default settings for new watermarks are **Arial** font, **Gray** color, **Very Light** shading, size **80** points, and **Regular** style. The default settings for preset watermarks are **Arial** font, **Gray** color, **Very Light** shading, and **Bold** style. The default point size for preset watermarks is language-dependent, and varies.

Destination tab features

The **Destination** tab provides options for job storage and output bins. The **Destination** tab is shown in the following illustration.

Note The Destination tab appears only if the Job Storage setting in the Device Settings tab is selected.

Figure 53: Destination tab features



Print Task Quick Sets

The **Print Task Quick Sets** option is available on the **Paper/Quality**, **Finishing**, **Effects**, and **Destination** tabs. The feature is used to store the current combination of driver settings that are found on all other tabs. Print task quick sets are either preset or user-defined printing specifications (such as paper size, pages per sheet, and so on). For more information, see "Print/Quality tab features".

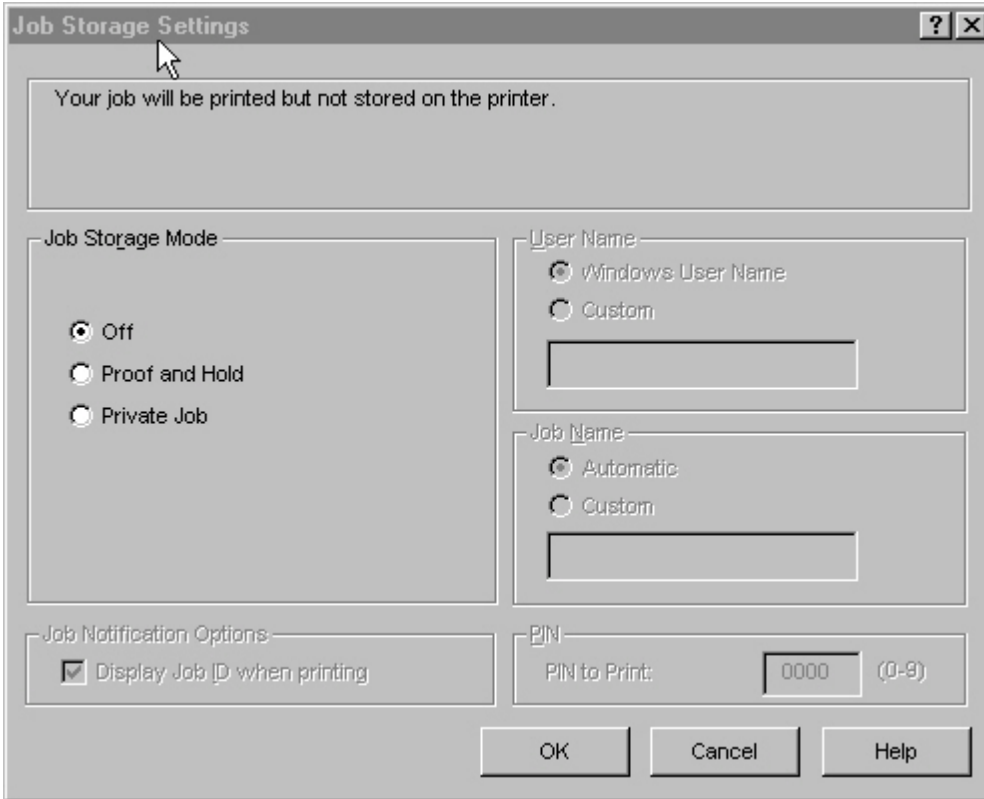
Hardware configuration and availability of Job Storage options

The HP LaserJet 2300 printer can accommodate the following Job Storage options:

- **Proof and Hold**
- **Private Job**

The following illustration shows the Job Storage Settings window.

Figure 54: Job Storage Settings window



Job storage modes

Using the Job Storage feature on your HP LaserJet 2300 printer, you can store documents at the printer and then control their printing at the printer control panel. This feature is intended to provide greater flexibility, convenience, security, and cost savings.

After the Job Storage feature has been enabled, you can use its features by clicking **Settings** on the **Destination** tab of the printer driver.

The HP LaserJet 2300 printer offers the following **Job Storage** options:

- Off
- Proof and Hold
- Private Job

These features and the settings that control them are described below.

Off

This option turns the Job Storage feature off (disables the feature), which means the print job will not be stored in the printer.

Proof and Hold

This option stores the print job and prints only the first copy of the job, allowing you to check the first copy. If the document prints correctly, you can print the remaining copies of the print job at the printer control panel. The number of proof-and-hold print jobs that can be stored in the printer is set at the printer control panel.

After it is released for printing, the proof-and-hold job is immediately deleted from the printer. If more copies are needed, you must reprint the job from the program. If you send a second proof-and-hold job to the printer with the same user name and job name as an existing proof-and-hold job (and you have not released the original job for printing), the job will overwrite the existing job. Proof-and-hold jobs are deleted if power to the printer is removed.

Private Job

This option allows you to send a print job directly to the printer memory. Selection of Private Job activates the PIN field. The print job can be printed only after you type a PIN in the printer control panel. After the job is printed, the printer removes the job from the printer memory. This feature is useful when you are printing sensitive or confidential documents that you do not want to leave in an output bin after printing. Private Job stores the print job in the printer RAM memory.

After it is released for printing, the private job is immediately deleted from the printer. If more copies are needed, you have to reprint the job from the program. If you send a second private job to the printer with the same user name and job name as an existing private job (and you have not released the original job for printing), the job will overwrite the existing job, regardless of the PIN. Private jobs are deleted if power to the printer is removed.

Using a PIN for Private Job

The **Private Job** option can be secured by a four-digit personal identification number (PIN). This number must be typed in the printer control panel before the printer prints the job. You can choose a predefined PIN, or you can also create a custom PIN.

The box labeled PIN is usually inactive. Selecting **Private Job** along with **Require PIN to Print** activates the PIN box. The Private Job/PIN coupling has a PIN restriction of four ASCII numeric characters (ASCII 0-30 through 0-39). If you enter non-numeric characters, they are removed immediately. If you enter more than four characters, the characters past the fourth are truncated. The field temporarily allows fewer than four digits in the string, but when the edit field loses focus, the zeroes pad the left end until there are exactly four digits. The default initialized value for the PIN is 0000 for **Private Job** with Require PIN to Print selected.

Document Identifiers used in Job Storage

When you use a Job Storage feature, your document is identified in the printer control panel by user name and job name.

User Name

The **User Name** edit box allows you to identify the job at the printer control panel. When the driver is first, this string initializes to the empty string (""), but the dialog box detects this condition and replaces the string with your login name. Restrictions for the **User Name** field are described in the "Job Name" section.

Job Name

The **Job Name** field is used for specifying a name to identify the job on the printer control panel. When the driver is installed, this string is initialized to the empty string (" "), but the dialog box will detect this condition and replace the string with "Untitled". The following describes the restrictions for the **Job Name** field.

The **Job Name** and the **User Name** fields can contain no more than 16 characters each, and are limited to A through Z and 0 through 9, because the name is displayed on the printer control panel. If you try to enter a lowercase character, it automatically shifts to uppercase. If you try to enter a character with an ASCII code of less than 32 or greater than 126 characters, the character is removed from the edit field, along with all characters that follow it. If you try to enter more than 16 characters, any character beyond 16 is truncated.

When the dialog box is closed, or the edit box loses focus, an empty string is replaced with "Untitled". In those languages for which "Untitled" cannot be translated without the use of invalid characters, the driver uses a string of three dashes. The acceptable characters for job name and user name vary for each operating system. The string must meet requirements to be able to appear on the printer control-panel display.

Using Job Storage options when printing

You can use **Job Storage** options in the **Destination** tab of the printer driver.

Note Your printer must have at least 48 MB of total memory to use the Job Storage feature, and the Job Storage setting must be Enabled on the Device Settings tab.

1. Click **Print** from the software program. The **Print** dialog box appears.
2. Click **Properties**. The **Properties** dialog box appears.
3. Click the **Destination** tab to display the destination options.
4. Click **Job Storage** on the drop-down menu under **Destination Features**.
5. Click **Settings...**. The **Job Storage Settings** dialog box appears.
6. You can then select one of the **Job Storage** options described above by clicking the appropriate option button.

These instructions are specific to the Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP environments when using the latest available PCL 5e, PCL 6, and PS drivers.

Releasing private jobs stored at the printer

Once you send a print job using **Job Storage**, you can release the job to print using the printer control panel.

1. Press the select button (the one with the check mark) to enter the menus.
2. Press the up and down buttons to scroll to RETRIEVE JOB, and then press the select button.
3. Press the up and down buttons to scroll to your job and press the select button.
4. Press the up and down buttons to scroll to PRINT. (The PRINT selection might have an icon next to it indicating that the job is locked. If so, type the PIN, and then press the select button.) Press the select button.

Note Type the PIN one digit at a time. Use the up or down arrow to obtain the first digit, and then press the select button. The cursor in the control panel then moves to the place for the next digit. Proceed likewise for each digit, and press the select button when the PIN is complete.

Deleting a print job

Sometimes it is necessary to delete a print job from the printer memory. This can be done from the printer control panel.

1. Press the select button (the one with the check mark) to enter the menus.
2. Press the up and down buttons to scroll to RETRIEVE JOB.

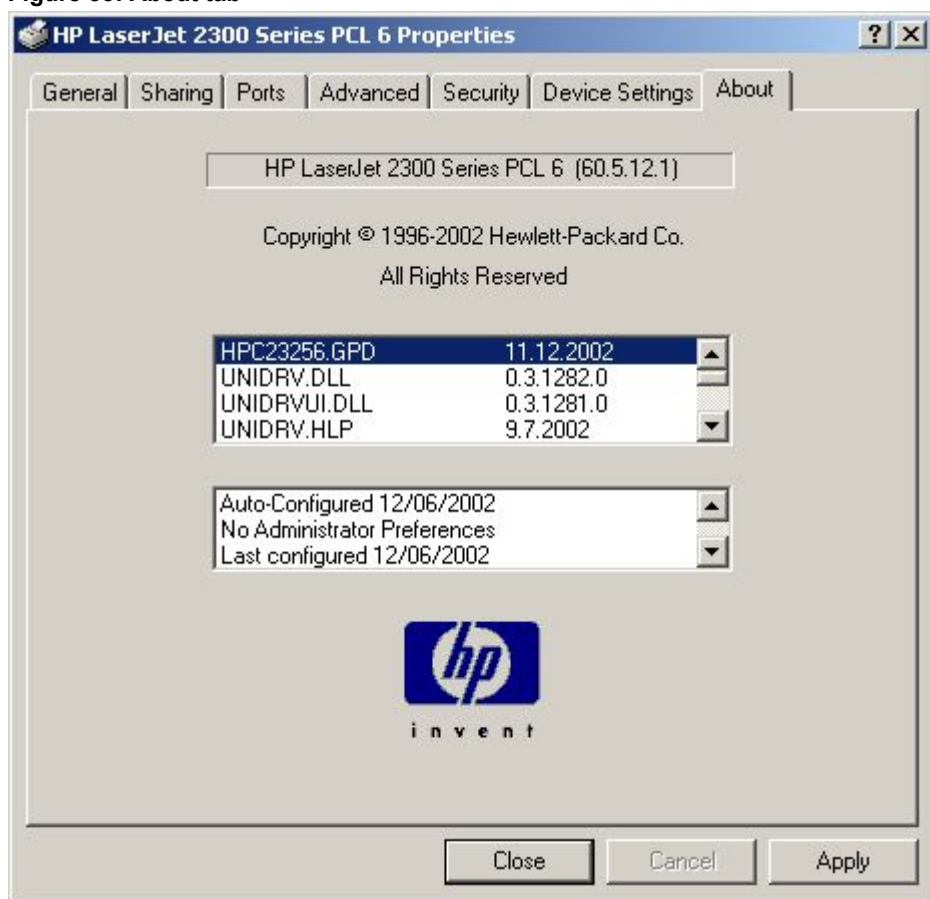
3. Press the up and down buttons to scroll to your job name and press the select button.
4. Press the up and down buttons to scroll to DELETE. (The DELETE selection might have an icon next to it indicating that the job is locked. If so, type the PIN number, and then press the select button.)

Note Type the PIN one digit at a time. Use the up or down arrow to obtain the first digit, and then press the select button. The cursor in the control panel then moves to the place for the next digit. Proceed likewise for each digit, and press the select button when the PIN is complete.

About tab

The **About** tab provides detailed information about the driver. It contains an overall build number (in parenthesis after the model name) along with specific information about each of the components. The information varies according to HP LaserJet model number, driver, date, and versions. The **About** tab is shown in the following illustration.

Figure 55: About tab

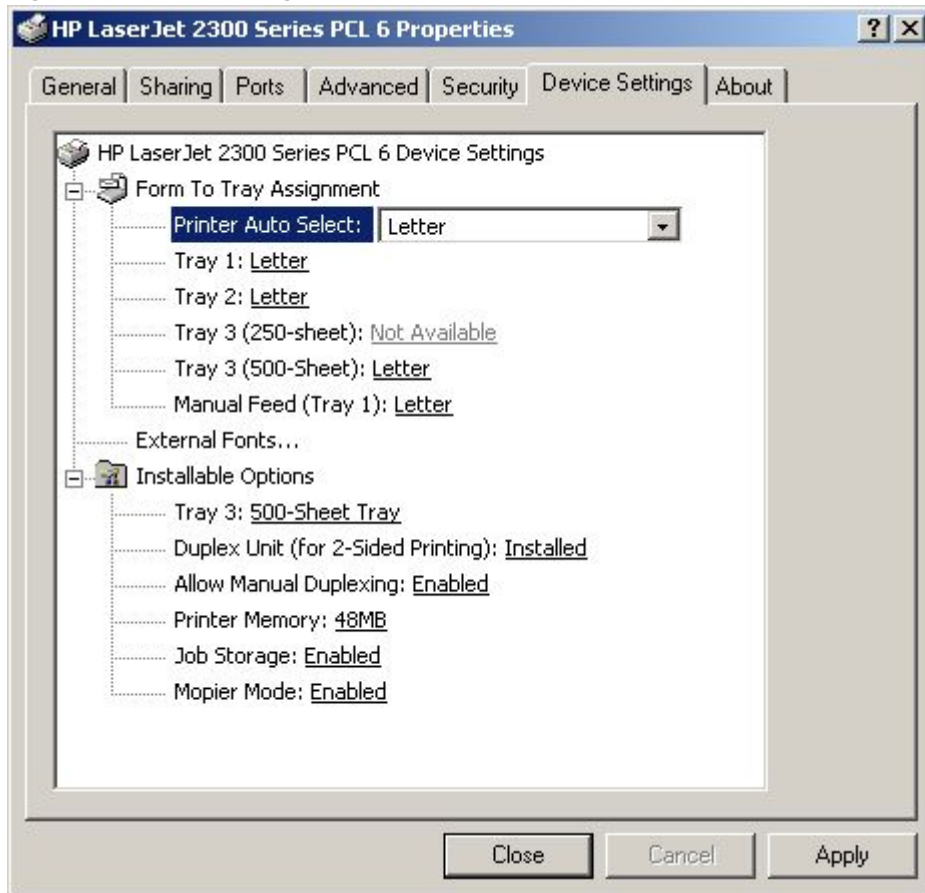


The **About** tab lists driver installation file names and their version numbers. The **About** tab also indicates whether the driver was autoconfigured, whether administrator preferences were set, the date the driver was last configured, and whether the configuration is default or user-defined.

Device Settings tab

The **Device Settings** tab communicates the hardware configuration of the printer to the driver. The **Device Settings** tab appears whenever the driver is opened from the **Printers** folder by selecting and right-clicking the printer, and then clicking **Properties...** for the driver. When the driver is opened from within a program, the **Device Settings** tab is not visible. When opened from the **Printers** folder, the **Device Settings** tab appears, as shown in the following illustration.

Figure 56: Device Settings tab



Each model of the HP LaserJet 2300 printer device has its own list of configurable items; see the *HP LaserJet 2300 User Guide* for detailed information. The following descriptions are for installable options that may be supported by one or more printer models.

Note

Changes made to the Device Settings tab are not reflected in the Printing Preferences settings until the modified device settings have been applied. For example, the duplexing unit will not appear until you modify the Device Settings tab, apply the settings, and then re-open Printing Preferences.

Form to Tray Assignment

A network administrator can use **Form to Tray Assignment** to specify the paper size in each paper tray.

Many printers support more than one source of paper, such as upper and lower trays. You can assign a form (which defines the paper size and margins) to each of your printer's paper sources. Once a form is matched to a source, you can select the form when you print from your programs. The printer prints from the tray to which that form is assigned.

The **Form to Tray Assignment** setting allows network administrators to specify, in the driver, the media size that is loaded into each available paper tray. The use of forms constrains the choices that are available in the media-size lists on the **Paper** tab. This constraint prevents (or reduces the likelihood of) tying up the printer with paper-mount messages that occur when users request sizes or types that are not available.

Input paper-handling options

Input paper-handling options include standard trays, high-capacity input trays, configurable sized paper trays (XY trays), and envelope feeders. Generally, items that are installed separately have a separate **Installable Options** setting. For example, for the HP LaserJet 2300 printer, tray 3 can be a high-capacity (500-sheet) tray. The additional input trays are included as paper sources in the driver's **Paper/Quality** tab.

Duplex Unit (for 2-Sided Printing)

If a duplexing unit is installed in the printer, select **Duplex Unit (for 2-Sided Printing)**:, and then click **Installed**. When the unit is installed, the **Print on Both Sides** control appears in the **Finishing** tab. You can turn duplexing off or turn on either long-edge or short-edge binding.

Allow Manual Duplexing

With manual duplexing, you can print on both sides of any size or weight of paper that is supported by the printer (although this is not recommended for transparencies). When you use this feature, the printer prints out one side of the paper for each page of the job. You must reinsert the paper stack into the input tray (Tray 1) to print the second side. The printer pauses while you make this adjustment. The **Allow Manual Duplexing** setting is **Enabled** by default for all models of the HP LaserJet 2300 printer.

Printer Memory

This option matches the setting to the amount of memory installed in the printer. The driver generates ranges of memory that can be selected, up to the maximum that the printer can accept. The driver can use this information to manage how the driver uses the printer memory.

Job Storage

When the Job Storage setting in the **Device Settings** tab is enabled, Job Storage appears as a feature on the **Destination** tab.

Note On HP LaserJet 2300L and the base HP LaserJet 2300 model, total printer memory is 32 MB. Job Storage is available and the Destination tab appears only if the total printer memory is increased to 48 MB or more.

Mopier Mode

A mopier is an HP-designed printer that produces multiple, collated copies from a single print job. Multiple-original printing (mopying) increases printer performance and reduces network traffic by sending the job to the printer once, then storing it in the printer RAM. The remainder of the copies are printed at the printer's fastest speed. All documents can be created, controlled, managed, and finished from the desktop, which eliminates the extra step of using a photocopier.

All HP LaserJet 2300 printer models support the Transmit Once mopying feature, provided they have enough total memory, and the mopying feature is enabled by default if the **Mopier Mode** setting is **Enabled** in the **Device Settings** tab.

Note On HP LaserJet 2300L and the base HP LaserJet 2300 model, total printer memory is 32 MB. The Mopier Mode setting is Enabled by default if the total printer memory is increased to 48 MB or more.

The driver determines whether the printer has mopying capability by detecting the presence of a collation feature in a PPD/GPD along with any constraints that might apply (for example, requiring that the **Job Storage** setting be **Enabled** in the printer driver). The driver automatically performs collation by selecting the **Collate** check box in the application's **Print** dialog box. If the printer is properly configured, the printer performs the collation; otherwise, the spooler collates the print job. Likewise, if you clear the **Collate** check box in the application's **Print** dialog box, the copies will not be collated. The following table shows the results of various driver Mopier Mode and collation settings.

Mopier mode and collation

Table 20: Driver Mopier mode and collation settings

Mopier mode	Application collation	Driver collation	Expected result
Disabled	Not selected	Not selected	3 copies uncollated
Disabled	Clear	Selected	3 copies uncollated
Disabled	Selected	Not selected	3 copies collated by OS
Disabled	Selected	Selected	3 copies collated by OS
Enabled	Clear	Not selected	3 copies uncollated
Enabled	Clear	Selected	3 copies uncollated
Enabled	Selected	Not selected	3 copies collated by Printer
Enabled	Selected	Selected	3 copies collated by Printer

Structure and availability of the HP LaserJet 2300 printing-system software CD-ROM

In-box file layout

The HP LaserJet printer system consists of two partitions: one for installation using Windows operating systems, the other for Macintosh operating systems. The files include documentation files and files that are required to install and uninstall the printing-system components.

HP LaserJet software CD-ROM, Windows partition

The root directory in the Windows partition of the printing-system CD-ROM contains the AUTORUN.EXE file and the SETUP.EXE file, as well as the following directories:

- Fonts
- Setup
- XP_2000
- Other directories for the languages that are on this printing-system software CD-ROM

The printing-system files for each language reside in the following directories:

- Drivers directory
- Manuals directory
- Reader directory

File layouts differ by language for the European and Asian versions of the software CD-ROM.

To view the files, insert the HP LaserJet printing system software CD-ROM, right-click **Start**, click **Explore**, and then select the CD-ROM drive.

HP LaserJet software CD-ROM, Macintosh Partition

The files contained in the Macintosh partition of the HP LaserJet software CD-ROM are grouped by language and reside in the following directories:

- Root directory
- HP LASERJET INSTALLERS (for Macintosh operating systems)
- PDF (for guides and manuals)

File layouts differ by language for the European and Asian versions of the software CD-ROM.

