

hp LaserJet 9000
9000n•9000dn•9000hns



i n v e n t

**software
technical
reference**



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Purpose and Scope

This technical reference provides information and troubleshooting tips for the printing system software for the HP LaserJet 9000 printer.

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.
- Descriptions of known software bugs and workarounds.

As explained below, each printer model is slightly different. The system software is written to accommodate these differences.

- **HP LaserJet 9000.** This is the base model. The HP LaserJet 9000 printer (product number C8519A) comes standard with 64 megabytes of random-access memory (MB RAM), and wide-format printing. Printing media input devices are the face-up bin, the face-down bin, tray 2, and tray 3.
- **HP LaserJet 9000 n.** This model (product number C8520A) is the same as the HP LaserJet 9000 printer, but also includes a 100-sheet multipurpose tray (optional tray 1) and an HP Jetdirect print server.
- **HP LaserJet 9000 dn.** This model (product number C8521A) is the same as the HP LaserJet 9000 N printer with the addition of an optional duplexing unit (for printing on both sides of the paper).
- **HP LaserJet 9000 hns.** This model (product number C8522A) is the same as the HP LaserJet 9000 DN printer with the addition of a 2000-sheet input tray (optional tray 4) and an optional 3000-sheet stacker.

NOTE: Bundle configurations might vary among geographic regions.

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 9000 printer end users, as appropriate.

Software Description

Introduction

The printer comes with software and installers for Microsoft (R) Windows (R) and Apple Computer, Inc., Macintosh (TM) systems. UNIX (R) and OS/2 systems are supported, but are available only through the Web. For particular information about a given system's installer, drivers, and components, locate the section that corresponds to that system.

Supported operating systems

The following operating systems (OSs) support a full-featured configuration of the HP LaserJet 9000 printing system software, including standard printer command language (PCL) and PS emulation drivers:

- Windows 3.1x (PCL 6 and PCL 5e) supported through the use of the HP LaserJet 8100 printer drivers. PS is supported with the HP LaserJet 8150 driver.
- Windows 95 and Windows 98.
- Windows Millennium Edition (Me).
- Windows NT 4.0 (Service packs 3 through 6).
- Windows 2000 (Service pack 1).
- IBM OS/2 2.0 or later.
- Macintosh OS System 7.5.3 or later. (PS)

NOTE: The HP LaserJet 8100 PCL 5e and PCL 6 drivers and the HP LaserJet 8150 PS driver necessary for Windows 3.1x systems are included on the HP LaserJet 9000 compact disc (CD).

Supported network operating systems

The following network operating systems support a full-featured configuration of the HP LaserJet 9000 printing system software, including standard PCL and PostScript emulation drivers:

- Windows NT 4.0
- Windows 2000
- Novell NetWare 4.x
- Novell NetWare 5.x

Technology backgrounders

Bidirectional communication

The HP LaserJet 9000 Series printing system software uses a new bidirectional communication technology. Previous versions of printing system software used Cooperative Object Layering Abstraction (COLA) architecture.

Bidirectional communication describes printer response to data inquiries from the computer and reports 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 (no bidirectional mode), it can only accept commands from the host and cannot report information back.

Driver Autoconfiguration and Job Status and Alerts use bidirectional communications software. The typical installation installs Driver Autoconfiguration in supported environments that contain the bidirectional software. Use the custom installation when you do not want these features.

Bidirectional communication depends upon your network operating system and the method used to connect your printer to the network.

The following table provides information about the operating systems and network environments that support bidirectional communication for the HP LaserJet 9000 printer.

Port type			Client operating system					
			Windows 95	Windows 98	Windows Me	Windows NT 4.0	Windows 2000	Macintosh
Direct	IR ¹		X	X	X	X	X	
	USB ²			X	X	X	X	X
	LocalTalk							X
Local Port Monitor	Jetdirect	TCP/IP ³	X	X	X	X	X	X
		IPX/SPX ⁴	X	X	X	X	X	N/A
	Standard	TCP/IP (HP)	X	X	X	X	X	N/A
		TCP/IP (MS)				X	X	N/A
		IPX/SPX (HP)	X	X	X	X	X	N/A
	LPR				X	X		
Novell	NetWare 4.x	Bindery queue	X	X	X	X	X	
		NDS ⁵ queue	X	X	X	X	X	
	NetWare 5.x	Bindery queue	X	X	X	X	X	
		NDS queue	X	X	X	X	X	
Micro-soft Share	Windows 9.x host	TCP/IP	X	X	X	X	X	X
		IPX/SPX	X	X	X	X	X	
	Windows NT 4.0 host	TCP/IP	X	X	X	X	X	X
		LPR	X	X	X	X	X	

¹Infrared receiver

²Universal serial bus

³Transmission control protocol/Internet protocol

⁴Internet packet exchange/sequences packet exchange

⁵Novell Directory Services

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 on the continent. It is vital that companies understand and prepare for the changes the Euro brings.

The HP LaserJet 9000 printer includes euro characters for each of the internal fonts. The HP LaserJet 9000 printer can print the euro character in the Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000 environments. Hewlett-Packard is committed to maximizing document portability through supporting and promoting euro symbol standards.

Printing system components

Printing system and installer

Printing system version

HP LaserJet 9000 Series printing system version 1.0.0.0

Installer version

HP LaserJet 9000 Series installer version 1.0.0.0

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, and Windows 2000 operating systems.

The HP LaserJet 9000 printer features a new common installer. This new installer offers the following features:

- The HP LaserJet 9000 software CD-ROM features a CD browser. See “CD browser for Windows systems.”
- Installation of Acrobat Reader 4.05.
- The typical installation requires less interaction than previous versions.
- The installer is Web-enabled, allowing 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.
- Automatic-sensing of the Windows operating system and language (Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000 only). Though system language is automatically sensed, the installer allows selection of any of the languages on the HP LaserJet 9000 software CD browser.
- Full localization and enabling for double-byte fonts.
- The HP LaserJet Uninstaller utility.
- Product registration using the Web and e-mail.

All of the Windows system components are installed by using the HP LaserJet 9000 printing system installer. The installer automatically senses your language of choice and operating system. It offers selections for each printer model. You can select the type of installation you prefer: Typical Installation or Custom Installation.

If you have an Internet connection, the installer will sense the connection and provide you with the capability to connect to the HP Web site to download the latest printing system software. The installer compares the versions of the software components on the HP LaserJet 9000 software CD-ROM to those on the HP Web site. If newer versions are on the HP Web site, the installer downloads them.

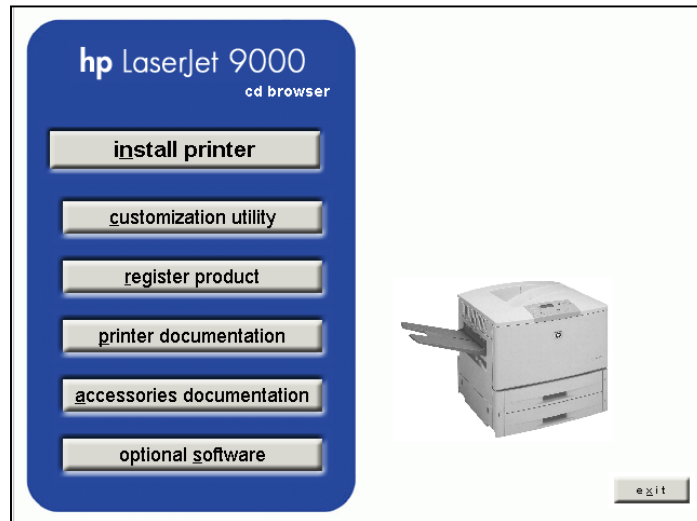
CD browser for Windows systems

In previous versions of the printing system software, you had to locate and run the SETUP.EXE file, which started the installer. For the Microsoft Windows environment (Windows 95, Windows 98, Windows Me, Windows 2000, and Windows NT 4.0), the HP LaserJet 9000 software CD-ROM provides an interactive CD browser that not only lets you install the printer drivers and related components, but also provides access to online product registration, user documentation, a customization utility, Adobe Acrobat Reader software, and optional HP software.

NOTE: Windows 3.1x is not supported by the HP LaserJet 9000 software CD browser or printing system installer. To install the PCL 6, PCL 5e, or PS printer drivers for Windows 3.1x, use the **Printer Manager** function in the Windows 3.1x control panel.

NOTE: A readme file for the Windows 3.1x printing system is available in the root directory of the HP LaserJet 9000 software CD-ROM. The path is: [root]/[language]/Drivers/Win3x

Figure 1: Installation CD browser main screen



The HP LaserJet 9000 software CD browser offers the following options.

NOTE: The text that follows each option is the same text that appears when you put the cursor on the option button.

Install printer. This wizard guides you through the installation of your HP LaserJet 9000 Series printing system. Only the necessary software will be installed.

Customization utility. Create a custom software installer for the HP LaserJet 9000 Series that can be copied to other media such as a floppy disk, a local hard drive, or a network drive.

Register product. Register your HP LaserJet 9000 Series now to receive free:

- Notification of driver updates
- Technical support updates
- News about emerging technologies

Printer documentation. View the HP LaserJet 9000 printer documentation.

NOTE: For systems that do not have Adobe Acrobat Reader 4.0 (or later) installed, clicking any of the links to documentation provided in Adobe Acrobat .PDF format opens a dialog box that provides the opportunity to install Adobe Acrobat Reader software from the HP LaserJet 9000 software CD browser.

Accessories documentation. View the HP LaserJet 9000 printer documentation for the 2000-sheet feeder, the duplexing unit, the multipurpose tray, HP Jetdirect, and the stapler/stacker.

Optional software. To increase productivity and get the most out of your HP LaserJet 9000 printer, view a list of optional software available for installation.

Installable components

This section provides information about the various installable components available either with the HP LaserJet 9000 software CD-ROM or from the HP Web site.

Printer drivers

The printing system for the HP LaserJet 9000 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 9000 software CD-ROM. The PCL 5e and PCL 6 drivers feature a graphical user interface that has a shared look and feel. All three drivers provide access to the printer paper-handling and print-quality features, such as Job Retention (hard disk and RAM), Edge-to-Edge Printing, and Printing All Text as Black (the PS driver, however, supports Job Retention and Edge-to-Edge Printing, but not Printing All Text as Black). For specific information about using PCL 5e, PCL 6, and PS driver features, see "Printer features."

Windows 3.1x driver versions

PCL 5e and PCL 6 support for Windows 3.1x is provided by using the HP LaserJet 9000 printer drivers. These drivers are available on the HP LaserJet 9000 software CD-ROM. An HP LaserJet 8150 PS printer description (PPD) provides PS support.

- HP LaserJet 8100 PCL 6 version 3.3.0.0
- HP LaserJet 8100 PCL 5e version 1.30.5.0
- Microsoft PS emulation driver version 3.58

Windows 95/98/Me driver versions

- HP LaserJet 9000 PCL 6 version 4.3.2.132
- HP LaserJet 9000 PCL 5e version 4.3.2.132
- Microsoft PS emulation driver version 4.9
- PPD version 1.0.0.0

Windows NT 4.0 driver versions

- HP LaserJet 9000 PCL 6 version 4.3.2.132
- HP LaserJet 9000 PCL 5e version 4.3.2.132
- Microsoft PS emulation driver version 4.5
- PPD version 1.0.0.0

Windows 2000 driver versions

- HP LaserJet 9000 PCL 6 version 4.3.2.132
- HP LaserJet 9000 PCL 5e version 4.3.2.132
- Microsoft PS emulation driver version 5.0
- PPD version 1.0.0.0

Macintosh and Macintosh-compatible system driver versions

The HP LaserJet printing solution for Macintosh is composed of the Apple LaserWriter driver, 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 allows autoconfiguration of the software. The installable components are:

- the HP LaserJet Installer for Mac OS 8 and Mac OS 9.
- the HP LaserJet Installer for 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 installed in the HP LaserJet folder of Macintosh operating systems 8 and 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 the Macintosh OS Help Center.
- the HP Auto Setup Utility, installed in the Startup Items folder of Mac OS 8 and later versions. It provides assistance to set up your new printer, then moves itself to **Trash**.
- installation notes.

AutoCAD driver versions

The HP LaserJet 9000 software CD-ROM contains printer drivers to support AutoCAD in the Microsoft disk operating system (MS-DOS), 16-bit Windows, and 32-bit Windows operating environments. The driver version numbers are the same for each of the three operating environments.

AutoCAD versions supported	Driver version
10, 11, 12: for MS-DOS 13 and 14: for Windows	4.1b
2000, 2000 LT	HP Windows driver

Additional driver availability

Additional drivers are available from your Hewlett-Packard distributor or from the http://www.hp.com/go/lj9000_software Web site. These drivers are:

- IBM OS/2 drivers
- UNIX/HP-UX/Linux driver sample scripts

Additional software components

The HP LaserJet 9000 printing system (version 1.0.0.0) includes other installable components. Following the table are descriptions of each component.

Windows components	Version
Driver Autoconfiguration	5.0.41.5
Job Status and Alerts	1.0.0.31
HP LaserJet 9000 <i>use</i> guide	1.0

Windows components	Version
Hewlett-Packard LaserJet 9000 Series Printers Release/Installation Notes	0.1
Adobe Acrobat Reader	4.05
HP LaserJet 9000 Uninstaller	2.0.0.0
HP Web Registration	3.7.6.0

Macintosh components	Version
HP LaserJet PPDs for past projects	
ColorSync profiles	Not applicable
Screen fonts	Not applicable

Windows component descriptions

Driver Autoconfiguration

The HP LaserJet 9000 PCL 6 and PCL 5e drivers for Windows feature bidirectional communication technology which, in supported network environments, provides automatic discovery and driver configuration for printer accessories at the time of installation or later, if needed. The HP LaserJet 9000 installer senses whether or not the installation environment supports bidirectional communication. If the environment supports bidirectional communication, the installer presents Driver Autoconfiguration as an installable component for a typical installation and an optional installable component 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 is not displayed during installation. However, installed drivers will configure automatically based on the HP LaserJet 9000 bundle selected during installation of the printing system software.

For detailed information about using Driver Autoconfiguration, see "Driver Autoconfiguration" in the "Overview of printer features" section.

NOTE: Parallel and USB connections do not support bidirectional communication. Therefore, Driver Autoconfiguration is not available with those types of connections.

Job Status and Alerts

The Job Status and Alerts feature provides printer and job status information such as printing history, job progress, toner and paper levels, consumable and supplies reorder information, and 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. For more detailed

information about how to use this feature, see "Job Status and Alerts" in the "Overview of printer features" section.

HP LaserJet 9000 user documentation

HP LaserJet 9000 guides

The HP LaserJet 9000 *start* and *introduce* guides are supplied in Adobe Acrobat Reader printer description file (PDF) format for viewing on your computer. You can either view the guides from the HP LaserJet CD browser or install them on your system.

To install the online *start* and *introduce* guides, click the **printer documentation** check box during a custom installation. You can also choose to install the guides later. The online *start* and *introduce* guides are installed in the Manuals folder on the target system. To view the guides, you must have Adobe Acrobat Reader or another PDF reader installed. When you click **start guide** or **introduce guide** from within the HP LaserJet 9000 software CD browser, the installer scans the system for an installed PDF reader. If the installer cannot find a reader, the installer presents the option to install the Adobe Acrobat Reader.

The online HP LaserJet 9000 *use* guide is available at <http://hp.com/go/lj9000>.

The following additional documentation is available for viewing from the HP LaserJet 9000 software CD browser. You can copy the text and PDF files to another location.

HP LaserJet 9000 printer printing system release notes

The *Hewlett-Packard LaserJet 9000 Series Printers Release/Installation Notes* are available on the HP LaserJet 9000 software CD-ROM. The printer release notes (filename Read9000.wri) contain important information about printer features, instructions for installing the printing system software, and technical assistance. You can either view the file from the HP LaserJet 9000 software CD browser, or you can install it on your system. To view this text file from the HP LaserJet 9000 software CD browser, click **printer documentation**, and then click **installation**. When you have the file open in Notepad, you can click **File**, and then click **Save As** to save a copy of the file to another location. To install the file, click the **printer documentation** check box during a custom installation. You can also choose to install the file later. The printer release notes are installed in the Hewlett-Packard\LaserJet 9000 folder on the target system.

HP LaserJet 9000 printer printing system late-breaking readme

The *Hewlett-Packard LaserJet 9000 Late Breaking Readme* text file is available on the HP LaserJet 9000 software CD-ROM. This readme file (filename readme.txt) contains an overview of the printing system software components, late-breaking information about known issues and workarounds, and other technical assistance. You can either view the file from the HP LaserJet 9000 software CD browser, or you can install it on your system. To view this text file from the HP LaserJet 9000 software CD browser, click **printer documentation**, and then click **Release notes**. When you have the file open in Notepad, you can click **File**, and then click **Save As** to save a copy of the file to another location. To install the file, click the **printer documentation** check box during a custom installation. You can also choose to install the file later. The *HP LaserJet 9000 Late Breaking Readme* file is installed in the Hewlett-Packard\LaserJet 9000 folder on the target system.

HP 2000-sheet input (optional tray 4) *install* guide

This guide is available on the HP LaserJet 9000 software CD-ROM as an Adobe Acrobat .PDF file. You can view the document from the HP LaserJet 9000 software CD browser by clicking

accessories documentation and then clicking **2000-sheet feeder guide**. To install the file, click the **accessories documentation** check box during a custom installation.

HP Duplex Printing Accessory *install* guide

This guide is available on the HP LaserJet 9000 software CD-ROM as an Adobe Acrobat .PDF file. You can view the document from the HP LaserJet 9000 software CD browser by clicking **accessories documentation** and then clicking **duplexer guide**. To install the file, click the **accessories documentation** check box during a custom installation.

HP multipurpose (optional tray 1) install guide

This guide is available on the HP LaserJet 9000 software CD-ROM as an Adobe Acrobat .PDF file. You can view the document from the HP LaserJet 9000 software CD browser by clicking **accessories documentation** and then clicking **HP jetdirect guide**. To install the file, click the **accessories documentation** check box during a custom installation.

HP Jetdirect Administrator's Guide

This guide is available on the HP LaserJet 9000 software CD-ROM as an Adobe Acrobat .PDF file. You can view the document from the HP LaserJet 9000 software CD browser by clicking **accessories documentation** and then clicking **HP jetdirect guide**. To install the file, click the **accessories documentation** check box during a custom installation.

HP 3000-Sheet Stapler/Stacker *Use* Guide

This guide provides instructions for using the 3000-sheet stacker and 3000-sheet stapler/stacker output devices. The guide is available on the HP LaserJet 9000 software CD-ROM as an Adobe Acrobat .PDF file. You can view the document from the HP LaserJet 9000 software CD browser by clicking **accessories documentation**, and then clicking **stacker/stapler guide**. To install the file, click the **accessories documentation** check box during a custom installation.

Adobe Acrobat Reader

The HP LaserJet 9000 software CD-ROM includes Adobe Acrobat Reader version 4.05 for viewing online documentation. When you click any of the documentation links in the HP LaserJet 9000 software CD browser, the installer scans the system for an installed 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 to view the documents on the HP LaserJet 9000 software CD browser.

HP LaserJet 9000 Series Uninstaller

After you have successfully installed the printing system software, the uninstaller lets you select and remove any or all of the printing system software components. To uninstall one or more software components, click the **HP LaserJet 9000 Uninstaller** icon from the HP LaserJet 9000 Series program group. The printing system presents options for removing all or part of the print system components.

NOTE: The uninstaller easily and safely uninstalls printing system components and their related files without affecting other system components or shared system files. Do not remove printer files without using the uninstaller. Doing so can affect the integrity of your system.

HP Web Registration

This component lets you register your HP LaserJet 9000 printer on the HP Web site or through e-mail. After a successful installation of the software, the installer prompts you to register your HP LaserJet 9000 printer. Also, you can gain access to HP Web Registration from the HP LaserJet 9000 software CD browser 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 **WebReg** from the **HP LaserJet 9000** program group when you decide to complete your registration.

Macintosh component descriptions

HP LaserJet PPDs

These PS printer definition files for HP LaserJet printers are installed to the Printer Descriptions folder, which is in the Extensions folder within the System folder.

HP LaserJet Utility

This Hewlett-Packard printer utility is installed to the HP LaserJet folder of Macintosh OS 8.6 to 9.1 Macintosh systems. It provides configuration and management support for PS and PCL printers.

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 provided with earlier HP printers. The help system can be viewed through a browser or in the Macintosh OS Help Center.

HP Auto Setup Utility

This utility is installed to the Startup Items folder of Macintosh OS 7 and newer Macintosh systems. It provides assistance to set up a new printer, then moves itself to **Trash**.

Screen fonts

These screen fonts are available only for Macintosh computers and Macintosh compatibles. The screen fonts match your printer fonts, allowing you to see on screen how your printed page will look.

Customization utility for Windows

The **Customization Utility** button lets you create your own customized installation of printing system components. To start the utility, click **Customization Utility** on the main menu of the HP LaserJet 9000 software CD browser. The available options for creating a customized installation are:

- **Copy printer drivers only.** This option lets you copy the HP LaserJet 9000 Series Windows printer drivers to a selected form of media (disk, CD-ROM, network drive, and so on). You

can use the resulting disk set with the Windows **Add Printer Wizard**. The customization utility prompts these choices:

- Operating system
- Printer model
- Printing system components (drivers to copy)
- Destination path
- **Create customized installer.** This option lets you create either an interactive or silent (unattended) installer customized by any of the following selections:
 - Operating system
 - Printer model
 - Printing system components
 - Interactive or silent (unattended) installer
- **Copy entire printing system installer.** This option lets you copy the HP LaserJet 9000 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

Silent installer

The HP LaserJet 9000 Series Printing System software lets you create a silent installer that runs the SETUP.EXE program without user interaction. This installation method is useful when you want to use the default selections provided by the installer or when you want to run the installation without being prompted. You also have the option of creating a custom disk image containing 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

This option lets you select the printing system components to include in the silent install. You can select the operating system, language, printer models, drivers, utilities, and documentation to install.

Command line silent install

This method cannot be customized and installs only the printing system components 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 previous methods

For example, this file contains two options: **/port** and **/printer**. The installer operates as normal 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=1** for the installer, it operates in unattended mode and chooses HP LaserJet 9000 n. (The options specified on the command line override the options specified in the SETUP.LST file.)

The options available can also include the **/u** option. Using this option key makes the installer always operate as unattended. 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**. Used to specify the default port when performing an unattended install. The value specified by **xxxx** should be a valid port and should contain no spaces.
- **/printer=n**. Used to specify the default printer when doing an unattended install. 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 9000 printer installation:
 - 0 = HP LaserJet 9000 printer
 - 1 = HP LaserJet 9000 n printer
 - 2 = HP LaserJet 9000 dn printer
 - 3 = HP LaserJet 9000 hns printer
- **/pd=n**. 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, entering one sets the selected printer as the default printer. Entering 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 located in the root directory of the HP LaserJet 9000 software CD-ROM. In the defaults section, add the following syntax:

```
[Defaults]
Options= /port=<value> /printer=<number> /pd=<number>
```

Optional software

The HP LaserJet 9000 software CD browser provides links to install or download HP Web JetAdmin as optional software.

HP Web JetAdmin

This software program is a printer management tool that allows network administrators to remotely install, configure, troubleshoot, manage, and set passwords for HP Jetdirect-connected printers. The HP LaserJet 9000 software CD browser provides a link to the HP Web site (http://www.hp.com/cposupport/swindexes/hpwebjetad1880_swen.html) to download the latest version of the HP Web JetAdmin software. Click **optional software** from the CD-ROM browser, and then click **HP web jetadmin**. HP Web JetAdmin is available for the following network operating environments:

- Microsoft Windows 2000
- Microsoft Windows NT 4.0
- HP-UX 10.20 and 11.x
- Sun Solaris 2.5, 2.6, and 7
- Red Hat Linux
- SuSE Linux

HP LaserJet Resource Manager

This software utility lets you manage fonts, forms, and macros on the hard disk, RAM disk, or optional flash dual inline memory modules (DIMMs). The utility is also used for updating digital copy firmware and HP Web Access firmware.

This software program can be downloaded and installed from the Web. To download the HP Resource Manager, go to http://www.hp.com/go/lj9000_firmware.

HP LaserJet Resource Manager is not localized for all languages. If the HP LaserJet Resource Manager directory is not found with your language of choice, it is not available for that language

Printer features

Overview of printer features

The printing system software for the HP LaserJet 9000 printers includes the following features:

- Driver Autoconfiguration
- Include back cover
- PS 3 emulation
- Product registration (WebReg)
- Set Registration
- Job Retention in RAM
- Job Status and Alerts
- Remote firmware upgrade
- HP Web Access

Driver Autoconfiguration

The HP LaserJet 9000 PCL 6 and PCL 5e drivers for Windows offer a new Driver Autoconfiguration feature. Driver Autoconfiguration works in three ways:

- In environments that do not support bidirectional communication, the driver automatically configures options based on the HP LaserJet 9000 printer bundle selected during the installation of the printing system software. For example, if the HP LaserJet 9000 DN is selected, the driver automatically configures the optional duplexing unit. There is no communication between workstation and printer. Therefore, configuration is based solely on the definition of the printer bundle. Using the same example, if the HP LaserJet 9000 DN is selected during installation, the duplexing unit is configured in the driver whether the optional duplexing unit is physically present or not.
- In environments that support bidirectional communication, the workstation communicates with the printer, determines the physical configuration, and then configures the driver accordingly.
- If the configuration of the HP LaserJet 9000 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 duplexing unit is added later, you can automatically configure the duplexing unit in the driver by clicking the **Update Now** button on the driver's **Configure** tab.

The bidirectional communication software necessary for the second and third methods of Driver Autoconfiguration is included in a typical installation when installing a network printer in supported environments. The feature is also a selectable option for a custom installation.

Include back cover

This feature lets you include a blank back cover on a document, or to include a back cover from a different paper source than that used in the remainder of the document. You can also select a first page from an alternative paper source.

For more information about using this feature, see the heading "Back Cover" under "Paper Tab Features" in the section about PCL 6 and PCL 5e driver features.

PS 3 emulation support for the HP LaserJet 9000 printer

The HP LaserJet 9000 printer PS Level 3 Emulation maintains full compatibility with Adobe PS Level 3 when PS Level 3 soft fonts are purchased from Adobe.

A set of 92 PS Level 3 soft fonts is included with the printing system software. If you want to permanently install the fonts in the printer, PS Level 3 emulation fonts are also available from HP in an optional font DIMM.

Users of Adobe-licensed applications might also have the right to use the Adobe PS level 3 printer drivers from Adobe with the HP LaserJet 9000 printer PS Level 3 emulation PPD, available on the HP LaserJet 9000 printer software CD-ROM or from the HP Web site. When using the Adobe PS Level 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.

Product registration (HP WebReg)

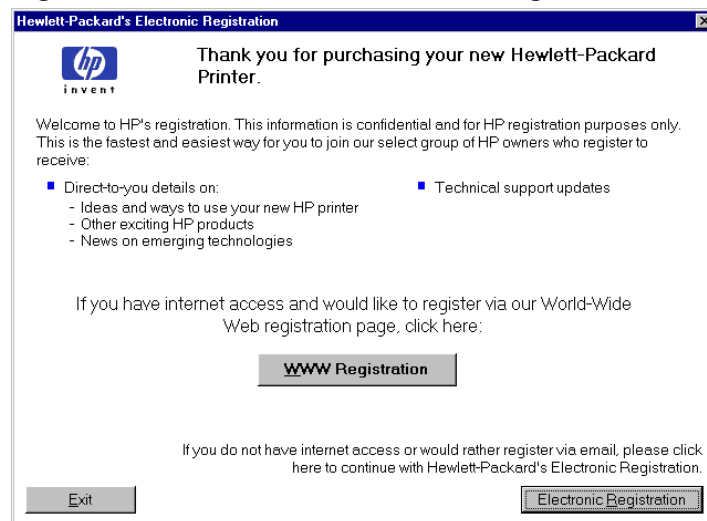
The HP LaserJet 9000 software CD browser provides two options for registering the HP LaserJet 9000 printer:

- 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.

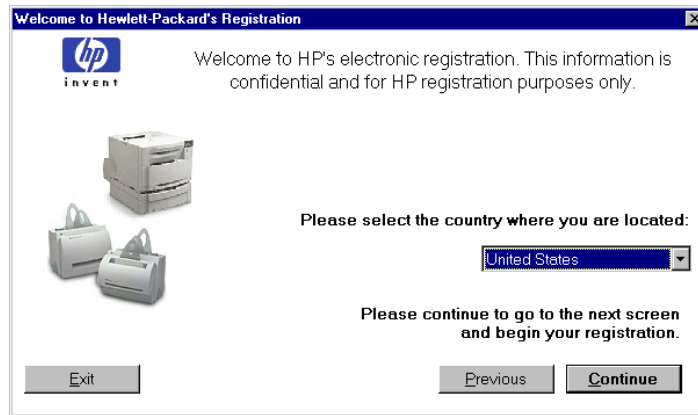
To gain access to the product registration options, go to the main menu of the HP LaserJet 9000 software CD browser and click **Register Product**. This starts the HP WebReg utility and opens the following window.