Availability and fulfillment

This section provides information about the availability of the HP LaserJet printing system software and related software. Printing-system software on CD-ROM is available from HP fulfillment centers or can be downloaded from the Web at the following URL:

http://www.hp.com/go/lj2300_software

In-box CD-ROMs

The HP LaserJet software CD-ROM is available in three regional versions. The following table lists the three versions of the software CD-ROM, along with the languages each version supports.

Table 21: CD-ROM versions

CD-ROM version	Languages supported
Americas	Dutch (Nederland) English French (Français) German (Deutsch) Arabic (Windows OSs only) Italian (Italiano) Portuguese (Português) - Brazilian Spanish (Español)
Asian	English Chinese (Simplified) Chinese (Traditional) Korean Thai (Windows OSs only)
Rest of world	Czech (Cesky) (Windows OSs only) Danish (Dansk) English Finnish (Suomi) Greek (Windows OSs only; manuals only) Hebrew (Ivrit) (Windows OSs only) Hungarian (Magyar) (Windows OSs only) Norwegian (Norsk) Polish (Polski) (Windows OSs only) Russian (Russ) (Windows OSs only) Slovak (manuals only) Swedish (Svenska) Turkish (Turkçe)

Web ordering

The HP LaserJet software CD-ROM and related software CD-ROMs can be ordered from the http://www.hp.com/go/lj2300_software Web sites. The links for ordering the CD-ROMs appear on these pages.

Web deployment

Software to support HP LaserJet 2300 series printer are available for download from the following Web sites:

http://www.hp.com/go/lj2300_software

This is the preferred method for obtaining the latest software. The Web sites offers a notification option for automatic e-mail notification about new software releases.

Printing-system software

The HP LaserJet printing system software is available for download from the HP Web site at the following URL:

http://www.hp.com/go/lj2300_software

The software supports the following operating systems:

- Windows 95, Windows 98, Windows Me, and Windows NT 4.0
- Windows 2000, and Windows XP

Standalone drivers

The HP LaserJet PCL 5e, PCL 6, and PS drivers are available individually to support the following operating systems:

- Windows 95, Windows 98, and Windows Me
- Windows NT 4.0
- Windows 2000
- Windows XP

Note PCL 5e is not supported in Asian languages.

Point-and-print bundles

Point and Print is a Microsoft term that describes a two-step driver installation process. The first step is to install a shared driver on a network print server. The second step is to "point" to the print server from a network client so that the client can use the print driver.

The HP LaserJet PCL 6 driver is available in a point-and-print bundle to support the Windows operating environments.

Other operating systems

Drivers and related software are available for these additional operating environments:

- Macintosh OS (PPDs and Universal Installer)
- OS/2 (PCL 5e and PS)
- UNIX
- Linux

Software component availability

The following table lists the availability of HP LaserJet software components by operating system.

Note In the following table, "9x/Me" refers to Windows 95, Windows 98, and Windows Me; "2K" refers to Windows 2000; "4.0" refers to Windows NT 4.0; and "XP" refers to Windows XP.

Table 22: Software component availability for HP LaserJet 2300 printer

Component	9x/Me	4.0	2K/XP	Mac	UNIX	Linux
Drivers						
PCL 5e	X	X				
HP traditional PCL 6 driver	X	X				
HP traditional PS driver	X	X				
HP PCL 6 unidriver			X			
HP PCL 5e unidriver			X			
HP PS unidriver			X	X		
PS Driver and Postscript Printer Description (PPD)	X	X	X	X		
Mac QuickDraw PPD				X		
UNIX Model Script					X	
Linux printing drivers and model script						X
Installers						
Common Windows Installer	X	X	X			
CD-ROM Browser	X	X	X			
Customization Utility	X	X	X			
Fonts	X	X	X			
INF File (Add Printer)	X	X	X			
Font Installer ¹	X	X	X			
Macintosh Installer for OSs 8 and 9				X		
Macintosh Installer for OS X				X		
Web Registration	X	X	X			
Bidirectional communication						
Network Bidirectional Communications	X	X	X	X		
Direct Connect Bidirectional Communications						
EnterpriseAutoconfiguration	X	X	X	X		
Remote management and status						
Web JetAdmin		X	X		X	X
Applet for Web JetAdmin		X	X		X	X
Macintosh LJ Utility				X		
Printer Status and Alerts	X	X	X			
Driver autoconfiguration	X	X	X ²			
Online Documentation						
Adobe Acrobat Reader	X	X	X	X		
<i>HP LaserJet 2300 User Guide</i>	X	X	X	X		
HP LaserJet 2300 series printer Installation Notes	X	X	X	X		
HP Jetdirect Guide	X	X	X	X		
Mac PS Driver Help (for Mac OS 8.6 and Mac OS 9 only)				X		
Help systems	X	X	X	X		
Other						

Component	9x/Me	4.0	2K/XP	Mac	UNIX	Linux
PS Fonts	X	X	X	X	X	

¹Supported as a standalone utility.

²The Windows 2000 and Windows XP HP unidrivs have no Update Now button, but autoconfiguration is supported over the network using TCP/IP and IP/IPX protocols.

Software component localization

The following table provides localization information about the HP LaserJet 2300 printing system software. The information in this table does not necessarily reflect in-box solutions.

Components that are not available in any given language are supported in English.

Table 23: Software component localization for the HP LaserJet 2300 printer by language, A-J

Component	Operating system	AR	CZ	DN	DU	EN	FN	FR	GE	GR	HE	HU	IT
PS PPD	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x		x	x	x
Printer Status and Alerts	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x	x	x	x	x
Macintosh PS PPD	Mac	x ²	x ²	x	x	x	x	x	x	x ²	x	x ²	x
Macintosh LJ Utility	Mac			x	x	x	x	x	x				x
Macintosh Installation Notes	Mac		x	x	x	x	x	x	x				x
PCL 6	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x		x	x	x
PCL 5e	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x		x	x	x
Printing System Installation Notes	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x	x	x	x	x
Common Windows Installer	9x, 4.0, 2000	x	x	x	x	x	x	x	x		x	x	x
Web JetAdmin	4.0, 2000, UNIX		x	x	x	x	x	x	x			x	x

Component	Operating system	AR	CZ	DN	DU	EN	FN	FR	GE	GR	HE	HU	IT
Web JetAdmin Help	4.0, 2000, UNIX		x	x	x	x	x	x	x			x	x
HP Embedded Web Server	9x, 4.0, 2000, XP		x	x	x	x	x	x	x			x	x
Online manuals (PDF)	9x, 4.0, 2000, XP		x	x	x	x	x	x	x	x		x	x
IBM OS/2 driver - PCL 5e	OS/2			x	x	x	x	x	x				x
IBM OS/2 driver - PS	OS/2			x	x	x	x	x	x				x
Standard fonts	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x		x	x	x
PS 3 fonts	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x		x	x	x

1- For the Windows NT 4.0 operating system, the English driver is used.

2- The English driver is used.

Language key:

AR = Arabic

CZ = Czech

DN = Danish

DU = Dutch

EN = English

FN = Finnish

FR = French

GE = German

GR = Greek

HE = Hebrew

HU = Hungarian

IT = Italian

Table 24: Software component localization for the HP LaserJet 2300 printer by language, K-Z

Component	Operating system	KO	NW	PG	PO	RU	SC	SK	SP	SW	TC	TH	TU
PS PPD	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x	x	x	x	x
Printer Status and Alerts	9x, 4.0, 2000, XP	x	x	x	x	x	x		x	x	x		x
Macintosh PS PPD	Mac	x	x	x	x ²	x ²	x		x	x	x	x ²	x ²
Macintosh LJ Utility	Mac	x	x	x					x	x			
Macintosh Installation Notes	Mac	x	x	x			x		x	x	x		
PCL 6	9x, 4.0, 2000, XP	x	x	x	x	x	x		x	x	x	x ²	x
PCL 5e	9x, 4.0, 2000, XP		x	x	x	x			x	x		x ²	x
Printing System Installation Notes	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x	x	x		x
Common Windows Installer	9x, 4.0, 2000	x	x	x	x	x	x		x	x	x		x
Web JetAdmin	4.0, 2000, UNIX	x	x	x	x	x	x		x	x	x		x
Web JetAdmin Help	4.0, 2000, UNIX	x	x	x	x	x	x		x	x	x		x

Component	Operating system	KO	NW	PG	PO	RU	SC	SK	SP	SW	TC	TH	TU
HP Embedded Web Server	9x, 4.0, 2000, XP		x	x	x	x			x	x			x
Online manuals (PDF)	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x	x	x		x
IBM OS/2 driver - PCL 5e	OS/2		x	x					x	x			
IBM OS/2 driver - PS	OS/2		x		x				x	x			
Standard fonts	9x, 4.0, 2000, XP		x	x	x	x			x	x			x
PS 3 fonts	9x, 4.0, 2000, XP		x	x	x	x			x	x			x

¹For the Windows NT 4.0 operating system, the English driver is used.

²The English driver is used.

Language key:

KO = Korean

NW = Norwegian

PG = Portuguese

PO = Polish

RU = Russian

SC = Simplified Chinese

SK = SLovak

SW = Swedish

SP = Spanish

TC = Traditional Chinese

TH = Thai

TU = Turkish

Driver feature comparison in various operating systems

The following tables detail the software features available for each driver type and for each supported operating system that the HP LaserJet 2300 printer supports. The printing system driver for Windows 2000 and Windows XP is the new HP unidriver, with a user interface look and feel that is consistent across the PCL 5e, PCL 6, and PS driver. The printing-system drivers for Windows 95, Windows 98, Windows Me, and Windows NT 4.0 are the HP traditional PCL 5e and PCL 6 drivers and the HP traditional PS driver.

Job stream output

Table 25: Driver support for job stream output feature

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver type	HP unidriver			HP traditional driver			HP traditional driver			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
PCL 6 support	X			X			X			
PCL 5e support		X			X			X		
PCL 6 pass-through support	X			X			X			
PS 3			X			X			X	X
PS 2			X			X			X	X
UTF-8 encoding for PCL	X	X	X	X			X			

Stream output modes

Table 26: Driver support for stream output modes feature

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
RAW output	X	X	X	X	X		X	X		
MS EMF output	X	X	X							
EPS			X			X			X	X

Connectivity

Table 27: Driver support for connectivity features

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95			Windows 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Parallel	X	X	X	X	X	X	X	X	X ¹	X ¹	X ¹	X	X
Network	X	X	X	X	X	X	X	X	X	X ¹	X ¹	X	X
USB	X	X	X							X ¹	X ¹	X	

¹Requires a DOT4 stack.

Bidirectional communication

Table 28: Driver support for bidirectional communication features

Operating System	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95			Windows 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Parallel	X	X	X	X	X		X	X		X ¹	X ¹		X
Network	X	X	X	X	X		X	X		X ¹	X ¹		X
USB	X	X	X							X ¹	X ¹	X	

¹Requires a DOT4 stack.

HP Driver Preconfiguration

Table 29: Driver support for HP Driver Preconfiguration

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
HP Driver Preconfiguration	X	X	X	X	X		X	X		
Feature lockout	X	X	X	X	X		X	X		
Enterprise Autoconfiguration (EAC)	X	X	X	X	X		X	X		

UI features

Table 30: Driver support for UI features

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
UI tabs	X	X	X	X	X	X	X	X	X	X
UI extensions	X	X	X			X				X
Page preview images	X	X	X	X	X		X	X		
Printer image bitmaps with hot spots				X	X		X	X		
Paper size dimensions	X	X	X	X	X	X	X	X	X	X
Page layout graphical representation	X	X	X	X	X	X	X	X	X	X
About . . .	X	X	X	X	X	X	X	X	X	X
Update now . . .				X	X		X	X		X
Printer bundle setting				X	X		X	X		
Accessibility/disability	X	X	X	X	X		X	X		


Help features

Table 31: Driver support for Help features

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
What's this Help (F1)	X	X	X	X	X	X	X	X	X	X
Help button	X	X	X	X	X		X	X		
Bubble Help				X	X		X	X		
MS Windows "?" Help	X	X	X	X	X	X	X	X	X	

Constraint support

Table 32: Driver support for constraints

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Constraint messages	X ¹	X ¹	X ¹	X	X	X	X	X	X	X
Unavailable (gray-out) options Driver	X	X	X	X	X		X	X		X
Constraint warnings by symbol 	X	X	X			X			X	X

¹Limited set of constraints

Document layout

Table 33: Driver support for document layout features

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Print on both sides	X	X	X	X	X	X	X	X	X	X
Manual duplex	X	X	X	X	X	X	X	X	X	X ¹
Flip pages up	X	X	X	X	X	X	X	X		X
Booklet printing	X	X	X	X	X		X	X		
Pages per sheet (N-up)	X	X	X	X	X	X	X	X	X	X
Page borders on/off	X	X	X	X	X		X	X		X
Page order	X	X	X	X	X		X	X		
Print document on (alternative size)	X	X	X	X	X		X	X		
Scale to fit	X	X	X	X	X	X	X	X	X	X
Allow scaling from large paper	X	X	X	X	X		X	X		
% of normal size	X	X	X	X	X	X	X	X	X	X
Portrait	X	X	X	X	X	X	X	X	X	X
Landscape	X	X	X	X	X	X	X	X	X	X
Rotated by 180 degrees	X	X	X	X	X	X	X	X	X	X
Number of copies . . .	X	X	X	X	X	X	X	X	X	X

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Ignore application collation				X	X		X	X		
Mopy	X	X	X	X	X	X	X	X	X	X

¹Available only with Mac OS 8.6 and Mac OS 9.x, using Manual Duplex and Booklet Plugin.

Job storage

Table 34: Driver support for job storage features

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac ¹
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Proof and hold	X	X	X	X	X	X	X	X	X	X
Private job	X	X	X	X	X	X	X	X	X	X
Job name	X	X	X	X	X	X	X	X		X
User name	X	X	X	X	X	X	X	X	X	X
PIN	X	X	X	X	X	X	X	X	X	X

¹Job Storage features are available only in Mac OS 8.6 through Mac OS 9.x. They are not available for Mac OS X.

Custom preference storage/recall

Table 35: Driver support for custom preference storage/recall features

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Print task quick sets	X	X	X	X	X		X	X		
Print quality	X	X	X	X	X		X	X		
Color options	X	X	X	X	X					

Print controls

Table 36: Driver support for print controls

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
EconoMode	X	X	X	X	X	X	X	X	X	X
DWS	X	X	X	X	X		X	X		
Mopier enable	X	X	X	X	X	X	X	X	X	X
Print optimizations	X	X	X							
Halftoning auto select	X	X	X							
Halftoning dither 6x6	X	X	X							
Halftoning dither 8x8	X	X	X							
Rendering mode (automatic)	X	X	X		X			X		

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Send graphics as vector	X	X			X			X		
Send graphics as raster	X	X			X			X		
Send page as raster					X			X		
Resolution (ProRes 1200 180 lpi)		X	X	X			X			X
Resolution (ProRes 1200 212 lpi)		X		X			X			
Resolution (FastRes 1200)	X	X	X	X		X	X		X	X
Resolution (600 dpi)	X	X	X	X	X	X	X	X	X	X
Resolution (300 dpi)	X				X	X		X	X	X
Manually print on second side	X	X	X	X	X		X	X		X ¹
RET	X	X	X	X	X	X	X	X	X	X
Scale patterns (WYSIWYG)	X	X	X	X	X		X			
Font DIMM (on/off)	X	X		X	X		X	X		
Send TrueType as bitmaps	X	X	X	X	X		X	X		
TrueType fonts	X	X	X			X			X	X
Levels of gray										
Edge to edge	X	X	X							
Print text as black	X	X	X	X	X		X	X		

¹Available only with Mac OS 8.6 and Mac OS 9.x, using Manual Duplex and Booklet Plugin.

Watermarks

Table 37: Driver support for watermarks feature

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
First page only	X	X	X	X	X	X	X	X	X	X
Custom watermark definition	X	X	X	X	X	X	X	X	X	X
Watermark angle	X	X	X	X	X	X	X	X	X	X
Watermark font name	X	X	X	X	X	X	X	X	X	X
Watermark font color	X	X	X	X	X	X	X	X	X	X
Watermark font shading	X	X	X	X	X	X	X	X	X	X
Watermark font size	X	X	X	X	X	X	X	X	X	X
Watermark font style	X	X	X	X	X	X	X	X	X	X

Paper sizes

Table 38: Driver support for paper sizes

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Letter	X	X	X	X	X	X	X	X	X	X
Legal	X	X	X	X	X	X	X	X	X	X
Executive	X	X	X	X	X	X	X	X	X	X

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
A4	X	X	X	X	X	X	X	X	X	X
A5	X	X	X	X	X	X	X	X	X	X
B5 (ISO)	X	X	X	X	X	X	X	X	X	X
B5 (JIS)	X	X	X	X	X	X	X	X	X	X
A3	X	X	X	X	X		X	X		
11x17	X	X	X	X	X		X	X		
8K										
16K	X	X	X	X	X	X	X	X	X	X
B4 (JIS)										
Executive (JIS)	X	X	X	X	X	X	X	X	X	X
Double Postcard (JIS)	X	X	X	X	X	X	X	X	X	X
Envelope #10	X	X	X	X	X	X	X	X	X	X
Envelope Monarch	X	X	X	X	X	X	X	X	X	X
Envelope C5	X	X	X	X	X	X	X	X	X	X
Envelope DL	X	X	X	X	X	X	X	X	X	X
Envelope B5	X	X	X	X	X	X	X	X	X	X
Custom	X	X	X	X	X	X	X	X	X	X
Custom paper size definition	X	X	X	X	X	X	X	X	X	X

Paper types

Table 39: Driver support for paper types

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Unspecified	X	X	X	X	X	X	X	X	X	X
Plain	X	X	X	X	X	X	X	X	X	X
Preprinted	X	X	X	X	X	X	X	X	X	X
Letterhead	X	X	X	X	X	X	X	X	X	X
Transparency	X	X	X	X	X	X	X	X	X	X
Prepunched	X	X	X	X	X	X	X	X	X	X
Labels	X	X	X	X	X	X	X	X	X	X
Bond	X	X	X	X	X	X	X	X	X	X
Recycled	X	X	X	X	X	X	X	X	X	X
Color	X	X	X	X	X	X	X	X	X	X
Cardstock > 164 g/m2	X	X	X	X	X	X	X	X	X	X
Rough	X	X	X	X	X	X	X	X	X	X
Envelope	X	X	X	X	X	X	X	X	X	X
User type 1				X	X		X	X		
User type 2				X	X		X	X		
User type 3				X	X		X	X		
User type 4				X	X		X	X		
User type 5				X	X		X	X		
Show media types as sources	X	X	X	X	X		X	X		

Paper sources

Table 40: Driver support for paper sources

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Autoselect	X	X	X	X	X	X	X	X	X	X
Manual feed	X	X	X	X	X	X	X	X	X	X
Tray 1	X	X	X	X	X	X	X	X	X	X
Tray 2	X	X	X	X	X	X	X	X	X	X
Tray 3	X	X	X	X	X	X	X	X	X	X
Assign paper size to tray	X	X	X	X	X	X			X	X
Assign paper type to tray	X	X	X	X	X	X			X	X

Alternative source/paper type

Table 41: Driver support for alternate source/paper type feature

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
All pages the same	X	X	X	X	X	X	X	X	X	X
Other pages	X	X	X	X	X		X	X		
Back cover	X	X	X	X	X		X	X		

Printing destination

Table 42: Driver support for printing destination feature

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Top bin (face down)	X	X	X	X	X	X	X	X	X	X
Straight paper path	X	X	X	X	X		X	X		

Installable options

Table 43: Driver support for installable options

Operating system	Windows XP (32-bit), Windows 2000			Windows NT 4.0			Windows 95, 98, Me			Mac
Driver	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PCL 6	PCL 5e	PS	PS
Duplexing unit	X	X	X	X	X	X	X	X	X	X
Total memory	X	X	X	X	X	X	X	X	X	X
Additional source trays	X	X	X	X	X	X	X	X	X	X
Font DIMM	X	X	X	X	X	X	X	X	X	X

PS-specific features

Table 44: Driver support for PS-specific features

Operating system	Windows XP	Windows NT 4.0	Windows 95, 98, Me	Mac
Driver	PS	PS	PS	PS
Font substitution	X	X	X	X
PS memory	X	X	X	X
Output protocol	X	X	X	X
Send CTRL-D before each job	X	X	X	
Send CTRL-D after each job	X	X	X	
Convert gray text to PS gray	X			
Convert gray graphics to PS gray	X			
Add euro currency symbol	X			
Job timeout	X	X	X	
Wait timeout	X	X	X	
Minimum font size to download as outline	X	X		
Minimum font size to download as bitmap	X	X		
PS language level	X	X	X	
Send error handler	X	X	X	
Mirrored output	X	X	X	
Negative output	X	X	X	
output option				
Optimize for speed	X	X	X	
Optimize for portability	X	X	X	
Encapsulated (EPS)	X	X	X	X ¹
Archive format	X	X	X	
TrueType font download option				
Outline	X	X	X	
Bitmap	X	X	X	
Native TrueType	X	X	X	X

¹Mac OS 8.6 through 9.2.2; not supported on Mac OS X or later.

4 Installing Windows printing system components

Introduction

The information that follows addresses the following topics:

- Supported operating systems
- System requirements
- Font support
- General Windows installation instructions
- Detailed Windows installation instructions
- Setting a default printer

Supported operating systems

The HP LaserJet 2300 printing system software supports the following Windows operating systems:

- Windows 95 (parallel and networked only)
- Windows 98
- Windows Me
- Windows NT 4.0 (parallel and networked only)
- Windows 2000
- Windows XP

Note The HP LaserJet 2300 printer has not been tested with and does not support Windows 3.1x or Windows NT 3.51.

- IBM OS/2 or later

System Requirements

The following are the system requirements for installing and using the HP LaserJet printing system software on each of the supported operating systems.

- Pentium (R) processor
- Minimum 16-color/grayscale display with 640-by-480 pixel resolution (video graphics array [VGA])
- Same amount of RAM as the minimum requirements for the operating system
- 93 MB of available disk space (on the same partition as the operating system) for full installation
- Onboard parallel port, USB port, or network connection

Font support

Basic fonts

Microsoft Windows software includes these basic fonts, which can be used with any HP printer:

- Arial
- Courier New Italic
- Times New Roman Italic
- Arial Italic
- Courier New Bold
- Times New Roman Bold
- Arial Bold
- Courier New Bold Italic
- Times New Roman Bold Italic
- Arial Bold Italic
- Symbol
- Wingdings
- Courier New
- Times New Roman

Default fonts

The following default fonts are installed through a Typical Installation of the HP LaserJet printing system software.

Table 45: Default fonts

File name	Font name
ALBR85W.TTF	Albertus Extra Bold
ALBR55W.TTF	Albertus Medium
OLVR55W.TTF	Antique Olive
OLVR75W.TTF	Antique Olive Bold
OLVR56W.TTF	Antique Olive Italic
CGOR45W.TTF	CG Omega
CGOR65W.TTF	CG Omega Bold
CGOR66W.TTF	CG Omega Bold Italic
CGOR46W.TTF	CG Omega Italic
CGTR45W.TTF	CG Times
CGTR65W.TTF	CG Times Bold
CGTR66W.TTF	CG Times Bold Italic
CGTR46W.TTF	CG Times Italic
CLAR67W.TTF	Clarendon Condensed Bold
CORONET.TTF	Coronet
CPSR45W.TTF	CourierPS
CPSR65W.TTF	CourierPS Bold
CPSR66W.TTF	CourierPS Bold Oblique
CPSR46W.TTF	CourierPS Oblique
GARR45W.TTF	Garamond
GARR65W.TTF	Garamond Bold
GARR46W.TTF	Garamond Italic

File name	Font name
GARR66W.TTF	Garamond Kursiv Halbfett
HELR45W.TTF	Helvetica*
HELR65W.TTF	Helvetica Bold
HELR66W.TTF	Helvetica Bold Oblique
HELR47W.TTF	Helvetica Narrow
HELR67W.TTF	Helvetica Narrow Bold
HELR68W.TTF	Helvetica Narrow Bold Oblique
HELR48W.TTF	Helvetica Narrow Oblique
HELR46W.TTF	Helvetica Oblique
AVGR45W.TTF	ITC Avant Garde Gothic Book
AVGR46W.TTF	ITC Avant Garde Gothic Book Oblique
AVGR65W.TTF	ITC Avant Garde Gothic Demi
AVGR66W.TTF	ITC Avant Garde Gothic Demi Oblique
BOKR75W.TTF	ITC Bookman Demi
BOKR76W.TTF	ITC Bookman Demi Italic
BOKR35W.TTF	ITC Bookman Light
BOKR36W.TTF	ITC Bookman Light Italic
CHANC___.TTF	ITC Zapf Chancery Medium Italic
DINGS___.TTF	ITC Zapf Dingbats
LETR45W.TTF	Letter Gothic
LETR65W.TTF	Letter Gothic Bold
LETR46W.TTF	Letter Gothic Italic
MARIGOLD.TTF	Marigold
NCSR75W.TTF	New Century Schoolbook Bold
NCSR76W.TTF	New Century Schoolbook Bold Italic
NCSR56W.TTF	New Century Schoolbook Italic
NCSR55W.TTF	New Century Schoolbook Roman
PALR65W.TTF	Palatino Bold
PALR66W.TTF	Palatino Bold Italic
PALR46W.TTF	Palatino Italic
PALR45W.TTF	Palatino Roman
SYMPS___.TTF	SymbolPS
TIMR65W.TTF	Times* Bold
TIMR66W.TTF	Times Bold Italic
TIMR46W.TTF	Times Italic
TIMR45W.TTF	Times Roman
UNVR65W.TTF	Univers Bold
UNVR66W.TTF	Univers Bold Italic
UNVR67W.TTF	Univers Condensed Bold
UNVR68W.TTF	Univers Condensed Bold Italic
UNVR57W.TTF	Univers Condensed Medium
UNVR58W.TTF	Univers Condensed Medium Italic
UNVR55W.TTF	Univers Medium
UNVR56W.TTF	Univers Medium Italic

Ninety-two additional PS 3 fonts are also available on the CD-ROM.

Table 46: Additional PS 3 fonts

File name	Font name
PS_12639.TTF	Albertus MT
PS_12640.TTF	Albertus MT Italic
PS_14530.TTF	Albertus MT Light

File name	Font name
PS-11120.TTF	Antique Olive CompactPS
PS_11119.TTF	Antique Olive Roman
PS_11118.TTF	Antique Olive Roman Bold
PS_11846.TTF	Antique Olive Roman Italic
PS_24516.TTF	Apple Chancery Italic
PS_12704.TTF	Bodoni Poster
PS_14508.TTF	Bodoni PosterCompressed
PS_12581.TTF	BodoniPS
PS_12585.TTF	BodoniPS Bold
PS_12586.TTF	BodoniPS Bold Italic
PS_12582.TTF	BodoniPS Italic
PS_24517.TTF	Candid
PS_24518.TTF	Chicago
PS_14513.TTF	Clarendon Light
PS_10269.TTF	ClarendonPS
PS_12968.TTF	ClarendonPS Bold
PS_10369.TTF	Cooper Black
PS_10370.TTF	Cooper Black Italic
PS_14514.TTF	Copperplate32bc
PS_14515.TTF	Copperplate33bc
PS_10249.TTF	Coronet
PS_10267.TTF	Eurostile
PS_10268.TTF	Eurostile Bold
PS_14512.TTF	Eurostile Bold ExtendedTwo
PS_14511.TTF	Eurostile ExtendedTwo
PS_10267.TTF	Eurostile Medium
PS_24509.TTF	Geneva
PS_13872.TTF	GillSans
PS_13874.TTF	GillSans Bold
PS_13875.TTF	GillSans Bold Italic
PS_14053.TTF	GillSans Condensed
PS_14054.TTF	GillSans Condensed Bold
PS_14051.TTF	GillSans ExtraBold
PS_13873.TTF	GillSans Italic
PS_13870.TTF	GillSans Light
PS_13871.TTF	GillSans Light Italic
PS_12542.TTF	Goudy
PS_12544.TTF	Goudy Bold
PS_10695.TTF	Goudy Bold Italic
PS_12545.TTF	Goudy ExtraBold
PS_12543.TTF	Goudy Italic
PS_14526.TTF	Helvetica Condensed
PS_14528.TTF	Helvetica Condensed Bold
PS_14529.TTF	Helvetica Condensed Bold Italic
PS_14527.TTF	Helvetica Condensed Italic
PS_24519.TTF	Hoefler Text
PS_24521.TTF	Hoefler Text Black
PS_24522.TTF	Hoefler Text Black Italic
PS_24520.TTF	Hoefler Text Italic
PS_24523.TTF	Hoefler Text Ornaments
PS_14503.TTF	Joanna MT
PS_14505.TTF	Joanna MT Bold

File name	Font name
PS_14506.TTF	Joanna MT Bold Italic
PS_14504.TTF	Joanna MT Italic
PS_13778.TTF	Letter Gothic Italic
PS_13777.TTF	Letter GothicPS
PS_13779.TTF	Letter GothicPS Bold
PS_13780.TTF	Letter GothicPS Bold Italic
PS_12675.TTF	Lubalin Graph
PS_12677.TTF	Lubalin Graph Bold
PS_12625.TTF	Lubalin Graph Bold Italic
PS_12623.TTF	Lubalin Graph Italic
PS_94073.TTF	Marigold
PS_14525.TTF	Mona Lisa Recut
PS_24524.TTF	Monaco
PS_24510.TTF	New York
PS_12506.TTF	Optima
PS_12510.TTF	Optima Bold
PS_12511.TTF	Optima Bold Italic
PS_12507.TTF	Optima Italic
PS_14072.TTF	Oxford Italic
PS_11546.TTF	Stempel Garamond Roman Italic
PS_11545.TTF	StempelGaramond Roman
PS_11547.TTF	StempelGaramond Roman Bold
PS_11548.TTF	StempelGaramond Roman Bold Italic
PS_14507.TTF	Taffy
PS_13501.TTF	Univers 45 Light
PS_14023.TTF	Univers 45 Light Bold
PS_14024.TTF	Univers 45 Light Bold Italic
PS_13502.TTF	Univers 45 Light Italic
PS_14030.TTF	Univers 47 Condensed Light Bold
PS_14040.TTF	Univers 47 CondensedLight Bold Italic
PS_14021.TTF	Univers 55
PS_14022.TTF	Univers 55 Italic
PS_14029.TTF	Univers 57 Condensed
PS_14039.TTF	Univers 57 Condensed Italic
PS_13548.TTF	Univers Extended Italic
PS_13547.TTF	Univers ExtendedPS
PS_14481.TTF	Univers ExtendedPS Bold Italic
PS_14480.TTF	Univers ExtendedPS Italic

Installation instructions

General installation for Windows 95, 98, Me, NT 4.0, 2000, and XP

General installation instructions for the Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP operating systems are similar.

If the HP LaserJet 2300 printer is connected through a file or print server, the HP LaserJet printing system software must first be installed on the server before being installed on any client systems. If the HP LaserJet printing system software is not first installed on the server, then bidirectional communication, some Driver Autoconfiguration methods, and Printer Status and Alerts will not be available to the client systems.

For Windows NT 4.0, Windows 2000, and Windows XP, administrator rights on the system are necessary to install the software.

When the HP LaserJet printing system installer runs, the HP LaserJet uninstaller is always added to the system.

Installing from the printing-system CD-ROM

To install the HP LaserJet printing system from the CD-ROM that came with your printer, follow these instructions:

1. Close all programs.
2. Insert the CD-ROM in the CD-ROM drive.

Note

If your CD-ROM does not start automatically, click Start, click Run, and then browse to and click the SETUP.EXE file in the root directory of the CD-ROM.

3. Click **Install Printer** and follow the onscreen prompts.

Installing from a network or from downloaded files

Follow these instructions if you downloaded the files from the Web, or if you are installing the printing system files from a network. You might need to see your network administrator for the location of the printing system software file.

1. Browse to the location of the SETUP.EXE file.
2. Double-click the SETUP.EXE file.
3. Click **Install Printer** and continue to follow the instructions until the printer is installed. For detailed installation instructions, see "Detailed Windows installation."

Detailed Windows installation

This section provides information about the installation dialog box sequence for installing the HP LaserJet printing-system software in Microsoft Windows environments. You can choose to install the software by using either a Typical Installation or a Custom Installation.

Typical Installation dialog box sequence

Note

The dialog boxes shown here appear in the Windows NT 4.0 installation sequence. The order and appearance of dialog boxes can vary among operating systems.

The Typical Installation includes the following components:

- HP LaserJet PCL 6 driver.
- Screen fonts.
- Driver Autoconfiguration (in environments that support bidirectional communication). This option will not appear in unsupported bidirectional communications environments.

Note

The components of a typical installation might vary from printer to printer.

When you select the **Install Printer** option from the HP LaserJet software CD-ROM browser, the **Choose Setup Language** dialog box appears. This dialog box does not appear when the setup language is Hebrew or Arabic.

Figure 57: Choose Setup Language dialog box



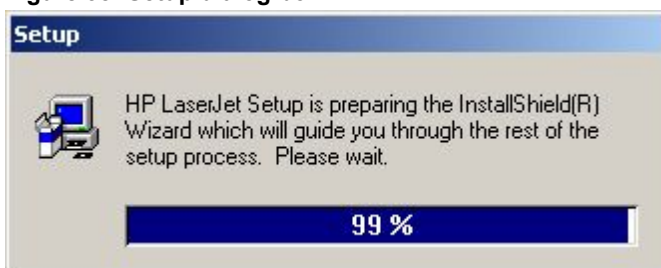
Note The Choose Setup Language dialog box lists only the languages that are available on the particular HP LaserJet software CD-ROM you are using.

Table 47: Choose Setup Language dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Choose Setup Language	Select the language for this installation from following the choices: OK [button] Cancel [button]	The installer automatically detects your computer system language and presents this choice as the default. You can select another language that is available on the CD-ROM by clicking the down arrow of the drop-down menu. Click OK to initiate the printing system setup. Click Cancel to go to the Exit Setup dialog box.

Next, the **Setup** dialog box appears.

Figure 58: Setup dialog box



Note While the Setup dialog box appears, the installer is decompressing files into the system Temp directory. The elapsed time to complete this action depends upon the performance of the system.

Table 48: Setup dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Setup	HP LaserJet 2300 Series Printing System Setup is preparing the InstallShield (R) Wizard that will guide you through the rest of the setup process. Please wait.	No user options. This is an information-only dialog box.

Figure 59: Welcome dialog box

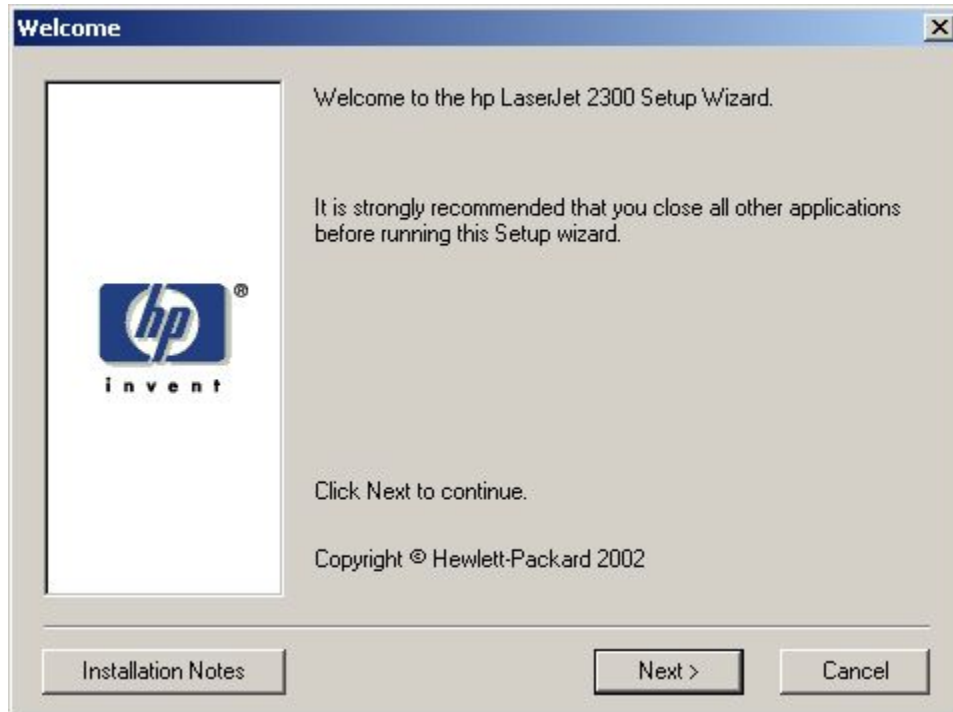


Table 49: Welcome dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Welcome	Welcome to the HP LaserJet 2300 Series Printing System Setup Wizard. It is strongly recommend that you close all other programs before running this Setup wizard. Click Next to continue. Copyright Hewlett-Packard XXXX	Next takes you to the HP Software License Agreement dialog box. Click Installation Notes to open the file LJXXXX_INSTALL_NOTES.RTF. Cancel takes you to the Exit Setup dialog box.

Figure 60: HP Software License Agreement dialog box

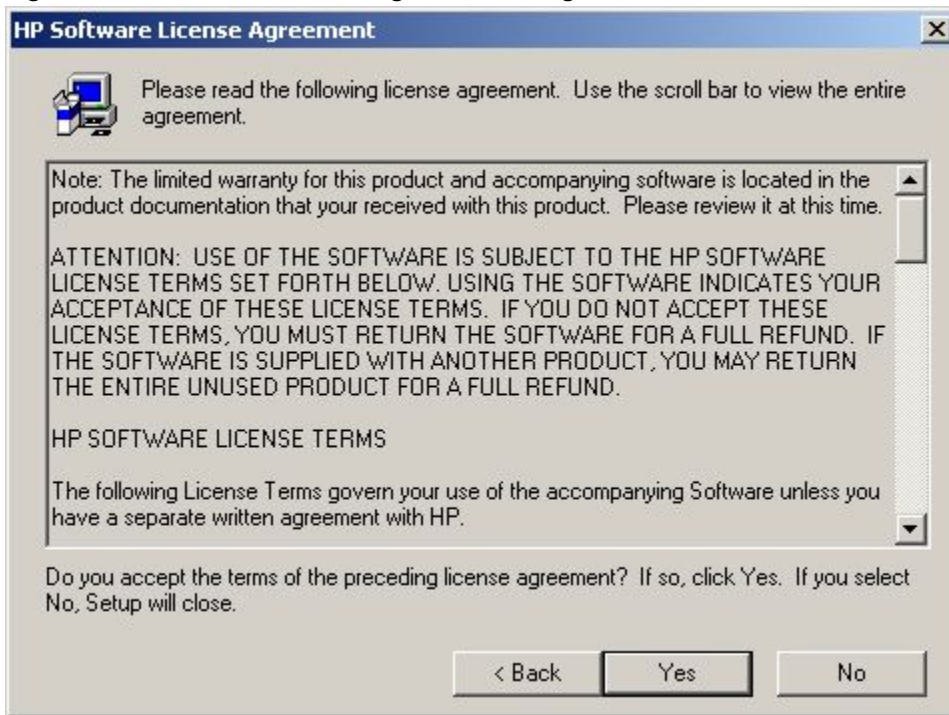


Table 50: HP Software License Agreement dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
HP Software License Agreement	<p>Please read the following license agreement. Use the scroll bar to view the entire agreement.</p> <p>Do you accept the terms of the preceding license agreement? If so, click Yes. If you select No, Setup will close.</p>	<p>Yes takes you to the Web Update dialog box.</p> <p>Back returns you to the Welcome dialog box.</p> <p>No takes you to the Exit Setup dialog box.</p>

Figure 61: Web Update dialog box

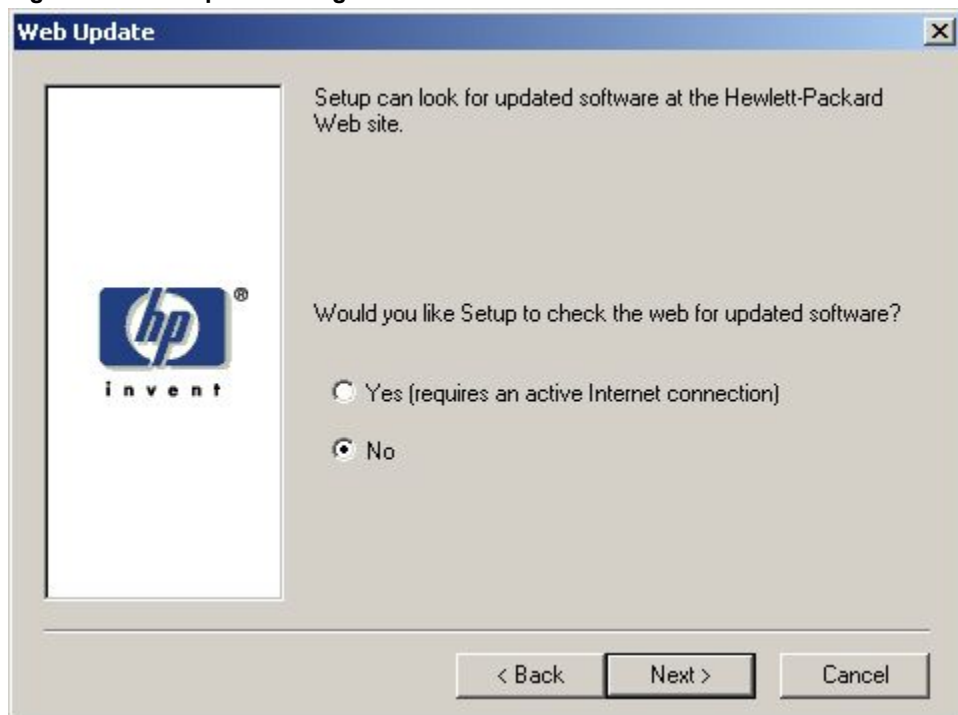


Table 51: Web Update dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Web Update	<p>Setup can look for updated software at the Hewlett-Packard Web site.</p> <p>Would you like Setup to check the Web for updated software?</p> <p>Yes (requires an active Internet connection) [option button]</p> <p>No [option button]</p>	<p>This is a conditional dialog box; that is, it appears only if the Setup program determines that an Internet connection might be available.</p> <p>If you select No, clicking Next takes you to the Type of Connection dialog box. This is the default option.</p> <p>If you select Yes, clicking Next starts the Web Update. Details of the Internet installation are not covered in this document. Web Update requires Internet Explorer 4.0 or later.</p> <p>Back returns you to the HP Software License Agreement dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 62: Type of Connection dialog box