Figure 2: Hewlett-Packard's electronic registration



Title of Dialog box	Text in Dialog box	User Options and Descriptions
<p>Hewlett-Packard's Electronic Registration</p>	<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 on:</p> <ul style="list-style-type: none"> • Ideas and ways to use your new HP printer • Other exciting HP products • News about emerging technologies • Technical support updates <p>If you have internet access and would like to register using 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 using e-mail, please click here to continue with Hewlett-Packard's Electronic Registration.</p> <p>Electronic Registration [button]</p> <p>Exit [button]</p>	<p>Click the WWW Registration button to open the default Web browser and connect to the product registration page on 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 3: Welcome to Hewlett-Packard’s registration dialog box



Title of Dialog box	Text in Dialog box	User Options and Descriptions
<p>Welcome to Hewlett-Packard’s Registration</p>	<p>Welcome to HP’s electronic registration. This information is confidential and for HP registration purposes only.</p> <p>Please select the country where you are located. [Drop-down menu]</p> <p>Please continue to go to the next screen and begin your registration</p> <p>Previous [button]</p> <p>Continue [button] [default option]</p> <p>Exit [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 entering your registration information. The second screen prompts you for information about your HP LaserJet 9000 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 4: 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

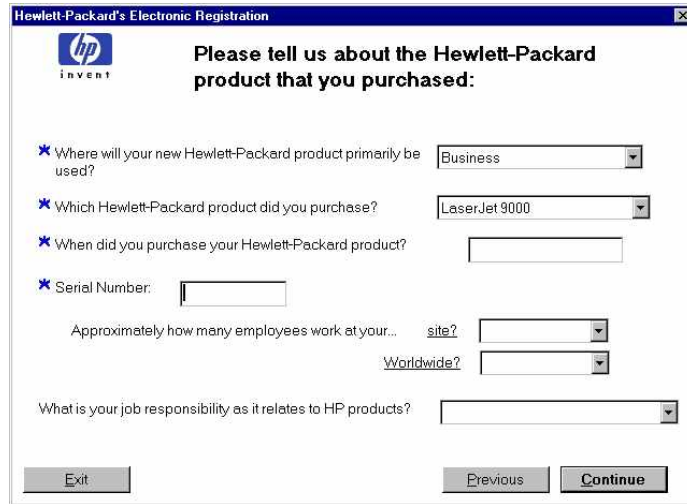
Occasionally HP communicates information on products and/or programs that may be relevant to you. Please select the method(s) of communication HP may use to contact you. (check all that apply)

E-mail Mail Telephone

Please don't contact me unless I specifically request it

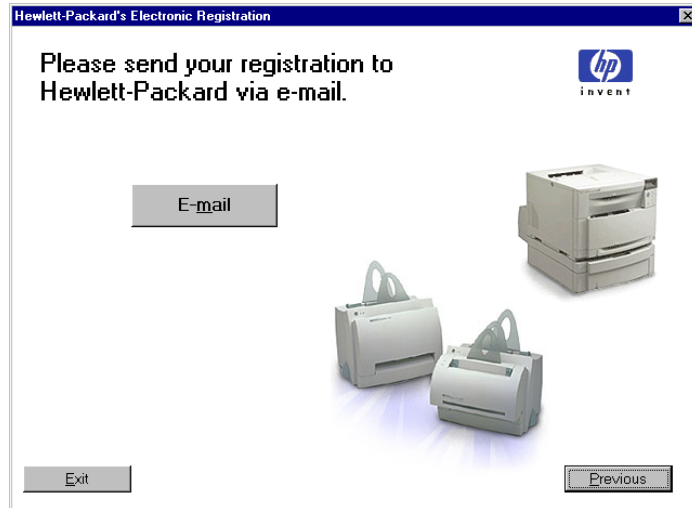
Title of Dialog box	Text in Dialog box	User Options and Descriptions
<p>Hewlett-Packard's Electronic Registration</p> <p>[This is the first of three screens.]</p>	<p>Please complete the following (required fields are denoted by a blue asterisk):</p> <p>[The following items are fields unless otherwise noted.]</p> <p>First name* Middle Initial Last Name* Company/Organization Name* Building/Mail Stop/Dept. Mailing Address* City/Town* State* [drop-down menu] Zip Code* E-mail Address Telephone Number Extension</p> <p>Occasionally HP communicates information about products and/or programs that may be relevant to you. Please select the method(s) HP can use to contact you. (check all that apply)</p> <p>E-mail [check box] Mail [check box] Telephone [check box]</p> <p>Please don't contact me unless I specifically request it [check box]</p> <p>Previous [button] Continue [button] Exit [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 5: Hewlett-Packard’s electronic registration dialog box (2 of 3)



Title of Dialog box	Text in Dialog box	User Options and Descriptions
<p>Hewlett-Packard’s Electronic Registration</p> <p>[This is the second of three screens.]</p>	<p>Please tell us about the Hewlett-Packard product you purchased:</p> <p>Where will your new Hewlett-Packard product primarily be used? [drop-down menu]</p> <p>Which Hewlett-Packard product did you purchase? [drop-down menu]</p> <p>When did you purchase your Hewlett-Packard product? [field]</p> <p>Serial Number [field]</p>	<p>Click the Previous button to go back to the first screen in this sequence.</p> <p>Click the Continue button to go to the third screen in this sequence.</p> <p>Click the Exit button to open the Exiting Registration! dialog box.</p>

Figure 6: Hewlett-Packard's electronic registration dialog box (3 of 3)



Title of Dialog box	Text in Dialog box	User Options and Descriptions
Hewlett-Packard's Electronic Registration [This is the second of three screens.]	Please send your registration to Hewlett-Packard using e-mail. E-mail [button] [default option] Previous [button] Exit [button]	Click the E-mail button to send an e-mail to HP containing the registration information you specified. A thank-you screen appears when the e-mail is sent. Click the Previous button to go back to the second screen in this sequence. Click the Exit button to open the Exiting Registration! dialog box.

Figure 7: Exiting Registration!



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 can go to the universal resource locator (URL) below to register your product at any time.</p> <p>http://register.hp.com</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 Exit.</p> <p>Click the Exit button to close the WebReg utility.</p>

Set registration

The **Set registration** feature allows you to adjust, for each paper tray, the printed area of the page. The printed area can be shifted towards the top, the bottom, the left, the right, or the left and right edges of the page in increments of 0.25 mm (0.0009 inch). You can print a registration page directly from the printer.

NOTE: The registration page is printed in landscape mode. Accordingly, the terms "top" and "bottom" in the following instructions refer to the wide edges of the page, and "left" and "right" refer to the short edges of the page (see illustrations in "Shifting the printed area").

Printing a registration page

To print a registration page, navigate through the menus on the HP LaserJet 9000 printer control panel using the following steps:

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 CONFIGURE DEVICE, and then press the select button.
3. Press the up and down buttons to scroll to PRINT QUALITY, and then press the select button.
4. Press the up and down buttons to scroll to SET REGISTRATION, and then press the select button.
5. Press the up and down buttons to scroll to PRINT TEST PAGE, and then press the select button.

Shifting the printed area

The registration page is shown in the following two illustrations.

NOTE: The instructions on the registration page are repeated below.

Figure 8: Registration page, side 1

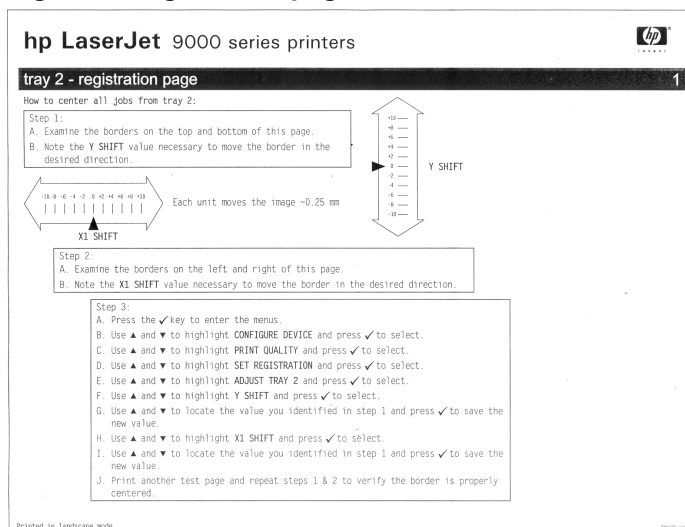
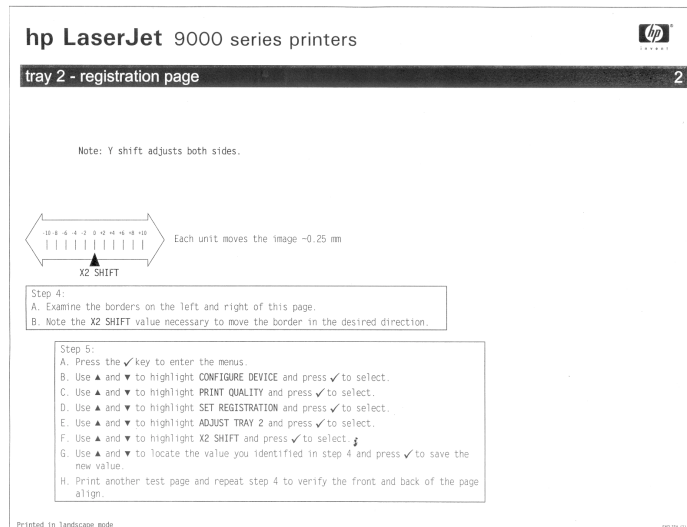


Figure 9: Registration page, side 2

The following instructions, adapted from the registration page shown in the following two illustrations, assist you in shifting the printed area in the desired direction:

1. Examine the borders on the top and bottom of the registration page.
2. Note the Y SHIFT value necessary to move the border in the desired direction, either up or down on the page.
3. Examine the borders on the left and right of the registration page.
4. Note the X1 SHIFT value necessary to move the border in the desired direction, either to the left or the right on the page.
5. Press the select button on the control panel display to enter the menus.
6. Use the up and down arrows to highlight CONFIGURE DEVICE, and then press the select button to select.
7. Use the up and down arrows to highlight PRINT QUALITY, and then press the select button to select.
8. Use the up and down arrows to highlight SET REGISTRATION, and then press the select button to select.
9. Use the up and down arrows to highlight the name of the desired tray (ADJUST TRAY 1, ADJUST TRAY 2, ADJUST TRAY 3, OR ADJUST TRAY 4), and then press the select button to select.
10. Use the up and down arrows to highlight Y SHIFT, and then press the select button to select.
11. Use the up and down arrows to locate the value you identified in step 2, and then press the select button to save the new value.
12. Use the up and down arrows to highlight X1 SHIFT, and then press the select button to select.
13. Use the up and down arrows to locate the value you identified in step 4, and then press the select button to save the new value.
14. Print another test page (See "Printing a registration page") and repeat these steps (1 through 14) to verify that the border is properly placed.

Adjusting the left and right sides of the page at the same time

NOTE: The Y shift adjusts both the top and bottom sides. The X1 shift adjusts the printed area to either the left or the right. Use the X2 shift to adjust both the left and right sides of the printed area in the desired direction.

To adjust both the left and right sides of the printed area in the desired direction:

1. Examine the borders on the left and right of the registration page.
2. Note the X2 SHIFT value necessary to move the left and right borders in the desired direction.
3. Press the select button to enter the menus.
4. Press the select button on the control panel display to enter the menus.
5. Use the up and down arrows to highlight CONFIGURE DEVICE, and then press the select button to select.
6. Use the up and down arrows to highlight PRINT QUALITY, and then press the select button to select.
7. Use the up and down arrows to highlight SET REGISTRATION, and then press the select button to select.
8. Use the up and down arrows to highlight the name of the desired tray (ADJUST TRAY 1, ADJUST TRAY 2, ADJUST TRAY 3, OR ADJUST TRAY 4), and then press the select button to select.
9. Use the up and down arrows to highlight X2 SHIFT, and then press the select button to select.
10. Use the up and down arrows to locate the value you identified in step 2, and then press the select button to save the new value.

Job Retention in RAM

The HP LaserJet 8100 printer introduced Job Retention features that required the use of an EIO hard disk. A feature of the HP LaserJet 9000 printer, called Job Retention in RAM, lets you use some Job Retention options without an installed EIO hard disk in the printer.

The proof-and-hold and private job options are available with the Job Retention in RAM feature. Other options continue to require the installed EIO hard disk.

NOTE: The Job Retention in RAM feature is not supported using Windows 3.1x.

For more information about the Job Retention feature, see the "Destination Features" section, under "Paper tab features," in the section about PCL 6 and PCL 5e driver features.

Job Status and Alerts

The HP LaserJet 9000 Series Printing System software includes a utility called Job Status and Alerts that lets you monitor print jobs and printer status from the desktop. Job Status and Alerts is a selectable component of custom installation. To install Job Status and Alerts, choose the **Custom Installation** and click the appropriate check box.

NOTE: These features are available for printers connected to a network that supports bidirectional functionality. The Job Status and Alerts feature does not install over IR, parallel, serial, or USB ports. See “Bidirectional communication.”

Windows NT 4.0 and Windows 2000 do not support Job Status and Alerts with terminal server.

On Windows 95, only Internet Explorer 4.0 or later supports printer status. Also, on Windows 95, the Microsoft Winsock2 patch must first be installed. To download the Microsoft Winsock2 patch, go to http://www.microsoft.com/windows95/downloads/contents/WUAdminTools/S_WUNetworkingTools/W95Sockets2/Default.asp.

For other operating systems, the computer must have Internet Explorer version 4.1 or later. To check the version number, open Internet Explorer, click **Help**, and then click **About Internet Explorer**. The version number is reported as Version: 4.72.XXXXX.

Unlike HP Toolbox, HP Job Status and Alerts polls the printer only during an active print job to minimize network traffic.

The following restrictions apply to HP printers using Job Status and Alerts:

- For **Device Status** (printer icons in the status window), the computer must have Internet Explorer version 4.1 or later installed. No Internet Explorer is necessary for getting status about jobs.
- For MS Shared printers, the host system must have either **Job Status and Alerts** or the **HP Driver Autoconfiguration** option from the HP installer on the computer. The client must have Job Status and Alerts installed.
- On a few applications, such as MS Excel and Seagate Crystal Reports, multiple copies of the same document show up in the Job Status and Alerts window as separate jobs. This is because these applications actually send each copy as a separate job.
- When renaming a driver, job and device status will not be tracked until the computer is restarted.
- Drivers added after Job Status and Alerts is installed are not recognized by this utility until the computer is restarted.
- The **Cancel** button in the Job Status and Alerts window cannot 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 (commonly the case with smaller jobs).
- Installation software does not allow the user to install Job Status and Alerts over a parallel connection. If Job Status and Alerts is tracking a networked printer that is subsequently switched to an LPT port, the utility will not be able to track jobs or get device status for that printer.
- When using Job Status and Alerts with Microsoft printer sharing:
 - The Microsoft patch “Vredir” is required if you want to use Job Status and Alerts on a Windows 95, Windows 98, or Windows Me computer for a printer that has been shared directly from either a Windows NT 4.0 or Windows 2000 computer. Failure to install the patch could cause a blue screen on the client computer.
 - For MS Shared printers, the host system must have either Job Status and Alerts or the **HP driver Autoconfiguration** option from the HP installer on the computer. The client must have Job Status and Alerts installed.

When the Job 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. The printer icon

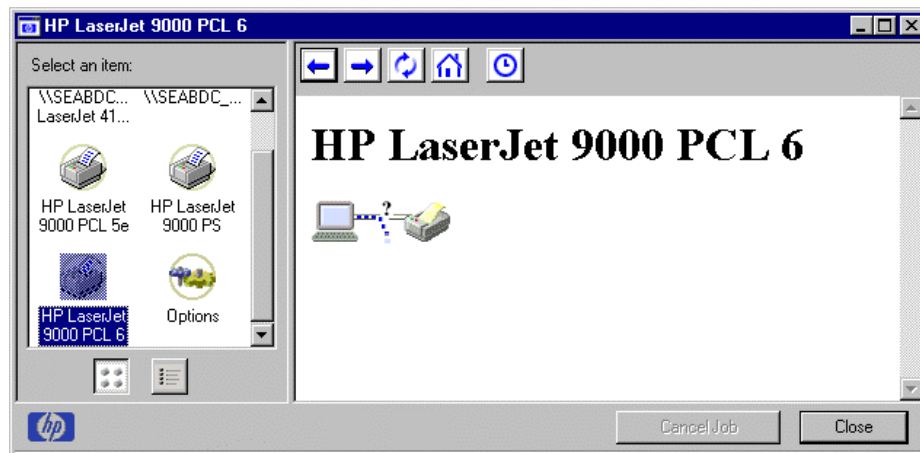
remains unchanged until you send a print job to the HP LaserJet 9000 printer. When you send a print job, the icon changes to alert you to the status of the print job. Nine icons exist in this feature. The eight icons in the following illustration show current printer status. The ninth icon, the Receiving and Waiting icon, never shows up in the Systray. When the print job is in a receiving or waiting state, then the printing icon appears in the Systray.

Figure 10: Job Status and Alerts icons



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

Figure 11: Job Status and Alerts window



The Job 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.

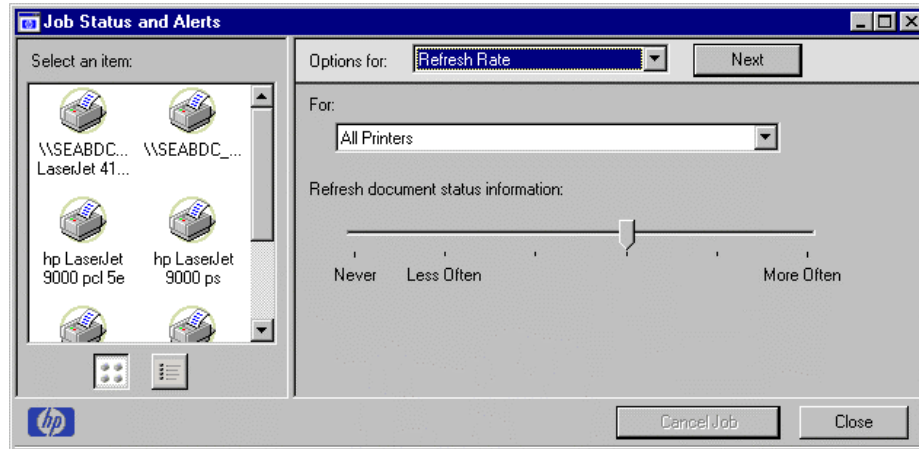
Click a printer icon in the left pane to view information about the printer and supplies or to view a history of recent print jobs. The following printer information is available:

- **Printer Status** shows a replica of the printer control panel that indicates the current status of the HP LaserJet 9000 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 present in each input device, as well as the status of output devices. This section also provides information about the type and size of media loaded in each input device.

- **Capabilities** provides information about such things as installed trays, paper-handling accessories, and disk storage.

Click a print job icon to see information about the progress and status of the print job. Click the **Option** icon to select options for configuring pop-up status windows displaying document alerts and to set the refresh rate for displaying job status information.

Figure 12: Refresh Rate option



There are six settings for the refresh rate. The default setting is in the center, halfway between **Less Often** and **More Often**.

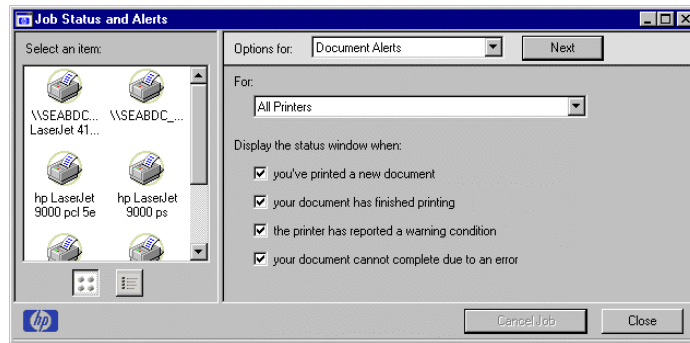
The **Less Often** setting specifies the least frequent update intervals, which have minimal impact on network traffic. The **More Often** setting updates the status more frequently, but also has the most impact on traffic. The **Never** setting disables the job status monitoring mechanism for the selected 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 SAS 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 still open the status window and view the printer status panels.

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

There are four options for configuring pop-up status windows with document alerts. The four options are:

- you've printed a new document (the print job was just sent to the printer).
- your document has finished printing (the print job is complete).
- the printer has reported a warning condition (reports all warning conditions that *do not* affect your current print job).
- your document cannot complete due to an error (reports all warning conditions that *do* affect your current print job).

Figure 13: Document Alerts option



If the last two conditions occur, the printer status icon in the Windows system tray changes to one of two icons, a yellow triangle or a stop sign, each with an exclamation point. Double-click the icon to open the Job Status and Alerts window and view information about the condition.

NOTE: Depending upon the options you select, the status window will change information for each job printed, each job completed, and each warning condition detected.

The following table lists the HP printer models and drivers that support Job Status and Alerts.

Printer model	Drivers supported
HP LaserJet 4000 Series*	PCL 6, PCL 5e (but not the older RASDD version), PS
HP LaserJet 4100 Series	PCL 6, PCL 5e, PS
HP Color LaserJet 4500**	PCL 6, PCL 5c, PS
HP LaserJet 5000 Series*	PCL 6, PCL 5e, PS
HP LaserJet 8000***	PCL 6, PCL 5e, PS
HP LaserJet 8100 Series	PCL 6, PCL 5e, PS
HP LaserJet 8150 Series	PCL 6, PCL 5e, PS
HP Color LaserJet 8500	PS
HP Color LaserJet 8550	PCL 5c, PS
HP LaserJet 4050 Series	PCL 6, PCL 5e, PS
HP Color LaserJet 4550	PCL 6, PCL 5e, PS
HP LaserJet 9000 Series	PCL 6, PCL 5e, PS
HP Mopier 240	PCL 6, PS
HP Mopier 320	PCL 6, PS

* The original drivers released with the HP LaserJet 4000 series and HP LaserJet 5000 Series printers do not support Job Status and Alerts. Since those products were introduced, the drivers have been updated. The new drivers support Job Status and Alerts.

**The HP Color LaserJet 4500 drivers (PCL 5, PCL 6, and PS) are not supported in Windows 95, Windows 98, and Windows Me. However, new PCL 5 and PCL 6 (but not PS) drivers will be available soon for this printer that will be supported by Job Status and Alerts. Check www.hp.com for the newest Windows 95, Windows 98, and Windows Me PCL 5 and PCL 6 drivers. This restriction does not affect the Color LaserJet 4550 drivers.

***The PCL6 driver for the HP LaserJet 8000 is not supported in Windows 95, Windows 98, and Windows Me.

The original MS version of the HP Color LaserJet 8550 PS driver (shipped on the CD) is not supported. A new version, available at <http://www.hp.com>, is supported

For an updated list of printers that the Job Status and Alerts feature supports, open the text file `hpsasdrv.mtx` located in the Windows subdirectory.

Remote firmware upgrade

The HP LaserJet 9000 printer and optional paper-handling devices feature a remote firmware upgrade capability. The method for downloading remote firmware upgrades from the http://www.hp.com/go/lj9000_firmware Web site is similar to that used to download the latest printing system software and printer drivers. The Web site features an "E-mail me when new software is available" link, an option that sends e-mail when a new version of printer firmware is available. Also, if you used HP WebReg to register the HP LaserJet 9000 printer, HP will send you e-mail notifications of new firmware releases.

The process for remotely upgrading printer firmware involves three steps:

1. Determine the current level of firmware installed on the HP LaserJet 9000 printer.
2. Go to the http://www.hp.com/go/lj9000_firmware Web site and download the latest firmware.
3. Download the new firmware to the printer.

Determining the current level of firmware

To determine the current level of firmware installed on the printer:

1. Go to the printer control panel.
2. Press the select button (the one with the check mark) to enter the menus.
3. Press the up and down buttons to scroll to INFORMATION on the control panel display.
4. Press the select button
5. Press the up and down buttons to scroll to PRINT CONFIGURATION on the control panel display.
6. Press the select button to print the configuration page.
7. Look in the section marked "Printer Information" for the firmware date code. The firmware date code will look something like this:

20010406 01.032.1

Downloading the new firmware from the HP Web site

The .RFU file and an associated readme file are packaged together as a self-extracting .EXE file. See the http://www.hp.com/go/lj9000_firmware Web site for detailed instructions about how to download the .EXE file.

Downloading the new firmware to the printer

You can send an .RFU upgrade to a printer at any time; the printer will wait for all input/output (I/O) channels to become idle before cycling power.

NOTE: If the firmware upgrade involves a change in the format of nonvolatile random-access memory (NVRAM), any settings changed from the default settings will revert to default positions, and must be changed again.

The elapsed time for an upgrade depends on the I/O transfer time, as well as the time that it takes for the printer to reinitialize. The I/O transfer time depends on a number of things, including the speed of the host computer sending the upgrade, the I/O method (Fast InfraRed Connect [FIR], parallel, or network). The reinitialization time will depend on the specific hardware configuration of the printer, such as the number of EIO devices installed, the presence of external paper handling devices, and the amount of memory installed. Finally, any print jobs ahead of the .RFU job in the queue will be printed before the .RFU upgrade is processed.

NOTE: The printer will automatically power cycle after processing the upgrade.

For Windows systems: If the printer is shared on the network, then the following command can be issued from a command prompt:

```
copy /b FILENAME \\SHARENAME\PRINTERNAME
```

where FILENAME is the name of the .RFU file, SHARENAME is the name of the computer from which the printer is being shared, and PRINTERNAME is the printer share name.

If the printer is connected locally, then the .RFU file can be sent directly to the printer with a COPY command from a command prompt or MS-DOS window:

```
copy /b FILENAME PORTNAME
```

where FILENAME is the name of the .RFU file and PORTNAME is the name of the appropriate printer port (such as LPT 1).

You can also send the file through a FIR port.

For UNIX systems: Any method that delivers the .RFU file to the printer will work, including:

```
$ cp /home/yourmachine/FILENAME /dev/parallel
```

where /home/yourmachine/FILENAME contains the .RFU file.

Using HP Web JetAdmin to download the firmware to the printer

This procedure requires that Web JetAdmin version 6.1 or later be installed. Complete the following steps to upgrade a single printer through HP Web JetAdmin after downloading the .RFU file from the HP Web site.

1. Start HP Web JetAdmin.
2. Enter the Internet protocol (IP) address or IP hostname of the printer in the **Quick Device Find** field, and then click **Go**. The printer Status window appears.
3. Click the right arrow on the toolbar to display the **Update** button.
4. Click **Update**.
5. When prompted for the type of update to perform, click **Update Printers**, and then click **Continue**.
6. Under **Upload new firmware image:**, click **Browse** to locate the .RFU file you downloaded from the http://www.hp.com/go/lj9000_firmware Web site.

7. Click **Upload** to move the .RFU file from your hard drive to the HP Web JetAdmin server.
8. Refresh the browser.
9. Select the .RFU file from the **Select new firmware version:** drop-down menu.
10. Click **Update Firmware**. HP Web JetAdmin sends the selected .RFU file to the printer.

Also, HP Web JetAdmin 6.1 can be used to perform multiple or unattended installations.

1. Start HP Web JetAdmin.
2. Create a device group. A simple way to do this is to:
 - a. Click **Devices** on the **1. Choose:** drop-down menu.
 - b. Click **Device Model** from the **2. Filter:** drop-down menu.
 - c. Type "9000" (without quotation marks) in the **3. Criteria (Optional):** field.
 - d. Click **Go**.
3. In the Device List, select the printers you want to include in the group and click **Create Group**.
4. When prompted, type a name for the new device group, and then click **OK**.
5. Click **Update**.
6. When prompted for the type of update to perform, click **Update Printers**, and then click **Continue**.
7. From the list of HP Devices, select the printers to be upgraded, or click **Select All**.
8. Click **Update** to install the new printer firmware.

The printer displays three messages during a normal upgrade process:

Printer message	Explanation
RECEIVING UPGRADE	Appears from the time the printer recognizes the beginning of an .RFU upgrade until the time the printer has verified the validity and integrity of the .RFU upgrade.
UPGRADING PRINTER	Appears while the printer is actually reprogramming the DIMM with the .RFU upgrade.
WAIT FOR PRINTER TO REINITIALIZE	Appears from the time the printer has finished reprogramming the DIMM until the printer reinitializes.

NOTE: To verify that the firmware upgrade succeeded, print a configuration page from the printer control panel and verify that the firmware datecode shown on the configuration page is the same as the datecode of the .RFU file you downloaded.

Troubleshooting a firmware upgrade

The following table lists causes of and results of possible interruptions to the firmware upgrade.

Cause	Result
Job cancelled from printer control panel	No upgrade has occurred
Break in I/O stream during send (for example, parallel cable removed)	No upgrade has occurred
Power cycle during RECEIVING UPGRADE	No upgrade has occurred
Power cycle during UPGRADING PRINTER	Resend upgrade
Power cycle during WAIT FOR PRINTER TO REINITIALIZE	Upgrade completed

Print jobs sent to the printer while an upgrade is in process will not interrupt the upgrade.

The following table lists possible reasons for the failure of a remote firmware upgrade and the corrective action to take for each situation.

Reason for firmware upgrade failure	Corrective action
.RFU file corrupted	The printer recognizes that the file is corrupted and rejects the upgrade. Download the image from the http://www.hp.com/go/lj9000_firmware Web site again and send the new file to the printer.
Wrong printer model in .RFU file	The printer recognizes the model mismatch and rejects the upgrade. Download the correct image from the http://www.hp.com/go/lj9000_firmware Web site and send it to the printer.
Upgrade interrupted	See the previous table in this section.
Flash hardware failure	Although extremely unlikely, the flash DIMM itself might have a hardware failure. In this case, order another flash DIMM from HP.

NOTE: All HP LaserJet 9000 printers ship from the factory with the latest available firmware version installed in a backup partition on the flash DIMM. If a remote firmware upgrade fails, the printer can use the backup firmware to restart the computer. You can then attempt the remote firmware upgrade again. If a remote firmware upgrade fails, any optional paper-handling devices will not function until a successful remote firmware upgrade has been completed.

HP Web Access

The HP Web Access feature contains the following software:

- Embedded virtual machine for Java applications
- HP Web Access
- Web pages
- Storage space

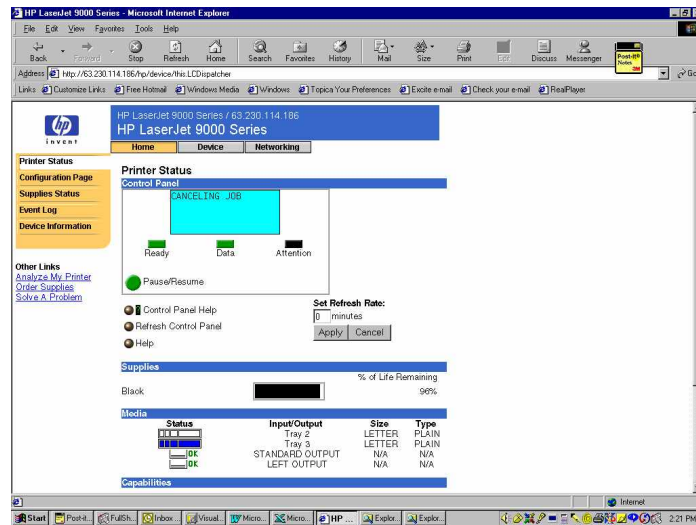
HP Web Access and HP Web JetAdmin work together to provide a scalable remote management solution. Used without HP Web JetAdmin, HP Web Access provides a simple, easy-to-use solution for one-to-one printer management. In offices where there are a limited number of printers, remote management of printing devices can be accomplished without installing any management software. The only requirement is that the management console have a supported Web browser.

In environments with a larger number of printers, where one-to-one management is impractical, you can use HP Web JetAdmin for printer management. In this case, 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 HP Web Access and HP Web JetAdmin so Web Access features can be configured on multiple printers in one operation. For example, the security password for HP Web Access can be set on a population of printers using one command.

View status remotely

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 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 14: Printer Status page

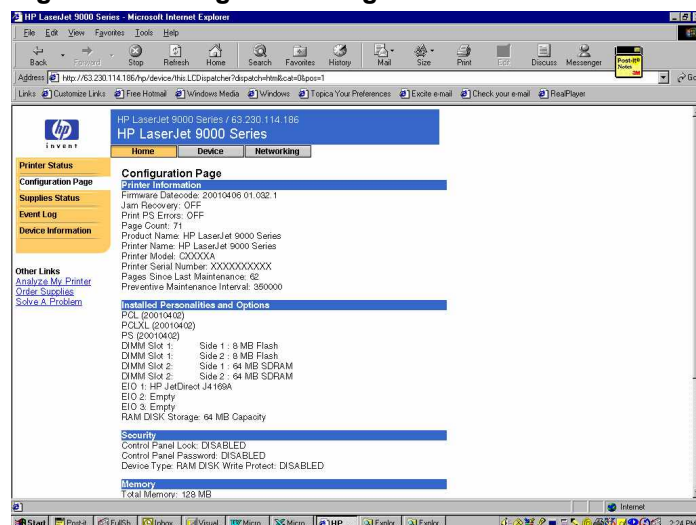


To view information about the printer using HP Web Access, open a supported Web browser and type in the printer IP address. The IP address for the printer is listed on the EIO Jetdirect page. To print a copy of this page from the printer control panel display, see the instructions for printing a configuration page in the "Determining the current level of firmware" section. You also can view information about an installed HP Jetdirect print server by clicking the **Networking** button in HP Web Access window.

Configuration information

The HP LaserJet 9000 printer configuration page is available remotely through HP Web Access. The HP Web Access printer 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 printer configuration page viewed remotely through HP Web Access.

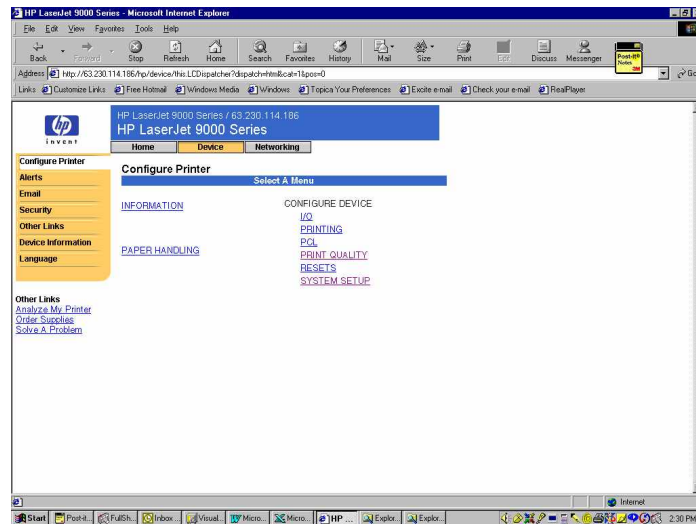
Figure 15: Configuration Page



Remote printer configuration

Printer configuration information can be obtained through a Web browser by launching the printer Web page and changing any of the basic configuration settings. Security and password controls provide management information system managers with the level of control required within their environments. The following illustration shows an example of printer options that can be configured remotely.

Figure 16: Configuration Categories



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

Links to off-printer solutions

Links within the home page of HP Web Access provide an easy way of locating information or completing tasks.

- **Registration link.** Lets you register printer information.
- **Order facilitation link.** Information about the printer cartridge is linked to an ordering page where you can order print cartridges quickly and easily from the chosen reseller.
- **Solve a problem (dynamic targeted Web page link).** 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.
- **User-defined URL.** This feature lets you specify links to your company Web sites or other Web resources.

Other HP Web Access features

HP Web Access offers these additional features:

- **Supplies Status.** This page provides information about print cartridge, total pages printed, and the serial number of the printer.
- **Event Log.** This page provides information about reported printer errors.
- **Usage Page.** This page provides information about the usage of the printer.
- **Security.** This page lets you set a password to secure the printer.

- **Language.** This page lets you select the language in which to view the HP Web Access information.

PCL 6 and PCL 5e driver features

This section describes the options available on each tab of the HP LaserJet 9000 PCL 6 and PCL 5e driver interfaces.

NOTE: The Windows 3.1x Print dialog does not offer a **Properties** button to open the HP LaserJet 9000 printer driver settings dialog boxes. Use the **Print Setup** command in the File menu to gain access to the settings dialog boxes, and then click **Print**.

Help system

The HP LaserJet 9000 PCL 6 and PCL 5e drivers include a full-featured Help system to provide assistance with printing and configuration options.

What's this? Help

Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000 "What's this? Help" is supported. To use "What's this? Help":

- Right-click a control and click **What's this?** to display a pop-up Help window.
- Click the ? button located on the top-right corner of the frame next to the X to change the cursor to an arrow with a question mark. Selecting a control with this special cursor displays the pop-up **Help** window for that feature.
- Press the F1 key to display the **Help** window for the control that currently has focus.

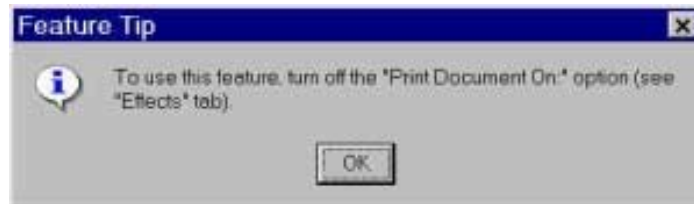
Page-sensitive Help

Press the **Help** button on a driver tab or dialog box to display context-sensitive Help.

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 17: A typical constraint message with an OK button



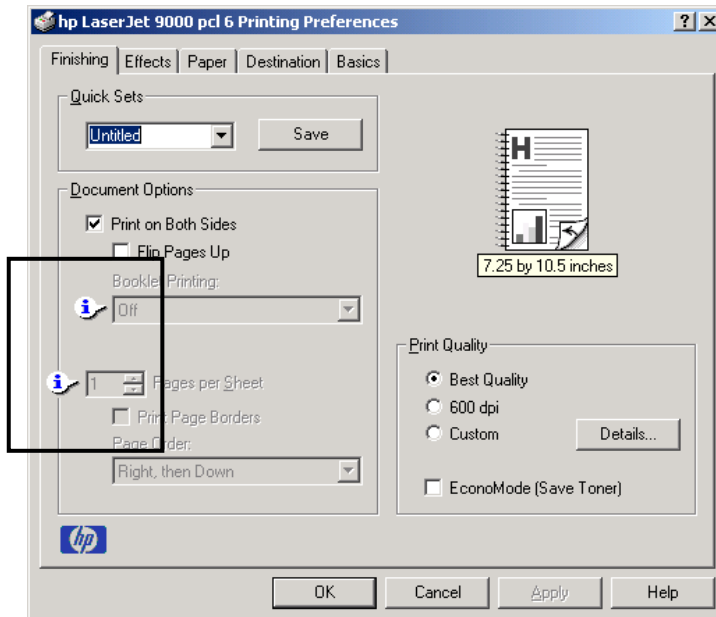
Whenever a constraint message appears with an **OK** and a **Cancel** button, the interpretation of the buttons is as follows:

- 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, setting the control back to its previous value.

Bubble Help

Bubble Help features a graphical icon resembling a cartoon speech bubble with a small **i** in it, representing the international symbol for information. (See below for a list of the Bubble Help messages.) The following illustration shows **Bubble Help** icons on a driver tab.

Figure 18: A property page with Bubble Help icons

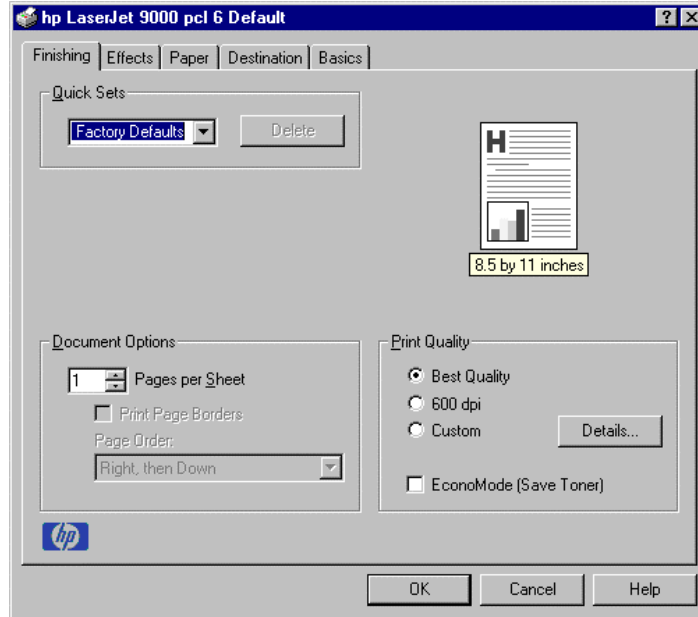


The bubble typically appears next to a disabled control, although it can also accompany an enabled control if there is an important note concerning its use. Moving the pointer over the bubble changes the arrow to a gloved hand, which indicates that the area underneath the pointer is selectable. When the bubble is selected, using either the mouse or the keyboard, a message box appears with 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 **Finishing** tab is the default tab shown when you click **Document Defaults...** for the driver or a software application.

Figure 19: The default appearance of the Finishing tab



The **Finishing** tab contains three group boxes:

- Quick Sets
- Document Options
- Print Quality

Quick Sets

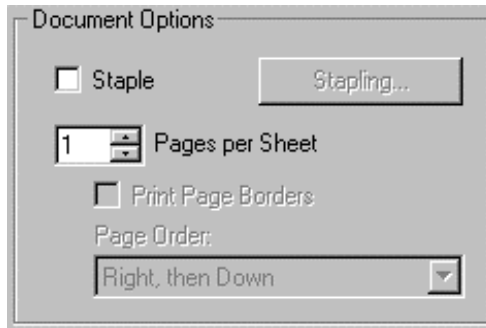
This group box is present on each tab for the driver. Quick sets are either preset or user-defined printing specifications (such as paper size, pages per sheet, and so on). The default setting is **Factory Defaults**. The driver also provides a quick set for printing the *use* guide.

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

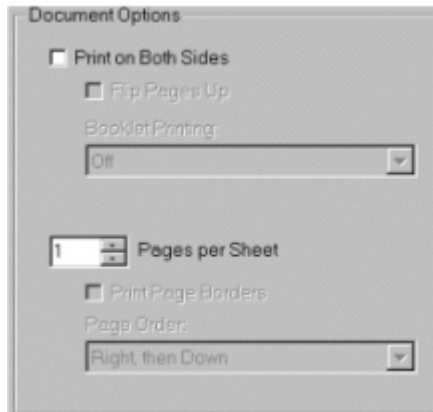
Document Options

The **Document Options** group box dynamically sizes itself and positions controls to reflect configuration options of the HP LaserJet 9000 printer that affect the **Document Options** controls. Three configurations are possible, depending on whether a duplexing unit or stapler, or both, are installed.

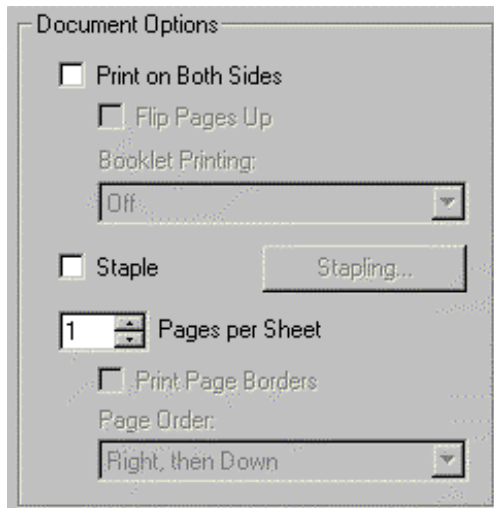
Figure 20: The Document Options group box



a) Document Options group box stapler only



b) Document Options group box with duplexing unit only



c) Document Options group box with both stapler and duplexing unit

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

- **Paper Type** is set to transparency, cardstock, or labels.
- **Paper Size** is anything except Letter, Legal, A3, A4, A5, B4, B5 (Japanese Industry Standard, or JIS), Executive, Ledger, and custom sizes greater than or equal to 148 mm by 210 mm (5.8 inches by 8.3 inches), and less than or equal to 312 mm by 470 mm (12.3 inches by 18.5 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. The default for both of these options is OFF.

The **Flip Pages Up** check box, visible only when **Print on Both Sides** is selected, is used to specify the duplex-binding option. The following table demonstrates the results of selecting this box, depending upon the paper orientation:

Orientation	Flip Pages Up selected	Flip Pages Up not selected
Portrait	Short-edge binding	Long-edge binding
Landscape	Long-edge binding	Short-edge binding

The preview document image shows a spiral binding along either the left or the top edge of the page to indicate how the pages will be flipped when **Print on Both Sides** is selected. Also, a folded over corner appears in the lower right of the preview image with an arrow that points in the direction that the page is flipped.

The **Booklet Printing** drop-down menu, visible when **Print on Both Sides** is selected, offers six choices, two of which are based on the current paper size. The list contains the items with the following structure:

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

where **[paper size]** depends on the paper size set on the **Paper** tab. The following table shows the appropriate entries in the **Booklet Printing** drop-down menu for each selected paper size.

Paper Size selected	Entries in Booklet Printing drop-down menu
Letter	Off Letter (Left Binding) Letter (Right Binding) Legal (Left Binding) Legal (Right Binding) 11 x 17 (Left Binding) 11 x 17 (Right Binding)
Legal	Off Legal (Left Binding) Legal (Right Binding)
A4	Off A4 (Left Binding) A4 (Right Binding) A3 (Left Binding) A3 (Right Binding)

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

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

- Print on Both Sides is selected.
- Percent of Normal Size (on the Effects tab) is 100.
- Pages per Sheet is 1.
- Paper Size is Letter, Legal, or A4.
- Print Document On: (on the Effects tab) is not selected.

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

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 the value entered to the nearest valid value (in this example, 2). 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.

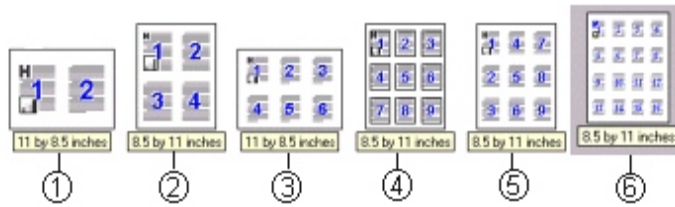
Print Page Borders sets a line around each page image on a printed sheet to help visually define the borders of each logical page.

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 in the following illustration.

Figure 21: Page order preview image



1. 2 pages per sheet
2. 4 pages per sheet
3. 6 pages per sheet
4. 9 pages per sheet, with Print Page Borders selected
5. 9 pages per sheet, with (Down, then Right) page order selected
6. 16 pages per sheet

Print Quality

The HP LaserJet 9000 printer driver **Print Quality** group box provides options to control resolution, graphics settings, and font settings. The group box includes three options:

- Best Quality (settings predefined)
- 600 dpi (settings predefined)
- Custom (automatically selected when any changes are made to Best Quality or 600 dpi)

The **Print Quality** group box also includes a **Details** button. Clicking this button opens the **Print Quality Details** dialog box. The **Print Quality Details** dialog box provides options for various print quality settings. If you select either **Best Quality** or **600 dpi** and then change their default settings in the **Print Quality Details** dialog box, the selected option in the **Print Quality** group box of the **Finishing** tab automatically changes to **Custom**.

The following screens show the default settings for Best Quality and 600 dpi.

Figure 22: Print Quality Details dialog box showing Best Quality settings

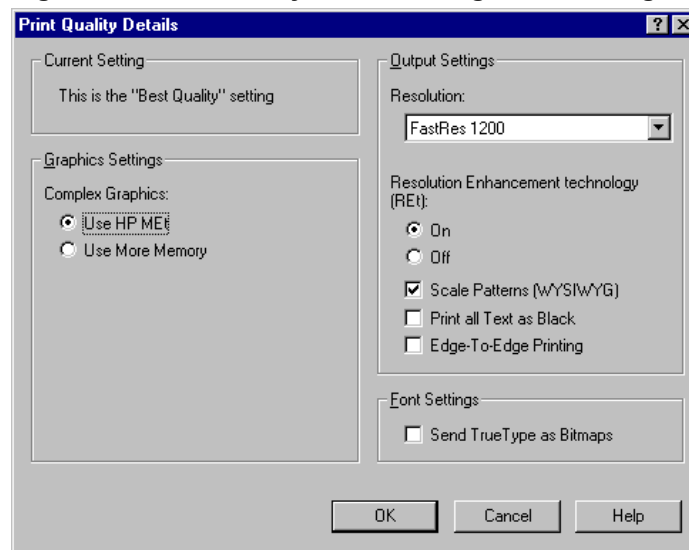
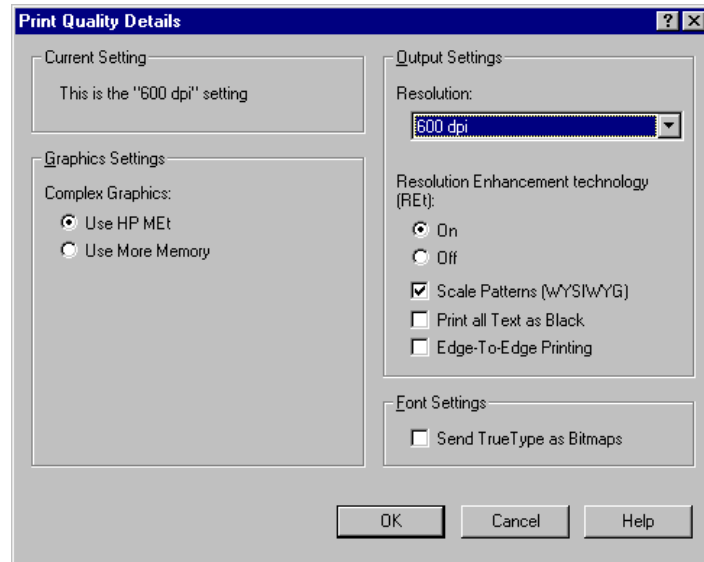


Figure 23: Print Quality Details dialog box showing 600 dpi settings

The **Graphics Settings** group box includes two options for **Complex Graphics**. These options let you determine which method to use for managing memory for print jobs. **Use HP MEt** (Memory Enhancement technology) is the default selection. This is the best choice unless you are receiving printer memory error messages. If you receive such error messages, change this setting to **Use More Memory** to complete the current print job. Then, change the setting back to the default: **Use HP MEt**.

The **Output Settings** group box contains controls for selecting **Resolution Enhancement Technology (REt)**, **Scale Patterns (WYSIWYG)**, **Print all Text as Black**, and **Edge-to-Edge Printing**.

The HP LaserJet 9000 printer supports **Resolution Enhancement technology (REt)**. The **REt** feature is a default setting, but you can choose to turn it off.

The **Scale Patterns (WYSIWYG)** feature is implemented to address the moiré effect created when certain applications encounter certain patterns. This feature allows you 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 is off by default. When selected, this option will cause the driver to image all text as black regardless of the original document text color. White text remains white. 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.

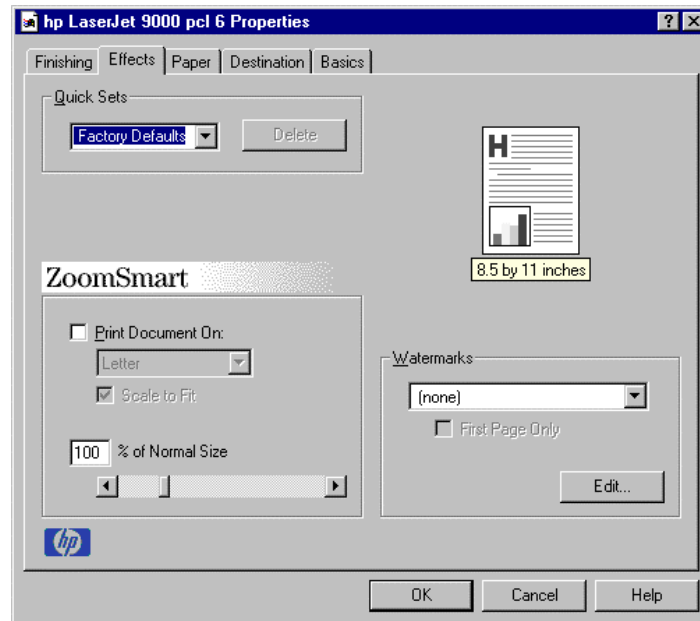
Edge-to-Edge Printing is off by default. When selected, this option lets you increase the default printable area to within 2 mm (0.08 inch) of the edge of the selected media. This setting remains selected only for the current print job. When the current print job is completed, the **Edge-to-Edge Printing** default is automatically turned off.

In the **Font Settings** group box, the only available option is **Send TrueType as Bitmaps**, which provides a safety net for applications that have trouble using TrueType fonts for special graphic purposes, such as shading, rotation, or slanting.

Effects tab features

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

Figure 24: The Effects tab



ZoomSmart

The **ZoomSmart** group box includes features that scale the image on the page, either by a numeric percentage or by specifying a scale change to a different paper size. **ZoomSmart** handles scale transformations.

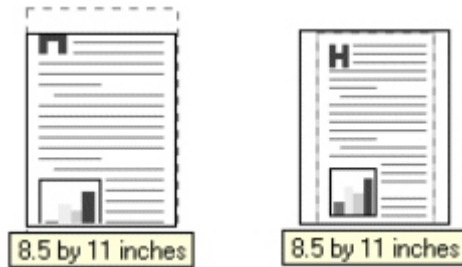
Print Document On: lets you format the document for one paper size, but prints the document on a different paper size with or without scaling the page image to fit the new paper size.

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

- Percent of Normal Size is not 100.
- Pages per Sheet is not 1.
- Booklet Printing is on.

When **Print Document On:** is selected, the drop-down menu specifies the media size on which to 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.

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 25: 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.

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 application (if the application 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 clipped 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.
- Booklet Printing is on.

Watermarks

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

- Confidential
- Draft
- SAMPLE

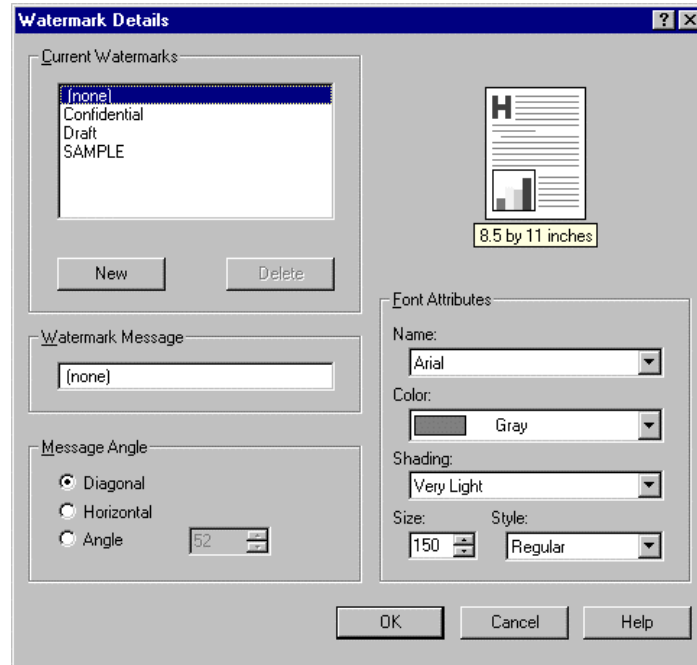
The drop-down menu shows alphabetically sorted watermarks currently available on the system, plus the string "None", which indicates that no watermark is selected. This is the default setting. Any watermark selected from this list appears in the preview image.

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, there are four watermarks on the physical page (one on each logical page).

Click the **Edit** button to display the **Watermark Details** dialog box.

Figure 26: Watermark Details dialog box



The dialog box shows a preview image and provides options creating new watermark and for 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.

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 **Help** bubble appears to explain 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.

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. 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.

The controls in the **Message Angle** group box let you print the watermark in a diagonal, horizontal, or angle (custom) orientation to the page's text. The default is **Diagonal**. While all three settings automatically center the watermark string within the page, these settings affect 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.

The **Font Attributes** group box provides controls to let you change the font and the color, shading, size, and style of the font.

The **Name** drop-down menu lists TrueType fonts currently installed on the system. For the HP LaserJet 9000 printers, the only **Color** selection is gray. The **Shading** drop-down menu offers the following range of shades:

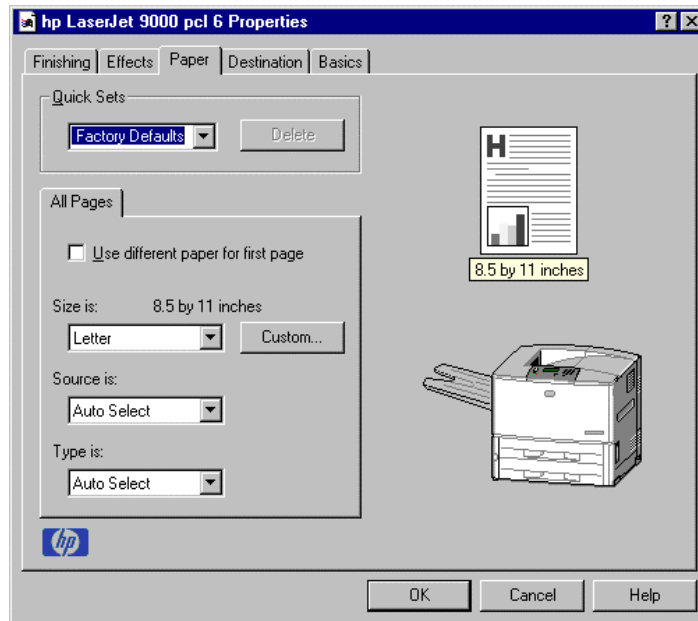
- **Lightest**
- **Very Light**
- **Light**
- **Medium Light**
- **Medium**
- **Medium Dark**
- **Dark**
- **Very Dark**
- **Darkest.**

The **Size** selection allows sizes from 1 to 999 points. The **Style** drop-down menu offers a choice of regular, bold, italic, and bold italic.

The default settings for watermarks on the HP LaserJet 9000 printer are Arial font, Gray color, Very Light shading, 150 points, and Regular Style.

Paper tab features

The **Paper** tab lets you specify the size, type, and source of the media. You can also use the **Paper** tab to define a custom paper size. If desired, you can indicate different paper selection choices for the first page and back cover of the document.

Figure 27: The Paper tab

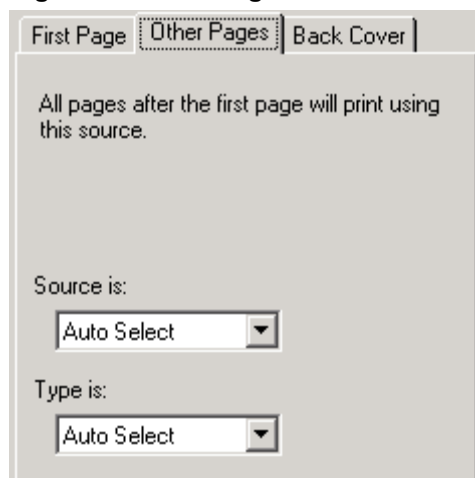
All Pages

The controls on this tab are contained in an **All Pages** mini-tab. As the name implies, this means that the settings specified on that tab apply to all pages of the document. However, when you click the **Use different paper for first page** check box, the mini-tab becomes three mini-tabs. These three mini-tabs 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.

Other Pages

The **Other Pages** mini-tab allows you to select an alternative media type or source for the pages of a document following the first page. The choices and defaults for **Source is:** and **Type is:** are the same as for **First Page**.

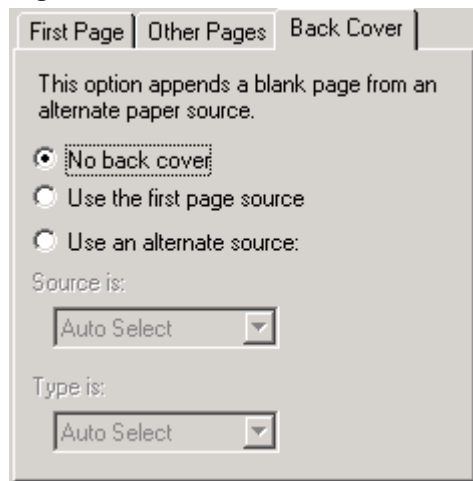
Figure 28 Other Pages tab

Back Cover

The **Back Cover** mini-tab allows you to select an alternative media source (or the same source as **First Page**) from which a blank page is drawn and placed after the back page of a document. The mini-tab contains three radio buttons and a drop-down menu. **No Back Cover** is selected as the default, with the drop-down source selection box disabled. Clicking **Use an Alternate Source** activates the drop-down menu. The drop-down menu value defaults to the same source as that chosen for the **First Page** tab. Clicking **Use the First Page Source** changes the drop-down value to match the first page, if necessary, but the drop-down menu remains inactive.

When the **Back Cover** tab is active, clicking **No Back Cover** deactivates the drop-down menu, but does not change its value. No help bubble is available for the inactive drop-down menu. The settings will revert to defaults when **Use Different Paper for First Page** is selected again.

Figure 29: Back cover tab



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. Selecting 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 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** tabs, the **Size** drop-down menu does not appear because the media size must be consistent for all pages of the job. Certain applications 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.

The following table shows the standard paper sizes for the driver as they appear in the list.

NOTE:	The following table lists the media size order for Windows NT 4.0. The order of the list can vary for other operating systems. The list will contain all the sizes shown below, and might contain sizes from other drivers.
--------------	---

Size is:	Width	Height
Letter	216 mm (8.5 inches)	279 mm (11.0 inches)
Legal	215.9 mm (8.5 inches)	355.6 mm (14.0 inches)
Executive	184 mm (7.25 inches)	267 mm (10.5 inches)
A3	297 mm (11.69 inches)	420 mm (16.54 inches)
A4	210 mm (8.26 inches)	297 mm (11.70 inches)
A5	148 mm (5.83 inches)	210 mm (8.27 inches)
B4 (JIS)	257 mm (10.12 inches)	364 mm (14.33 inches)
B5 (JIS)	182 mm (7.17 inches)	257 mm (10.12 inches)
11 by 17	279.4 mm (11.00 inches)	431.8 mm (17.00 inches)
Envelope #10	104.9 mm (4.13 inches)	241.3 mm (9.50 inches)
Envelope DL	110 mm (4.33 inches)	220 mm (8.66 inches)
Envelope C5	162 mm (6.38 inches)	229 mm (9.02 inches)
Envelope B5	176 mm (6.93 inches)	250 mm (9.84 inches)
Envelope Monarch	98.4 mm (3.88 inches)	190.5 mm (7.50 inches)
Double Postcard	148 mm (5.83 inches)	200 mm (7.87 inches)
Executive (JIS)	215.9 mm (8.50 inches)	330.2 mm (13.00 inches)

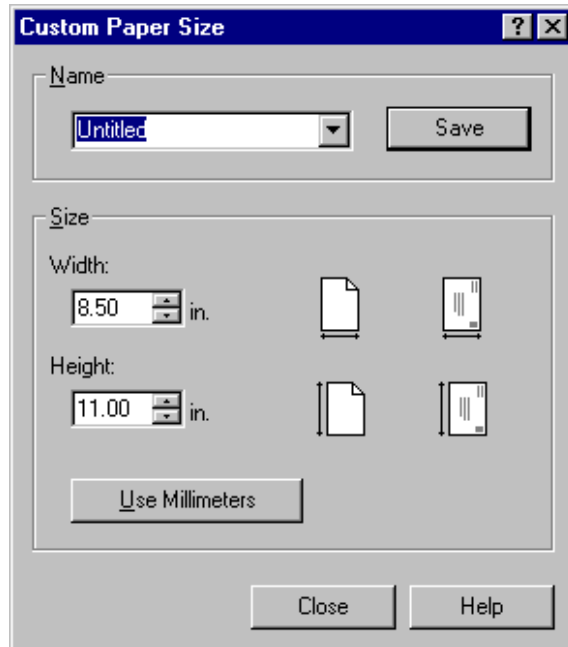
Size is:	Width	Height
16K	196.85 mm (7.75 inches)	273 mm (10.75 inches)
8K	273 mm (10.75 inches)	393.7 mm (15.5 inches)
11 by 17 Oversize	297 mm (11.69 inches)	449 mm (17.69 inches)

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

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 30: The 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 upon the current paper size selection in the **Paper** tab:

- If the paper size selection is a custom size previously defined, 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 for a custom paper size, **Untitled**.