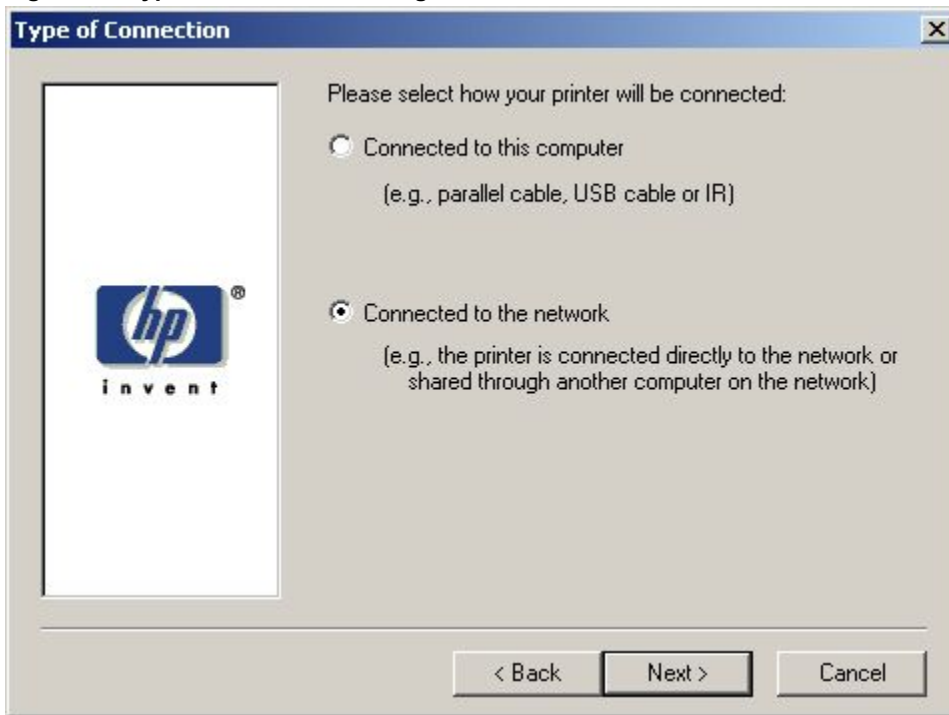


Table 52: Type of Connection dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Type of Connection	<p>Please select how your printer will be connected:</p> <p>Connected to this computer (e.g., parallel cable, USB cable or IR) [option button]</p> <p>Connected to the network (e.g., the printer is connected directly to the network or shared through another computer on the network) [option button]</p>	<p>If you select Connected to this computer (a "direct connection" using a parallel cable, universal serial bus cable, or infrared connection), clicking Next takes you to the Select Port dialog box. This is the default option.</p> <p>If you select Connected to the network, clicking Next takes you to the Network Setup dialog box.</p> <p>Back returns you to the HP Software License Agreement dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 63: Select Port dialog box

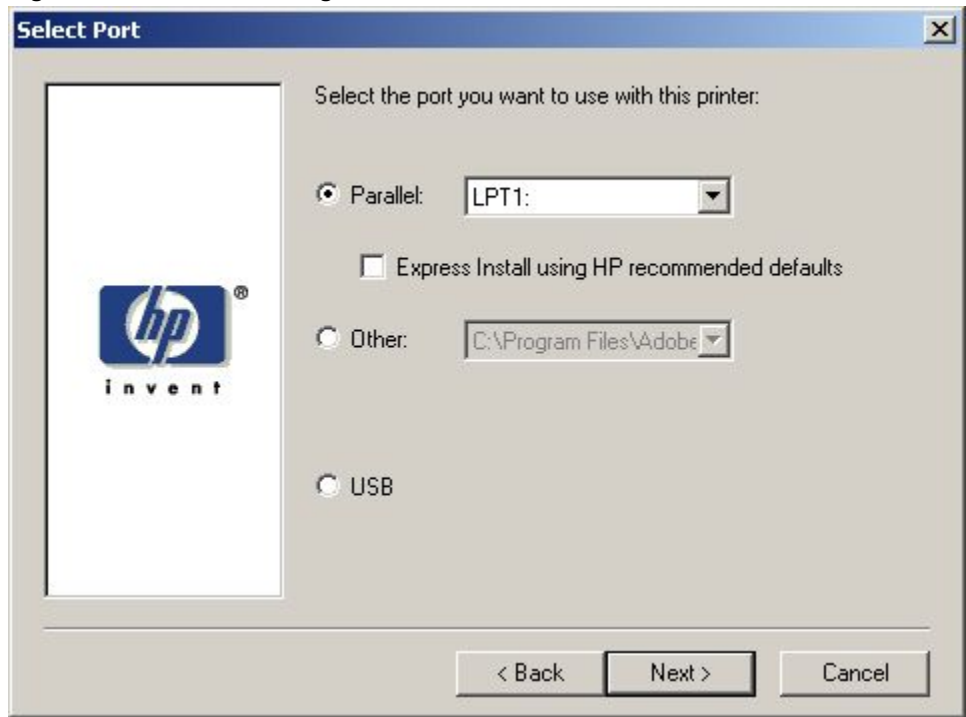


Table 53: Select Port dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Select Port (This dialog box appears if Connected to this computer was selected in the Type of Connection dialog box)	Select the port you want to use with this printer: Parallel [option button and drop-down menu] Express Install using HP recommended defaults [check box] Other [option button] Other [option button] USB [option button]	Regardless of the port chosen (Parallel, Other, or USB), clicking Next takes you to the printer Model dialog box. Back returns you to the Type of Connection dialog box. Selecting the Express Install check box, which is also selected by default, installs the PCL 6 driver. Cancel takes you to the Exit Setup dialog box.

Figure 64: Network Setup dialog box

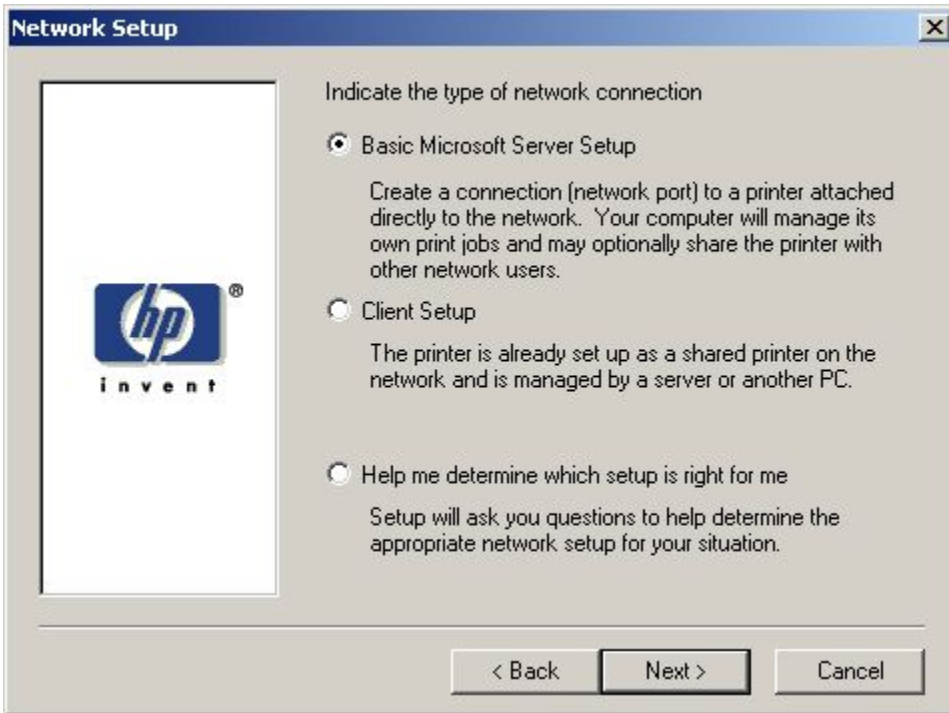


Table 54: Network Setup dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Network Setup	<p>Indicate the type of network connection</p> <p>Basic Microsoft Server Setup [option button]</p> <p>Create a connection (network port) to a printer attached directly to the network. Your computer will manage its own print jobs and may optionally share the printer with other network users.</p> <p>Client Setup [option button]</p> <p>The printer is already set up as a shared printer on the network and is managed by a server or another PC.</p> <p>Help me determine which setup is right for me [option button]</p> <p>Setup will ask you questions to help you determine the appropriate network setup for your situation.</p>	<p>If you select Client Setup, Next takes you to the Specify Network Path dialog box, and then to the Installation Type dialog box.</p> <p>If you select Help me, Next initiates a series of question dialog boxes that help you determine the best connection type option to follow. This series begins with the Cable Type Selection dialog box.</p> <p>Back returns you to the Type of Connection dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 65: Network Printer Configuration dialog box

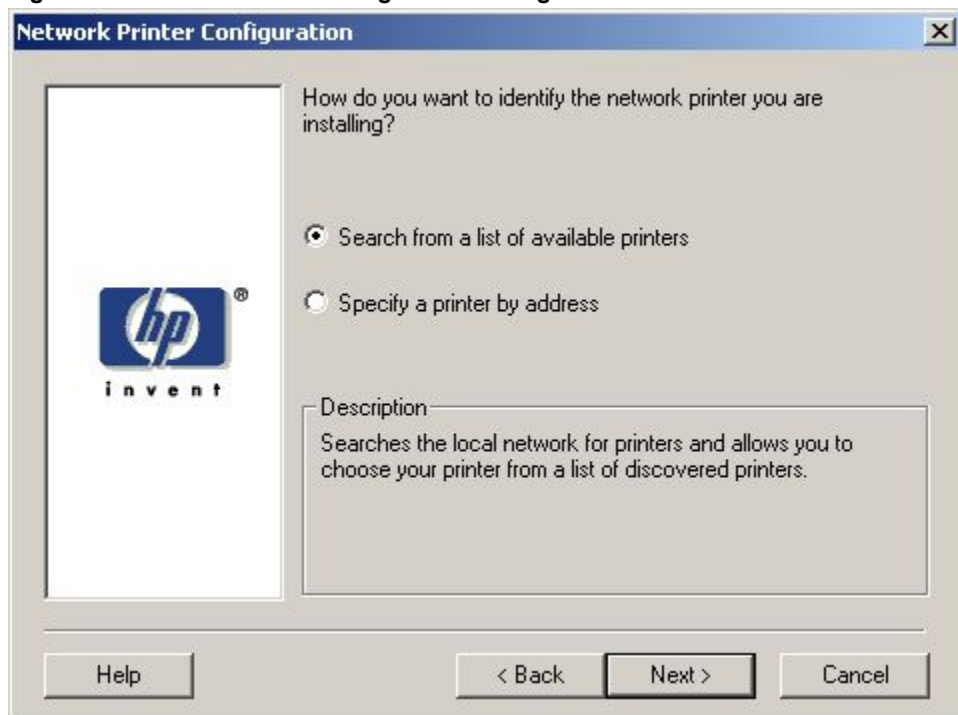


Table 55: Network Printer Configuration dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Network Printer Configuration	<p>How do you want to identify the network printer you are installing?</p> <p>Search from a list of available printers [option button]</p> <p>Specify a printer by address</p> <p>Description</p>	<p>If you select Search from a list of available printers, Next takes you to the Identify Printer dialog box.</p> <p>If you select Specify a printer by address, Next takes you to the Identify Printer dialog box.</p> <p>Always select Specify a printer by address when the printer address is available. On large networks, selecting Search from a list of available printers might not reveal the location of a specific printer.</p> <p>Back returns you to the Network Setup dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 66: Identify Printer dialog box (1 of 2)

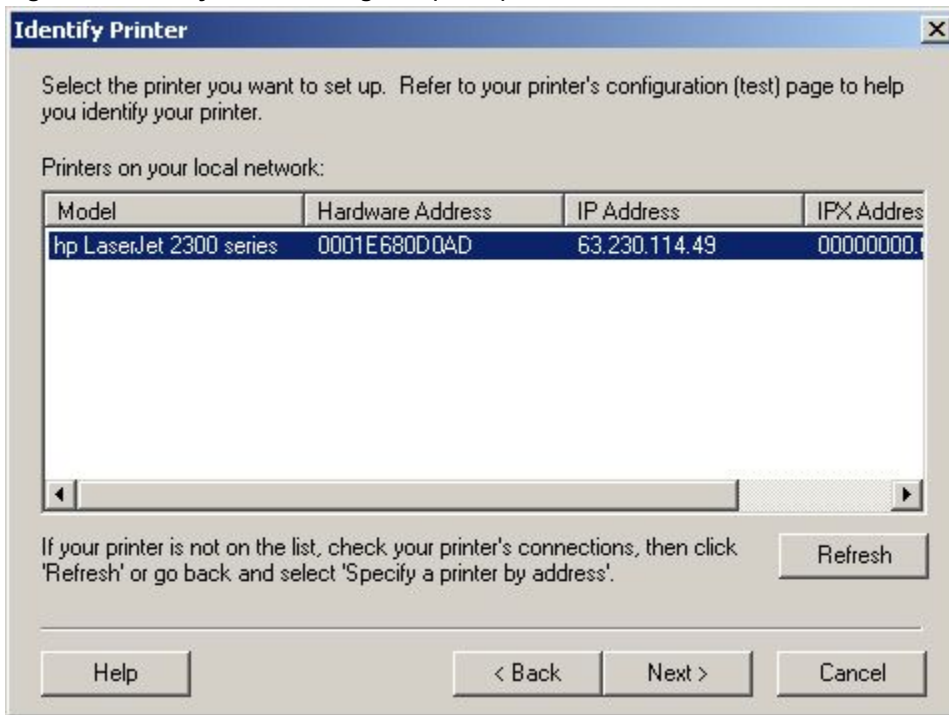


Figure 67: Identify Printer dialog box (2 of 2)

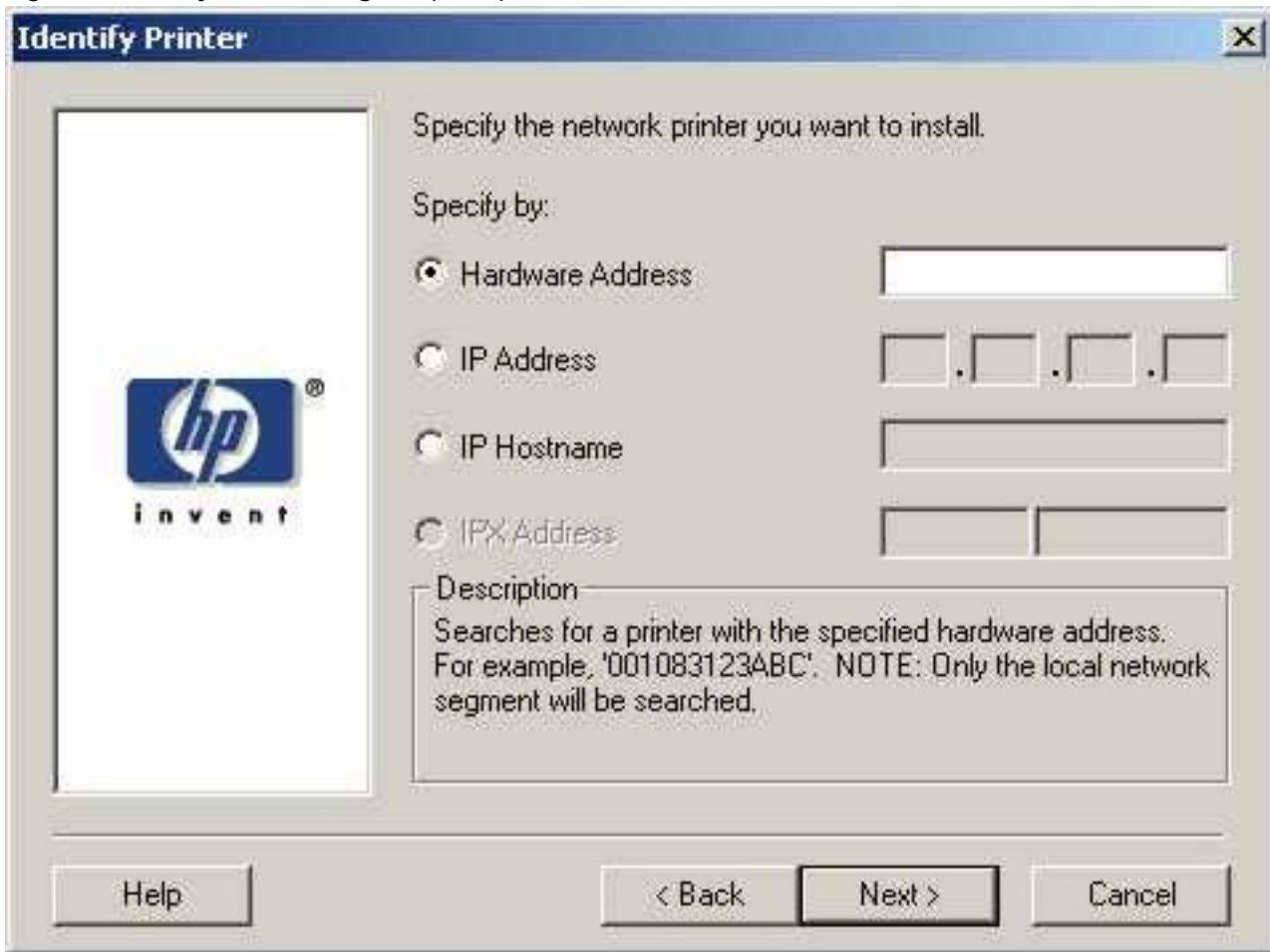


Table 56: Identify Printer dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Identify Printer	<p>Select the network printer you want to install.</p> <p>Printers on your local network: If your printer is not found on the list, click 'Refresh', or go back and click 'Specify a printer by address'.</p> <p>Specify the network printer you want to install.</p> <p>Specify by:</p> <p>Hardware Address. [option button] IP Address [option button] IP Hostname [option button] IPX Address [option button] Description</p>	<p>If you identify the printer by selecting from the list, and your HP LaserJet printer appears in the list and is selected, Next takes you to the Set Network Communication Mode dialog box.</p> <p>If your HP LaserJet 2300 printer is not found on the network, click Refresh or go back to the Network Printer Configuration dialog box to specify the device by address.</p> <p>Refresh updates the list of network printers.</p> <p>If you identify the printer by specifying a specific network address, Next takes you to the Set Network Communication Mode dialog box.</p> <p>Back returns you to the Network Printer Configuration dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 68: Specify Network Path dialog box

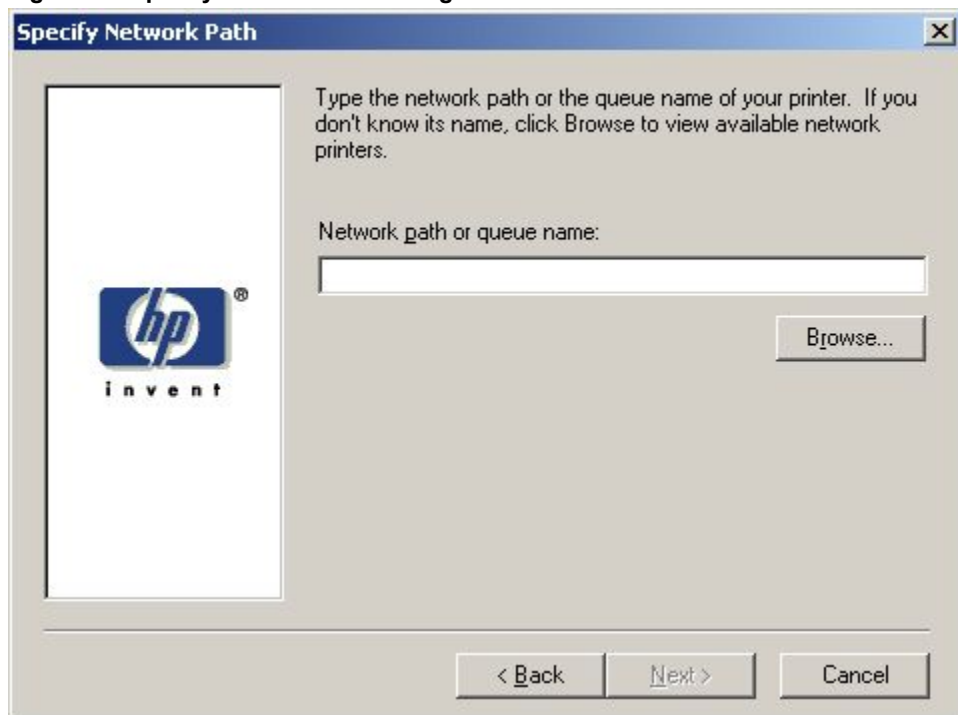


Table 57: Specify Network Path dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Specify Network Path	Type the network path or the queue name of your printer. If you don't know its name, click Browse to view the available network printers. Network path or queue name: Browse ...[button]	If you type a network path or queue name, Next takes you to the Cable Type Selection dialog box. NOTE: If you reached this dialog box from the Connected to Selection dialog box, Next takes you to the Installation Type dialog box. Click Browse to bring up a list of devices that are available on the network. Back returns you to the Network Setup dialog box. Cancel takes you to the Exit Setup dialog box.