NOTE:

In Windows 95, Windows 98, and Windows Me, the custom paper size entry and storage are case sensitive. For example, the names "Big" and "BIG" can co-exist. However, in Windows NT 4.0 and Windows 2000, the custom paper size entry is case sensitive, but storage is not. Therefore, "Big" and "BIG" cannot co-exist.

The new name is compared only against the list of user-defined custom paper 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 displays the name of the last selected custom paper size, allows you to enter new names for custom paper sizes, and allows you to select from the list of currently defined custom paper sizes.

The name displayed in the **Name** drop-down menu is one of three things, depending upon 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 displays 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 displays 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 display until a saved custom paper size has been selected from the drop-down menu.

If a new name is typed into the **Name** drop-down menu, but the **Save** button is not clicked, 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 the selection of an existing custom paper size. Selecting 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 you 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 for you to type a different name. Whenever the command button has the **Save** title, it is the default button.

NOTE: In Windows 95, Windows 98, and Windows Me, both the custom paper size entry and storage are case sensitive; “Big” and “BIG” can co-exist. However, in Windows NT 4.0 and 2000, while the custom paper size entry is case sensitive, storage is not. Therefore, “Big” and “BIG” cannot co-exist.

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

- **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.

<u>State</u>	<u>Drop-down menu contents</u>	<u>Button label</u>	<u>Action</u>	<u>Next state</u>
1	Untitled	Save	Click Save	3
			Type something into 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 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 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 selecting the up and down arrows.

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

NOTE: If units are in millimeters, the custom paper size range minimum is the limit rounded up to the nearest whole millimeter. Custom paper size range maximum is the limit rounded down to the nearest whole millimeter. Any non-numerical entry will revert 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 upon 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 upon 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 9000 printer is 98 mm by 191 mm (3.87 inches by 7.5 inches) and the maximum is 297 mm by 450 mm (11.7 inches by 17.7 inches). The following table summarizes paper size limits for each paper-handling device.

Media source or paper handling accessory	Minimum size - width by height	Maximum size - width by height
Tray 1 (multi-purpose)	98 mm by 191 mm (3.87 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)
Tray 2	148 mm by 210 mm (5.8 by 8.2 inches)	297 by 432 mm (11.7 by 17 inches)
Tray 3	148 mm by 210 mm (5.8 by 8.2 inches)	297 by 432 mm (11.7 by 17 inches)
2000-sheet input tray (Tray 4)	182 mm by 210 mm (7.17 inches by 8.27 inches)	297 mm by 432 mm (11.7 inches by 17.0 inches)
Face-down bin	98 mm by 191mm (3.9 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)
Face-up bin	98 mm by 191mm (3.9 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)
Duplex printing accessory	98 mm by 191mm (3.9 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)
3000-sheet stacker face-up bin	98 mm by 191mm (3.9 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)

Media source or paper handling accessory	Minimum size - width by height	Maximum size - width by height
3000-sheet stacker face-down bin	148 mm by 210 mm (3.9 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)
3000-sheet stapler/stacker	98 mm by 191 mm (3.9 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)
3000-sheet stapler/stacker face-down bin	148 mm by 210 mm (3.9 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)

Icons

The paper and envelope icons visually define width and height.

Measurement Units button

Like the dynamic command button previously described, the **Measurement Units** button is also multi-titled, although its function is always 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 table below. In all cases, any custom paper sizes 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.

If the drop-down menu contains ...	And the button says ...	Then it will do this 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.

If the drop-down menu contains ...	And the button says ...	Then it will do this when the Close button is clicked
<name of saved item>	Delete	The dialog box closes, and the current paper size is set to that which was last displayed 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 minimum list contains:

- Auto Select
- Manual Feed
- Tray 1 (if installed)
- Tray 2
- Tray 3
- Tray 4 (if installed)

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, or type, and you choose to keep the conflicting settings, the settings are processed in the following order: paper size, paper type, and 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 supported by the HP LaserJet 9000 printer, as well as any user-defined types created by a printer administrator. The default setting is **Auto Select**, which allows the application to select the paper type.

No mechanism exists for manually adding custom paper types from 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 standard types that appear in the lists are:

- Auto select
- Bond
- Cardstock

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

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

Printer image

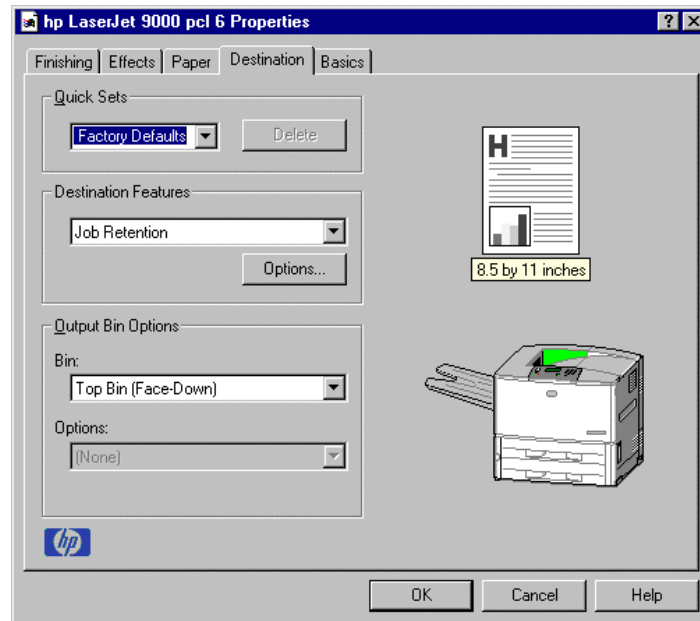
The bitmap image in the lower-right portion of the **Paper** tab represents the current physical configuration of the printer and corresponds to its configuration data, either obtained automatically through bidirectional communication or configured manually. It should look the same as the image that 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 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 on the bitmap.
- Selecting manual feed or tray 1 highlights the same part of the bitmap.
- Selecting on the area that represents tray 1 in the bitmap will always select tray 1. **Manual Feed** cannot be selected by selecting the bitmap.
- On the **Paper** tab, only input trays have hot spots and can be highlighted. Output bins must be selected from the **Destination** tab.

Destination tab features

The **Destination** tab provides options for Job Retention and output bins.

Figure 31: The Destination tab

Destination Features

The Destination Features group box provides controls for Job Retention. This group box is only visible if **Printer Hard Disk** or **Job Retention Enabled** is selected in the **More Configuration Options** dialog box available on the **Configure** tab.

Hardware configuration and availability of Job Retention options

NOTE: The Job Retention in RAM feature is not supported under Windows 3.1x.

The **Job Retention** options available to you depends upon whether your printer has an optional hard disk installed. Some of the **Job Retention** options require a printer hard disk (an optional HP EIO disk drive). However, the feature called Job Retention in RAM allows you to use some of the Job Retention options without installing a printer hard disk.

The **Proof and Hold** and **Private Job** options are available through the Job Retention in RAM feature, and do not require the installation of a hard disk.

The **Quick Copy** and **Stored Job** options require the installation of a printer hard disk. To use all four of the Job Retention options, the printer must have the optional hard disk installed, the **Printer Hard Disk** selected on the **More** dialog box of the **Configure** tab, and the print driver configured to use hard disk storage.

Configuring the printer driver for a printer hard disk

If the print driver on your computer is not yet configured to use the hard disk, follow these simple steps:

NOTE: These steps must be completed for each driver.

1. Double-click the **My Computer** icon. This opens the **My Computer** window.

2. Open the **Printers** window.
3. Right-click the printer icon. This opens a drop-down menu. Click **Properties**. The **Properties** dialog box appears.
4. Click the **Configure** tab.
5. Click **Other Options**.
6. Under **Storage**, click the **Printer Hard Disk** check box.
7. Close all dialog boxes by clicking **OK**.

Your PCL printer driver is now configured to use the hard disk and Job Retention features of your HP LaserJet 9000 printer.

Job retention modes

NOTE: The Job Retention in RAM feature is not supported under Windows 3.1x.

Using the HP LaserJet 9000 printer's Job Retention feature, you can store documents in the printer memory and then control the printing of these documents using the printer control panel. This feature is intended to provide greater flexibility, convenience, security, and cost savings.

Once the Job Retention in RAM feature has been enabled, you can access its features in the **Destination** tab of the printer driver.

NOTE: The Job Retention options available to you will depend on whether your printer has an optional hard disk installed. For details, see "Hardware configuration and availability of Job Retention options."

The HP LaserJet 9000 printer offers the following Job Retention options:

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

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

NOTE: The printer configuration can be set to hold a maximum of 50 quick-copy or proof-and-hold jobs. The number is set on the printer control panel in the **Configuration** menu, and the default is 32. When this preset limit is reached, a newer document will overwrite the oldest. Also, a document that has the same user and job name as one already stored on the hard disk will overwrite the existing document. Quick-copy jobs are deleted if the printer's power is removed.

Proof and Hold: This option allows you to print and check the first copy of a print job before printing the remaining copies. If the document prints correctly, you can print the remaining copies of the print job from the printer control panel. The number of proof-and-hold print jobs that can be stored in the printer is set from the printer control panel.

Proof and Hold stores the print job on the printer hard disk or in printer RAM memory, and prints only the first copy of the job. You must release subsequent copies from the control panel.

Private Job. This option allows you to send a print job directly to the printer memory. The print job can be printed only after you enter a personal identification number (PIN) in the printer control panel. (You can set the PIN in the **Print** dialog box.) After the job is printed, the printer removes it from the printer memory. This feature is useful when you are printing sensitive or confidential documents you do not want to leave in an output bin after printing.

Private Job stores the print job on the hard disk or in printer RAM memory, and releases it only after you type in the PIN on the printer control panel. Selection of **Private Job** activates the PIN field, and a PIN number must be entered to complete the selection.

Once released for print, the private job is immediately deleted from the printer. If more copies are needed, it will be necessary to reprint the job from the application. 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 second job will overwrite the older job, regardless of the PIN. Private jobs are deleted if power to the printer is removed.

Stored Job: This option is available only when a printer hard disk is installed. **Stored Job** allows you to send a print job directly to the printer hard disk. The print job will be stored in the printer as if it is an electronic file cabinet. After the print job is stored in the printer's hard disk, you can print the job from the printer control panel. Nothing will be printed until the job is requested from the printer control panel.

The job remains stored on the printer until it is deleted or overwritten by a document with the same user and job names. Stored jobs remain on the printer hard disk when power is interrupted. Use this feature for forms and other common or shared documents.

A stored job can be handled in two ways, as either a private or a public job. A private stored job allows you to send a print job directly to the printer memory and can be printed only after you enter a PIN in the printer control panel. (You can set the PIN in the **Print** dialog box.) After the job is printed, the job remains in the printer memory and can be printed again from the printer control panel. This feature is useful when you are printing sensitive or confidential documents you do not want to leave in an output bin after printing. Private mode is initiated by clicking the **Require PIN to Print** check box. In this mode, a PIN entry at the control panel is required to release the job.

The box labeled **PIN** is usually inactive. The **Require PIN to Print** option is activated if you click **Stored Job**. If selected, you must enter a PIN to make the stored job private. This generates the commands `@PJL SET HOLDTYPE=PRIVATE` and `@PJL SET HOLDKEY="xxxx"` in addition to the stored job commands.

NOTE: A private stored job is not the same as a private job (see above). Private jobs are deleted from the printer memory after they are printed. Private stored jobs are retained in the printer memory after printing, but require that a PIN be entered each time they are printed.

Document identifiers used in Job Retention

When you use a Job Retention feature, your document is identified in the printer control panel by the following information:

The **User Name** edit box allows you to identify the job at the printer control panel. When the driver is first installed (or when the **Factory Defaults Quick Set** 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 NT 4.0 and Windows 2000. It replaces it with "Untitled" in Windows 3.1x, Windows 95, Windows 98, and Windows Me. Restrictions for the **User Name** field are described below.

The **Job Name** is used for specifying a name to identify the job on the printer control panel. When the driver is installed, or when **the Factory Defaults Quick Set** is selected, this string is initialized to the empty string (" "), but the dialog box will detect this condition and replace the string with "Untitled". Restrictions for the job name field are described below.

The **Job Name** and the **User Name** field can contain no more than 16 characters, 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 be displayable on the printer control panel.

PIN

Private print jobs are secured by a four-digit PIN, which you can assign to a print job when you are using the Private Job feature. This number must be entered in the printer control panel before it 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** or **Stored Job** along with **Require PIN to Print**, activates the **PIN** box. The Stored 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 PIN is 0000 for **Private Job** and **Stored Job** with **Require PIN to Print** checked.

Using Job Retention options when printing

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

NOTE: The printer driver installed on your computer must be configured to use the Job Retention features. See the "Configuring the printer driver for a printer hard disk" section.

1. Click **Print** from the software application. 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 Retention** on the drop-down menu under **Destination Features**.
5. Click **Options**. The **Job Retention Options** dialog box appears.

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

NOTE: These instructions are specific to the Windows NT 4.0, Windows 2000, Windows 95, Windows 98, and Windows Me environments using the latest available PCL 6 and PCL 5e drivers. While the basic concepts of Job Retention 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 stored jobs at the printer

Once you send a print job using Job Retention, 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 should have an icon next to it indicating that the job is locked).
5. Enter the PIN number and press the select button.

Deleting a print job

Sometimes it is necessary to delete a print job from the printer memory or hard disk. 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, 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 DELETE (The DELETE selection should have an icon next to it indicating that the job is locked).
5. Enter the PIN number and press the select button.

Output Bin Options

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

The HP LaserJet 9000 printer has two default output bins that can be selected in the driver:

- **Face-down bin** refers to the main output bin at the top of the printer and is the default setting for the HP LaserJet 9000 printer. Jobs sent to this bin are printed face down. This option is always available.
- **Face-up bin** refers to the secondary output bin that extends from the left side of the printer. Jobs sent to this bin are printed face up. This option is always available, and there are no paper size or type constraints.

In addition, depending upon the bundle and the driver configurations, the HP LaserJet 9000 printer offers the following optional output devices:

- **Optional 3000-sheet stapler/stacker.** This single 3000-sheet stacking device accommodates up to 3,000 sheets of Letter-sized and A4-sized paper, or up to 1,500 sheets of 11-inch by 17-inch and A3 paper. It provides multi-position stapling for up to 50 sheets of paper per document.
- **Optional 3000-sheet stacker.** This single 3000-sheet stacking device accommodates up to 3,000 sheets of Letter-sized and A4-sized paper, or up to 1,500 sheets of 11-inch by 17-inch and A3 paper.

Options

The **Options** drop-down menu is inactive.

Printer image

The bitmap image in the lower-right portion of the **Destination** 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 **Paper** tab and the **Configure** tab.

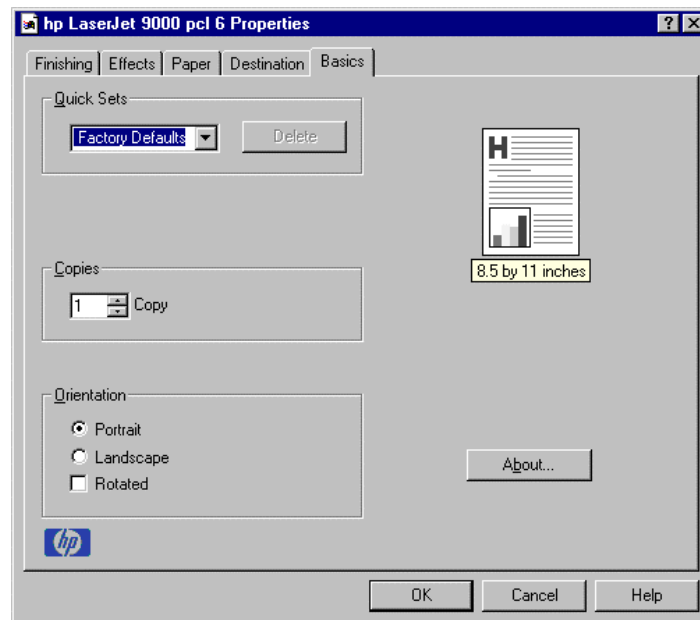
On the **Destination** tab, the printer image contains hot spots for selecting an output bin. When the pointer moves over a hot spot, the arrow reverts to the gloved hand used in the bubble help, the preview image, and other areas. The current output bin is highlighted in a bright green color on the 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. It also lets you retrieve information about the driver.

Figure 32: The Basics tab



Copies

The Copies feature allows you 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 999. The copies value will not advance from 999 to 1 or change from 1 to 999 when the down arrow is used. Invalid entries into the edit box (such as non-numerical input, numbers less than 1 or greater than 999) are changed to the last valid value when focus is removed from the control. The default number of copies is 1.

Because applications can also be used to set the desired number of copies, conflicts between the application and the driver can arise. In most cases, the application and the driver communicate,

so that the number of copies set in one location (such as the application) will appear in the other (such as the driver). For some applications, this communication does not take place, and the copies values are treated independently. For these applications, setting 10 copies in the application and then setting 10 copies in the driver will result in 100 copies (10 x 10) being printed.

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:

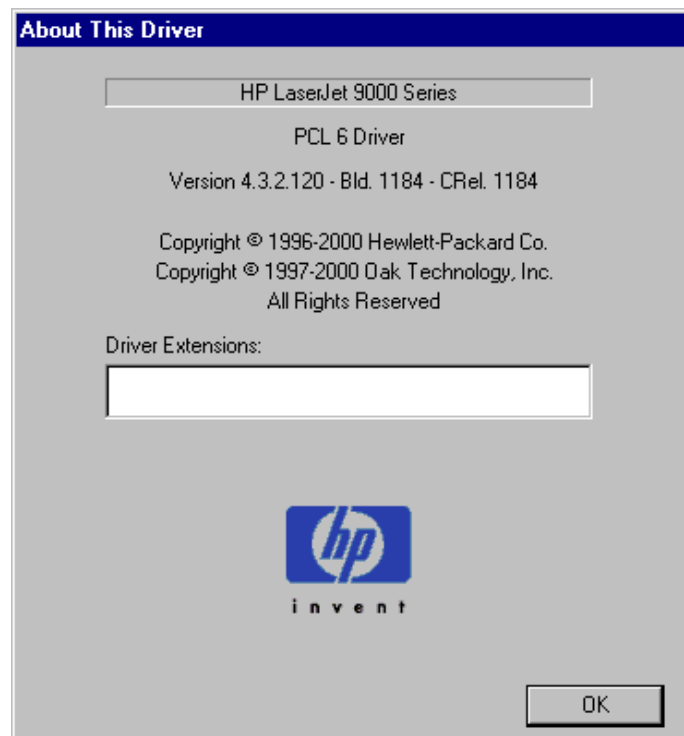
- **Portrait.** The top edge of the document is the shorter edge of the paper.
- **Landscape.** The top edge of the document is the longer edge of the paper.
- **Rotated.** Rotated is a form of landscape or portrait in which the image is rotated 180 degrees. This setting is useful for printing envelopes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

Orientation can toggle between portrait and landscape by left-clicking the preview image. If you check **Rotation**, there is no change in the preview image.

About

By clicking the **About** button on the **Basics** tab or selecting 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. Figure 33 shows the **About** box.

Figure 33: The About This Driver dialog box



Driver extensions

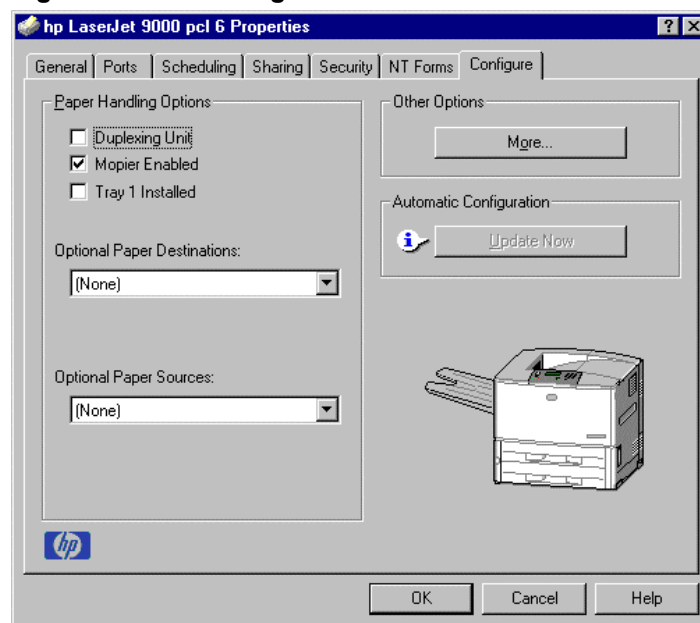
The **Driver extensions** text box provides you with some visibility of any extended driver functionality. It can contain a brief description of the driver extension and a version number.

Configure tab features

The **Configure** tab lets you 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 will be unavailable, so you must manually configure the options on this tab.

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

Figure 34: The Configure tab



Paper handling options

The **Paper Handling Options** group box provides options for configuring the majority of 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 in 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 application, click the **Properties** button, click the **Finishing** tab, and then click **Print on Both Sides**.

Mopier enabled

A mopier is a printer designed by HP to produce multiple, collated copies from a single print job. All documents can be created, controlled, managed, and finished from the desktop, eliminating the extra step of going to a photocopier. The HP LaserJet 9000 printers support the Transmit Once mopying feature, and the **Mopier Enabled** option is selected by default.

Tray 1 installed

If the optional tray 1 is installed, it can be selected in the **Configure** tab. The printer image automatically changes to include tray 1.

Optional Paper Destinations

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

- HP 3000-Sheet Stapler/Stacker
- HP 3000-Sheet Stacker

NOTE: If the 3000-sheet stapler/stacker is configured on the **Configure** tab, the **Staple** option is included on the **Finishing** tab.

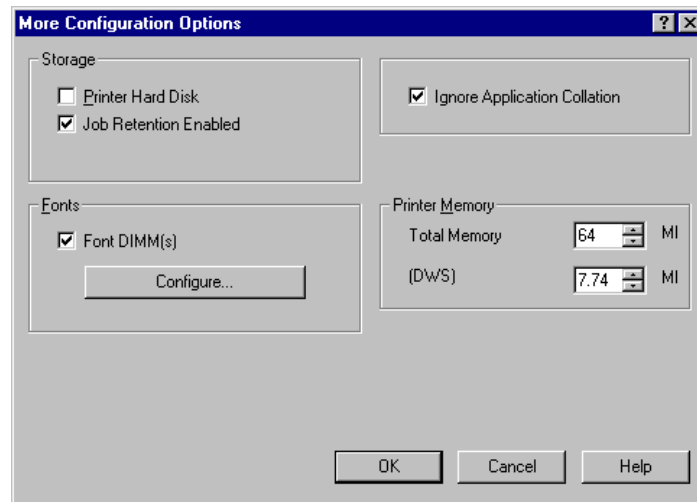
Optional Paper Sources

The **Optional Paper Sources** drop-down menu lists an optional paper source configured for the HP LaserJet 9000 printer, the 2000-sheet input tray (tray 4).

Other Options

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

Figure 35: More Configuration Options dialog box



Storage

In **Storage**, you can specify whether a printer hard disk is installed or whether **Job Retention** is enabled. **Job Retention** is enabled by default. The printer hard disk control can be set manually or updated by a successful bidirectional communication query using the **Update Now** button in environments supporting bidirectional communication.

If **Job Retention Enabled** is not selected in this dialog box, the **Destination Features** drop-down menu does not appear on the **Destination** tab.

Printer Memory

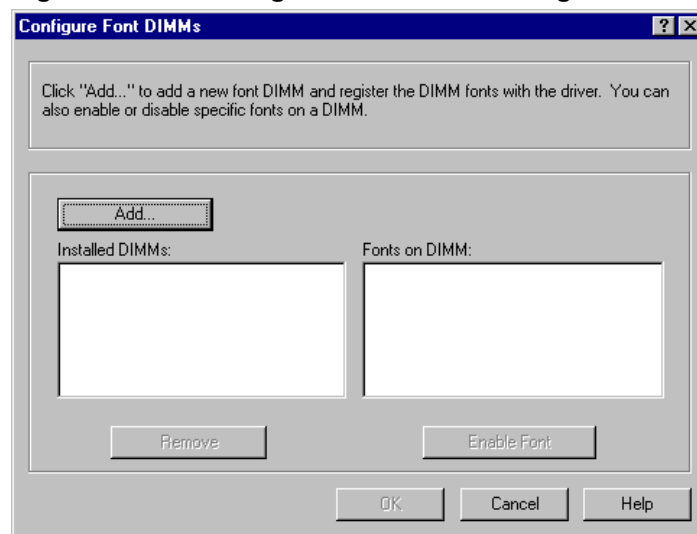
Total Memory. This shows the total amount of memory physically installed in the printer.

Driver Work Space. The **Driver Work Space** (DWS) option lets you specify the amount of work-space memory available to the printer. In environments supporting bidirectional communication, this option is configured automatically. To manually set **Driver Work Space**, print a configuration page and find the DWS value in the memory section of the configuration page. Then, enter that value in the **Driver Work Space** box in the **More Configuration Options** dialog box. An accurate **Driver Work Space** value optimizes driver performance.

Fonts

The **Fonts** group box contains a **Font DIMM** check box and a corresponding **Configure** button. Clicking the **Font DIMM** check box tells the driver that a **Font DIMM** is installed, and that stored data regarding 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 entered the **More Configuration Options** dialog box, selecting that check box automatically opens the **Configure Font DIMMs** dialog box.

Figure 36: The Configure Font DIMMs dialog box



The **Configure Font DIMMs** dialog box lets you:

- 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**) will display 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 on the HP LaserJet 9000 printer.
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, 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 display 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 HP LaserJet 9000 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 printer cartridge metrics (.PCM) file specifically designed to work with that DIMM.

Ignore Application Collation

Clicking **Ignore Application Collation** overrides collation settings in software application print options. This option is set by default. The **Ignore Application Collation** check box is disabled and set to OFF when the **Mopier Enabled** check box is not selected.

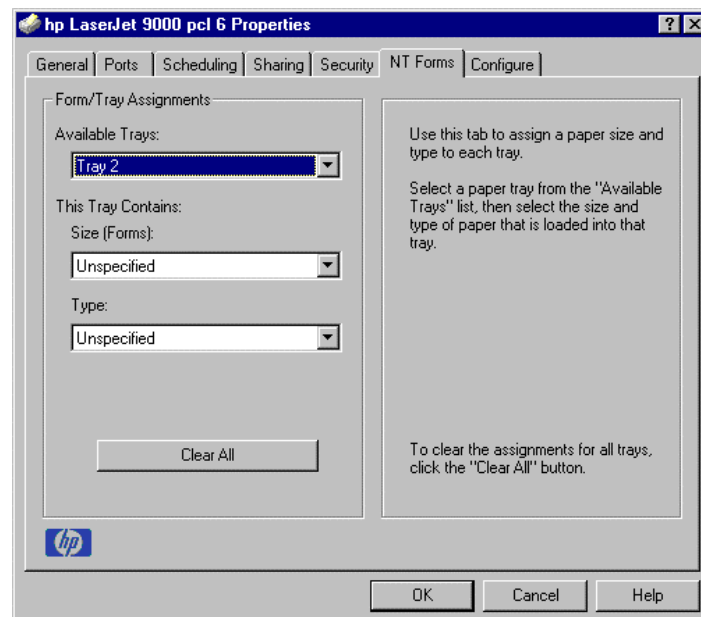
Automatic Configuration

If you have modified the configuration of the HP LaserJet 9000 printer since installation, click the **Update Now** button to automatically reflect the new configuration in the driver. This is the third method for using **Driver Autoconfiguration**. For more information about the Driver Automatic Configuration feature, see "Printer features."

NT Forms tab features

The **NT Forms** tab appears only in the Microsoft Windows NT 4.0 and Windows 2000 operating environments. The **NT Forms** tab (like the **Configure** tab) can be viewed only from the **Properties** window.

Figure 37: Driver NT Forms tab



The **NT Forms** tab lets you specify which media sizes and types are loaded in each of the available paper trays. The advantage is that it constrains the choices available in the **Size** and **Type** lists on the **Paper** tab. This constraint prevents information overload when you request unavailable sizes or types.

Available Trays is a drop-down menu containing all printer trays specified on the **Configure** tab. The **This Tray Contains/Size (Forms)** drop-down menu contains a list of standard paper sizes supported by the HP LaserJet 9000 printers, as well as any custom forms defined in the **Forms** tab. The **This Tray Contains/Type** drop-down menu lists all of the media types supported by the HP LaserJet 9000 printer. The **Clear All** button removes all 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) 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 imposed on the **Paper** tab.

Windows PS driver features

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

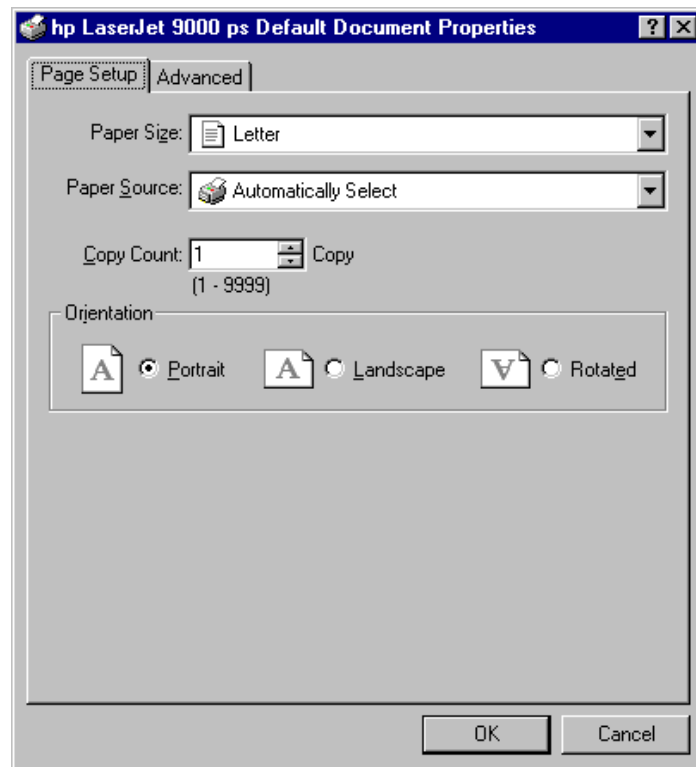
NOTE: The driver interface shown in this section is for Windows NT 4.0. The order and appearance of tabs can vary among operating systems.

Page Setup tab features

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

- Paper size
- Paper source
- Copy count
- Orientation

Figure 38: Page Setup tab

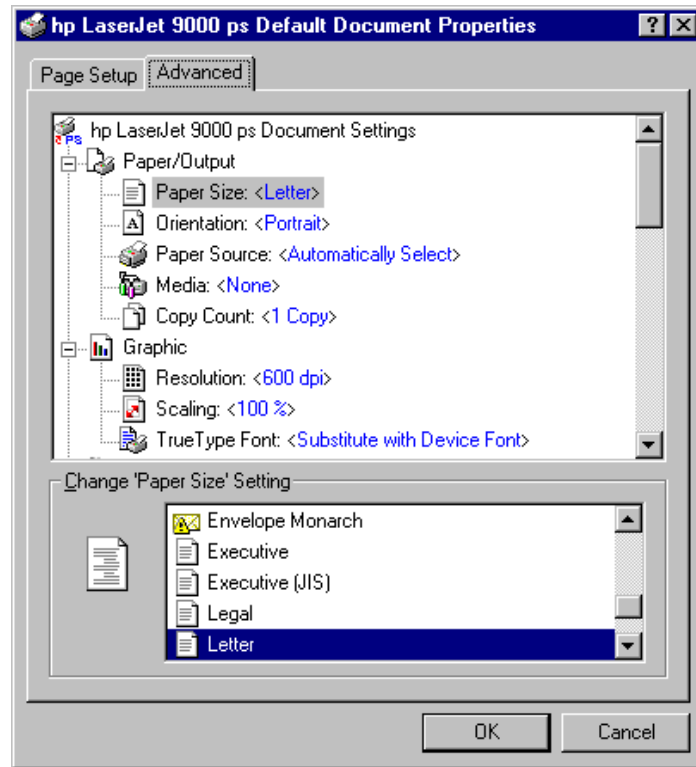


Advanced tab features

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)

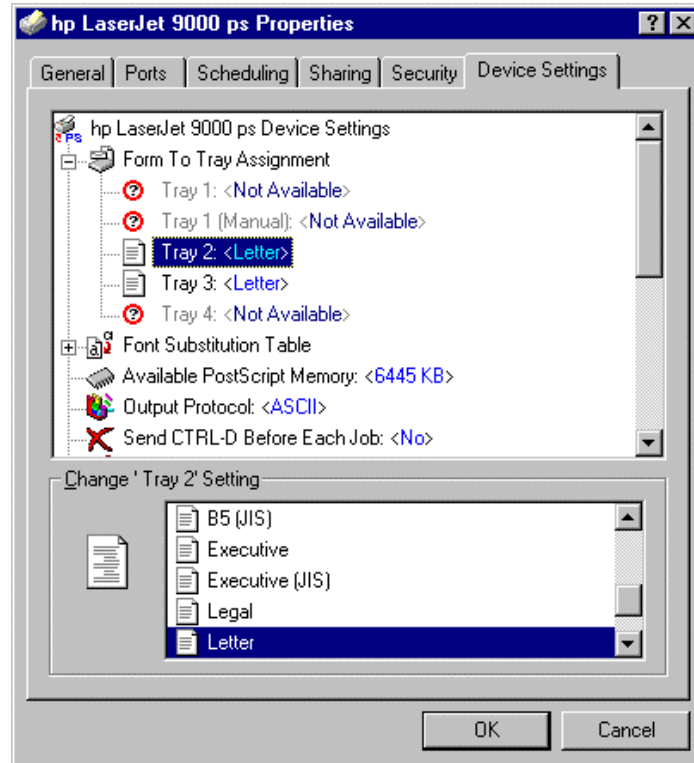
Figure 39: Advanced tab



Device Settings tab features

The **Device Settings** tab contains controls for paper-handling devices and controls for managing the HP LaserJet 9000 printer.

Figure 40: Device Settings tab



Media attributes**Paper source commands**

The PCL 5e escape sequence for paper source is Esc&#H (the " ℓ' is a lowercase 'L', not a numeral '1'). See the table below for values of #. For example, Esc& ℓ1H is the command for tray 2.

The PCL 6 escape sequence for paper source is ubyte # MediaSource. For example, ubyte 4 MediaSource is the command for tray 2.

Paper source	PCL 5e	PCL 6
Tray 1 (optional)	4	3
Tray 2	1	4
Tray3	5	5
Tray 4 (optional)	20	8
Auto Select	7	1
Manual Feed (if Tray 1 installed)	2	2

Media Types and Sizes

NOTE: Envelopes and labels cannot be printed without optional tray 1.

Media Types. The following tables provide information about paper-handling constraints for the HP LaserJet 9000 printers.

Features and Attributes: Features and attributes of paper supported by the HP LaserJet 9000 printer are shown in the following table.

Paper sizes	Width	Height	PCL5 value
Letter*	216 mm (8.5 inches)	279 mm (11.0 inches)	2
Legal	216 mm (8.5 inches)	356 mm (14.0 inches)	3
Executive	184 mm (7.25 inches)	267 mm (10.5 inches)	1
A5	148.0 mm (5.83 inches)	210 mm (8.27 inches)	25
A4*	210.0 mm (8.27 inches)	297 mm (11.69 inches)	26

<u>Paper sizes</u>	<u>Width</u>	<u>Height</u>	<u>PCL5 value</u>
A3	297.0 mm (11.69 inches)	420 mm (16.53 inches)	27
Envelope #10	105 mm (4.12 inches)	241 mm (9.5 inches)	81
Envelope DL	110 mm (4.3 inches)	220 mm (8.66 inches)	90
Envelope C5	162 mm (6.38 inches)	229 mm (9.01 inches)	91
Envelope B5	176 mm (6.93 inches)	250 mm (9.84 inches)	100
Envelope Monarch	98 mm (3.87 inches)	190 mm (7.5 inches)	80
11 by 17	279 mm (11.0 inches)	432 mm (17.0 inches)	6
B4 (JIS)	257 mm (10.12 inches)	364 mm (14.33 inches)	46
B5 (JIS)	182 mm (7.16 inches)	257 mm (10.12 inches)	45
Double Postcard	148 mm (5.83 inches)	200 mm (7.87 inches)	72
16K	197 mm (7.75 inches)	273 mm (10.75 inches)	17
8K	273 mm (10.75 inches)	394 mm (15.5 inches)	19
Executive (JIS)	216 mm (8.5 inches)	330 mm (12.99 inches)	18
Custom (leading edge) (other edge)	Minimum: 98 mm (3.87 inches) Maximum: 312 mm (12.28 inches)	Minimum: 312 mm (12.28 inches) Maximum: 470 mm (18.5 inches)	101

* Long-edge feed (others are short-edge feed)

The following table shows paper sizes supported by HP LaserJet 9000 printer input devices, Trays 1 through 4.

<u>Standard paper sizes</u>	<u>Tray 1</u>	<u>Tray 2</u>	<u>Tray 3</u>	<u>Tray 4 HCI</u>
Letter ¹	Y	Y	Y	Y
Legal	Y	Y	Y	Y
Executive	Y	Y	Y	Y
A5	Y	Y	Y	N
A4 ³	Y	Y	Y	Y

<u>Standard paper sizes</u>	<u>Tray 1</u>	<u>Tray 2</u>	<u>Tray 3</u>	<u>Tray 4 HCI</u>
A3	Y	Y	Y	Y
Envelope #10	Y	N	N	N
Envelope DL	Y	N	N	N
Envelope C5	Y	N	N	N
Envelope B5	Y	N	N	N
Envelope Monarch	Y	N	N	N
11 by 17	Y	Y	Y	Y
B4 (JIS)	Y	Y	Y	Y
B5 (JIS)	Y	N	N	N
Double Postcard	Y	N	N	N
Executive (JIS)	Y	N	N	N
16K	Y	N	N	N
8K	Y	N	N	N
Oversize 11.7 by 17.7	Y	N	N	N
Custom	Y ²	Y ³	Y ³	Y ³

¹Long-edge feed (others are short-edge feed).

²This input device supports custom paper sizes with the following specifications: for the leading edge, minimum 98 mm (3.87 inches), maximum 312 mm (12.28 inches); for the other edge, minimum 312 mm (12.28 inches), maximum 470 mm (18.5 inches).

³This input device supports custom paper sizes with the following specifications: for the leading edge, minimum 148 mm (5.83 inches), maximum 297 mm (11.7 inches); for the other edge, minimum 210 mm (8.27 inches), maximum 432 mm (17.0 inches).

The following table shows paper sizes supported by HP LaserJet 9000 printer output devices.

Paper sizes	Duplex unit	Face down	Face up²	3000-sheet stacker³	3000-sheet stacker/ stapler³
Letter ¹	Y	Y	Y	Y	Y ⁴
Legal	Y	Y	Y	Y	Y
Executive	N	Y	Y	Y	Y
A5	N	Y	Y	Y	Y
A4 ¹	Y	Y	Y	Y	Y ⁴
A3	Y	Y	Y	Y	Y ⁵
Envelope #10	N	Y	Y	N	N
Envelope DL	N	Y	Y	N	N
Envelope C5	N	Y	Y	N	N
Envelope B5	N	Y	Y	N	N
Envelope Monarch	N	Y	Y	N	N
11 by 17	N	Y	Y	Y	Y ⁵
B4 (JIS)	Y	Y	Y	Y	Y ⁵
B5 (JIS)	N	Y	Y	Y	Y
Double Postcard ⁶	N	Y	Y	N	N
16K	N	Y	Y	Y	Y
8K	N	Y	Y	Y	Y ⁵
Executive (JIS)	N	Y	Y	Y	Y
Oversize ⁶	N	Y	Y	Y	Y
Custom	N	Y	Y	Y ⁷	Y ⁷

¹ Letter and A4 paper are both long-edge and short-edge feed. Other paper sizes are short-edge feed.

² Includes face-up bin in the optional output device.

³ These devices support a longer maximum length than the HP LaserJet 9000 engine.

⁴ Angled staple available when viewing orientation is portrait.

⁵ Angled staple available when viewing orientation is landscape.

⁶Double postcard and Oversize paper sizes do not have a JetLink code.

⁷This output device supports custom paper sizes within the following specifications: Minimum 100 mm by 148 mm (3.94 inches by 5.83 inches); maximum 279 mm by 432 mm (11 inches by 17 inches).

PCL 5e and PCL 6 custom paper sizes

Tray	Paper sizes	Width	Height
Tray 1	Custom (leading edge) (other edge)	Minimum: 98 mm (3.87 inches) Maximum: 312 mm (12.28 inches)	Minimum: 191 mm (7.5 inches) Maximum: 470 mm (18.5 inches)
Tray 2	Custom (leading edge) (other edge)	Minimum: 148 mm (5.83 inches) Maximum: 312 mm (12.28 inches)	Minimum: 210 mm (8.27 inches) Maximum: 470 mm (18.5 inches)

NOTE: The PS driver does not support custom paper sizes.

The following table identifies the media types supported by HP LaserJet 9000 printer input devices, Trays 1 through 4.

Input media types (PS string)	Tray 1	Tray 2	Tray 3	Tray 4 HCI
Plain	Y	Y	Y	Y
Preprinted	Y	Y	Y	Y
Letterhead	Y	Y	Y	Y
Transparency	Y	Y	Y	N
Prepunched	Y	Y	Y	Y
Labels	Y	N	N	N
Bond	Y	Y	Y	Y
Recycled	Y	Y	Y	Y
Color	Y	Y	Y	Y

<u>Input media types (PS string)</u>	<u>Tray 1</u>	<u>Tray 2</u>	<u>Tray 3</u>	<u>Tray 4 HCI</u>
Cardstock*	Y	Y	Y	Y
Rough	Y	Y	Y	Y

*Tray 1 accepts cardstock at a maximum weight of 216 g/m2 (60-lb.). Trays 2, 3, and 4 accept cardstock of 16 to 28 lb. weight.

The following table identifies the media types supported by HP LaserJet 9000 printer output devices.

<u>Output media types</u>	<u>Duplex unit</u>	<u>Face down</u>	<u>Face up*</u>	<u>3000-sheet stacker</u>	<u>3000-sheet stapler/stacker</u>
Plain	Y	Y	Y	Y	Y
Preprinted	Y	Y	Y	Y	Y
Letterhead	Y	Y	Y	Y	Y
Transparency	N	Y	Y	N	N
Prepunched	Y	Y	Y	Y	Y
Labels	N	Y	Y	N	N
Bond	Y	Y	Y	Y	Y
Recycled	Y	Y	Y	Y	Y
Color	Y	Y	Y	Y	Y
Cardstock	Y	Y	Y	N	N
Rough	Y	Y	Y	Y	Y

* Includes face-up bin in the optional output devices.

Image rotation versus stapling

The following matrix shows two examples for long-edge feed (for example, Letter size) and short-edge feed (for example, Legal, Ledger size). All options are shown in the table, even though the driver does not show them (for example, portrait and rotated PCL 5e). "Not available" means that the stapling option simply is not possible (for example, an angled staple in an opposite corner—in such a case, the device puts a straight staple in the opposite corner).

Table cells marked in yellow are defined as “hard to read,” and the driver shows a warning. This table shows the “short edge” twice because papers that are narrower than Legal size cannot be stapled using the **Angled** option.

Feed direction	Orientation	Duplex	Paper Size	1 staple	2 staples	3 staples	6 staples	Angled	Custom	
Long edge	Portrait	Simplex	Letter			Same side as two staples	Same side as two staples			
Long edge	Portrait Rotated	Simplex	Letter			Same side as two staples	Same side as two staples	Not available		
Long edge	Portrait	Print Both Side(booklet)	Letter			Same side as two staples	Same side as two staples			
Long edge	Portrait Rotated	Print Both Side (Booklet)	Letter	Not available						
Long edge	Portrait	Flip Pages Up (tablet)	Letter			Same side as two staples	Same side as two staples			
Long edge	Portrait Rotated	Flip Page Up (tablet)	Letter			Same side as two staples	Same side as two staples	Not available		
Long edge	Landscape	Simplex	Letter			Same side as two staples	Same side as two staples	Not available		
Long edge	Landscape Rotated	Simplex	Letter			Same side as two staples	Same side as two staples	Not available		
Long edge	Landscape	Print Both Side (booklet)	Letter			Same side as two staples	Same side as two staples	Not available		
Long edge	Landscape Rotated	Print Both Side (booklet)	Letter			Same side as two staples	Same side as two staples	Not available		
Long edge	Landscape	Flip Pages Up (tablet)	Letter			Same side as two staples	Same side as two staples	Not available		
Long edge	Landscape Rotated	Flip Pages Up (tablet)	Letter			Same side as two staples	Same side as two staples	Not available		

Software Technical Reference for the HP LaserJet 9000 printers

Feed direction	Orientation	Duplex	Paper Size	1 staple	2 staples	3 staples	6 staples	Angled	Custom	
Short edge	Portrait	Simplex	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Portrait Rotated	Simplex	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Portrait	Print Both Side (booklet)	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Portrait Rotated	Print Both Side (booklet)	Legal	Not available						
Short edge	Portrait	Flip Pages Up (tablet)	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Portrait Rotated	Flip Pages Up (tablet)	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Landscape	Simplex	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Landscape Rotated	Simplex	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Landscape	Print Both Side (booklet)	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Landscape Rotated	Print Both Side (booklet)	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Landscape	Flip Pages Up (tablet)	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Landscape Rotated	Flip Pages Up (tablet)	Legal			Same side as two staples	Same side as two staples	Not available		
Short edge	Portrait	Simplex	Ledger			Same side as two staples	Same side as two staples	Not available		
Short edge	Portrait Rotated	Simplex	Ledger			Same side as two staples	Same side as two staples	Not available		
Short edge	Portrait	Print Both Side	Ledger			Same side as two staples	Same side as two staples	Not available		
Short edge	Portrait	Print Both Side Rotated	Ledger	Not available						

Paper Type commands

The PCL 5e escape sequence for paper type is "Esc&n#Wdpapertype", where "#" 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.

NOTE: For the command to work properly, at least one of the paper trays in the printer must be configured in the control panel for the paper type used in the command.

<u>Esc&n</u>	<u>#</u>	<u>Wd</u>	<u>Paper type</u>
Esc&n	5	Wd	Bond
Esc&n	10	Wd	Cardstock ¹
Esc&n	6	Wd	Color
Esc&n	7	Wd	Labels
Esc&n	11	Wd	Letterhead
Esc&n	6	Wd	Plain
Esc&n	11	Wd	Preprinted
Esc&n	11	Wd	Prepunched
Esc&n	9	Wd	Recycled
Esc&n	6	Wd	Rough
Esc&n	13	Wd	Transparency ²

¹The correct command for Cardstock is Esc&n11WdCard Stock. There is a blank space between the "d" and the "S" and the "S" must be uppercase.

²It is necessary to spell out the word "Transparency" in the string, although it is abbreviated on the printer's control panel.

In-box file layout

HP LaserJet 9000 software CD-ROM, Windows partition

Directory structure

The following table shows the directory structure for the HP LaserJet 9000 software CD-ROM.

<u>First level</u>	<u>Second level</u>	<u>Third level</u>	<u>Fourth level</u>	<u>Fifth level</u>
Language (for example, English)	DRIVERS	AUTOCAD	DOS WIN16	DISK1 DISK2

<u>First level</u>	<u>Second level</u>	<u>Third level</u>	<u>Fourth level</u>	<u>Fifth level</u>
			WIN32	DISK1 DISK2
		WIN2000	PCL5E PCL6 PS	
		WIN3X	DISK1 DISK2	
		WIN9X_ME	PCL5E PCL6 PS	
		WINNT40	PCL5E PCL6 PS	
	FONTINST	WIN3X		
	MANUALS			
	READER			

The following tables show the directories and files contained on the HP LaserJet 9000 software CD-ROM.

Root directory

<u>Directory structure</u>	<u>Files in this directory</u>	<u>Directories in this directory</u>
<drive>:\ENGLISH\	READ9000.WRI	DRIVERS <DIR> FONTINST <DIR> MANUALS <DIR> READER <DIR>

Drivers directory

Directory structure	\Directory	\Directory	\Directory	Files
<drive>:\ENGLISH \DRIVERS\	AUTOCAD	DOS	[no subdirectory]	ACADDOS.EXE
		WIN16	DISK1	DISK1.ID R12DRV.Z R12SUP.Z R13DRV.Z R13SUP.Z README.TXT SETUP.EXE SETUP.INS SETUP.PKG _INST16.EX_ _ISDEL.EXE _SETUP.DLL _SETUP.LIB
			DISK2	APDS.Z COMSUP.Z DISK2.ID
		WIN 32	DISK1	DISK1.ID R13DRV.Z R13SUP.Z R14DRV.Z R14SUP.Z README.TXT SETUP.EXE SETUP.INS SETUP.PKG _INST32I.EX_ _ISDEL.EXE _SETUP.DLL _SETUP.LIB
			DISK2	APDS.Z COMSUP.Z DISK2.ID

Directory Structure	\Directory	\Directory	Files
	WIN2000	PCL5E	HPBAFD32.DL_ HPBF511E.DL_ HPBF511F.DL_ HPBF511G.DL_ HPBF511H.DL_ HPBF511I.CAT HPBF511I.DL_ HPBF511I.HL_ HPBF511I.INF HPBF511I.PM_ HPBF511J.DL_ HPBF511K.DL HPBFTM32.DL_ HPDCMON.DL_
		PCL6	HPBAFD32.DL_ HPBF512E.DL_ HPBF512F.DL_ HPBF512G.DL_ HPBF512H.DL_ HPBF512I.CAT HPBF512I.DL_ HPBF512I.HL_ HPBF512I.INF HPBF512I.PM_ HPBF512J.DL_ HPBF512K.DL_ HPBFTM32.DL_ HPDCMON.DL_
		PS	HP9000PS.CAT HP9000PS.INF HP9000_7.PPD HP9000_7.PP_ HPDCMON.DL_
	WIN3X	[no subdirectory]	README.TXT
	WIN3X	DISK1	HP8150_4.PPD HP8150_6.WPD HPBAFD16.DL_ HPBFAB.DD_ HPBFDA2.HL_ HPBFDA3.DR_ HPBFDA3.PM_ HPBFDA4.DL_ HPBFTM16.DL_ HPTABS16.DL_ OEMSETUP.INF PSCRIPT.DR_ PSCRIPT.HL_

Directory Structure	\Directory	\Directory	Files
		DISK2	HPBFCA3.DR_ HPBFCA3E.HL_ HPBFCA4.DL_ HPBFCA8.PM_
	WIN9X_ME	PCL5E	HPBAFD16.DL_ HPBF5110.DR_ HPBF5110.HL_ HPBF5110.INF HPBF5110.CAT HPBF5110.PM_ HPBF5111.DL_ HPBFAB.DD_ HPBFAB16.DL_ HPBFAB32.DL_ HPBFTM16.DL_ HPBFTM32.DL_ HPDCMON.DL_
		PCL6	HPBAFD16.DL_ HPBF5120.CAT HPBF5120.DR_ HPBF5120.HL_ HPBF5120.INF HPBF5120.PM_ HPBF5121.DL_ HPBFAB.DD_ HPBFAB16.DL_ HPBFAB32.DL_ HPBFTM16.DL_ HPBFTM32.DL_ HPDCMON.DL_
		PS	FONTS.MF_ HP9000PS.CAT HP9000PS.INF HP9000_4.PPD HP9000_4.PP_ HPDCMON.DL_ ICONLIB.DL_ PSCRIPT.DR_ PSCRIPT.HL_ PSCRIPT.IN_
<drive>:\ENGLISH\ DRIVERS\	WINNT40	PCL5E	HPBAFD32.DL_ HPBF5110.DL_ HPBF5111.DL_ HPBF5112.DL_ HPBF5113.DL_ HPBF5114.CAT HPBF5114.DL_ HPBF5114.HL_

Directory Structure	\Directory	\Directory	Files
			HPBF5114.PM_ HPBF5115.DL_ HPBF5116.DL_ HPBFTM32.DL_ HPDCMON.DL_
		PCL6	HPBAFD32.DL_ HPBF5120.DL_ HPBF5121.DL_ HPBF5122.DL_ HPBF5123.DL_ HPBF5124.CAT HPBF5124.DL_ HPBF5124.HL_ HPBF5124.INF HPBF5124.PM_ HPBF5125.DL_ HPBF5126.DL_ HPBFTM32.DL_ HPDCMON.DL_
		PS	HP9000PS.CAT HP9000PS.INF HP9000_6.PPD HP9000_6.PP_ HPDCMON.DL_ PS4UI.DL_ PSCRIPT.NT_ PSCRIPT4.DL_ PSCRIPT4.HL_

Fontinst directory

Directory structure	Directory	Files in this directory
<drive>:\ENGLISH\FONTINST\	WIN3X	FONTIN31.EXE FONTINST.DLL FONTS.INI

Manuals directory

Directory structure	Files in this directory	
<drive>:\ENGLISH\MANUALS\	EAUTOCAD.PDF C8084A.PDF C8531A.PDF C8532A.PDF	C8568A.PDF JETDIRECT.PDF START.PDF INTRODUCE.PDF

Reader directory

<u>Directory structure</u>	<u>Files in this directory</u>	
<drive>:\ENGLISH\READER\	AR405.EXE	

HP LaserJet 9000 software CD-ROM, Macintosh partition

NOTE: The file layouts shown in this section are from the Americas version of the HP LaserJet 9000 software CD-ROM. File layouts differ according to language for the European and Asian versions of the software CD-ROM.

Root directory

<u>Directory structure</u>	<u>Files in this directory</u>	<u>Directories in this directory</u>
<drive>	LATE BREAKING README HP LASERJET SCREEN FONTS	HP LASERJET INSTALLERS <DIR> PDF <DIR>

HP LaserJet Installers directory

Directory structure	Files in this directory
<drive>\HP LASERJET INSTALLERS\MACINTOSH OS 8&9	HP LASERJET INSTALLATIE (Dutch installer) HP LASERJET INSTALLER (U.S. English) HP LASERJET INSTALLER (A4) INSTALACIÓN DE LASERJET (Spanish installer) INSTALLA HP LASERJET (Italian installer) INSTALAR HP LASERJET (Portuguese installer) INSTALLATIE-AANWIJZINGEN (Installation Notes, Dutch) INSTALLATION DE LASERJET (French installer) INSTALLATION NOTES (English) INSTALLATIONSHINWEISE (Installation Notes, German) INSTRUÇÕES PARA A INSTALAÇÃO (Installation Notes, Portuguese) ISTRUZIONI PER L'INSTALLAZIONE (Installation Notes, Italian) LASERJET-INSTALLATIONSDATEI (German installer) NOTAS PARA LA INSTALACIÓN (Installation Notes, Spanish) REMARQUES SUR L'INSTALLATION (Installation Notes, French)
INSTALLERS\MACINTOSH OS X	HP LASERJET OS X INSTALLATIE (Dutch installer) HP LASERJET OS X INSTALLER (U.S. English) HP LASERJET OS X INSTALLER (A4) INSTALACIÓN DE LASERJET (Spanish installer) INSTALLA HP LASERJET (Italian installer) INSTALLATION DE LASERJET (French installer) OS X LASERJET-INSTALLATIONS DAT (German installer)

PDF directory

<u>Directory structure</u>	<u>Directories in this directory</u>
<drive>\PDF\	DEUTSCH <DIR> ENGLISH <DIR> ESPANOL <DIR> FRANCAIS <DIR> ITALIANO <DIR> NEDRLNDS <DIR> PORTUGUS <DIR>

PDF\English directory

<u>Directory structure</u>	<u>Files in this directory</u>
<drive>\PDF\ENGLISH	C8084A.PDF C8568A.PDF C8531A.PDF C8532.PDF START.PDF INTRODUCE.PDF JETDIRECT.PDF

Availability and fulfillment

This section provides information about the availability of the HP LaserJet 9000 Series Printing System software and related software and firmware. Software and firmware is available on CD-ROM from HP fulfillment centers or can be downloaded from the http://www.hp.com/go/lj9000_software and http://www.hp.com/go/lj9000_firmware Web sites.

In-box CD-ROMs

The HP LaserJet 9000 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.

CD-ROM version	Languages supported
Americas	Dutch (Nederland) English French (Français) German (Deutsch) Hebrew Italian (Italiano) Portuguese (Português) Spanish (Español)
European	Arabic Czech (Cesky) Danish (Dansk) Dutch (Nederland) English Finnish (Suomi) Hungarian (Magyar) Norwegian (Norsk) Polish (Polski) Russian (Russ) Swedish (Svenska) Turkish (Turkçe)
Asian	English Chinese (Simplified) Chinese (Traditional) Korean Japanese

CD-ROM fulfillment

This section provides information about fulfillment centers and Web ordering for the HP LaserJet 9000 software CD-ROM.

Fulfillment centers

The HP LaserJet 9000 software CD-ROM is available from regional fulfillment centers. The following table lists these fulfillment centers and the territories they support. Contact the local Customer Care Center for additional information. Your local Customer Care Center telephone numbers are available in the HP LaserJet *introduce* guide.

Region	Fulfillment center	Territory supported
Americas	BIS Distribution	Argentina Brazil Chile Colombia Mexico Miami Venezuela
Europe	StarTEK International	Europe
Asia	HP	China India Japan Korea Taiwan
	Media Technology PPY Limited	Australia New Zealand
	Datacom IT Services SEA Limited	Hong Kong Indonesia Malaysia Philippines Singapore Thailand

Web ordering

The HP LaserJet 9000 software CD-ROM and related software CD-ROMs can be ordered from the http://www.hp.com/go/lj9000_cdrom Web site. Search by product name and number to find the appropriate Web links.

Web deployment

Software and firmware to support the HP LaserJet 9000 printers are available for download from the http://www.hp.com/go/lj9000_software and http://www.hp.com/go/lj9000_firmware Web sites. This is the preferred method for obtaining the latest software and firmware. The Web site offers a notification option for automatic e-mail notification about new software and firmware releases.

Printing system software

The HP LaserJet 9000 Series Printing System software is available for download from the HP Web site at http://www.hp.com/go/lj9000_software to support the following operating systems:

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

Printer firmware

Firmware to support the HP LaserJet 9000 printers is available for download from the HP Web site at http://www.hp.com/go/lj9000_firmware. Use the notification option to be notified of new firmware releases.

Standalone drivers

The HP LaserJet 9000 PCL 6, PCL 5e, and PS drivers are available individually to support the following operating systems:

- Windows 3.1x (all three drivers, plus fonts)
- Windows 95, Windows 98, and Windows Me
- Windows NT 4.0
- Windows 2000

Operating system driver bundles

The HP LaserJet 9000 PCL 6, PCL 5e, and PS drivers are available in bundled configurations to support the following operating systems:

- Windows 3.1x
- Windows 95, Windows 98, and Windows Me
- Windows NT 4.0 and Windows 2000

Point-and-print bundles

The HP LaserJet 9000 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)
- AutoCAD (AutoCAD family drivers)
- OS/2 (PCL 6, PCL 5e, and PS)

Software component availability

The following table lists the availability of HP LaserJet 9000 software components by operating system.

NOTE: In the following table, "3.x" refers to Windows 3.1x. "9x/Me" refers to Windows 95, Windows 98, and Windows Me. "4.0" refers to Windows NT 4.0. An asterisk (*) indicates a new software component.

Component	3x	9x/ME	4.0	2000	OS/2	Mac	UNIX	Linux	Installation
Drivers									
PCL 6 Wizard		X	X	X					Typical
PCL 5e Wizard		X	X	X					Custom
PCL 6 8100	X								In-box
PCL 5e 8100	X								In-box
PCL5 Unidriver GPD				X					w/OS
Pscript Driver & PPD	X	X	X	X					Custom
Mac QuickDraw PPD						X			In-box
OS/2 IBM Drivers					X				Web
Autocad	X	X	X						In-box
Installers									
Common Windows Installer*		X	X	X					Typical
CD Browser		X	X	X					NA
Customization Utility		X	X	X					NA
Network Installer		X	X	X					NA
Font Installer		X	X	X					Typical
Splash Screens		X	X	X					Typical
INF File (Add Printer)	X	X	X	X					In-box
Plug & Play		X	X	X					In-box
Point & Print		X	X	X					In-box
Add Printer	X	X	X	X					In-box
Font Installer*	X								In-box
Macintosh Installer for OSs 8 and 9						X			In-box
Macintosh Installer for OS X						X			
Web Registration		X	X	X					Typical
Bidirectional Communication									
Network bidirectional Communications		X	X	X					NA
Remote Management and Status									
Web JetAdmin			X	X			X		Web
Applet for Web JetAdmin*			X	X			X		Web
Macintosh LJ Utility						X			In-box
Job Status and Alerts		X	X	X					Custom
Auto Configuration		X	X	X					Typical
HP Resource Manager		X	X	X					Web
Online Documentation									

Component	3x	9x/ME	4.0	2000	OS/2	Mac	UNIX	Linux	Installation
Adobe Acrobat Reader	X	X	X	X		X			Custom
HP LaserJet 9000 Start Guide *	X	X	X	X		X			Custom
HP LaserJet 9000 Use Guide *	X	X	X	X		X			Custom
HP LaserJet 9000 Installation *	X	X	X	X		X			Custom
HP LaserJet 9000 Release Notes	X	X	X	X		X			Custom
2000-sheet Feeder Guide *	X	X	X	X		X			Custom
Duplexing unit Guide *	X	X	X	X		X			Custom
Multipurpose Tray Guide *	X	X	X	X		X			Custom
HP Jetdirect Guide *	X	X	X	X		X			Custom
Stacker/Stapler Guide *	X	X	X	X		X			Custom
Online Manual Printer	X	X	X	X		X			Custom
Mac PS Help						X			In-box
Help	X	X	X	X					In-box
Other									
PS Fonts	X	X	X	X					Typical
PS Font DIMM *		X	X	X		X			

*A new software component.