Figure 69: Set Network Communication Mode dialog box

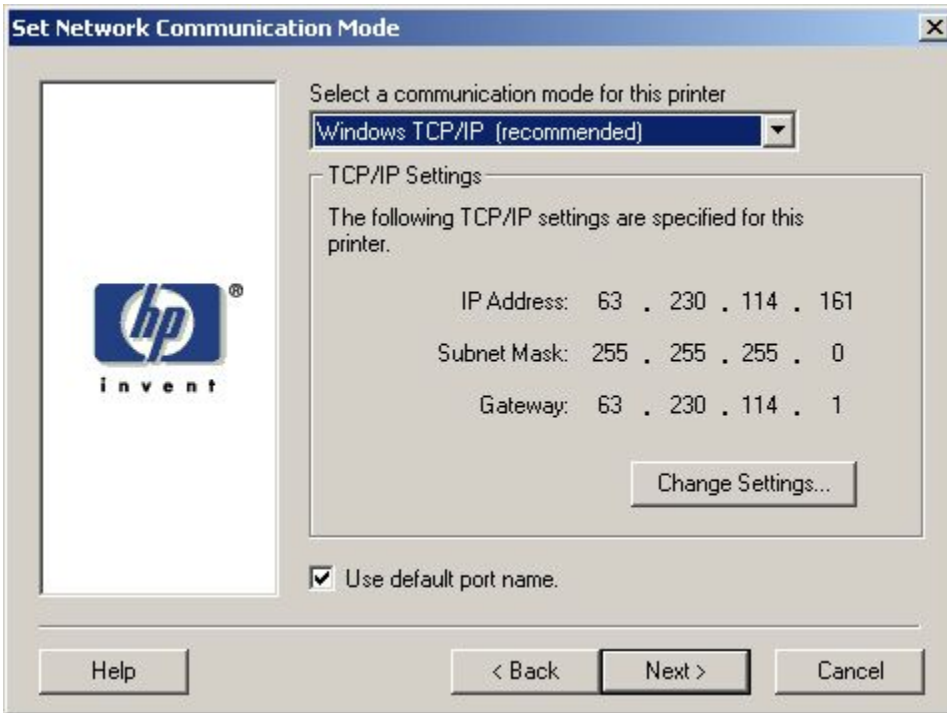


Table 58: Set Network Communication Mode dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Set Network Communication Mode	Select a communication mode for this printer. TCP/IP Settings The following TCP/IP settings are specified for this printer. [Conditional fields showing TCP/IP or other address information] Change Settings... [button] Use default port name. [checkbox]	Select a communication mode. Windows TCP/IP (recommended) is the default setting. Click Change Settings... to change the TCP/IP address, subnet mask, or gateway. After you have specified a communications mode, Next takes you to the printer Model dialog box. Back returns you to the Identify Printer dialog box. Cancel takes you to the Exit Setup dialog box.

Figure 70: Printer Model dialog box dialog box

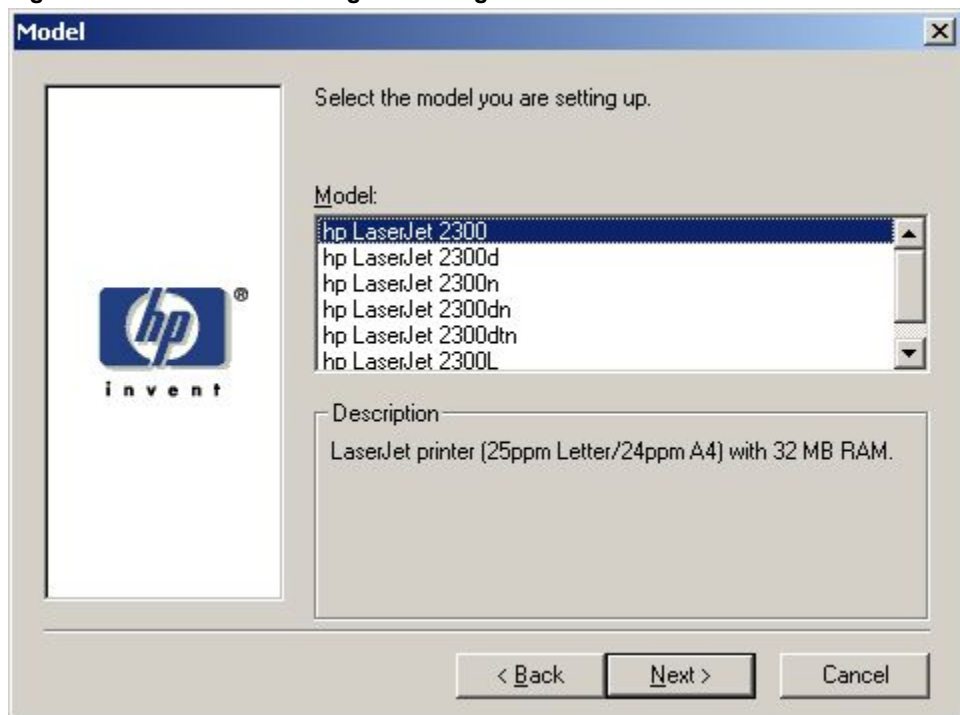
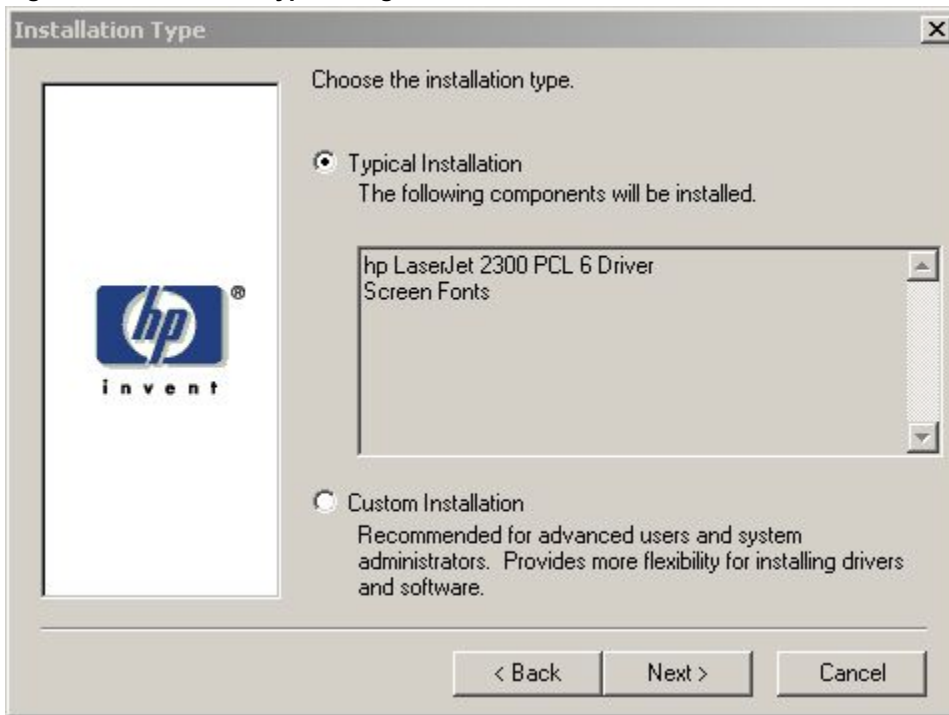


Table 59: Printer Model dialog box text string

Title of dialog box	Text in dialog box	User options and descriptions
Model	Select the model you are setting up. Model: Description	Next takes you to the Installation Type dialog box. Back returns you to the Select Port dialog box when you are performing a direct connection installation, or to the Set Network CommunicationMode dialog box when you are performing a network installation. Cancel takes you to the Exit Setup dialog box.

Figure 71: Installation Type dialog box



Note The components of a Typical Installation might vary from printer to printer.

Table 60: Installation Type dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Installation Type	<p>Choose the installation type.</p> <p>Typical Installation</p> <p>Custom Installation</p> <p>Recommended for advanced users and system administrators. Provides more flexibility for installing drivers and software.</p>	<p>If you select Typical Installation, Next takes you to the Printer Name dialog box.</p> <p>If you select Custom Installation, Next takes you to the Components dialog box.</p> <p>Back returns you to the printer Model dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 72: Printer Name dialog box

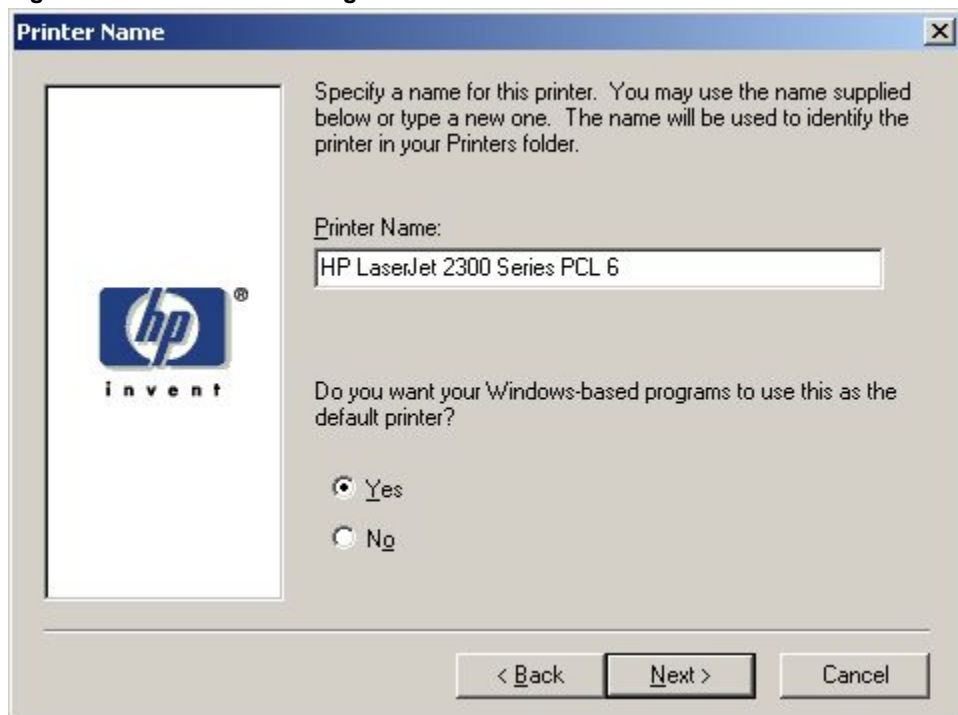
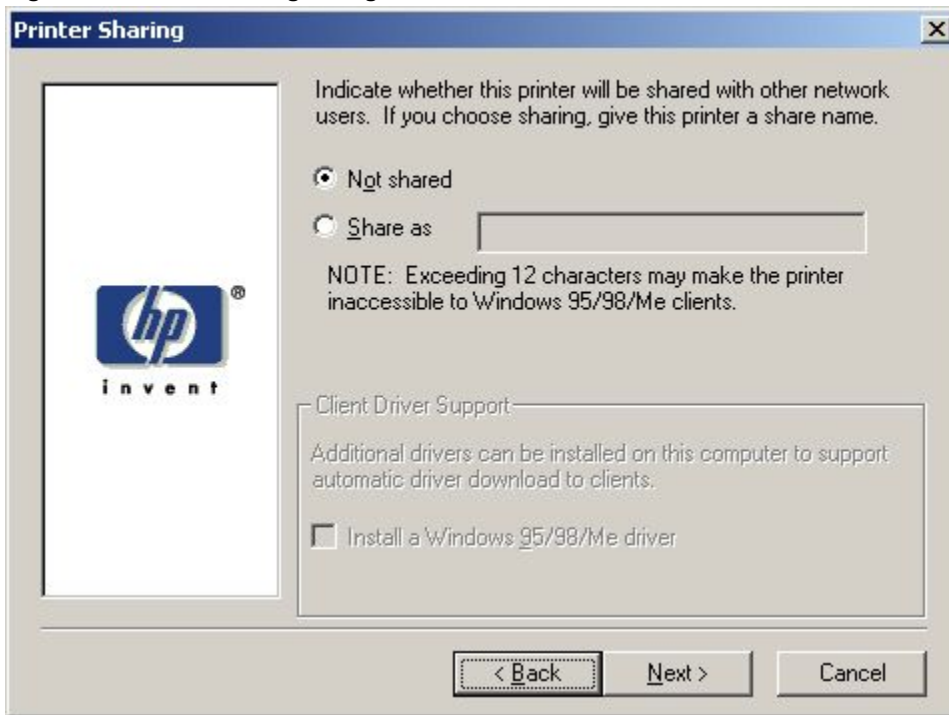


Table 61: Printer Name dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Printer Name	<p>Specify a name for this printer. You may use the name supplied below or type a new one. The name will be used to identify the printer in your Printers folder.</p> <p>Printer Name:</p> <p>Do you want your Windows-based programs to use this as the default printer?</p> <p>Yes [option button]</p> <p>No [option button]</p>	<p>Next takes you to the Printer Sharing dialog box.</p> <p>The default printer name in the text field is HP LaserJet 2300 PCL 6.</p> <p>NOTE: A printer name is created for each driver that is installed. The driver type is appended to the name specified in the Printer Name: field. For example, HP LaserJet 9000 PCL 6.</p> <p>Back returns you to the Installation Type dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 73: Printer Sharing dialog box



Note When you do not share the printer, additional driver support is not available. If you share the printer on Windows NT 4.0, Windows 2000, or Windows XP operating systems by selecting Share as, you must type a name. You can also provide additional printer driver support for other operating systems.

Table 62: Printer Sharing dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Printer Sharing	<p>Indicate whether this printer will be shared with other network users. If you choose sharing, give the printer a share name.</p> <p>Not shared [option button]</p> <p>Share as [option button and text box]</p> <p>NOTE: Exceeding 12 characters may make the printer inaccessible to Windows 95/98/Me clients.</p> <p>Client Driver Support</p> <p>Additional drivers can be installed on this computer to support automated driver download to clients.</p> <p>Install a Windows 95/98/Me driver. [check box]</p>	<p>Next starts the file copy process.</p> <p>Back returns you to the Printer Name dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 74: Finish dialog box

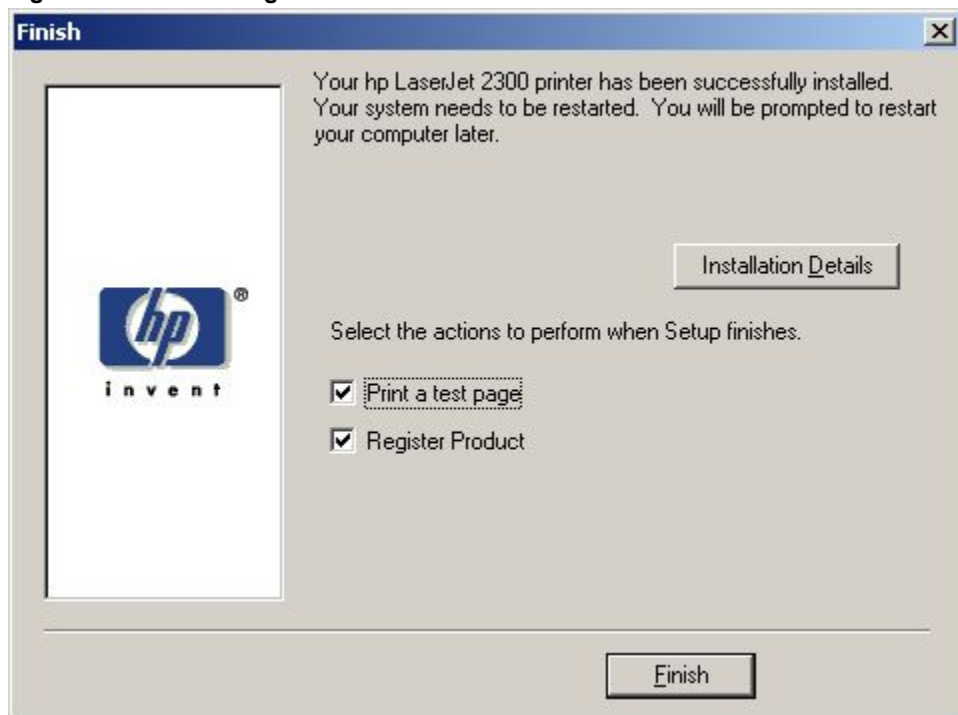


Table 63: Finish dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Finish	<p>Your hp LaserJet printer has been successfully installed. Your system needs to be restarted. You will be prompted to restart your computer later.</p> <p>Installation Details</p> <p>Select the actions to perform when Setup finishes.</p> <p>Print a test page [check box]</p> <p>Web Registration [check box]</p>	<p>Finish completes the installation process and initiates test-page printing and Web-page registration if those options are selected.</p> <p>Click Installation Details to open a dialog box that shows installation details.</p> <p>NOTE: If the computer must be restarted, the Print a test page and Web registration functions will occur after the computer is restarted.</p>

Figure 75: Exit Setup dialog box

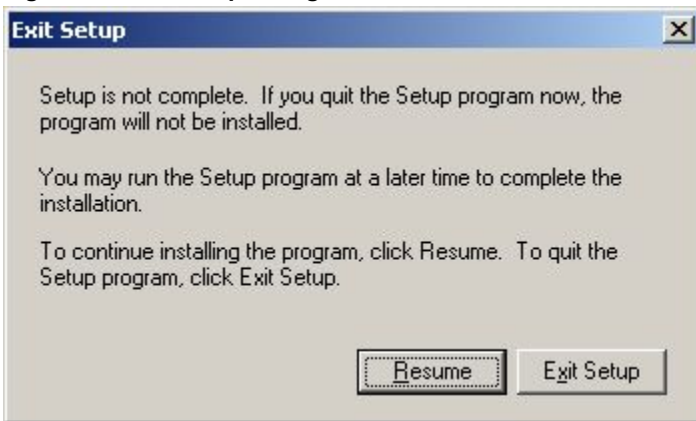


Table 64: Exit Setup dialog box text strings

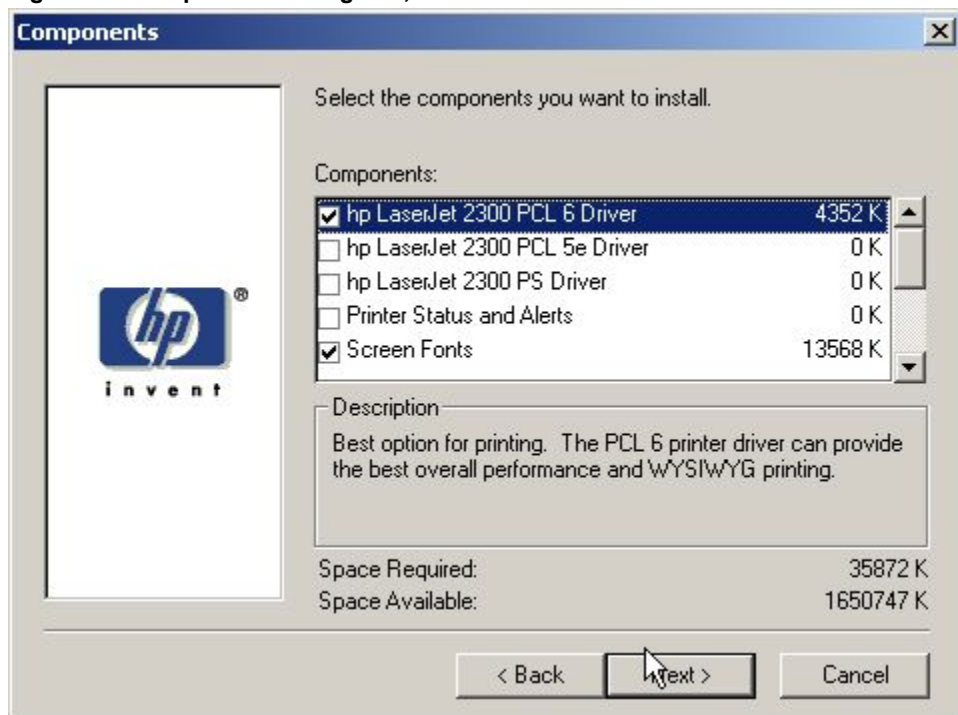
Title of dialog box	Text in dialog box	User options and descriptions
Exit Setup	<p>Setup is not complete. If you quit the Setup program now, the program will not be installed.</p> <p>You may run the Setup program at a later time to complete the installation.</p> <p>To continue installing the program, click Resume. To quit the Setup program, click Exit Setup.</p>	<p>Exit Setup closes the Installer program.</p> <p>Resume takes you to the dialog box that you most recently canceled.</p>

Custom installation

The custom installation gives you the option of installing the following components:

- HP LaserJet 2300 PCL 6 Driver (for direct-connect and network installations)
- HP LaserJet 2300 5e Driver (for direct-connect and network installations)
- HP LaserJet 2300 PS Driver (for direct-connect and network installations)
- Printer Status and Alerts (for direct-connect [for Job Status only] and for network installations)
- Screen fonts (for direct-connect and network installations)
- User Guide (the *HP LaserJet 2300 User Guide*, for direct-connect and network installations)

Figure 76: Components dialog box, Custom Installation



Note The components of a Custom Installation might vary from printer to printer.

Table 65: Custom Installation dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Components	Select the components you want to install. Components: Description Space Required Space Available	Next takes you to the Printer Name dialog box. Back returns you to the Installation Type dialog box. Cancel takes you to the Exit Setup dialog box. NOTE: Custom Installation automatically selects the options that are available in the Typical Installation. You can also select from among the following components: PCL 6 driver PCL 5e driver PostScript driver Printer Status and Alerts Screen Fonts User Guide

Product registration (HP WebReg)

The HP LaserJet software CD-ROM browser provides two options for registering the HP LaserJet 2300 printer:

- registration through the Internet to the <http://register.hp.com> Web site
- registration by e-mail

Note

Web registration for Hebrew and Arabic is in English.