Software component localization

The following table provides localization information about the HP LaserJet 9000 Series Printing system software. The information in this table does not necessarily reflect in-box solutions.

Component	Operating systems	AR	EN	EC EN	FR	IT	GE	HE	SP	JN	KO	TC	SC	SW	DU	PG	NW	FN	DN	CZ	PO	RU	HU	TU	
PS PPD	3.x, 9x, 4.0, 2000		X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Job Status and Alerts	9x, 4.0, 2000		X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
HP Resource Manager	9x, 4.0, 2000				X	X	X		X	X	X	X	X		X										
Macintosh PS PPD	Mac		X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X		X	
Macintosh LJ Utility	Mac		X		X	X	X		X					X	X	X	X	X	X						
Macintosh Installation Notes	Mac		X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X		X	
PCL 6	3.x, 9x, 4.0, 2000	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PCL 5e	3.x, 9x, 4.0, 2000	X	X		X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	
Printing System ReadMe	3.x, 9x, 4.0, 2000	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Late Breaking ReadMe	3.x, 9x, 4.0, 2000		X																						
Common Windows Installer	9x, 4.0, 2000		X		X	X	X	X	X	X	X	X	X	X	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	X	X	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	X	X	X	X	X	X	X	X	X	X	X
HP Web Access			X		X	X	X		X	X				X	X	X	X	X	X	X	X	X	X	X	X
Online manuals (PDF)	9.x, 4.0, 2000		X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IBM OS/2 Driver – PCL5C	OS/2		IBM	IBM	IBM	IBM	IBM		IBM					IBM	IBM	IBM	IBM	IBM	IBM						
IBM OS/2 Driver – PS	OS/2		IBM	IBM	IBM	IBM	IBM		IBM					IBM	IBM	IBM	IBM	IBM	IBM						
Standard Fonts	3.x, 9x, 4.0, 2000	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X
PS3 Fonts	3.x, 9x, 4.0, 2000	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X

Language Key:

AR = Arabic

EN = English

EC EN = EC English

FR = French

HE = Hebrew

IT = Italian

GE = German
SP = Spanish
JN = Japanese
KO = Korean
TC = Traditional Chinese
SC = Simplified Chinese
SW = Swedish
DU = Dutch
PG = Portuguese
NW = Norwegian
FN = Finnish
DN = Danish
CZ = Czech
PO = Polish
HU = Hungarian
TU = Turkish

System requirements

This section lists the system requirements necessary to install and use the HP LaserJet 9000 Series printing system software on each supported operating system.

Windows 95/98/Me

- Pentium processor
- 16 MB RAM
- 20 MB available disk space

Windows 2000

- Pentium processor
- 16 MB RAM
- 20 MB available disk space

Windows NT 4.0

- Pentium processor
- 16 MB RAM
- 20 MB available disk space

Windows 3.1x

- 386 processor or higher
- 16 MB RAM
- 20 MB available disk space

Macintosh

- 68-kilobyte processor
- Macintosh OS 7.5.3 or later
- 16 MB RAM
- 20 MB available disk space

OS/2

- Pentium processor
- 32 MB RAM (required for OS/2)
- 5 MB available disk space (required for driver)

Installation and Removal

This section provides procedures for installing and removing the HP LaserJet 9000 Series Printing System software for each supported operating system. It also provides information about font support and system modifications. Supported operating systems include:

- Windows 95, Windows 98, and Windows Me, Windows NT 4.0, and Windows 2000
- Windows 3.x
- Macintosh

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

This section addresses the following topics:

- Font support
- Installation instructions
- General installation for Windows 95, 98, Me, NT 4.0, and 2000 operating systems
- Detailed Windows installation
- Setting a default printer
- Uninstalling Windows printing system components
- PCL 5e driver modifications
- PCL 6 driver modifications
- PS emulation driver modifications
- Additional \$SYSTEM directory files for Windows 95, 98, Me, NT 4.0, and 2000 OSs
- \$WINDIR (Windows directory path)
- \$PROGFILES\Hewlett-Packard>Status for Windows 95, 98, Me, NT 4.0, and 2000 operating systems
- \$DEFAULT for Windows 95, 98, Me, NT 4.0, and 2000 operating systems
- \$SUPPORTDIR\ for Windows 95, 98, Me, NT 4.0, and 2000
- \$TEMP\ for Windows 95, 98, Me, NT 4.0, and 2000
- .INI file modifications for Windows 95, 98, Me, NT 4.0, and 2000
- Registry modifications for Windows 95, 98, Me, NT 4.0, and 2000
- Services registry modifications for Windows NT 4.0 and Windows 2000
- Icons created for Windows 95, 98, Me, NT 4.0, and 2000 operating systems

NOTE: In the descriptions that follow, the \$ symbol before a path name indicates that the path to that directory can change from system to system. The term \$Path indicates that the path and the subdirectory can change from system to system.

Font support

Basic fonts

Microsoft Windows software includes these basic fonts that can be used with any HP printer:

- Arial
- Arial Italic
- Arial Bold
- Arial Bold Italic
- Courier New
- Courier New Italic
- Courier New Bold
- Courier New Bold Italic
- Symbol
- Times New Roman
- Times New Roman Italic
- Times New Roman Bold
- Times New Roman Bold Italic
- Wingdings

"HP 80" Default Fonts

The following "HP 80" default fonts are installed through a typical installation of the HP LaserJet 9000 printing system software.

<u>File name</u>	<u>Font name</u>
CORONET.TTF	Coronet
GARR45W.TTF	Garamond
GARR46W.TTF	Garamond Kursiv
GARR65W.TTF	Garamond Halbfett
GARR66W.TTF	Garamond Kursiv Halbfett
LETR45W.TTF	LetterGothic
LETR46W.TTF	LetterGothic Italic
LETR65W.TTF	LetterGothic Bold
MARIGOLD.TTF	Marigold
OLVR55W.TTF	Antique Olive
OLVR56W.TTF	Antique Olive Italic
OLVR75W.TTF	Antique Olive Bold
UNVR55W.TTF	Univers
UNVR56W.TTF	Univers Italic
UNVR57W.TTF	Univers Condensed
UNVR58W.TTF	Univers Condensed Italic
UNVR65W.TTF	Univers Bold
UNVR66W.TTF	Univers Bold Italic
UNVR67W.TTF	Univers Condensed Bold
UNVR68W.TTF	Univers Condensed Bold Italic
AVGR45W.TTF	ITC Avant Garde Gothic
AVGR46W.TTF	ITC Avant Garde Gothic Oblique

File name	Font name
AVGR65W.TTF	ITC Avant Garde Gothic Demi
AVGR66W.TTF	ITC Avant Garde Gothic Demi Oblique
BOKR35W.TTF	ITC Bookman Light
BOKR36W.TTF	ITC Bookman Light Italic
BOKR75W.TTF	ITC Bookman Light Demi
BOKR76W.TTF	ITC Bookman Light Demi Italic
CHANC_..TTF	ITC Zapf Chancery Medium Italic
CPSR45W.TTF	CourierPS
CPSR46W.TTF	CourierPS Oblique
CPSR65W.TTF	CourierPS Bold
CPSR66W.TTF	CourierPS Bold Oblique
DINGS_..TTF	ITC Zapf Dingbats
HELR45W.TTF	Helvetica
HELR46W.TTF	Helvetica Oblique
HELR47W.TTF	Helvetica Narrow
HELR48W.TTF	Helvetica Narrow Oblique
HELR65W.TTF	Helvetica Bold
HELR66W.TTF	Helvetica Bold Oblique
HELR67W.TTF	Helvetica Narrow Bold
HELR68W.TTF	Helvetica Narrow Bold Oblique
NCSR55W.TTF	New Century Schoolbook
NCSR56W.TTF	New Century Schoolbook Italic
NCSR75W.TTF	New Century Schoolbook Bold
NCSR76W.TTF	New Century Schoolbook Bold Italic
PALR45W.TTF	Palatino Roman
PALR46W.TTF	Palatino Italic
PALR65W.TTF	Palatino Bold
PALR66W.TTF	Palatino Bold Italic
SYMPS_..TTF	SymbolPS
TIMR45W.TTF	Times Roman
TIMR46W.TTF	Times Italic
TIMR65W.TTF	Times Bold
TIMR66W.TTF	Times Bold Italic

The following additional fonts can be installed:

File name	Font name
ALBR85W.TTF	Albertus Medium
ALBR55W.TTF	Albertus Extra Bold
CGOR45W.TTF	CG Omega
CGOR46W.TTF	CG Omega Italic

File name	Font name
CGOR65W.TTF	CG Omega Bold
CGOR66W.TTF	CG Omega Bold Italic
CGTR45W.TTF	CG Times
CGTR46W.TTF	CG Times Italic
CGTR65W.TTF	CG Times Bold
CGTR66W.TTF	CG Times Bold Italic
CLAR67W.TTF	Clarendon Condensed Bold

92 PS 3 fonts

Ninety-two additional PS 3 screen fonts are available for purchase at <http://hp.com>:

File name	Font name
ps_14530.ttf	Albertus Light
ps_12639.ttf	Albertus
ps_12640.ttf	Albertus Italics
ps_11119.ttf	Antique Olive Roman
ps_11846.ttf	Antique Olive Italic
ps_11118.ttf	Antique Olive Bold
ps_11120.ttf	Antique Olive Compact
ps_24516.ttf	Apple Chancery
ps_12581.ttf	Bodoni Roman
ps_12582.ttf	Bodoni Italic
ps_12585.ttf	Bodoni Bold
ps_12586.ttf	Bodoni Bold Italic
ps_12704.ttf	Bodoni Poster
ps_14508.ttf	Bodoni Poster Compressed
ps_24517.ttf	Candid
ps_24518.ttf	Chicago
ps_14513.ttf	Clarendon Light
ps_10269.ttf	Clarendon Roman
ps_12968.ttf	Clarendon 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 Medium
ps_10268.ttf	Eurostile Bold
ps_14511.ttf	Eurostile Extended No. 2
ps_14512.ttf	Eurostile Bold Extended No. 2
ps_24509.ttf	Geneva
ps_13870.ttf	Gill Sans Light
ps_13871.ttf	Gill Sans Light Italic
ps_13872.ttf	Gill Sans

File name	Font name
ps_13873.ttf	Gill Sans Italic
ps_13874.ttf	Gill Sans Bold
ps_13875.ttf	Gill Sans Bold Italic
ps_14051.ttf	Gill Sans Condensed
ps_14053.ttf	GillSans Condensed Bold
ps_14054.ttf	GillSans Condensed Bold
ps_12542.ttf	Goudy Oldstyle
ps_12543.ttf	Goudy Oldstyle Italic
ps_12544.ttf	Goudy Bold
ps_10695.ttf	Goudy Bold Italic
ps_12545.ttf	Goudy Extra Bold
ps_14526.ttf	Helvetica Condensed
ps_14527.ttf	Helvetica Condensed Oblique
ps_14528.ttf	Helvetica Condensed Bold
ps_14529.ttf	Helvetica Condensed Bold Oblique
ps_24519.ttf	Hoefler Text
ps_24520.ttf	Hoefler Text Italic
ps_24521.ttf	Hoefler Text Black
ps_24522.ttf	Hoefler Text Black Italic
ps_24523.ttf	Hoefler Ornaments
ps_14503.ttf	Joanna
ps_14504.ttf	Joanna Italic
ps_14505.ttf	Joanna Bold
ps_14506.ttf	Joanna Bold Italic
ps_13777.ttf	Letter Gothic
ps_13778.ttf	Letter Gothic Slanted
ps_13779.ttf	Letter Gothic Bold
ps_13780.ttf	Letter Gothic Bold Slanted
ps_12675.ttf	ITC Lubalin Graph Book
ps_12623.ttf	ITC Lubalin Graph Book Oblique
ps_12677.ttf	ITC Lubalin Graph Demi
ps_12625.ttf	ITC Lubalin Graph Demi Oblique
ps_94073.ttf	Marigold
ps_24524.ttf	Monaco
ps_14525.ttf	ITC Mona Lisa Recut
ps_24510.ttf	New York
ps_12506.ttf	Optima Roman
ps_12507.ttf	Optima Italic
ps_12510.ttf	Optima Bold
ps_12511.ttf	Optima Bold Italic
ps_14072.ttf	Oxford
ps_11545.ttf	Stempel Garamond Roman
ps_11546.ttf	Stempel Garamond Italic
ps_11547.ttf	Stempel Garamond Bold

File name	Font name
ps_11548.ttf	Stempel Garamond Bold Italic
ps_14507.ttf	Taffy
ps_13501.ttf	Univers 45 Light
ps_13502.ttf	Univers 45 Light Oblique
ps_14021.ttf	Univers 55
ps_14022.ttf	Univers 55 Oblique
ps_14023.ttf	Univers 65 Bold
ps_14024.ttf	Univers 65 Bold Oblique
ps_14029.ttf	Univers 57 Condensed
ps_14039.ttf	Univers 57 Condensed Oblique
ps_14030.ttf	Univers 67 Condensed Bold
ps_14040.ttf	Univers 67 Condensed Bold Oblique
ps_13547.ttf	Univers 53 Extended
ps_14480.ttf	Univers 53 Extended Oblique
ps_13548.ttf	Univers 53 Extended Bold
ps_14481.ttf	Univers 53 Extended Bold Oblique

Installation instructions

General installation for Windows 95, 98, Me, NT 4.0, and 2000 operating systems

General installation instructions for the Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000 operating systems, presented in the following table, are similar. When instructions are not shared by Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000, the pertinent operating systems are listed in the left column of the table.

NOTE: If the HP LaserJet 9000 printer is connected through a file or print server, the HP LaserJet 9000 Series Printing System software must first be installed on the server first before being installed on any client systems. If the HP LaserJet 9000 Series Printing System software is not first installed on the server, bidirectional communication, Driver Autoconfiguration, and Job Status and Alerts will not be available to the client systems.

NOTE: For Windows NT 4.0 and Windows 2000, administrator rights on the system are necessary to install the software.

NOTE: When the HP LaserJet 9000 printing system installer runs, the HP LaserJet 9000 Series uninstaller is always added to the system.

NOTE: Bidirectional communication and Driver Autoconfiguration are installed on the system only in supported network environments. Parallel and USB connections do not support bidirectional communication.

To install the HP LaserJet 9000 printing system, follow these instructions:

1. Connect the printer to the computer, and turn the printer on.
2. Close all applications. Turn off virus checkers and TSR programs. After installation, these programs can be turned back on.
3. If you are installing from the CD-ROM, insert the CD-ROM for the appropriate language into the CD-ROM drive and go to step 4.

If you downloaded the printing system electronically, run the downloaded .EXE file(s) first. If SETUP.EXE does not automatically run, browse to the root location of the downloaded SETUP.EXE file, double-click the file, and *go to step 7*.

4. If the CD-ROM auto-play begins, *go to step 7*. If auto-play does not begin, *go to step 5*.
5. (If auto-play did not begin after step 4.) Click **Start**, and then click **Run**.
6. Type the drive and path for the installation CD-ROM (usually "D:\SETUP.EXE", without the quotation marks), and press **Enter**, or click **OK**. If the printer is not being installed in a network environment from a shared Windows directory, *go to step 8*.
7. If the printer is being installed in a network environment from a shared Windows directory, see the network administrator for the correct drive and path.
8. 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 9000 Series 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 9000 PCL 6 driver.
- Screen fonts.
- Driver Autoconfiguration (in environments that support bidirectional communication). This option will not be displayed if the selected connection type is **Connected to the printer**.

When you select the **Install Printer** option from the HP LaserJet 9000 software CD browser, the **Choose Setup Language** dialog box appears.

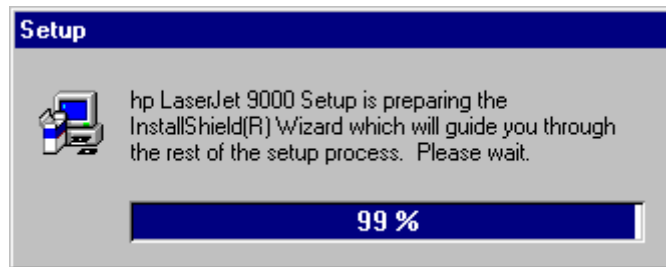
Figure 41: Choose setup language dialog box



NOTE: The **Choose Setup Language** dialog box lists only the languages available on the particular HP LaserJet 9000 software CD-ROM you are using.

Title of dialog box	Text in dialog box	User options and descriptions
Choose Setup Language	<p>Select the language for this installation from the choices below:</p> <p>[Pull-down menu lists available languages for installation.]</p> <p>OK [button]</p> <p>Cancel [button]</p>	<p>The installer automatically detects your computer system language and presents this choice as the default.</p> <p>You can select another language available on the CD-ROM by clicking the down arrow of the pull-down menu.</p> <p>Click OK to initiate the printing system setup.</p> <p>Click Cancel to go to the Exit Setup dialog box.</p>

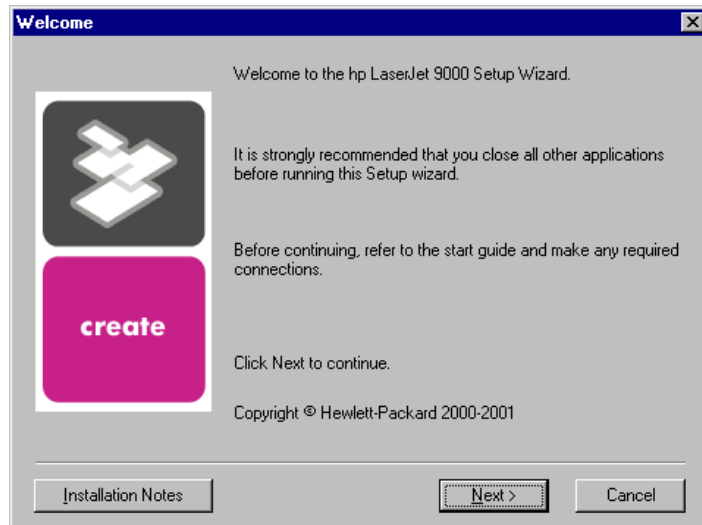
Figure 42: Setup dialog box



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.

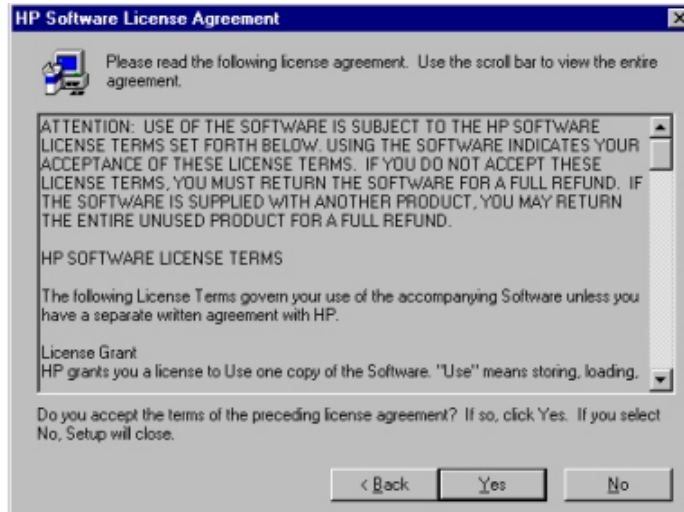
Title of dialog box	Text in dialog box	User options and descriptions
Setup	<p>HP LaserJet 9000 Series Printing System Setup is preparing the InstallShield (R) Wizard that will guide you through the rest of the setup process. Please wait.</p>	<p>No user options. This is an information-only dialog box.</p>

Figure 43: Welcome dialog box



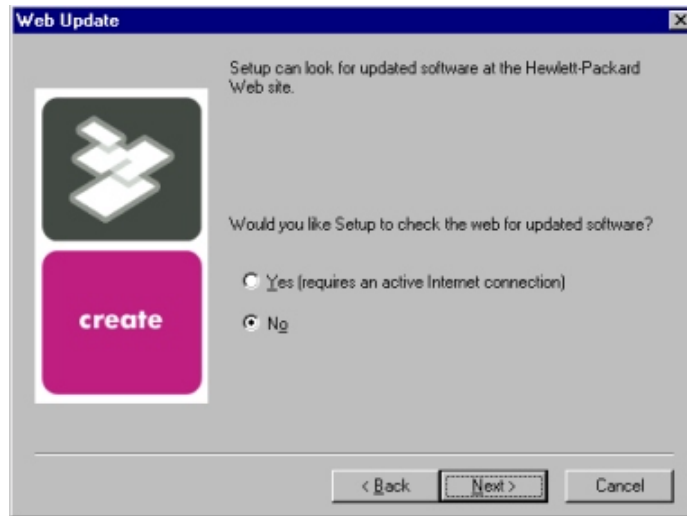
Title of dialog box	Text in dialog box	User options and descriptions
Welcome	<p>Welcome to the HP LaserJet 9000 Series Printing System Setup Wizard.</p> <p>It is strongly recommend that you close all other applications before running this Setup wizard.</p> <p>Before continuing, refer to the Setup poster and make any required connections.</p> <p>Click Next to continue.</p> <p>Copyright Hewlett-Packard 2000</p>	<p>Next takes you to the HP Software License Agreement dialog box.</p> <p>Click Installation Notes to open the file READ9000.WRI.</p> <p>Click Cancel to go to the Exit Setup dialog box.</p>

Figure 44: HP software license agreement dialog box



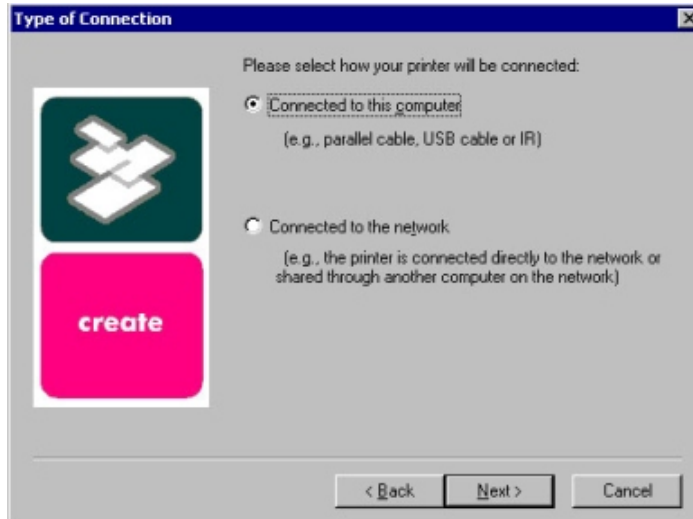
Title of dialog box	Text in dialog box	User options and descriptions
HP Software License Agreement	<p>Please read the following license agreement. Use the scroll bar to view the entire agreement.</p> <p>[Scrolling fields with text of license agreement]</p> <p>Do you accept the terms of the preceding license agreement? If so, click Yes. If you click 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 45: Web Update dialog box



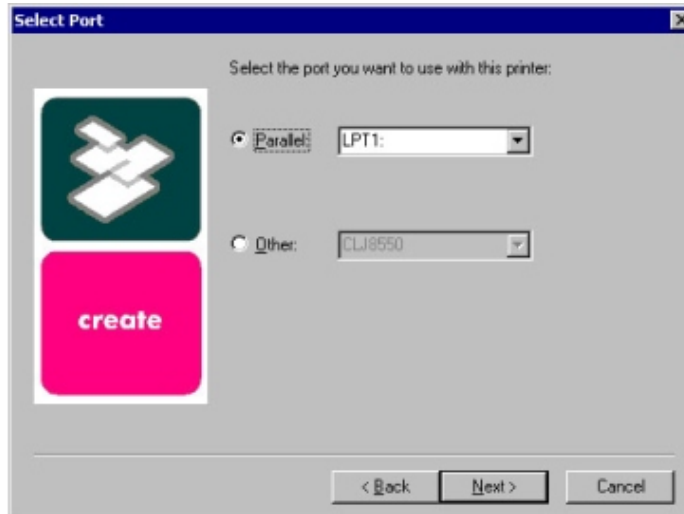
Title of dialog box	Text in dialog box	User options and descriptions
Web Update (Conditional)	<p>Setup can look for updated software at the Hewlett-Packard Web site.</p> <p>Would you like Setup to check the Web for updated software?</p> <p>Yes (requires an active Internet connection) [radio button]</p> <p>No [radio button]</p>	<p>This is a conditional dialog box; that is, it appears only if the Setup program determines there might be an Internet connection available.</p> <p>If No is selected, Next takes you to the Type of Connection dialog box. This is the default option.</p> <p>If Yes is selected, 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 License Agreement dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 46: Type of connection dialog box



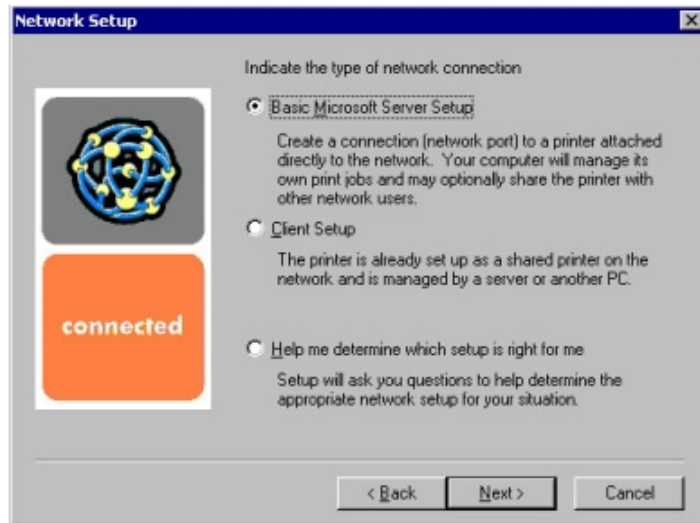
Title of dialog box	Text in dialog box	User options and descriptions
Type of Connection	<p>Please select the way your printer will be connected:</p> <p>Connected to this computer (by parallel cable, USB cable, or IR) [radio button]</p> <p>Connected to the network (that is, the printer is connected directly to the network or shared through another computer on the network) [radio button]</p>	<p>If Connected to this computer (a "direct connection") is selected, Next takes you to the Select Port dialog box. This is the default option.</p> <p>If Connected to the network is selected, Next takes you to the Network Setup dialog box.</p> <p>Back returns you to the License Agreement dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 47: Select port dialog box (for direct connections)



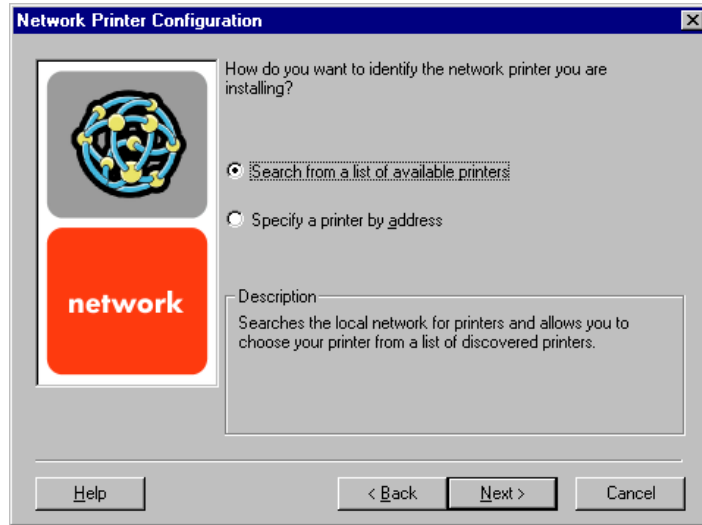
Title of dialog box	Text in dialog box	User options and descriptions
Select Port (If Connected to this computer was selected in the Type of Connection dialog box)	Select the port you want to use with this printer: Parallel [radio button] [Default. When selected, a pull-down list of parallel ports is available.] Other [radio button] [When selected, a pull-down list of other port types is available]	In either case, Next takes you to the printer Model dialog box. Back returns you to the Type of Connection dialog box. Cancel takes you to the Exit Setup dialog box.

Figure 48: Network setup dialog box (for network connections)



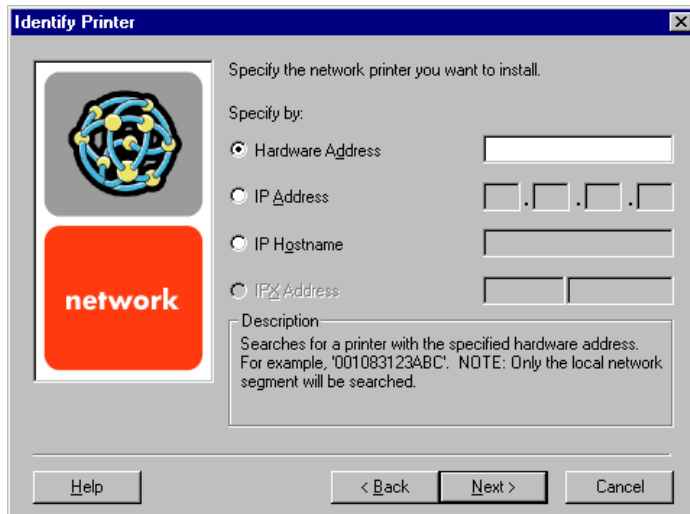
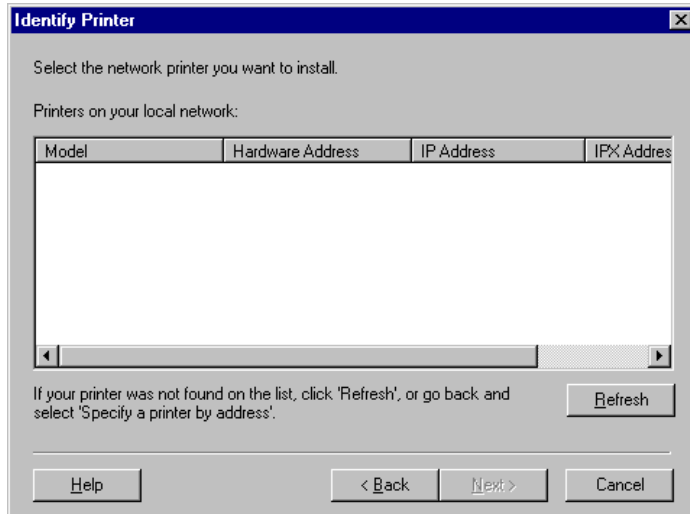
Title of dialog box	Text in dialog box	User options and descriptions
<p>Network Setup</p> <p>[If Connected to the network was selected in the Type of Connection dialog box]</p>	<p>Indicate the type of network connection</p> <p>Basic Microsoft Server Setup Create a connection (network port) to a printer attached directly to the network. Your computer will manage its own print jobs and may optionally share the printer with other network users. [radio button]</p> <p>Client Setup The printer is already set up as a shared printer on the network and is managed by a server or another PC. [radio button]</p> <p>Help me determine which setup is right for me Setup will ask you questions to help you determine the appropriate network setup for your situation. [radio button]</p>	<p>Next takes you to the Network Printer Configuration dialog box.</p> <p>If you choose the Client Setup option, Next takes you to the Specify Network Path dialog box, and then to the Installation Type dialog box.</p> <p>If the Help me option is chosen, 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 (6).</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 49: Network printer configuration dialog box



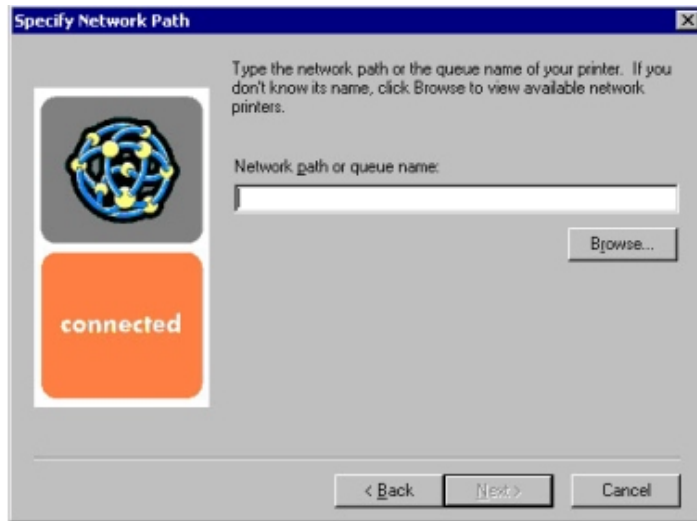
Title of dialog box	Text in dialog box	User options and descriptions
<p>Network Printer Configuration</p>	<p>How do you want to identify the network printer you are installing?</p> <p>Search from a list of available printers [radio button] [Description] Searches the local network for printers and allows you to choose your printer from a list of discovered printers.</p> <p>Specify a printer by address [radio button] [Description] Allows you to specify your printer by entering one of the following attributes: Hardware Address, IP Address, IP Hostname, or IPX Address.</p> <p>Description [Conditional text]</p>	<p>If you click Search from a list of available printers, Next takes you to the Identify Printer dialog box.</p> <p>If you click Specify a printer by address, Next takes you to the Identify Printer dialog box.</p> <p>Back returns you to the Network Setup dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 50: Identify printer dialog boxes



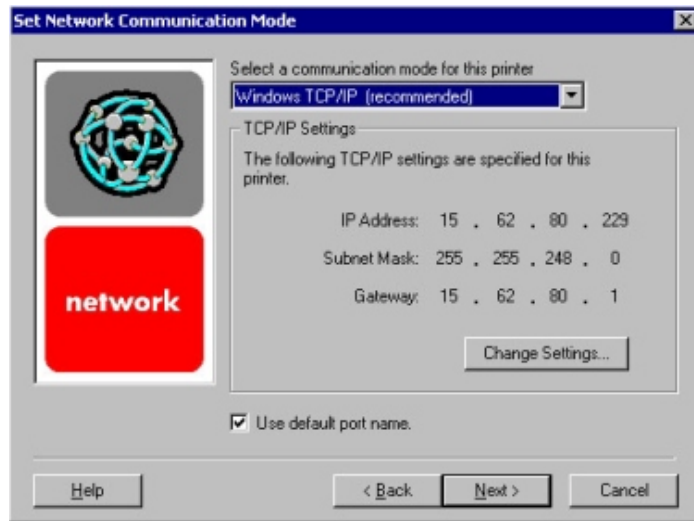
Title of dialog box	Text in dialog box	User options and descriptions
Identify Printer	<p>Select the network printer you want to install.</p> <p>Printers on your local network: [List, with attributes of Hardware Address, IP Address, and IPX Address listed, if available]</p> <p>If your printer is not found on the list, click Refresh, or go back and click Specify a printer by address.</p> <p>OR</p> <p>Specify the network printer you want to install.</p> <p>Specify by:</p> <p>Hardware Address. [radio button] [text field]</p> <p>IP Address [radio button] [text fields]</p> <p>IP Hostname [radio button] [text field]</p> <p>IPX Address [radio button] [text fields]</p> <p>Description [Conditional text]</p>	<p>If you identify the printer by selecting from the list, and the HP LaserJet 9000 appears in the list and is selected, Next takes you to the Set Network Communication Mode dialog box.</p> <p>If the HP LaserJet 9000 is not found on the network, click Refresh or go back to the Network Printer Configuration dialog box (9) 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 51: Specify network path dialog box



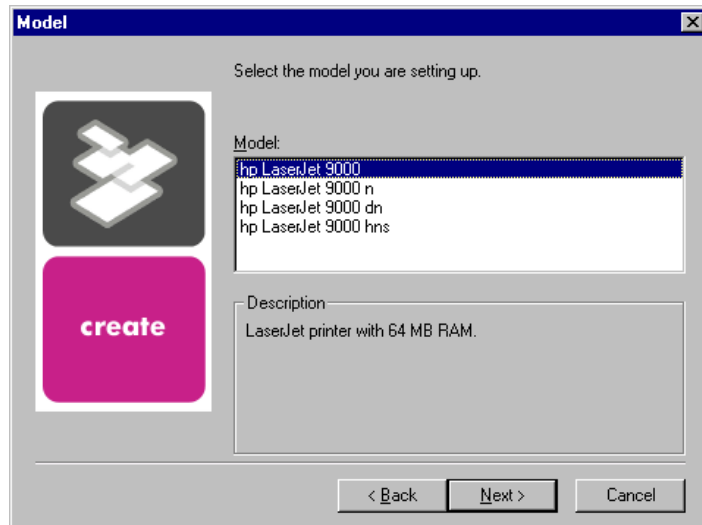
Title of dialog box	Text in dialog box	User options and descriptions
Specify Network Path	<p>Type the network path or the queue name of your printer. If you do not know its name, click Browse to view the available network printers.</p> <p>Network path or queue name: [text field]</p> <p>Browse ...[button]</p>	<p>If a network path or queue name is entered, Next takes you to the Cable Type Selection dialog box.</p> <p>NOTE: If you reached this dialog box from the Connected to Selection dialog box, Next takes you to the Installation Type dialog box.</p> <p>Click Browse to bring up a list of devices available on the network.</p> <p>Back returns you to the Network Setup dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 52: Set network communication mode dialog box



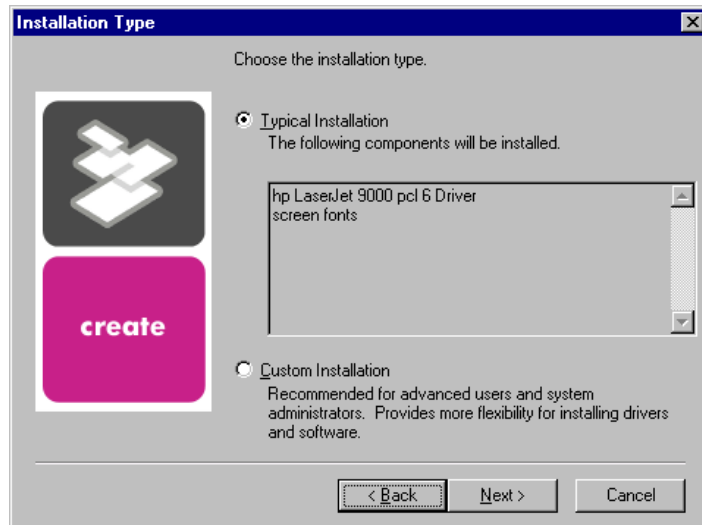
Title of dialog box	Text in dialog box	User options and descriptions
Set Network Communication Mode	<p>Select a communication mode for this printer [dropdown menu: Windows TCP/IP (recommended) other modes listed]</p> <p>TCP/IP Settings [Conditional fields for entering TCP/IP or other address information]</p> <p>Use default port name [check box]</p>	<p>Select a communication mode and enter the appropriate address information.</p> <p>After you have specified a communications mode, Next takes you to the printer Model dialog box.</p> <p>Back returns you to the Identify Printer dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 53: Printer model dialog box



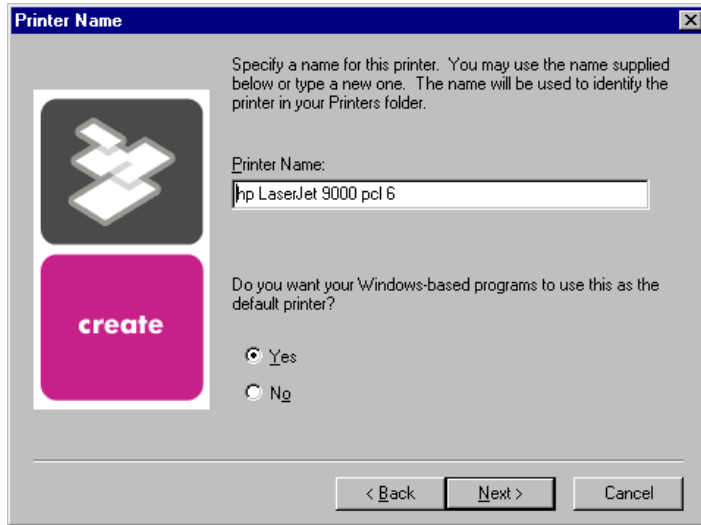
Title of dialog box	Text in dialog box	User options and descriptions
Model	<p>Select the model you are setting up.</p> <p>Model: [List of HP LaserJet 9000 models]</p> <p>Description [Conditional text, depending upon which model is chosen in the list]</p>	<p>Next takes you to the Installation Type dialog box.</p> <p>Back returns you to the Select Port dialog box when you are performing a direct connection installation, or to the Set Network Communication Mode dialog box when you are performing a network installation.</p> <p>Cancel takes you to the Exit Setup dialog box.</p>

Figure 54: Installation type dialog box



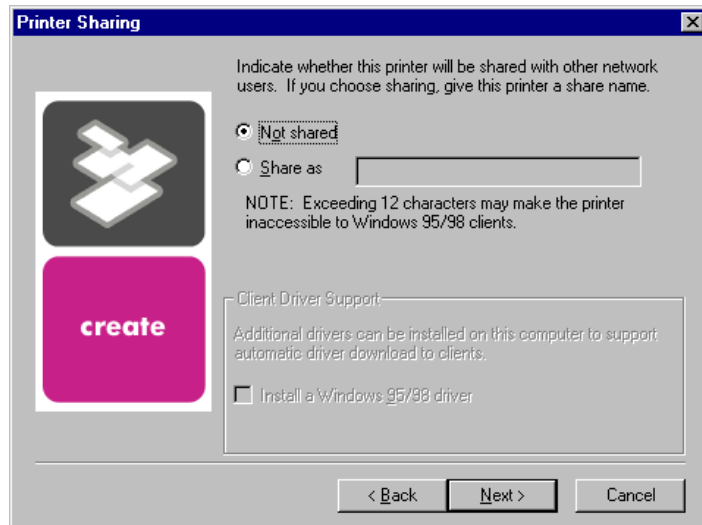
Title of dialog box	Text in dialog box	User options and descriptions
Installation Type	<p>Choose the installation type.</p> <p>Typical Installation [radio button]</p> <p>The following components will be installed:</p> <ul style="list-style-type: none"> • HP LaserJet 9000 PCL 6 Driver • Driver Autoconfiguration (if connecting to a network port) • Screen Fonts <p>Custom Installation [radio button]</p> <p>Recommended for advanced users and system administrators. Provides more flexibility for installing drivers and software.</p>	<p>If Typical Installation is selected, Next takes you to the Printer Name dialog box.</p> <p>If Custom Installation is selected, 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> <p>NOTE: For direct connection installations, Driver Autoconfiguration is not an available option.</p>

Figure 55: Printer name dialog box



Title of dialog box	Text in dialog box	User options and descriptions
Printer Name	<p>Specify a name for this printer. You can 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: [text entry field]</p> <p>Do you want your Windows-based programs to use this as the default printer?</p> <p>Yes [radio button]</p> <p>No [radio 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 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>

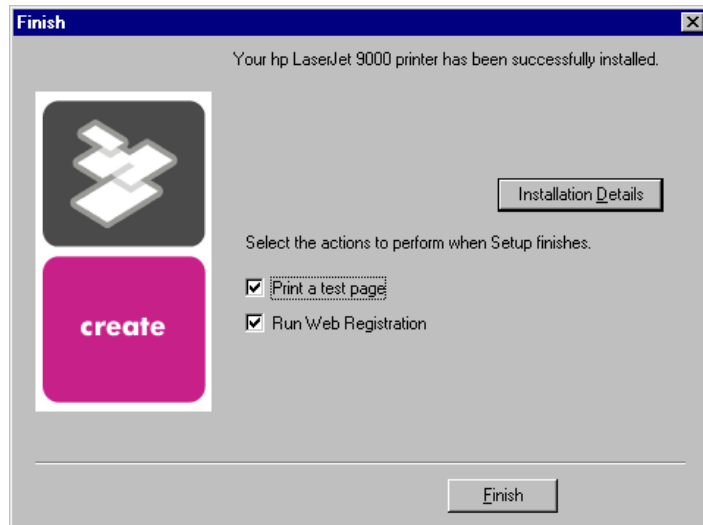
Figure 56: Printer sharing dialog box



NOTE: This screen is shown only if the installation takes place on a Windows NT or 2000 computer (it is *not* shown to Windows 95, Windows 98, or Windows Me users). When performing a **Typical Install** (or a **Custom Install** with only a single driver) the **Sharing** screen in the top of the figure is displayed. When performing a **Custom Install** and installing more than one driver, the **Sharing** screen on the bottom is shown.

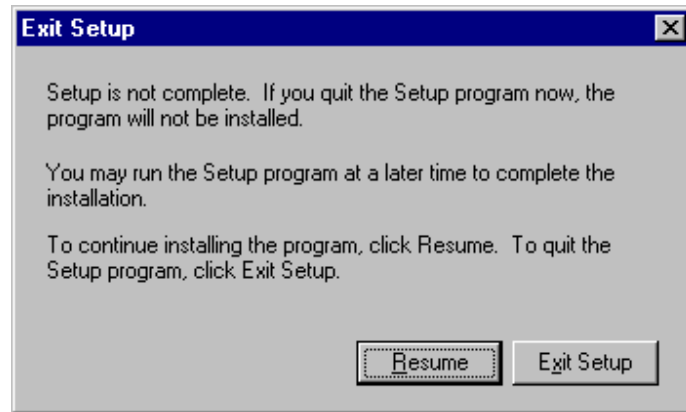
Title of dialog box	Text in dialog box	User options and descriptions
Printer Sharing	<p>Indicate whether this printer will be shared with other network users. If you choose sharing, give the printer a share name.</p> <p>Not shared [radio button]</p> <p>Share as [text entry field]</p> <p>NOTE: Exceeding 12 characters can make the printer inaccessible to Windows 95/98 clients. (Windows Me is not displayed but is supported.)</p> <p>Client Driver Support Additional drivers can be installed on this computer to support automated driver download to clients.</p> <p>Install a Windows 95 (or Windows 98 or Windows 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 57: Finish dialog box



Title of dialog box	Text in dialog box	User options and descriptions
Finish	<p>Your HP LaserJet 9000 printer has been successfully installed.</p> <p>Installation Details [button]</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 display a modal 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 started.</p>

Figure 58: Exit setup dialog box



Title of dialog box	Text in dialog box	User options and descriptions
Exit Setup [when Cancel is selected]	Setup is not complete. If you quit the Setup program now, the program will not be installed. You can run the Setup program at a later time to complete the installation. To continue installing the program, click Resume . To quit the Setup program, click Exit Setup .	Exit Setup quits the Installer program. Resume takes you to the dialog box you most recently canceled.

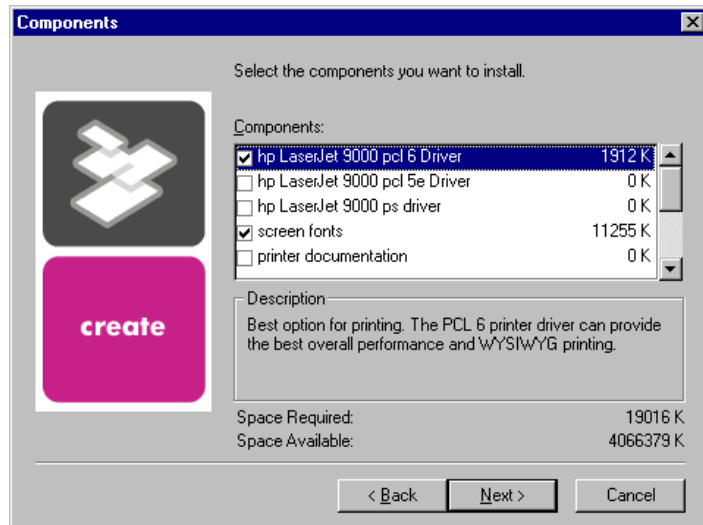
Custom installation

The custom installation gives you the option of installing the following components:

- HP LaserJet 9000 PCL 6 driver
- HP LaserJet 9000 PCL 5e driver
- HP LaserJet 9000 PS driver
- Screen fonts
- Printer documentation
- Accessory documentation

NOTE: Windows NT 4.0 and Windows 2000 running terminal server do not support the **Job Status and Alerts** option.

Figure 59: Custom installation component selection dialog box



Title of dialog box	Text in dialog box	User options and descriptions
Components	<p>Select the components you want to install.</p> <p>Components:</p> <p>Description [Conditional text, according to the item currently highlighted in the list]</p> <p>Space Required [Specifies disk space required to install components currently selected in list]</p> <p>Space Available [Specifies disk space available on disk drive specified in Choose Destination Location dialog box (00)]</p>	<p>Next takes you to the Printer Name dialog box.</p> <p>Back returns you to the Installation Type dialog box.</p> <p>Cancel takes you to the Exit Setup dialog box.</p> <p>NOTE: Custom installation automatically selects the options available in the typical installation. You can also select from among the following components:</p> <ul style="list-style-type: none"> • PCL 5e driver • PS driver • screen fonts • printer documentation • accessory documentation

Driver-only installation

1. Close all software applications.
2. Click **Start**, click **Settings**, and then click **Printers**.
3. Double-click **Add Printer**.
4. Answer the questions in the **Add Printer Wizard** dialog box until you reach the screen with the printer manufacturer list.
5. Click **Have Disk**.
6. Browse to the driver location using one of the options in this step:

- **Inbox CD-ROM** option. Browse to the appropriate directory for your operating system and language.
 - **Internet download** option. Browse to the folder where the Web files were downloaded and decompressed.
7. Select the appropriate .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 is 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, and 2000

The following information will assist you as you install a printer driver using the Microsoft Point and Print function when the user cannot see the printer on the network.

Point and Print is a Microsoft term used to describe 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. This process is also described as a network installation of a printer driver.

NOTE: This section outlines the procedures for installing print drivers with 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 95/98/Me servers with Windows 95/98/Me clients

Server and client installation instructions for the Windows 95, Windows 98, Windows Me, Windows NT 4.0, and Windows 2000 operating systems, presented in the following table, are similar. For all operating systems, use the Add Printer Wizard to install the appropriate operating system driver on the server.

NOTE: To install the printer driver on the Windows NT 4.0 server, you must have administrator privileges.

In the following table, the pertinent operating systems for each step are listed in the left column. Skip the step if your operating system is not listed either by name or as "Windows 95, 98, Me, NT 4.0, and 2000." For instance, if your operating system is Windows NT 4.0 or Windows 2000, start with step 3.

Operating system	Steps
Windows 95, Windows 98, and Windows Me	1. Press CTRL+ALT+DELETE to bring up the Close Program window.
Windows 95, Windows 98, and Windows Me	2. Close every software program except Explorer and Systray. Do this by highlighting the other items, one at a time, and selecting the End Task button. Press CTRL+ALT+DELETE each time you need to close another item.
Windows 95, 98, Me, NT 4.0, and 2000	3. Click Start , click Settings , and then click Printers .
Windows 95, 98, Me, NT 4.0, and 2000	4. In the Printers folder, double-click the Add Printer icon to start the Add Printer Wizard .

Operating system	Steps
Windows 95, 98, Me, NT 4.0, and 2000	5. Click Next , and then click Local Printer . Click Next . If your operating system is Windows 95, Windows 98, or Windows Me, <i>go to step 7</i> .
Windows NT 4.0 and Windows 2000	6. Select the appropriate port in the list of ports, or click Add Port to connect to a network port not in the list of available ports.
Windows 95, 98, Me, NT 4.0, and 2000	7. Select the printer model in the list of available printers, or click Have Disk if installing the driver from an alternative source, such as diskette, CD-ROM, or software download. If installing from a software download, you must know the path where the software has been downloaded.
Windows 95, 98, Me, NT 4.0, and 2000	8. Complete the installation. If your operating system is Windows NT 4.0 or Windows 2000, <i>go to step 12</i> .
Windows 95, Windows 98, Windows Me, and Windows 2000	9. After the installation is complete, highlight the Printer icon and click File , and then Properties . In the Printer Properties window, click the Sharing tab.
Windows 95, Windows 98, and Windows Me	10. You must enable the File and Print Sharing service for either Microsoft networks or Novell networks on the server.
Windows 95, Windows 98, and Windows Me	11. Under the Sharing tab, click Shared As and type in a share name. Any comment or password is optional. Then <i>go to step 13</i> .
Windows NT 4.0 and Windows 2000	12. Under the Sharing tab, click Shared: and type in a share name. If desired, click the Security tab and click Permissions to modify the default user permissions of the printer.
Windows 95, 98, Me, NT 4.0, and 2000	13. To exit Properties , click OK . A hand will appear beneath the Printer icon in the Printers folder, indicating that the printer is shared.
Windows 95, 98, Me, NT 4.0, and 2000	<p>14. You can install the driver using Point and Print in one of the following four ways:</p> <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; drag and drop the icon for the shared printer into your Printers folder. • In the Printers folder, open the Add Printer Wizard. Then, depending 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 and Windows 2000, click Network printer server. <p>15. Click Next. Enter the network path or queue name, or choose Browse to search the network to locate the appropriate path.</p> <p>16. In Network Neighborhood, locate the server and double-click. Then locate the printer share name and right-click. Click Install.</p>

Operating system	Steps
Windows 95, 98, Me, NT 4.0, and 2000	17. Complete the installation through the Add Printer Wizard.

Windows NT 4.0 or Windows 2000 server and Windows 95/98/Me clients

1. Install the Windows NT driver on the server using the **Add Printer Wizard**:
 - Click **Start**, click **Settings**, and then click **Printers**.
 - In the Printers folder, open the **Add Printer Wizard**, click **Add Printer**, and then click **File** and **Open** from the menu bar.
 - Click **Next**, and then click **My Computer**. Click **Next**.
 - Select the appropriate port in the list of ports, or click **Add Port** to connect to a network port not listed as an available port.
 - Select the printer model in the list of available printers, or click **Have Disk** if installing the driver from an alternative source, such as a diskette, CD-ROM, or software download. If installing from a software download, you must know the path to which the software has been downloaded.
 - Complete the installation.
2. After the installation is complete, highlight the printer icon and click **File/Properties**. In the **Printer Properties** window, click the **Sharing** tab.
3. Under the **Sharing** tab, click **Shared:** and type in a share name. In the **Alternate Drivers** list, click **Windows 95, Windows 98, or Windows Me**. If desired, click the **Security** tab and click **Permissions** to modify the default user permissions of the printer. Click **OK**.
4. Click **OK** in the **Insert Disk** window.
5. In the Printer Drivers for Windows 95 (or Windows 98 or Windows Me) window, enter the appropriate path for the Windows printer driver .INF file. If the printer driver file is on a disk, insert the disk or CD-ROM in the disk drive. Click **OK**.
6. Click **OK** again to confirm the path for the Windows 95, 98, or Me .INF file. Windows NT then copies the Windows 95, Windows 98, or Windows Me printer driver files. A hand appears beneath the printer icon in the Windows NT 4.0 Printers folder, indicating that it is shared.
7. From a Windows 95, Windows 98, or Windows Me client, you can install the driver using Point and Print in one of the following three ways:
 - In Network Neighborhood, locate the server and double-click the printer share name.
 - In Network Neighborhood, locate the server and drag and drop the icon for the shared printer into the **Printers** folder.
 - In the **Printers** folder, open the **Add Printer Wizard** and click **Network Printer**. Click **Next**. Enter the network path or queue name, or browse the network to locate the appropriate path.
8. Complete the installation through the **Add Printer Wizard**.

NOTE: To completely install the Windows NT 4.0 printer driver on the Windows NT 4.0 server (or, for Windows 2000, 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, for Windows 2000, 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.

Setting a default printer

This section applies to Windows 95, 98, Me, NT 4.0, and 2000.

1. From the **Start** menu, click **Settings**, and then click **Printers**.
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**.

Enabling file and print sharing in Windows 95

This section applies only to the Windows 95 operating system.

1. Open the properties of Network Neighborhood from the Windows 95 desktop.
2. Under the **Configuration** tab, determine if file and printer sharing for Microsoft Networks, or file and printer sharing for NetWare Networks, is listed in the installed components list.
3. If the appropriate component is listed, continue to step 6. If not, click the **Add** button.
4. In the **Select Network Component Type** window, choose **Service**, and click the **Add** button.
5. In the **Select Network Service** window, click **Microsoft** under manufacturers, and **File and Print Sharing** for Microsoft Networks, or click **NetWare Networks**. Click **OK**.
6. Under the **Configuration** tab of the Network window, click the **File and Print Sharing** button. Click to check the box next to "I want to be able to allow others to print to my printer(s)." Click **OK**.
7. Click **OK** to exit the Network window.
8. In the **System Settings Change** window, click **Yes** to restart the computer now.
9. Windows 95 will restart.

NOTE: Point and Print installation of PS drivers is supported only when using Microsoft Windows 95 PS drivers (version 4.0).

10. After the chosen printer software has been installed and Windows has been restarted, the installation is complete.

Installing printer drivers on Windows 3.1x

Windows 3.1x is not supported by the CD-ROM browser and printing system installer for the HP LaserJet 9000 printer. Printing from Windows 3.1x is supported with the PCL 5e and PCL 6 drivers for the HP LaserJet 8100, and with the PS driver. To install these drivers, you must use the **Add Printer** function in the Windows 3.1x control panel:

1. Close all programs. Turn off virus checkers and terminate stay resident (TSR) programs. After installation, these programs can be turned back on.
2. Go to Main in the Program Manager and click **Control Panel**.
3. Click **Printers**.
4. Under Printer, choose **Add**.
5. Under the list of printers, choose **Unlisted** and click **Install**.
6. Browse to the driver location using one of the options below:
 - **CD-ROM option**
Browse to the appropriate <CD-ROM Drive>:\<Language>\Drivers\Win3.x directory for your operating system and language.
 - **Internet download option**
Browse to the <CD-ROM Drive>:\<Language>\Drivers\Win3.x folder where the Web files were downloaded and decompressed.

7. Select the appropriate printer and click **OK**.
8. Follow the remaining instructions to complete the printer installation.

Macintosh

Font support

To ensure that you can use all installed fonts with the HP LaserJet 9000 printer, the Macintosh printing system includes the standard 35 screen fonts in 11 families:

- Avant Garde
- Bookman
- Courier
- Helvetica
- Helvetica Narrow
- New Century Schoolbook
- Palatino
- Symbol
- Times
- Zapf Chancery
- Zapf Dingbats

The Macintosh printing system also includes the HP 45 XPS font families:

- Clarendon Condensed Bold
- Coronet
- Courier
- Garamond
- Letter Gothic
- Marigold
- Symbol
- Times New Roman
- Univers
- Univers Condensed
- Wingdings

The following bitmap screen fonts reside on the HP LaserJet 9000 printer:

- ITC Avant Garde Gothic Book
- ITC Avant Garde Gothic Book Oblique
- ITC Avant Garde Gothic Demi
- ITC Avant Garde Gothic Demi Oblique
- ITC Bookman Demi
- ITC Bookman Demi Italic
- ITC Bookman Light
- ITC Bookman Light Italic
- Courier
- Courier Bold
- Courier Bold Oblique
- Courier Oblique
- Helvetica
- Helvetica Bold
- Helvetica Bold Oblique
- Helvetica Oblique
- Helvetica Narrow
- Helvetica Narrow Bold
- Helvetica Narrow Bold Oblique
- Helvetica Narrow Oblique
- New Century Schoolbook Bold
- New Century Schoolbook Bold Italic
- New Century Schoolbook Italic
- New Century Schoolbook Roman
- Palatino
- Palatino Bold
- Palatino Bold Italic
- Palatino Italic
- Symbol
- Times Bold
- Times Bold Italic
- Times Italic
- Times Roman
- ITC Zapf Chancery Medium Italic
- ITC Zapf Dingbats

The following fonts are resident on all HP LaserJet 9000 printers, but can be used by Macintosh platforms only by installing additional screen fonts. You can either use these screen fonts directly from the HP LaserJet 9000 software CD browser, or obtain them from the HP Web site at http://www.hp.com/go/lj9000_cdrom.

- Albertus Extra Bold
- Albertus Medium
- Antique Olive
- Antique Olive Bold
- Antique Olive Italic
- Arial
- Arial Bold
- Arial Bold Italic
- Arial Italic
- CG Omega
- CG Omega Bold
- CG Omega Bold Italic
- CG Omega Italic
- CG Times
- CG Times Bold
- CG Times Bold Italic
- CG Times Italic
- Clarendon Condensed Bold
- Coronet
- Courier
- Courier Bold
- Courier Bold Oblique
- Courier Italic
- Garamond Antiqua
- Garamond Halbfett
- Garamond Kursiv
- Garamond Kursiv Halbfett
- Letter Gothic
- Letter Gothic Bold
- Letter Gothic Italic
- CG Times Bold Italic
- Marigold
- Symbol
- Times New Roman
- Times New Roman Bold
- Times New Roman Bold Italic
- Times New Roman Italic
- Univers Bold
- Univers Bold Italic
- Univers Condensed Bold Italic
- Univers Condensed Medium
- Univers Condensed Medium Italic
- Univers Medium
- Univers Medium Italic
- Univers Italic
- Wingdings

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 with 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 for the correct connection to communicate with the printer.

The HP LaserJet 9000 Series device 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 must use a USB connection for a direct connection to a computer running Macintosh OS.

The Macintosh partition contains an installer program for each language. Find the language appropriate for the operating system being used, and use the installer program for that language.