To gain access to the product-registration options, go to the main menu of the HP LaserJet software CD-ROM browser and click **Register Product**. This starts the HP WebReg utility and opens the following window.

Figure 77: Hewlett-Packard's Electronic Registration dialog box



Table 66: Hewlett-Packard's Electronic Registration text strings

Title of dialog box	Text in dialog box	User options and descriptions
Hewlett-Packard's Electronic Registration	<p>Welcome to HP's registration. This information is confidential and for HP registration purposes only. This is the fastest and easiest way for you to join our select group of HP owners who register to receive:</p> <p>Direct-to-you details about:</p> <ul style="list-style-type: none"> • Ideas and ways to use your new HP printer. • Other exciting HP products. • News on emerging technologies. <p>Technical support updates.</p> <p>If you have internet access and would like to register via our World Wide Web registration page, click here:</p> <p>WWW Registration[button] [default option]</p> <p>If you do not have internet access or would rather register via email, please click here to continue with Hewlett-Packard's Electronic Registration.</p> <p>Exit[button]</p> <p>Electronic Registration [button]</p>	<p>Click the WWW Registration button to open the default Web browser and connect to the product registration page at the http://register.hp.com Web site.</p> <p>Click the Electronic Registration button to open the Welcome to Hewlett-Packard's Registration dialog box.</p> <p>Click the Exit button to open the Exiting Registration! dialog box.</p>

Figure 78: Welcome to Hewlett-Packard's Registration dialog box

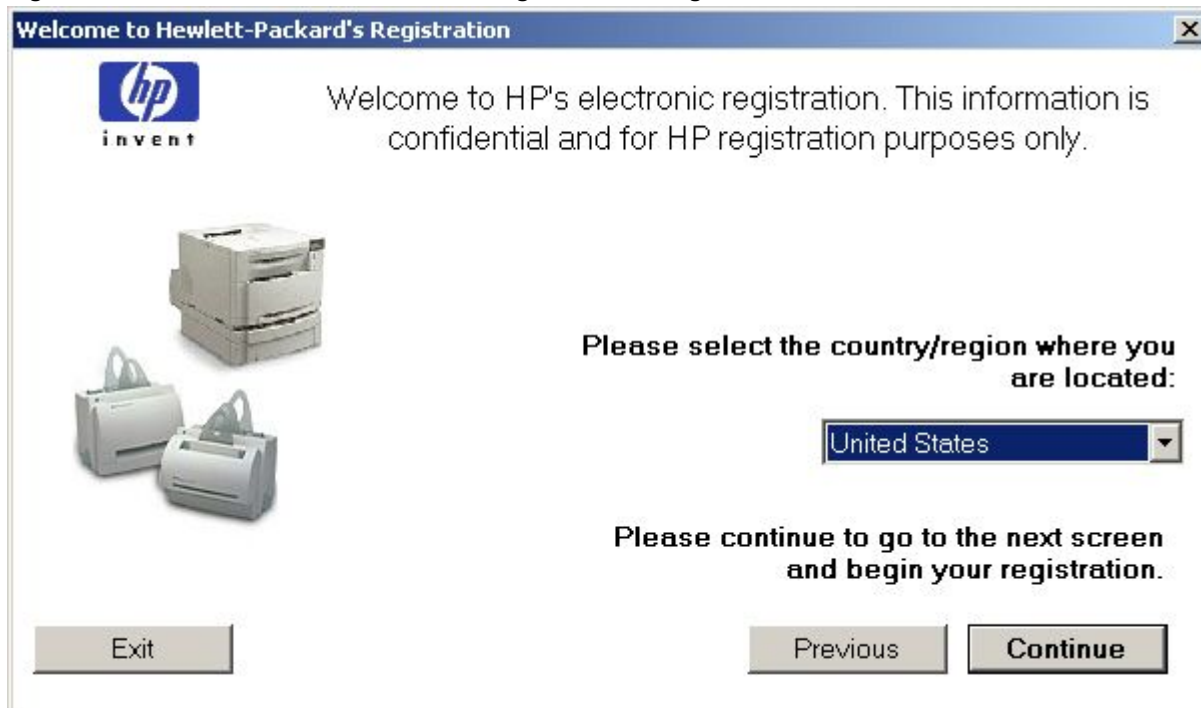


Table 67: Welcome to Hewlett-Packard's Registration dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Welcome to Hewlett-Packard's Registration	<p>Welcome to HP's electronic registration. This information is confidential and for HP registration purposes only.</p> <p>Please select the country/region where you are located: [drop-down menu]</p> <p>Please continue to go to the next screen and begin your registration</p> <p>Exit [button]</p> <p>Previous [button]</p> <p>Continue [button]</p>	<p>Click the Previous button to return to the Hewlett-Packard's Electronic Registration dialog box.</p> <p>Click the Continue button to start a sequence of three screens. The first screen provides fields for typing your registration information. The second screen prompts you for information about your HP LaserJet 2300 printer. The third screen gives you the option of sending the e-mail message to register the printer.</p> <p>Click the Exit button to open the Exiting Registration! dialog box.</p>

Figure 79: Hewlett-Packard's Electronic Registration dialog box (1 of 3)

Hewlett-Packard's Electronic Registration

* Please complete the following (required fields are denoted by a blue asterisk):

* First Name Middle Initial * Last Name

Company/Organization Name Building/Mail Stop/Dept.

* Mailing Address

* City/Town * State * Zip Code

E-mail Address Telephone Number Extension

Occasionally HP communicates information on products and/or programs that may be relevant to you. Please select the method(s) of communication HP may use to contact you. (check all that apply)

E-mail Mail Telephone

Please don't contact me unless I specifically request it

Exit Previous **Continue**

Table 68: Hewlett-Packard's Electronic Registration dialog box text strings (1 of 3)

Title of dialog box	Text in dialog box	User options and descriptions
Hewlett-Packard's Electronic Registration	<p>Please complete the following (required fields are denoted by a blue asterisk):</p> <p>First name*</p> <p>Middle Initial</p> <p>Last Name*</p> <p>Company/Organization Name*</p> <p>Building/Mail Stop/Dept.</p> <p>Mailing Address*</p> <p>City/Town*</p> <p>State* [drop-down menu]</p> <p>Zip Code*</p> <p>E-mail Address</p> <p>Telephone Number</p> <p>Extension</p> <p>Occasionally HP communicates information on products and/or programs that may be relevant to you. Please select the method(s) of communication HP may use to contact you. (check all that apply)</p> <p>E-mail [check box]</p> <p>Mail [check box]</p> <p>Telephone [check box]</p> <p>Please don't contact me unless I specifically request it [check box]</p> <p>Exit [button]</p> <p>Previous [button]</p> <p>Continue [button]</p>	<p>Click the Previous button to go back to the Welcome to Hewlett-Packard's Registration dialog box.</p> <p>Click the Continue button to go to the second screen in this sequence.</p> <p>Click the Exit button to open the Exiting Registration! dialog box.</p>

Figure 80: Hewlett-Packard's Electronic Registration dialog box (2 of 3)

hp
invent

Please tell us about the Hewlett-Packard product that you purchased:

* Where will your new Hewlett-Packard product primarily be used?

* Which Hewlett-Packard product did you purchase?

* When did you purchase your Hewlett-Packard product?

* Serial Number:

Exit Previous Continue

Table 69: Hewlett-Packard's Electronic Registration dialog box text strings (2 of 3)

Title of dialog box	Text in dialog box	User options and descriptions
Hewlett-Packard's Electronic Registration	Please tell us about the Hewlett-Packard product you purchased: Where will your new Hewlett-Packard product primarily be used? * [drop-down menu] Which Hewlett-Packard product did you purchase?* [drop-down menu] When did you purchase your Hewlett-Packard product?* [text box] Serial Number* [text box] Approximately how many employees work at your...site? Worldwide? What is your job responsibility as it relates to HP products? Exit [button] Previous [button] Continue [button]	Click the Previous button to go back to the first screen in this sequence. Click the Continue button to go to the third screen in this sequence. Click the Exit button to open the Exiting Registration! dialog box. Type the date you purchased your Hewlett-Packard printer. Type the printer's serial number. The questions about the number of employees and your job responsibility appear only if you answered that you will use your Hewlett-Packard 2300 printer primarily for business or telecommuting. Drop-down menus that contain possible answers are provided for your convenience. (Answering these questions is optional in the registration process.)

Figure 81: Hewlett-Packard's Electronic Registration dialog box (3 of 3)

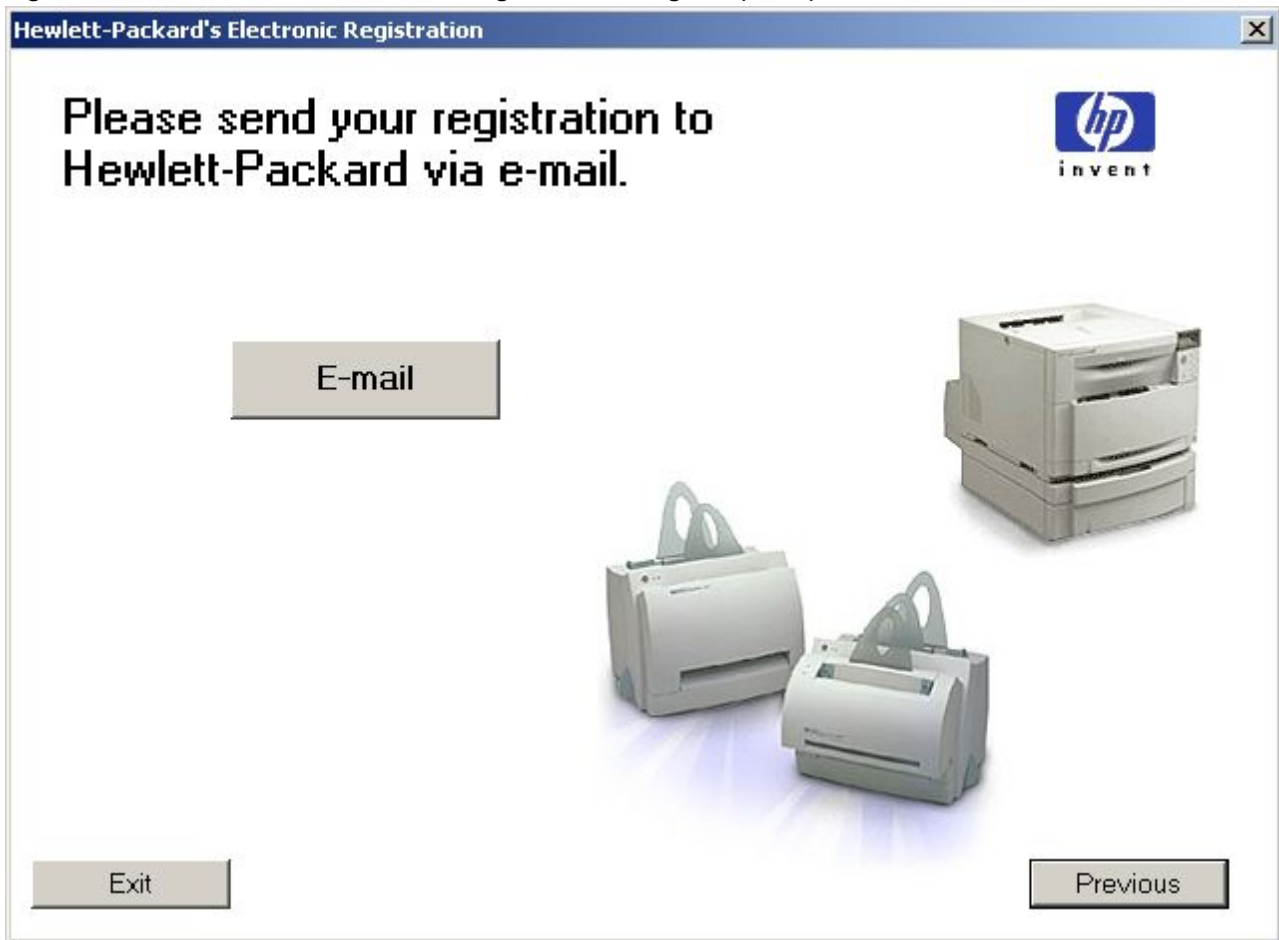


Table 70: Hewlett-Packard's Electronic Registration dialog box text strings (3 of 3)

Title of dialog box	Text in dialog box	User options and descriptions
Hewlett-Packard's Electronic Registration	<p>Please send your registration to Hewlett-Packard via e-mail.</p> <p>E-mail [button] [default option]</p> <p>Exit [button]</p> <p>Previous [button]</p>	<p>Click the E-mail button to send an e-mail to HP that contains the registration information you specified. A thank-you screen appears when the e-mail is sent.</p> <p>Click the Previous button to go back to the second screen in this sequence.</p> <p>Click the Exit button to open the Exiting Registration! dialog box.</p>

Figure 82: Exiting registration! dialog box

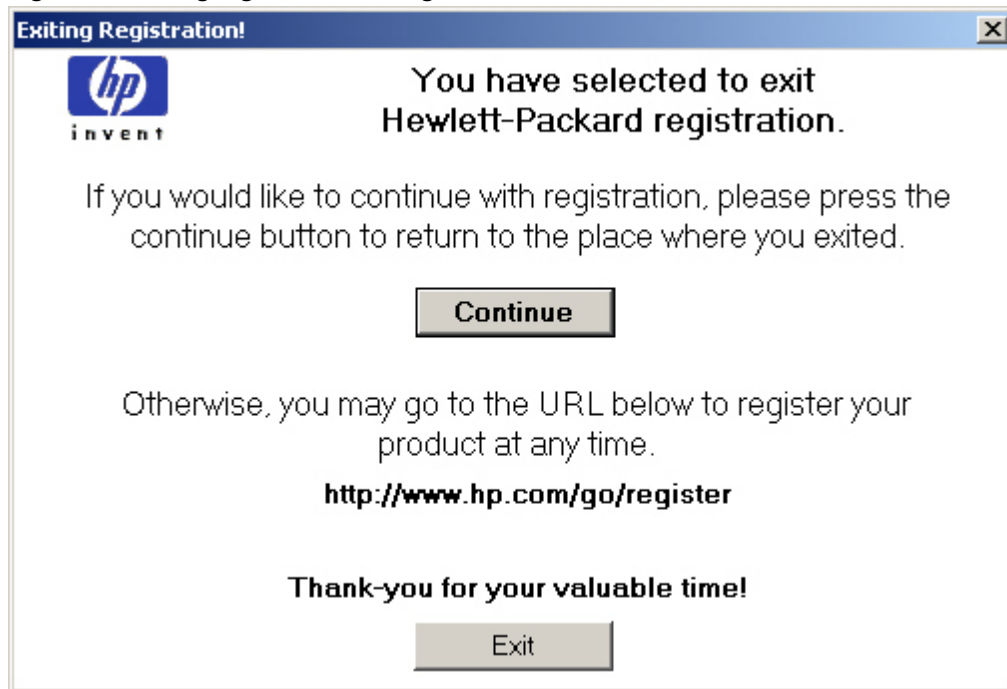


Table 71: Exiting registration text strings

Title of dialog box	Text in dialog box	User options and descriptions
Exiting Registration!	<p>You have selected to exit Hewlett-Packard's registration.</p> <p>If you would like to continue with registration, please press the continue button to return to the place where you exited.</p> <p>Continue [button] [default option]</p> <p>Otherwise, you may go to the URL below to register your product at any time.</p> <p>http://register.hp.com/go/register</p> <p>Thank you for your valuable time!</p> <p>Exit [button]</p>	<p>Click the Continue button to go back to the screen where you were when you clicked the Exit button.</p> <p>Click the Exit button to close the HP WebReg utility.</p>

Customization Utility for Windows

Use the **Customization Utility** button to create your own customized installation of printing-system components. To start the utility, click **Customization Utility** on the main menu of the HP LaserJet software CD-ROM browser. The following are available options for creating a customized installation.

- **Create Customized Installer.** Using this option, you can create either an interactive or silent (unattended) installer customized by any of the following selections:
 - Language
 - Operating System
 - Printer Model
 - Components
- **Copy Entire Printing System installer.** Using this option, you can copy the HP LaserJet printing system installer to a selected form of high-capacity media such as a network drive. The customization utility prompts these choices:
 - Language
 - Operating System
 - Destination Path

Silent installer

You can use the HP LaserJet printing system software to create a silent installer that runs the installation program without user interaction. This installation method is useful when you want to use the default selections that the installer provides or when you want to run the installation without being prompted. You also have the option of creating a custom disk image that contains specific drivers and utilities, allowing users to run the installer without further interaction.

Silent installation can be performed in two ways:

- customized silent installer
- command-line silent installer

Customized silent installer

Use this option to select the printing-system components to include in the silent installation. You can select the operating system, language, printer models, drivers, utilities, and documentation to install.

HP preconfiguration

HP preconfiguration is a software architecture and set of tools that you can use to customize HP and third-party software and distribute the software within managed corporate printing environments. Network administrators can use HP preconfiguration to preconfigure printer drivers and other printing software and to manage that software on client workstations remotely. With HP preconfiguration, you can retain customized printer settings during driver updates, rather than replace those settings with the default settings of the new driver.

Command-line silent install

This method cannot be customized. It installs only the printing-system components that are included in the Typical Installation.

Note Values that follow equal signs (=) in a command line must not contain intervening spaces.

Method 1: Command line

Type the following at the command line (do not type the beginning and ending quotation marks):

```
"<CD-ROM-ROOT>/SETUP/SETUP.EXE /U /PORT=XXXX /PRINTER=N /PD=N"
```

Method 2: SETUP.LST

Use the SETUP.LST file to specify command-line arguments to the installer for an unattended installation. You can send command-line arguments in one of the following ways:

- Send the command directly to the installer.
- Send the command using the SETUP.LST file located in the setup directory.
- Use a combination of the two methods.

For example, this file contains two options: **/port** and **/printer**. The installer operates normally because the **/u** option has not been specified. If you use **setup /u** for the installer, it operates in unattended mode and uses the two values specified in the defaults section of the SETUP.LST file. If you use **setup /u /printer=4** for the installer, it operates in unattended mode and chooses the HP LaserJet 2300dtn. The options specified on the command line override the options that are specified in the SETUP.LST file.

The available options can also include the **/u** option. Using this option key makes the installer always operate in the unattended mode. The following descriptions explain the available options:

- **/u** signals the installer to use the specified port and printer given on the command line (or in this file), and to use all default selections. Installation then proceeds without prompting the user.
- **/port=xxxx** is used to specify the default port when performing an unattended installation. The value specified by **xxxx** should be a valid port and should contain no spaces; for example, **LPT1**.
- **/printer=n** is used to specify the default printer when doing an unattended installation. The value specified by "n" is an integer that references the list of available printers. For example, the following printers are available for the HP LaserJet 2300 printer installation:

0 = HP LaserJet 2300 printer

1 = HP LaserJet 2300d printer

2 = HP LaserJet 2300n printer

3 = HP LaserJet 2300dn printer

4 = HP LaserJet 2300dtn printer

5 = HP LaserJet 2300L printer

- **/pd=n** is used to specify whether the selected printer is the default printer, when you have multiple printers connected to your network. The value specified by **n** is an integer (that is, 0 or 1). For this argument, typing 1 (one) sets the selected printer as the default printer. Typing zero (0) or not specifying a value at all sets the printer as a non-default printer.

You can preset these options in the SETUP.LST file that is located in the root directory of the HP LaserJet software CD-ROM. In the defaults section, add the following syntax:

[Defaults]

Options= /port=<value> /printer=<number> /pd=<number>

For example, <value> = LPT1,

Driver-only installation

1. Close all software programs.
2. In Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000 OSs, click **Start**, click **Settings**, and then click **Printers**. In Windows XP, click **Start**, click **Control Panel**, click **Printers and Faxes** (Windows XP Professional) or **Printers and other hardware devices** (Windows XP Home).
3. Double-click **Add Printer**.
4. Answer the questions in the **Add Printer Wizard** dialog box until you reach the screen that shows the printer manufacturer list.
5. Click **Have Disk**.
6. Browse to the driver location using one of these options: With **Inbox CD-ROM**, browse to the appropriate directory for your language, operating system, and driver, in this order. With **Internet download**, browse to the folder where the Web files were downloaded and decompressed.

Note

Navigating to the operating system before the language (when using the Inbox CD-ROM option) will lead you to the incorrect .INF file.

7. Select the appropriate information (.INF) file.
8. Click **Open**, and then click **OK**.
9. Select the appropriate printer.
10. Follow the remaining instructions to complete the printer installation. At this point, the driver has been copied to your hard disk and is included with the list of installed printers.

Point and Print installation for Windows 95, 98, Me, NT 4.0, 2000, and XP

The following information helps you install a printer driver using the Microsoft Point and Print function when you cannot see the printer on the network.

Point and Print is a Microsoft term that describes a two-step driver installation process. The first step is to install a shared driver on a network print server. The second step is to "point" to the print server from a network client so that the client can use the print driver.

Note

This section outlines the procedures for installing print drivers by using Point and Print. If these procedures are not successful, contact Microsoft. Hewlett-Packard provides drivers that are compatible with the Point and Print feature, but this is a function of the Microsoft operating systems, not of HP print drivers. Windows NT 4.0, Windows 2000, and Windows XP drivers from HP are supported only on Intel X86 (R) processor types. Any other processor types must use Windows NT 4.0 drivers from Microsoft. To install the printer driver on a Windows NT 4.0, Windows 2000, or Windows XP server, you must have administrator privileges. To completely install the Windows NT 4.0 printer driver on the Windows NT 4.0 server (or the Windows 2000 printer driver on the Windows 2000 server), you must have administrator privileges on the server. The Windows NT 4.0 Printer .INF file (or the Windows 2000 Printer .INF file) must contain the same printer name as the Windows 95, Windows 98, or Windows Me printer .INF file. Point and Print installation of a PS driver is supported only with a Microsoft Windows 95, Windows 98, or Windows Me PS driver version 4.0 or later.

For all operating systems, use the Add Printer Wizard to install the appropriate operating system driver on the server and client machines, as shown in the following table.

Table 72: Windows servers with Windows clients

Computer function	Steps
Server and clients	1. Click Start , click Settings , and then click Printers .
Server and clients	2. In the Printers folder, double-click the Add Printer icon to start the Add Printer Wizard.
Server only	3. Click Next , and then click Local Printer . Click Next . If your operating system is Windows 95, Windows 98, or Windows Me, go to step 6.
Server and clients	4. Select the appropriate port in the list of ports, or click Add Port to connect to a network port that is not in the list of available ports.
Server and clients	5. Select the printer model in the list of available printers, or click Have Disk if you are installing the driver from an alternative source, such as disk, CD-ROM, or software download. If you are installing from a software download, you must know the path to where the software has been downloaded.
Server only	6. After the installation is complete, highlight the Printer icon and click File , and then click Properties . In the Printer Properties window, click the Sharing tab.
Server only	7. You must enable the File and Print Sharing service for either Microsoft networks or Novell networks on the server.
Server only	8. To exit Properties, click OK . A hand appears beneath the Printer icon in the Printers folder, indicating that the printer is shared.
Client only	9. You can install the driver using Point and Print in one of the following four ways: <ul style="list-style-type: none"> • In Network Neighborhood, locate the server and double-click the printer share name. • In Network Neighborhood, locate the server, and then drag and drop the icon for the shared printer into your Printers folder. • In the Printers folder, open the Add Printer Wizard. The next action depends on the operating system: <ul style="list-style-type: none"> • For Windows 95, Windows 98, and Windows Me, click Network Printer. • For Windows NT 4.0, Windows 2000, and Windows XP, click Network printer server.
Client only	10. Click Next . Type the network path or queue name, or select Browse to search the network to locate the appropriate path.
Client only	11. In Network Neighborhood, locate the server and double-click. Then locate the printer share name and right-click.
Client only	12. Click Install to complete the installation through the Add Printer Wizard.

Setting a default printer

This section applies to the Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP operating systems.

1. In Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000 OSs, click **Start**, click **Settings**, and then click **Printers**. In Windows XP, click **Start**, click **Control Panel**, click **Printers and Faxes** (Windows XP Professional) or **Printers and other hardware devices** (Windows XP Home).
2. Select the printer you want to set as the default printer.
3. From the **File** menu, click **Set As Default**. A check mark appears next to the menu option.
4. Click **Close**.

Windows 3.1x

The HP LaserJet 2300 printer has not been tested with and is not supported with Windows 3.1x.

5 Installation for Macintosh, IBM OS/2, and Linux operating systems

Introduction

This section provides system requirements and procedures for installing and removing the HP LaserJet printing system software for supported operating system other than Windows. It also provides information about font support and system modifications. The following are the other supported operating systems:

- Macintosh
- IBM OS/2
- Linux

System Requirements

The following are system requirements for installing and using the HP LaserJet printing system software on each of these supported operating systems.

Macintosh

- 68-kilobyte processor
- Mac OS 8.6 or later
- 16 MB RAM
- 20 MB available hard-disk space

IBM OS/2

- Pentium processor
- 32 MB RAM (required for OS/2)
- 5 MB available hard-disk space (required for driver)

Linux

For information about Linux support for the printer, see the following Web sites:

- <http://hp.sourceforge.net> (HP Linux support home page)
- <http://www.hp.com/go/linux> (Hewlett-Packard's Linux Web site)

Macintosh

This section describes the software components for Macintosh systems that are supported by the HP LaserJet 2300 printing-system software.

Macintosh component descriptions

The printer includes the following software for Macintosh computers:

PPDs (Mac OS 8.6 to 9.x, Mac OS X classic, and Mac OS X)

HP LaserJet PPDs

In Mac OS 8.6 to 9.x, these PS printer-definition files for HP LaserJet 2300 printer are installed to the **Printer Descriptions** folder, which is in the **Extensions** folder within the **System** folder. In Mac OS X, the PPDs are installed in

Library:Printers:PPDs:Contents:Resources:<lang>.lproj

where <lang> is the appropriate localized folder.

The PPDs, in combination with the LaserWriter driver, provide access to the printer features and allow the computer to communicate with the printer. An installation program for the PPDs is provided on the printing software CD-ROM.

For Mac OS 8.6 to 9.x, the Apple LaserWriter 8 driver must be installed in order to use the PPD file. Use the Apple LaserWriter 8 driver that came with your Macintosh. For Mac OS X, use Print Center to print.

PDEs (Mac OS X)

Printer Dialog Extensions (PDEs) are code plug-ins that provide access to printer features, such as number of copies, duplexing, and quality settings. An installation program for the PDEs and other software is provided on the printing software CD-ROM.

HP LaserJet Utility

This Hewlett-Packard printer utility is installed to the HP LaserJet folder in Macintosh OS 8.6 to 9.x operating systems. It provides configuration and management support for PS and PCL printers.

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

- customize the printer control-panel messages
- name the printer, assign it to a zone on the network, download files and fonts, and change most of the printer settings
- set a password for the printer
- from the computer, lock out functions on the printer control panel to prevent unauthorized access (see the printer software Help)

Installation notes

This text file contains important information about printer features, instructions for installing the printing-system software, and technical assistance.

ColorSync profiles

These text files contain color-matching information for the Macintosh system and HP LaserJet color printers.

Online Help

This HTML-based Help system replaces the Apple Guide Help system that was provided with Mac OS 8.6 to 9.x HP printers. The Help system can be viewed through a browser or in the Macintosh OS Help Center.

Screen fonts (Mac OS classic)

These screen fonts are available only for Macintosh computers and Macintosh-compatible computers. Because the screen fonts match your printer fonts, you can see on the screen how your printed page will look.

To ensure that you can use all installed fonts with the HP LaserJet 2300 printer, the Macintosh printing system includes the standard 35 screen fonts in 11 families:

- Avant Garde
- Helvetica Narrow
- Times
- Bookman
- New Century Schoolbook
- Zapf Chancery
- Courier
- Palatino
- Zapf Dingbats
- Helvetica
- Symbol

The Macintosh printing system also includes the HP 45 XPS font families:

- Clarendon Condensed Bold
- Symbol
- Albertus Medium
- Coronet
- Times New Roman
- Antique Olive
- Courier
- Univers
- Arial
- Garamond
- Univers Condensed
- CG Omega
- Letter Gothic
- Wingdings
- CG Times
- Marigold

The following bitmap screen fonts reside on the HP LaserJet 2300 printer:

- ITC Avant Garde Gothic Book
- Helvetica
- Palatino
- ITC Avant Garde Gothic Book Oblique
- Helvetica Bold

- Palatino Bold
- ITC Avant Garde Gothic Demi
- Helvetica Bold Oblique
- Palatino Bold Italic
- ITC Avant Garde Gothic Demi Oblique
- Helvetica Oblique
- Palatino Italic
- ITC Bookman Demi
- Helvetica Narrow
- Symbol
- ITC Bookman Demi Italic
- Helvetica Narrow Bold
- Times Bold
- ITC Bookman Light
- Helvetica Narrow Bold Oblique
- Times Bold Italic
- ITC Bookman Light Italic
- Helvetica Narrow Oblique
- Times Italic
- Courier
- New Century Schoolbook Bold
- Times Roman
- Courier Bold
- New Century Schoolbook Bold Italic
- ITC Zapf Chancery Medium Italic
- Courier Bold Oblique
- New Century Schoolbook Italic
- ITC Zapf Dingbats
- Courier Oblique
- New Century Schoolbook Roman

The following fonts reside on the HP LaserJet 2300 printer, but can be used by Macintosh platforms only if you install additional screen fonts. You can either use these screen fonts directly from the HP LaserJet 2300 software CD-ROM, or obtain them from the HP Web site at the following URL:

<http://www.hp.com/support/lj2300>

- Albertus Extra Bold
- CG Times Italic
- Marigold
- Albertus Medium
- Clarendon Condensed Bold

- Symbol
- Antique Olive
- Coronet
- Times New Roman
- Antique Olive Bold
- Courier
- Times New Roman Bold
- Antique Olive Italic
- Courier Bold
- Times New Roman Bold Italic
- Arial Courier Bold Oblique
- Times New Roman Italic
- Arial Bold
- Courier Italic
- Univers Bold
- Arial Bold Italic
- Garamond Antiqua
- Univers Bold Italic
- Arial Italic
- Garamond Halbfett
- Univers Condensed Bold Italic
- CG Omega
- Garamond Kursiv
- Univers Condensed Medium
- CG Omega Bold
- Garamond Kursiv Halbfett
- Univers Condensed Medium Italic
- CG Omega Bold Italic
- Letter Gothic
- Univers Medium
- CG Omega Italic
- Letter Gothic Bold
- Univers Medium Italic
- CG Times
- Letter Gothic Italic
- Univers Italic
- CG Times Bold
- CG Times Bold Italic

- Wingdings
- CG Times Bold Italic

Installing the Macintosh printing system

On a Macintosh-compatible computer, the installation procedures are the same for a network administrator, a network client, and a single user. Install the software on any computer that has access rights to the printer.

Note If the computer is connected to the printer by a LocalTalk (Printer Port) or EtherTalk connection, the AppleTalk (or Network) control panel must be configured in order for the correct connection to communicate with the printer. The HP LaserJet 2300 printer must be set up, connected to the computer, and turned on before the software is installed. Macintosh OS systems do not support parallel connections. You can use either a USB cable or a cross-over Ethernet cable for a direct connection to a computer running Macintosh OS. In the following instructions, "XXXX" represents the HP LaserJet printer model number.

The Macintosh partition contains an installer program for each language. Find the language that is appropriate for the operating system being used, and use the installer program for that language.

To install the HP LaserJet printer software for the Macintosh OS

1. Insert the CD-ROM that came with the Macintosh printer software into the CD-ROM drive.

Note If the CD screen does not open automatically, double-click the CD-ROM icon on the desktop to open the CD-ROM window.

2. Open the **HP LaserJet Installers** folder. Find the **Installer** icon for the appropriate language. Double-click the **Installer** icon to launch the Installer. In the opening dialog, click **Continue**.

Note The Continue button appears only after you type the "Admin" password in the Authenticate dialog box.

3. The main **Installer** dialog box appears. Click **Install** and then follow the onscreen instructions to complete the software installation.

Note If you are installing the printer software on a Macintosh OS X system, please be patient. The installer must perform an initial search of the computer for up to one full minute. During this time the installer might appear to be stalled.

4. When software installation is complete, click **Quit**. See the section that corresponds to the following options to finish setting up your printer:

"To set up a USB direct printer connection with Mac OS 8.6 through 9.x"

"To set up an AppleTalk networked printer with Mac OS 8.6 through 9.x"

"To set up a printer with Mac OS X"

To set up a USB direct printer connection with Mac OS 8.6 through 9.x

1. Run the Apple Desktop Printer Utility.
2. Select **HP Printer (USB)** if you installed this component during a Custom Install and intend to use the HP LaserJet utility for configuration.
- OR -
Select **Printer (USB)**, and then click **OK**.
3. Click **Change** in the USB Printer Selection area.
4. Select the USB printer in the printer selection window, and then click **OK**.
5. Click **Auto Setup** to attempt to match a PPD file and USB driver to your printer. If **Auto Setup** fails, click **Change**. Scroll through the list of printers, select **HP LaserJet 2300**, and then click **Select**.
6. Click **Create**.

To set up an AppleTalk networked printer with Mac OS 8.6 through 9.x

1. Run the Apple Desktop Printer Utility.
2. Select **Printer (AppleTalk)**, and then click **OK**.
3. Click **Change** in the AppleTalk Printer Selection area.
4. Select the appropriate zone and printer, and then click **OK**.
5. Click **Auto Setup** to attempt to match a PPD file and USB driver to your printer. If **Auto Setup** fails, click **Change**. Scroll through the list of printers, select **HP LaserJet 2300**, and then click **Select**.
6. Click **Create**.

To set up a printer with Mac OS X

1. In the **Applications** folder, open the **Utilities** folder, and then run the **Print Center**.
2. Click **Add** (in Mac OS X 10.2) or **Add Printer** (in Mac OS X 10.1).
3. From the pop-up menu at the top of the window, select the appropriate connection type for your printer.
4. Select or type any other information as indicated for the type of connection for your printer. For example, if you are using an AppleTalk connection, select your printer zone; if you are using IP Printing, type in an IP address.

Note

If the automatic selection fails, or if you want to manually select a PPD file, click the Printer Model pop-up menu, select HP, and then click LaserJet 2300.

5. Click **Add**.
6. To configure installable options in Mac OS X 10.2, such as a duplexing unit or optional paper trays, click the appropriate printer icon in the **Print Center Printer List** window. Select **Show Info** from the **Printers** menu, and then select the appropriate options from the **Installable Options** pop-up menu.
7. Configure the options, and then click **Apply Changes**.

Uninstalling the Macintosh printing system

To uninstall the Macintosh Printing System, drag the PPDs and the unwanted component(s) to **Trash**. See the tables in the following sections for a list of new folders and files that are added when the HP LaserJet 2300 printing-system software is installed in Mac OSs.

In-box disk layout

The Macintosh Printing System consists of one file: the HP LaserJet Installer - Integrated installer program.

Folders and files added through installation of the HP LaserJet software (Mac OS)

The tables in the following sections detail the changes to your system as new folders and files are added when the HP LaserJet 2300 printer software is installed on Macintosh OS systems.

Note This listing does not include temporary directories and files that are created, and then deleted, during the installation process.

In the following listing, "MACINTOSH HD" indicates the drive on which the software was installed.

Mac OS Classic installation

This section provides information about the various installation dialog box sequences for the Mac OS Classic.

Main Install dialog box sequence

This subsection provides information about the Macintosh installation dialog box sequence for the Easy Install (the typical installation option).

Figure 83: HP LaserJet for Macintosh installer splash screen dialog box



Table 73: HP LaserJet for Macintosh installer splash screen dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Splash screen	hp LaserJet for Macintosh Continue... [button]	Click Continue to open the HP LaserJet Installer dialog box.

Figure 84: HP LaserJet Installer dialog box (easy install)



Table 74: HP LaserJet Installer dialog text strings (easy install)

Title of dialog box	Text in dialog box	User options and descriptions
hp LaserJet Installer	<p>Easy Install [drop-down menu]</p> <p>Click the Install button to install:</p> <ul style="list-style-type: none"> · Printer Descriptions (Classic) · hp LaserJet Utility (Classic) · Installation Notes (Classic) · hp LaserJet Help (Classic) <p>Disk space available: [conditional]</p> <p>Approximate disk space needed: [conditional]</p> <p>Items will be installed on the disk "Macintosh HD" [name can be customized]</p> <p>Quit [button]</p> <p>Install [button] (default option)</p>	<p>If you want to install the files in a location other than the default "Macintosh HD," click Install Location: to specify a location. You can also select the Custom installation option from the drop-down menu at upper left. Easy Install is the default.</p> <p>Click Read Me to open the Installer readme file.</p> <p>Click Install to start the installation on the selected disk</p> <p>Click Quit to quit the Installer without making changes to the system.</p> <p>NOTE: A Read Me... button appears on each Macintosh installation screen.</p>

Figure 85: HP LaserJet Installer dialog box (custom install)

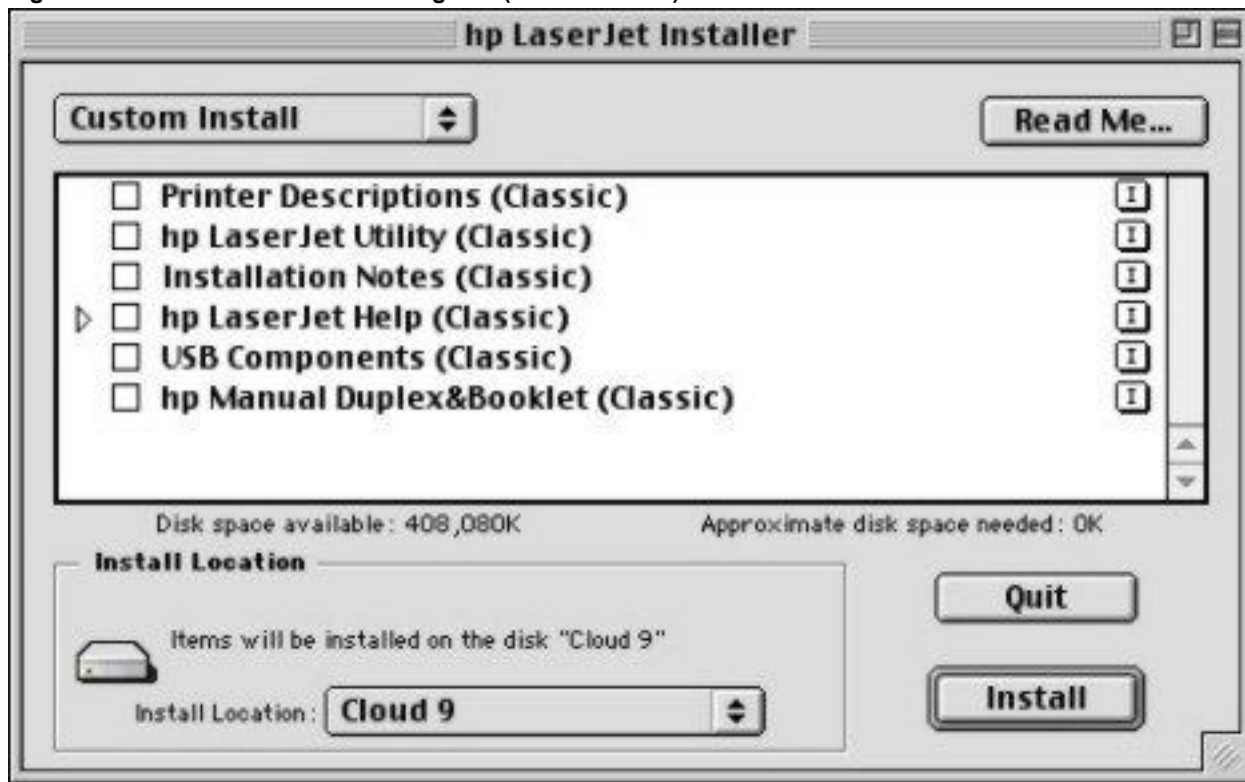


Table 75: HP LaserJet Installer dialog text strings (custom install)

Title of dialog box	Text in dialog box	User options and descriptions
hp LaserJet Installer	Custom Install [drop-down menu] Printer Descriptions (Classic) hp LaserJet Utility (Classic) Installation Notes (Classic) hp LaserJet Help (Classic) USB Components (Classic) hp Manual Duplex&Booklet (Classic) Disk space available: [conditional] Approximate disk space needed: [conditional] Items will be installed on the disk "Macintosh HD" [name can be customized] Quit [button] Install [button] [default option]	If you want to install the files in a location other than the default "Macintosh HD," click Install Location: to specify a location. Select which of the available components to install by using the check boxes in the list. Click the Read Me to open the Installer readme file. Click Install to start the installation on the selected disk. Click Quit to quit the Installer without making any changes to the system.

Figure 86: Installing dialog box

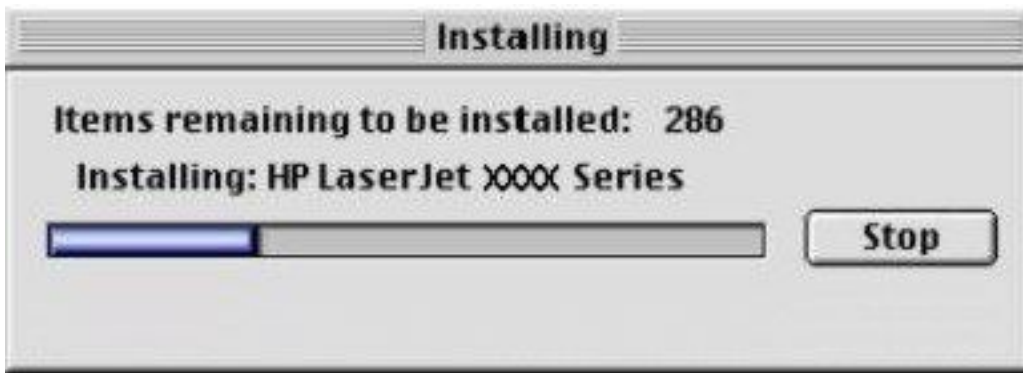


Table 76: Installing dialog text strings

Title of dialog box	Text in dialog box	User options and descriptions
Installing	Items remaining to be installed: [conditional number] Installing: HP LaserJet XXXX Series Stop [button]	This dialog box shows the installation progress. No action is required unless you want to stop the installation. Click Stop to interrupt the install file-copy process.

Figure 87: Installation was successful dialog box



Table 77: Installation successful dialog text strings

Title of dialog box	Text in dialog box	User options and descriptions
	Installation was successful. If you are finished, click Quit to leave the Installer. If you wish to perform additional installations, click Continue .	Click Quit to exit the Installer. The Printer Setup Assistant opens. Click Continue to return to the HP LaserJet Installer.

HP LaserJet Screen Fonts Installer dialog box sequence

This section provides information about the installation dialog box sequence for the HP Screen Font Installer.

Figure 88: HP LaserJet Screen Fonts splash screen dialog box



Table 78: HP LaserJet Screen Fonts splash screen dialog text strings

Title of dialog box	Text in dialog box	User options and descriptions
HP LaserJet Screen Fonts	HP LaserJet Screen Fonts Continue [button]	Click Continue to open the HP LaserJet Screen Fonts dialog box.

Figure 89: HP LaserJet Screen Fonts installer dialog box



Table 79: HP LaserJet Screen Fonts installer dialog text strings (1 of 2)

Title of dialog box	Text in dialog box	User options and descriptions
HP LaserJet Screen Fonts	Click the Install button to install: Screen Fonts Install Location Items will be installed on the disk "Apple External HD" Quit [button] Install [button] (default option)	Click Install to start the installation. Click Quit to quit the Installer without making changes to the system.

When you click **Install**, an installation progress bar dialog box briefly appears. The following table details the contents of that dialog box.

Table 80: HP LaserJet Screen Fonts installer dialog text strings (2 of 2)

Title of dialog box	Text in dialog box	User options and descriptions
Installing	Items remaining to be installed: [conditional number] Stop [button]	Click Stop to interrupt the install file copy process.

Figure 90: Installation was successful dialog box

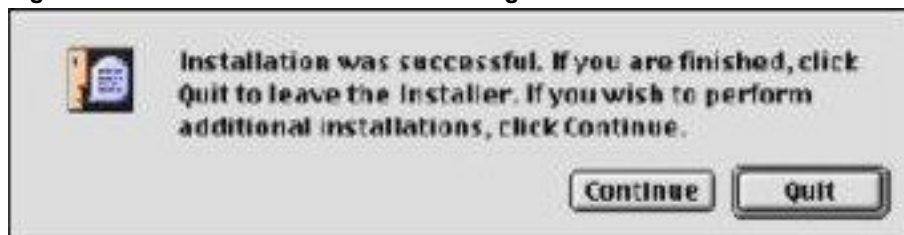


Table 81: Installation was successful dialog text strings

Title of dialog box	Text in dialog box	User options and descriptions
	<p>Installation was successful. If you are finished, click Quit to leave the Installer.</p> <p>If you wish to perform additional installations, click Continue.</p>	<p>Click Quit to exit the Installer.</p> <p>Click Continue to return to the HP LaserJet Screen Fonts installer.</p>

Mac OS X installation

This section provides information about the various installation dialog box sequences for the Mac OS X operating system.

Main Install dialog box sequence

This section provides information about the Macintosh installation dialog box sequence for the Easy Install (the typical installation option).

Figure 91: HP LaserJet for Macintosh installer splash screen dialog box



Table 82: HP LaserJet for Macintosh installer splash screen dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Splash screen	<p>hp LaserJet for Macintosh</p> <p>Continue... [button]</p>	<p>Click Continue to open the HP LaserJet Installer dialog box.</p>

Figure 92: HP LaserJet Installer dialog box (easy install)



Table 83: HP LaserJet Installer dialog text strings (easy install)

Title of dialog box	Text in dialog box	User options and descriptions
hp LaserJet Installer	Easy Install [drop-down menu] Click the Install button to install: · Printer Dialog Extensions (OS X) · Printer Descriptions (OS X) · Printer Descriptions (Classic) · hp LaserJet Utility (Classic) · Installation Notes (Classic) · ColorSync Profiles Disk space available: [conditional] Approximate disk space needed: [conditional] Install location: Items will be installed on the disk "Mac" Install Location [drop-down menu] Quit [button] Install [button] (default option)	If you want to install the files in a location other than the default "Mac," click the Install Location drop-down menu to specify a location. You can also choose a Custom installation option from the drop- down menu at upper left. Click Read Me to open the Installer readme file. Click Install to start the installation on the selected disk Click Quit to quit the Installer without making changes to the system.

Figure 93: HP LaserJet Installer dialog box (custom install)



Table 84: HP LaserJet Installer dialog text strings (custom install)

Title of dialog box	Text in dialog box	User options and descriptions
hp LaserJet Installer	Custom Install [drop-down menu] Printer Dialog extensions (OS X) Printer Descriptions (OS X) Printer Descriptions (Classic) hp LaserJet Utility (Classic) Installation Notes (Classic) hp LaserJet Help (Classic) Disk space available: [conditional] Approximate disk space needed: [conditional] Install Location: Items will be installed on the disk "Mac" Install Location [drop-down menu] Quit [button] Install [button] [default option]	Select the install location by using the Install Location drop-down menu (if the location that you want is different from "Mac"). Select which of the available components to install by using the check boxes in the list. Click Read Me to open the Installer readme file. Click Install to start the installation on the selected disk. Click Quit to quit the Installer without making any changes to the system.

Figure 94: Installing dialog box

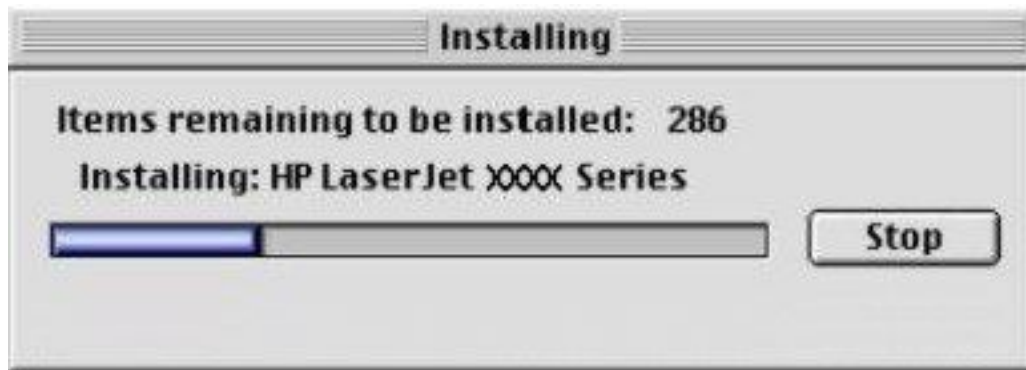


Table 85: Installing dialog text strings

Title of dialog box	Text in dialog box	User options and descriptions
Installing	Items remaining to be installed: [conditional number] Installing: HP LaserJet XXXX Series Stop [button]	This dialog box shows the installation progress. No action is required unless you want to stop the installation. Click Stop to interrupt the install file copy process.

IBM OS/2 Warp 3.0 and later

OS/2 installation instructions

Installation procedures differ depending upon whether or not a printer object exists on the OS/2 desktop. Use the instructions that match the desktop.

Installing a printer in OS/2 when the printer object is missing

Use this procedure when a printer object does not appear on the computer desktop. To create a printer object and install a printer driver, follow these steps.

Note Use this procedure if the OS/2 desktop does not have a printer object. A system can have this configuration if no printer was selected during OS/2 installation, or if all the print objects have been deleted from the desktop.

1. Open the templates folder that is located in the **OS/2 system** folder after OS/2 installation.
2. Click the **Printer** template. Press and hold the right mouse button.
3. Drag the template to the Desktop.
4. Release the right mouse button.
5. Type a name for the printer in the **Name** field.
6. Select the port to which the printer is connected.
7. Click **Install new printer driver**. A window appears that contains a list of the printer drivers that are shipped with OS/2.
8. Click **Other printer driver**.
9. Point to the downloaded printer drivers.
10. Click **Refresh**. Wait until the window fills with printer drivers.
11. Click the driver that you want.
12. Click **Install**.

Installing a printer in OS/2 with a pre-existing printer object on desktop

To install a new printer driver by using an existing printer object, use the following procedure.

Note If the 16-bit HP LaserJet driver is installed on a system, delete it before installing this driver.

Use these directions if a printer object exists on the OS/2 desktop, but you do not have the correct printer driver installed on the system. This could happen if a different printer has been added to the system.

1. Right-click the **Printer** object.
2. Click **Settings**.
3. Click the **Printer Driver** tab.
4. Right-click one of the **Printer Driver** objects.
5. Click **Install**.
6. Click **Other OS/2 printer driver**.
7. Point to the downloaded printer drivers.
8. Click the **Refresh** button. Wait until the window fills with printer drivers.
9. Click the driver that you want.
10. Click **Install**.

Additional information about the OS/2 drivers is included in the readme files that come with each driver.

Font support

Note Fonts can be downloaded to the printer by using the Font Installer feature of the printer driver.

- Albertus
- CG Times Italic
- Symbol
- Albertus Extra Bold
- Clarendon Condensed
- Times New Roman
- Antique Olive - Coronet
- Times New Roman Bold
- Antique Olive Bold
- Courier
- Times New Roman Bold Italic
- Antique Olive Italic
- Courier Bold
- Times New Roman Italic
- Arial
- Courier Bold Italic
- Univers
- Arial Bold
- Courier Italic
- Univers Bold

- Arial Bold Italic
- Garamond Antiqua
- Univers Bold Italic
- Arial Italic
- Garamond Halbfett
- Univers Italic
- CG Omega
- Garamond Kursiv
- Univers Condensed
- CG Omega Bold
- Garamond Kursiv Halbfett
- Univers Condensed Bold
- CG Omega Bold Italic
- Letter
- Univers Condensed Bold Italic
- CG Omega Italic
- Letter Bold
- Univers Condensed Medium Italic
- CG Times
- Letter Italic
- Wingdings
- CG Times Bold
- Line Printer
- CG Times Bold Italic
- Marigold

Changing a printer driver in the printer object

After both the printer object and the printer driver have been installed, the correct printer driver should be selected in the print object. This might also be necessary if you are using different printer drivers with a single print object. To change to a different printer driver:

1. Right-click the **Printer** object.
2. Click **Settings**.
3. Click the **Printer Driver** tab.
4. Double-click the **Titlebar** icon.

The printer object is now set up to use a different printer driver. To customize the settings for this printer driver, see "Changing the printer properties" or "Changing the job properties."

Changing the printer properties

Printer properties describe how a particular printer is physically set up. Examples of printer properties include the amount of memory in a printer, printer-defined forms, forms associated with the printer paper trays, and installed printer patterns.

To set or change printer properties:

1. Point to the Printer object. Right-click the **Printer** object.
2. Click **Settings**.
3. Click the **Printer Driver** tab.
4. Right-click the correct printer driver.
5. Click **Settings**.
6. Change the properties to match the printer setup.
7. Double-click the **Titlebar** icon.

The printer object is now set up to print a job. For information about how to print a job, see the OS/2 tutorial or the information folder.

Changing the job properties

Job properties describe how a particular print job is printed. Examples of job properties include number of copies, print resolution, print quality, and orientation (portrait or landscape). Programs generally have you select a printer object, and let you change the job properties associated with a particular job by selecting setup or options buttons. Under certain conditions, it is appropriate to change job properties outside of a software program, such as when performing drag-and-drop printing.

To change the default job properties associated with a printer object outside of an program:

1. Right-click the **Printer** object.
2. Click **Settings**.
3. Click the **Job Properties** tab.
4. Change the properties.
5. Click **Save**.

The default job properties associated with a printer object are now set up. For more information about how to print a job, see the OS/2 tutorial or the information folder.

6 Engineering detail

Introduction

This section presents engineering detail for the following topics:

- Media attributes

Media attributes

This section includes the following information about media attributes:

- paper sources and destinations
- paper-tray configurations
- paper-source commands
- media types and sizes
- PCL 5e and PCL 6 custom paper sizes

Paper sources and destinations

The following table indicates the standard and optional paper sources and destinations for the HP LaserJet 2300 series printer.

Table 86: HP LaserJet 2300 printer paper sources and destinations

Paper sources	multipurpose tray (tray 1)	standard
	250-sheet paper tray (tray 2)	standard
	500-sheet paper tray (tray 3)	optional
Paper destinations	top output bin	standard
	rear output bin	standard

Paper-tray configurations

The HP LaserJet 2300 printer comes with an integral standard 250-sheet input cassette, which is always designated as tray 2. An additional 250-sheet or 500-sheet cassette can be stacked beneath the printer, providing a tray 3. The cassette hardware provides mechanical system for automatically assigning these tray numbers.

The following table indicates the paper tray configurations that are possible for the HP LaserJet 2300 printer.

Table 87: Paper tray configurations for the HP LaserJet 2300 printer

Configurations	Tray number	Tray type	Standard/optional
A	Tray 1	multipurpose tray	standard
	Tray 2	250-sheet tray	standard
B	Tray 1	multipurpose tray	standard
	Tray 2	250-sheet tray	standard
	Tray 3	250-sheet tray	optional
C	Tray 1	multipurpose tray	standard
	Tray 2	250-sheet tray	standard
	Tray 3	500-sheet tray	optional

Note: A duplexing unit is possible in any configuration.

Paper-source commands

The PCL 5e escape sequence for paper source is "Esc&l#H" (the "l" is a lowercase "L" rather than the numeral "1"). See the following table for values of #. For example, "Esc&l1H" is the command for tray 2.

The PCL 6 escape sequence for paper source is "ubyte # MediaSource". See the following table for values of #. For example, "ubyte 4 MediaSource" is the command for tray 2.

Table 88: Paper-source commands

Paper source	PCL 5e	PCL 6	PS
Tray 1	4	3	3 ManualFeed false
Tray 2 (250-sheet)	1	4	0
Tray 3 (500-sheet)	5	5	1
Auto Select	7	1	-
Manual feed	2	2	3 ManualFeed true

Media types and sizes

The tables in this section provide information about media features, media attributes, and paper-handling constraints for the HP LaserJet 2300 printer.

Note The following table lists the features and attributes of various media listed under the Size Is: drop-down menu on the Paper tab. The list order can vary, depending on the printer and operating system. The list contains all the following sizes, and might contain sizes from other drivers.

Table 89: Supported features and attributes by driver

Paper sizes	Width	Height	PCL 5 escape value ¹	PCL 6 ²	PCL 5 margin x,y portrait	PCL 5 margin x,y landscape	PCL 6 margins	PS commands ⁵
Letter	216 mm (8.5 inches)	279 mm (11.0 inches)	2	"LETTER"	150,100	120,100	100,100	"Letter"

Paper sizes	Width	Height	PCL 5 escape value ¹	PCL 6 ²	PCL 5 margin x,y portrait	PCL 5 margin x,y landscape	PCL 6 margins	PS commands ⁵
Legal	216 mm (8.5 inches)	356 mm (14.0 inches)	3	"LEGAL"	150,100	120,100	100,100	"Legal"
Executive	184 mm (7.25 inches)	267 mm (10.5 inches)	1	"EXEC"	150,100	120,100	100,100	"Executive"
Executive (JIS)	216 mm (8.5 inches)	330 mm (12.99 inches)	18	"JISEXEC"	150,100	120,100	100,100	"W612h936"
A5	148 mm (5.83 inches)	210 mm (8.27 inches)	25	"A5"	150,100	120,100	100,100	"A5"
A4	210.0 mm (8.27 inches)	297 mm (11.69 inches)	26	"A4"	142, 100	118, 100	100,100	"A4"
Envelope Commercial #10	105 mm (4.12 inches)	241 mm (9.5 inches)	81	"COM10"	150, 100	120, 100	100,100	"Env10"
Envelope DL (ISO)	110 mm (4.3 inches)	220 mm (8.66 inches)	90	"DL"	142, 100	118, 100	100,100	"EnvDL"
Envelope C5 (ISO)	162 mm (6.38 inches)	229 mm (9.01 inches)	91	"C5"	142, 100	118, 100	100,100	"EnvC5"
Envelope B5 (ISO)	176 mm (6.93 inches)	250 mm (9.84 inches)	100	"B5 ENV"	142, 100	118, 100	100,100	"EnvISO B5"
Envelope Monarch	98 mm (3.87 inches)	190 mm (7.5 inches)	80	"MONARCH"	150, 100	120,100	100,100	"EnvMonarch"
B5 (ISO) ³	176 mm (6.93 inches)	250 mm (9.84 inches)	65	"ISOB5"	142, 100	118, 100	100,100	"ISOB5"
B5 (JIS)	182 mm (7.16 inches)	257 mm (10.12 inches)	45	"JIS B5"	142,100	142, 100	100,100	"B5"

Paper sizes	Width	Height	PCL 5 escape value ¹	PCL 6 ²	PCL 5 margin x,y portrait	PCL 5 margin x,y landscape	PCL 6 margins	PS commands ⁵
Double Postcard	100 mm (3.94 inches)	148 mm (5.83 inches)	72	"JPOST D"	100,100	100,100	100,100	"Double Postcard"
16K ³	197 mm (7.75 inches)	273 mm (10.75 inches)	17	"ROC16 K"	150, 100	120, 100	100, 100	"W558h 774"
8.5 inches by 13 inches	215 mm (8.5 inches)	330 mm (13.0 inches)	10	"FOOLS CAP"				
Custom (leading edge) (other edge)	Minimum: 76 mm (3.0 inches) Maximum: 148 mm (8.5 inches)	Minimum: 127 mm (5.0 inches) Maximum: 216 mm (14.0 inches)	101	4	4	4	4	true

¹The PCL escape sequence for paper size is Esc&1#A. The values in this column are for #.

²The PCL 6 command for paper size is ubyte array(String)MediaSize. The values in this column are the values for "String".

³In Windows NT 4.0, this paper size is treated as a custom size.

⁴For custom sizes, the HP traditional PCL 6 driver specifies actual dimensions - for example, for 8-inch by 9-inch custom size, "real32_8.000000 9.000000 CustomMediaSize".

⁵The PS command for paper size is "PageSize".

Table 90: Supported input media types

Input media types (PS string)	Tray 1	Tray 2	Tray 3 (250-sheet)	Tray 3 (500-sheet)	Duplexing unit	Manual duplex
Plain	Y	Y	Y	Y	Y	Y
Preprinted	Y	Y	Y	Y	Y	Y
Letterhead	Y	Y	Y	Y	Y	Y
Transparency	Y	Y	Y	N	N	N
Prepunched	Y	Y	Y	Y	Y	Y
Labels	Y	N	N	N	N	Y
Bond	Y	Y	Y	Y	Y	Y
Recycled	Y	Y	Y	Y	Y	Y

Input media types (PS string)	Tray 1	Tray 2	Tray 3 (250-sheet)	Tray 3 (500-sheet)	Duplexing unit	Manual duplex
Color	Y	Y	Y	Y	Y	Y
Cardstock*	Y	Y	Y	Y	Y	Y
Rough	Y	Y	Y	Y	Y	Y
Envelope	Y	N	N	N	N	N

*Tray 1 accepts cardstock at a maximum weight of 164 g/m² (45 lb).

PCL 5e and PCL 6 custom paper sizes

Note The PS driver does not support user-defined media sizes.

The following table shows custom paper sizes that are available for the HP LaserJet 2300 printer.

Table 91: PCL 5e and PCL 6 custom paper sizes

Tray	Dimensions	Minimum	Maximum
Tray 1	Width	76 mm (3.0 inches)	216 mm (8.5 inches)
	Height	127 mm (5.0 inches)	356 (14.0 inches)
Tray 2	Width	148 mm (5.83 inches)	216 mm (8.5 inches)
	Height	210 mm (8.27 inches)	356 mm (14.0 inches)
Tray 3 (250-sheet)	Width	148 mm (5.83 inches)	216 mm (8.5 inches)
	Height	210 mm (8.3 inches)	356 mm (14.0 inches)
Tray 3 (500-sheet)	Width	210 mm (8.3 inches)	216 mm (8.5 inches)
	Height	279 mm (11.0 inches)	296 mm (11.69 inches)
Duplexing unit	Width	210 mm (8.3 inches)	216 mm (8.5 inches)
	Height	279 mm (11.0 inches)	356 mm (14.0 inches)

Paper Type commands

The PCL 5e escape sequence for paper type is "Esc&n#Wdpapertype", where "n#" is the number of characters in the paper type plus 1. For example, in the sequence "Esc&n6WdPlain", "Plain" has 5 letters plus 1, for a total of 6.

For the command to work properly, at least one of the paper trays in the printer must be configured at the control panel for the paper type that is used in the command.

Note Some paper type options listed in the following table might not be defined in the printer driver.

Table 92: Paper-type commands

Esc&	n#	Wd	Paper type
Esc&	5	Wd	Bond
Esc&	10	Wd	Cardstock ¹
Esc&	6	Wd	Color
Esc&	7	Wd	Labels
Esc&	11	Wd	Letterhead
Esc&	6	Wd	Plain
Esc&	11	Wd	Preprinted
Esc&	11	Wd	Prepunched
Esc&	9	Wd	Recycled
Esc&	6	Wd	Rough

Esc&	n#	Wd	Paper type
Esc&	13	Wd	Transparency ²
Esc&	9	Wd	Envelope

¹The correct command for cardstock is "Esc&n11WdCard Stock", with a space between the "d" and the "S", and with an uppercase "S".

²You must spell out the word "Transparency" in the string, although it is abbreviated on the printer control panel.

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