To install the HP LaserJet 9000 printer software for Macintosh OS

1. Insert the CD-ROM that came with the Macintosh product 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**.
3. The main Installer dialog box appears. Click **Install** and then follow the instructions on the screen to complete the software installation.
4. When software installation is complete, click **Restart**.
5. Run the Apple Desktop Printer utility.
6. Click **HP Printer (USB)** and then click **OK**.
7. Click **Change** in the USB Printer Selection area.
8. Click **HP Printer (USB)** and then click **OK**.
9. Click **Auto Setup**. This attempts to match a PPD file and USB driver to your printer. If this fails, click **Change**, scroll through the list, click **HP LaserJet 9000**, and then click **Select**.
10. Click **Create**.

Uninstalling the Macintosh printing system

To uninstall the Macintosh Printing System, drag the PPDs and the unwanted component(s) to Trash.

In-box disk layout

The Macintosh Printing System consists of one file: the HP LaserJet 9000 Installer - Integrated installer program.

Folders and files added through installation of the HP LaserJet 9000 software (Macintosh OS)

The tables in the following sections detail the changes to your system as new folders and files are added when the HP LaserJet 9000 Series product 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.

MACINTOSH HD: HP LASERJET

<u>File Name</u>	<u>Description</u>
INSTALLATION NOTES	HP LaserJet 9000 printer readme file.
COLORSYNC PROFILES (folder)	Setup Assistant runs following software installation. You can also run it at any time by double-clicking.
HP LASERJET UTILITY	The LaserJet Utility helps you configure and manage HP LaserJet printers.

MACINTOSH HD: SYSTEM: EXTENSIONS

<u>File Name</u>	<u>Description</u>
HP STEELHEAD USB	USB system extension for the HP LaserJet printers with USB connection types

MACINTOSH HD: SYSTEM: EXTENSIONS: PRINTER DESCRIPTIONS

<u>File Name</u>	<u>Description</u>
HP LASERJET 9000 SERIES	PPD File

MACINTOSH HD: SYSTEM: EXTENSIONS: PRINTING PLUG-INS

<u>File Name</u>	<u>Description</u>
HPCustomPrintLib	Printing software support libraries

MACINTOSH HD: SYSTEM: FONTS

File Name	Description
The following fonts are installed by the HP LaserJet 1200 Series software: Albertus Medium Antique Olive Albertus Extra Bold Arial CG Omega CG Times Courier Clarendon Condensed Bold Coronet Garamond Marigold Letter Gothic Symbol Times New Roman Univers Univers Condensed	Font files

MACINTOSH HD: SYSTEM: HELP

File Name	Description
HP LASERJET PRINTER HELP: (Subdirectory)	Contains HTML and graphics files for Apple Help support of HP LaserJet printers
HP LASERJET UTILITY HELP: (Subdirectory)	Contains HTML and graphics files for Apple Help support of HP LaserJet Utility

MACINTOSH HD: SYSTEM: PREFERENCES:

File Name	Description
HP REGISTRY	Software support file

MACINTOSH HD: SYSTEM: PREFERENCES: HP PRINTER PREFS

File Name	Description
HP LASERJET PRINTER PREFS	Printer settings file

Macintosh (Macintosh OS) installation

This section provides information about the various installation dialog box sequences for the Macintosh 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 60: Installer splash screen dialog box



Title of Dialog box	Text in Dialog box	User Options and Descriptions
Splash screen [This title does not appear in the dialog box.]	HP LaserJet for Macintosh Continue ... [button]	Click Continue to open the HP LaserJet Installer dialog box.

Figure 61: HP LaserJet installer dialog box (Easy Install)



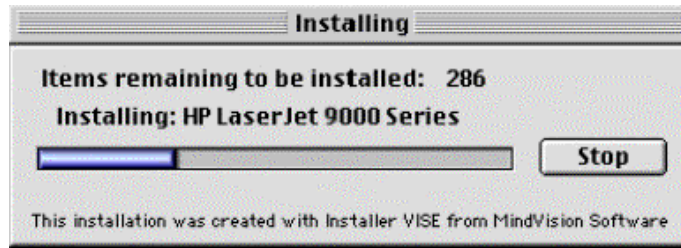
Title of dialog box	Text in dialog box	User options and descriptions
HP LaserJet Installer	<p>Easy Install [pull-down menu]</p> <p>Click the Install button to install:</p> <p>Printer Descriptions HP LaserJet Utility Installation Notes ColorSync Profiles</p> <p>Disk space available: [conditional]</p> <p>Approximate disk space needed: [conditional]</p> <p>The folder "HP LaserJet Folder" will be created on the disk "Macintosh HD"</p> <p>Select Folder [button]</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 Select Folder to specify a location.</p> <p>You can also choose a Custom installation option from the pull-down menu at upper left.</p> <p>Click the Read Me button to open the Installer readme file.</p> <p>Click the Install button to start the installation on the selected disk.</p> <p>Click the Quit button to quit the Installer without making changes to the system.</p>

Figure 62: HP LaserJet installer dialog box (Custom Install)



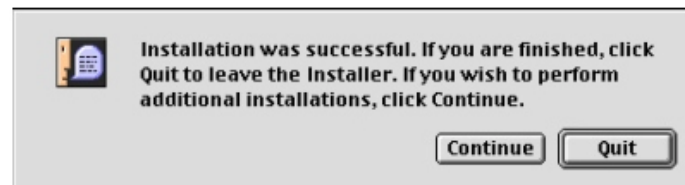
Title of dialog box	Text in dialog box	User options and descriptions
<p>HP LaserJet Installer</p>	<p>Custom Install [pull-down menu]</p> <p>Printer Descriptions HP LaserJet Utility Installation Notes ColorSync Profiles HP LaserJet Help LaserJet Printer Help USB Components</p> <p>Disk space available: [conditional]</p> <p>Approximate disk space needed: [conditional]</p> <p>The HP LaserJet Folder will be created on the disk "Macintosh HD."</p> <p>Select Folder [button]</p> <p>Quit [button]</p> <p>Install [button] [default option]</p>	<p>Select the install location using the Select Folder option (if the desired location is different from "Macintosh HD").</p> <p>Select available components to install by using the check boxes in the list.</p> <p>Click the Read Me button to open the Installer readme file.</p> <p>Clicking Install starts the installation on the selected disk.</p> <p>Click the Quit button to quit the Installer without making any changes to the system.</p>

Figure 63: Installation progress dialog box



Title of dialog box	Text in dialog box	User options and descriptions
Installing	<p>Items remaining to be installed: [conditional number]</p> <p>Installing: HP LaserJet 9000 Series</p> <p>Stop [button]</p>	Click the Stop button to interrupt the install file copy process.

Figure 64: Finish dialog box

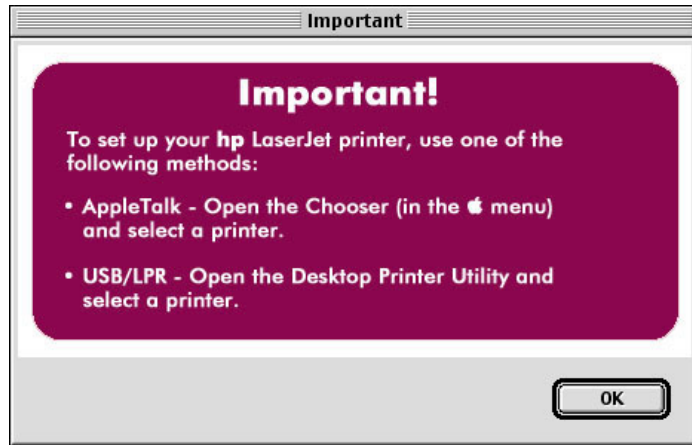


Title of dialog box	Text in dialog box	User options and descriptions
Finish [This title does not appear.]	<p>Installation was successful. If you are finished, click Quit to leave the Installer. If you want to perform additional installations, click Continue.</p>	<p>Click the Quit button to exit the Installer. The Printer Setup Assistant opens.</p> <p>Click the Continue button to return to the HP LaserJet Installer.</p>

Printer setup using AppleTalk Chooser

This section provides information about installing the printer using the AppleTalk Chooser.

Figure 65: Important dialog box



Title of dialog box	Text in dialog box	User options and descriptions
Important!	<p>To set up your HP LaserJet printer, use one of the following methods:</p> <p>AppleTalk - Open the Chooser (in the [Apple icon] menu) and select a printer.</p> <p>USB/LPR - Open the Desktop Printer Utility and select a printer.</p>	<p>Click OK, and then continue installing the printer using either the AppleTalk Chooser, or USB/LPR.</p>

Figure 66: Apple Guide help sequence

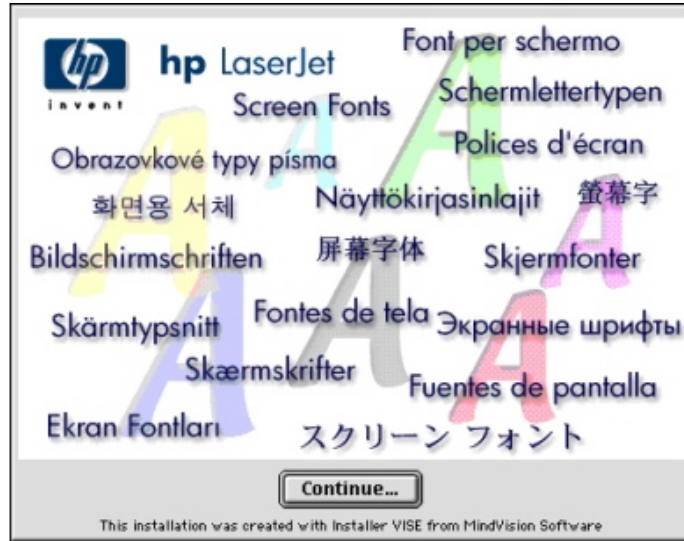


Title of dialog box	Text in dialog box	User options and descriptions
How do I select my printer?	<p>For instructions, click the right arrow.</p> <p>Topics [button]</p> <p>[An eight-panel Apple Guide sequence describes how to gain access to the Macintosh Chooser and how to select and set up the printer.]</p>	This is a standard Macintosh OS help sequence.

HP LaserJet Screen Fonts Installer dialog box sequence

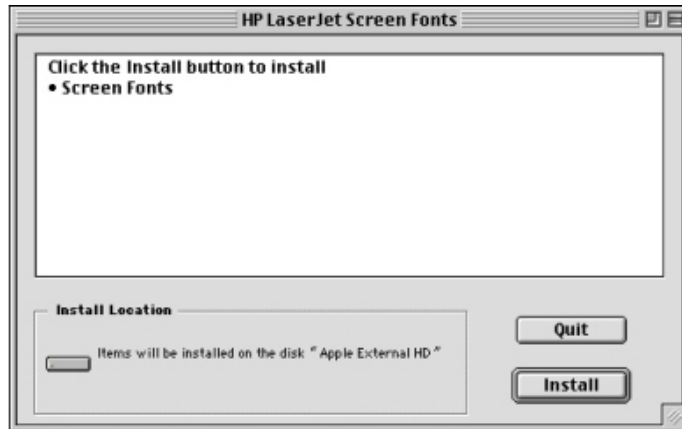
This section provides information about the installation dialog box sequence for the HP Screen Font Installer.

Figure 67: Screen fonts installer splash screen dialog box



Title of dialog box	Text in dialog box	User options and descriptions
HP LaserJet Screen Fonts	HP LaserJet Screen Fonts [The phrase "Screen Fonts" is repeated in multiple scripts and languages.] Continue [button]	Click the Continue button to open the HP LaserJet Screen Fonts dialog box.

Figure 68: HP LaserJet screen fonts installer dialog box

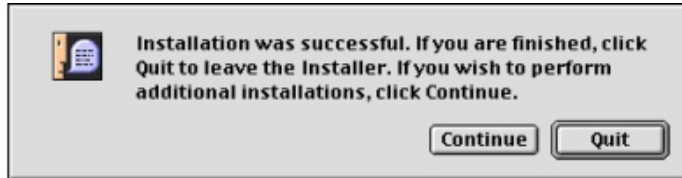


Title of dialog box	Text in dialog box	User options and descriptions
HP LaserJet Screen Fonts	<p>Click the Install button to install:</p> <ul style="list-style-type: none"> • Screen Fonts <p>Items will be installed on the disk "Apple External HD"</p> <p>Quit [button]</p> <p>Install [button] (default option)}</p>	<p>Click the Install button to start the installation.</p> <p>Click the Quit button to quit the Installer without making changes to the system.</p>

When you click **Install**, an installation progress bar dialog box briefly appears. The following table details the contents of that dialog box.

Title of dialog box	Text in dialog box	User options and descriptions
Installing	<p>Items remaining to be installed: [conditional number]</p> <p>Stop [button]</p>	<p>Click the Stop button to interrupt the install file copy process.</p>

Figure 69: Finish dialog box



Title of dialog box	Text in dialog box	User options and descriptions
Finish [This title is not displayed.]	Installation was successful. If you are finished, click Quit to leave the Installer. If you want to perform additional installations, click Continue .	Click the Quit button to exit the Installer. Click the Continue button to return to the HP LaserJet Screen Fonts installer.

IBM OS/2 Warp, 3.0 and greater**Font support**

NOTE: Fonts can be downloaded to the printer by using the Font Installer feature of the printer driver.

- Albertus
- Albertus Extra Bold
- Antique Olive
- Antique Olive Bold
- Antique Olive Italic
- Arial
- Arial Bold
- Arial Bold Italic
- Arial Italic
- CG Omega
- CG Omega Bold
- CG Omega Bold Italic
- CG Omega Italic
- CG Times
- CG Times Bold
- CG Times Bold Italic
- CG Times Italic
- Clarendon Condensed
- Coronet
- Courier
- Courier Bold
- Courier Bold Italic
- Courier Italic
- Garamond Antiqua
- Garamond Halbfett
- Garamond Kursiv
- Garamond Kursiv Halbfett
- Letter
- Letter Bold
- Letter Italic
- Line Printer
- Marigold
- Symbol
- Times New Roman
- Times New Roman Bold
- Times New Roman Bold Italic
- Times New Roman Italic
- Univers
- Univers Bold
- Univers Bold Italic
- Univers Italic
- Univers Condensed
- Univers Condensed Bold
- Univers Condensed Bold Italic
- Univers Condensed Medium Italic
- Wingdings

OS/2 installation instructions

NOTE: Installation procedures differ depending upon whether or not a printer object does or does not exist on the OS/2 Desktop being used. Use the instructions that match the desktop.

Installing a printer in OS/2 when a printer object does not appear on the computer desktop

To create a printer object and install a printer driver, use the following procedures:

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 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 **Desktop**.
4. Release the right mouse button.
5. Type a name for the printer in the **Name** field.
6. Select a port to which the printer is connected.
7. Click **Install new printer driver**. A window appears with a list of the printer drivers that are shipped with O/S2.
8. Click **Other** printer driver.
9. Point to the downloaded printer drivers.
10. Click **Refresh**. Wait until the window fills with printer drivers.
11. Select a driver by clicking the left mouse button over the desired driver.
12. Click **Install**.

Installing a printer in OS/2 when a printer object does appear on your desktop

To install a new printer driver 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. Select the **Printer** object using the right mouse button.
2. Click **Settings**.
3. Click the **Printer Driver** tab.
4. Select one of the **Printer Driver** objects using the right mouse button.
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. Select a driver by clicking the left mouse button over the desired driver.
10. Click the **Install** button.

Additional information about the OS/2 drivers is included in the readme files that come with each driver.

Changing a printer driver in the printer object

Once 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 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 **Title bar** 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, forms defined by the printer, 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. Select the printer driver, and then right-click the mouse button.
5. Click **Settings**.
6. Change the properties to match the printer setup.
7. Double-click the **title bar** 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 for information about printing.

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). Applications generally allow the selection of a printer object, and they allow you to 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 an application, such as when performing drag-and-drop printing.

To change the default job properties associated with a printer object outside of an application:

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.

Known Issues

General printer

- ISSUE:** Labels do not print from the cassette trays.
- DESCRIPTION:** Printing labels from trays 2, 3, and 4 can damage the printer. Labels can be printed only from optional tray 1.
- WORKAROUND:** Do not print labels from trays 2, 3, and 4. Use tray 1.
- ISSUE:** Transparencies do not print correctly.
- DESCRIPTION:** The printer can accommodate only transparencies designed specifically for laser printers.
- WORKAROUND:** Use only transparencies designed for laser printers.
- ISSUE:** When tray 1 is not installed, the minimum and maximum values for custom paper sizes are incorrect on Windows NT 4.0 PCL 6 drivers.
- DESCRIPTION:** Specifications state that when tray 1 is not installed, the minimum custom paper size allowed is 148 by 210 mm (5.83 by 8.27 inches), and the maximum is 279.4 by 431.8 mm (11.7 by 17 inches). Actual minimum size when tray 1 is not installed is 98 by 191mm (3.87 by 7.5 inches); the actual maximum size is 312 by 470 mm (12.28 inches by 18.46 inches).
- WORKAROUND:** If tray 1 is not installed, the minimum custom paper size allowed is 148 by 210 mm (5.83 by 8.27 inches), and the maximum is 279.4 by 431.8 mm (11.7 by 17 inches). When tray 1 is installed, the actual minimum size is 98 by 191mm (3.87 by 7.5 inches), and the actual maximum size is 312 by 470 mm (12.28 inches by 18.46 inches).

HP LaserJet 9000 printing system installer

Hard disk free space requirements

Before installing the HP LaserJet 9000 printing system software, verify that the target disk drive has at least 20 MB of disk space available for the installation.

- ISSUE:** During Network installation, changing the port name causes Network Installer to fail and returns a severe error message.
- DESCRIPTION:** If the port name is changed during installation and a port name longer than 49 characters is used, the installer is unable to install any drivers and returns a setup error dialog box that states, "Setup was unable to install the HP LaserJet 9000 PCL 6 driver. Refer to the installation Notes for information on how to install this driver manually." Clicking OK produces identical message boxes for PCL 5e and PS drivers.
- WORKAROUND:** Use a port name no longer than 49 characters.
- ISSUE:** The Turkish installer fails at the start of the installation and displays a message dialog box.

- DESCRIPTION:** The Turkish language is not supported through the HP LaserJet printing system installer in Windows 2000.
- WORKAROUND:** Use the Add Printer Wizard to install the driver for the Turkish language.
- ISSUE:** Acrobat Reader appears as installable, but cannot be installed through the **Silent Installer** option of the printer's Customization utility.
- DESCRIPTION:** When running the printer's Customization utility using the Silent Installer option, Acrobat Reader appears on the list of installable components. However, Acrobat Reader and the printer accessory documentation are not installed. When using the interactive Customization utility, Acrobat Reader is selectable and will be installed as expected.
- WORKAROUND:** For Acrobat Reader and the printer accessory documentation to be installed, use the interactive option of the Customization utility.
- ISSUE:** In Windows 98, a second copy of the printer is installed through plug-n-play after restarting the computer.
- DESCRIPTION:** When the printer is connected to a local port on a computer using Windows 98, and is also connected through a network, an additional copy of the printer will be installed through plug-n-play after restarting the computer.
- WORKAROUND:** Disconnect the local port connection to the printer, or install a printer driver for the local connection.
- ISSUE:** Cannot cancel the HP LaserJet 9000 printing system installer after file copy has begun.
- DESCRIPTION:** No **Cancel** button is available when the printing system installer is copying files and updating the system. The **Cancel** button is not available because cancellation during the file copy or system update processes could leave your system in an unknown state.
- WORKAROUND:** Complete the printing system installation and use the printing system uninstaller located in the HP LaserJet 9000 programs folder to uninstall the printing system. Also, do not close programs or turn off the computer during the file copy and system update process. After the uninstall process is complete, the printing system installer can be rerun with your new selections.
- ISSUE:** There is no response when trying to run the installer's SETUP.EXE file.
- DESCRIPTION:** The installation program checks for a minimum of 7 MB of free disk space on the computer before starting the installation of the software. If there is not at least 7 MB of free disk space, the installer will not start and no error messages or warnings appear.
- WORKAROUND:** Verify that there is at least 20 MB of free disk space available for the installation of the software.
- ISSUE:** A Dr. Watson error occurs during installation after uninstalling an existing typical installation.
- DESCRIPTION:** This problem has been observed on Windows NT 4.0 systems during a reinstallation. If the HP LaserJet 9000 printing system software was installed using an IP port and the typical installation option, then subsequently uninstalled, a Dr. Watson error might be received during a reinstallation when attempting to select **Connected to this computer**.

- WORKAROUND:** 1. Make sure that the temp directory defined in the system variables is created during installation of the HP LaserJet 9000 printing system.
2. Instead of selecting **Connected to this computer**, select **Connected to the network** and click **Next**. Then, click **Back** and change the selection to **Connected to this computer**. Click **Next** and continue with the installation. The Dr. Watson error should not appear.
- ISSUE:** The installer presents custom installation options during a typical installation.
- DESCRIPTION:** This problem occurs during a typical installation if you mistakenly select **Custom Installation**, click **Back**, click **Typical Installation**, and then click **Next**. The installer presents custom installation options rather than typical installation options.
- WORKAROUND:** Cancel the installation process by exiting the installer. Restart the installer and be sure to select **Typical Installation**.
- ISSUE:** You experience proxy errors while trying to perform a Web Update during installation.
- WORKAROUND:** Go to the <http://www.hp.com> Web site and download the latest version of the HP LaserJet 9000 printing system software. Install the newly downloaded software rather than installing the software from the HP LaserJet 9000 software CD browser.

HP LaserJet 9000 printing system uninstaller

- ISSUE:** The HP LaserJet 9000 printing system uninstaller does not completely uninstall the printing system software.
- DESCRIPTION:** If the printing system installer is used to install more than one language on the same system, only the files and components from the last installation will be removed. The printing system installer stores only one uninstallation file per system.
- WORKAROUND:** Uninstall the printing system for one language before installing the printing system for a second language.
- ISSUE:** Uninstaller does not remove HP 9000 LaserJet Program group (including subfolders/links). This occurs on double-byte Asian Systems running Windows 95, Windows 98, or Windows Me.
- WORKAROUND** Manually remove the HP 9000 LaserJet program groups.
1. Right-click on Taskbar and click **Properties**.
 2. Click the **Start Menu Programs** Tab.
 3. Click the **Remove** button.
 4. From the tree view, select HP 9000 LaserJet.
 5. Click the **Remove** button.

Install Network Printer wizard

- ISSUE:** For port names more than 63 characters in length, the port creation fails.
- DESCRIPTION:** If you choose to change the port name and use a new name consisting of more than 63 characters, the port creation will fail. A dialog box appears with the following message: "There was an error creating the port. Please refer to the readme file about how to create network printer

ports.” The printer will be set up to the local printer port. The driver installation finishes, and the printer is set up to print to LPTx.

WORKAROUND: Run the installer again and enter a name with fewer than 63 characters.

ISSUE: The IP Address is set using **Suggest Settings** and printer creation fails.

Conditions required: The computer is configured with TCP/IP only and a Dial Up Adapter, the printer has an assigned IP address, and a specific device search is performed by hardware address.

DESCRIPTION: After the printer is discovered using the hardware address, you can use the **Suggest Settings** option on the **IP Settings** screen. If you use the **Suggest Settings** option (autonet), the installation continues as though the installer is assigning an autonet address to the printer. However, the installation will fail and IP on printer will not be written.

WORKAROUND: Do not change the IP Address using the **Suggest Settings** option.

ISSUE: The **Install Network Printer Wizard** does not suggest a default queue name.

DESCRIPTION: A new queue is created each time the **Install Network Printer Wizard** runs on different computers. For the first eight installations, the **Install Network Printer Wizard** suggests a default queue name incrementing by _q2, _q3... This is successful until the ninth queue. When the ninth queue should be created, the queue is not created and the queue name field remains blank.

WORKAROUND: Type in the name of the queue.

NOTE: Use **Add Printer** or the appropriate installer to attach to an existing queue rather than using the **Install Network Printer Wizard** to create a new queue for each workstation. If you want a new queue for each workstation, you will have to type in a new queue name.

Customization utility

ISSUE: The "floppy" disk drive is not available as a destination when using the Customization utility to create a custom printing system.

DESCRIPTION: Only the **Copy Printer Drivers Only** selection allows the use of a "floppy" disk drive as a destination. When selecting **Create Customized Installer** or **Copy Entire Printing System Installer** from the Customization utility, only local or network hard drives can be selected.

WORKAROUND: When selecting either **Create Customized Installer** or **Copy Entire Printing System Installer**, select either a local or network drive as the destination for downloading the image.

Network bidirectional communication

ISSUE: A "Printer Communication Error" message is received when you click the **Update Now** button in the HP LaserJet 9000 PCL 6 or PCL 5e drivers.

DESCRIPTION: This problem can occur on Windows NT 4.0 clients using bidirectional communication and where HP Port Resolver to a remote printer using a Windows NT 4.0 share.

WORKAROUND: 1. Make sure that the RFC Configuration service is correctly installed on both the client and the print server host. 2. Make sure that the **RFC Name Service Provider** field is set to "Windows NT Locator."

Local (IR, parallel, and USB) bidirectional support

- ISSUE:** Some advanced features of the LaserJet 9000 printing system are not supported over a parallel or USB printer connection.
- DESCRIPTION:** Printing system components that require bidirectional communication are not supported over parallel or USB printer connections. The components that are not supported over parallel or USB include:
- Driver Autoconfiguration
 - Update Now
 - Job Status and Alerts
- WORKAROUND:** None at present. This functionality will be added in a future release of the printing system software for the HP LaserJet 9000 printer.

Web Registration

- ISSUE:** Before the browser opens to perform a Web Registration, the Web Registration program displays a message asking if the registration was successful
- WORKAROUND:** Click **Yes** to clear the **Web Registration** dialog box. Proceed with the Web Registration.

Web installation

- ISSUE:** The Installer hangs if you start a new installation after canceling Web install.
- DESCRIPTION:** If, after canceling Web Update, you immediately click **Install Printer** again in the CD browser, several errors can occur: the system can crash; the setup progress bar might proceed to 99%, then the system can hang; or an _ins5576 error can appear, followed by a system crash.
- WORKAROUND:** Do not click **Install Printer** immediately after canceling out of Web installation. Instead, wait several minutes before clicking **Install Printer**.

General printer driver

- ISSUE:** The **Proof and Hold** option in **Job Retention** prints all of the copies of a print job.
- DESCRIPTION:** Some applications might send each copy of a print job as separate jobs from the application.
- WORKAROUND:** Clear the selection for collation in the software application.
- ISSUE:** When duplexing, you cannot print on the back side of the first sheet if you selected **Use Different Paper** for the first page.
- WORKAROUND:** The printing system does not allow at this time for the use of different paper for the first page of a duplexed printing job. This functionality might be added in future products.
- ISSUE:** When using **Print on Both Sides** with multiple copies, the second copy prints on the first copy's last page instead of on a separate page.
- DESCRIPTION:** This is a known issue with several applications. For example, an application sends a three-page, two-copy job as one six-page document. When print data is sent to the printer in this manner, the driver cannot distinguish that it is really two copies of the same print job.

- WORKAROUND:** Turn on **Ignore Application Collation** in the printer driver and turn off collation in the application's **Print** dialog box.
- ISSUE:** PNG graphic images do not print with the current version of Netscape Navigator (4.73).
- DESCRIPTION:** Netscape does not support PNG images by default. A PNG plug-in must be downloaded from Netscape and installed into the browser.
- WORKAROUND:** Download and install the PNG plug-in from Netscape.
- ISSUE:** Printers shared from Windows 2000 that have Windows NT 4.0 printer drivers installed do not appear to be connected to any port.
- WORKAROUND:** Despite the appearance of not being connected to a port, the printer will print jobs normally.
- ISSUE:** An "Incompatible Options" dialog box is displayed after removing tray 1 on the **Configure** tab.
- DESCRIPTION:** This error occurs when optional tray 1 is installed and you perform the following actions:
- Under **Document Settings** (in Windows NT 4.0 and Windows 2000) or the **Paper** tab (in Windows 95, Windows 98, and Windows Me), you select either of the following options:
 - For **Page size:**, click **Double Postcard** or an envelope of any size.
 - For **Media type:**, click **Label**.
 - Manually remove tray 1 under the **Configure** tab, and click **OK**.
- Because the selected page size or media type is not supported by any of the remaining trays after tray 1 is cleared under the **Configure** tab, an **Incompatible Options** dialog is displayed. The driver tries to fix the page size or media type, but does not seem to apply it correctly. The **Incompatible Options** dialog continues to display after you click **OK**.
- WORKAROUND:** Remove the printer icon after restarting the computer, and reinstall the printer using the installer or Add Printer.
- ISSUE:** The driver work space (DWS) is capped at 50.00 MG.
- DESCRIPTION:** When using the Driver Autoconfiguration feature or the **Update Now** button on the **Configuration** tab of the PCL printer drivers, the Driver Work Space (DWS) value will not be updated for values higher than 50 MB. If the actual setting in the HP LaserJet 9000 printer is above, 50 MB, this information will not be reflected in the printer driver.
- WORKAROUND:** The DWS information will be reflected correctly above 50 MB in future driver releases.

PCL 6 driver

- ISSUE:** When installing a network printer with the PCL 6 driver and a port name of 63 or more characters, the installer is unable to complete the installation and crashes.
- DESCRIPTION:** The installer presents the error message "Setup was unable to install the HP LaserJet 9000 PCL 6 Driver. Refer to the installation notes for information on how to install this driver manually." The installer then crashes. The problem is that the specified port name is 63 or more characters in length. The Install Network Printer Wizard does not support port names of 63 or more characters.
- WORKAROUND:** Run the installer again and specify a port name of less than 63 characters.

- ISSUE:** A fatal error is received when trying to cancel a complex booklet printing job.
- DESCRIPTION:** A fatal error might be received when attempting to cancel a complex print job with Booklet Printing selected. The fatal error occurs when using CTRL + ALT + DELETE to cancel a complex print job that appears to be hung.
- WORKAROUND:** Complex print jobs (for example, jobs with complex graphics) might take a very long time to spool. Attempting to cancel the job during spooling causes the fatal error. Let the job finish spooling before attempting to cancel it. You should then be able to cancel the print job without errors.
- ISSUE:** A General Protection Fault occurs on a Windows NT 4.0 client workstation when the user attempts to use Point and Print to install version 4.3.2.89 of the HP LaserJet 9000 printer PCL 6 driver shared on a Windows 2000 host.
- DESCRIPTION:** This problem occurs when a Windows 2000 host is updated from the kernel mode PCL 6 driver (version 4.3.2.76) to the user mode PCL 6 driver (version 4.3.2.89) and a user on a Windows NT 4.0 share attempts to download the updated driver from the Windows 2000 host. Because the new driver (version 4.3.2.89) is a user mode driver, the Windows NT 4.0 client does not support it. This causes the general protection fault on the Windows NT 4.0 client.
- WORKAROUND:** Uninstall all HP LaserJet 9000 kernel mode PCL 6 drivers from the Windows 2000 host. Install the updated user mode Windows 2000 PCL 6 driver on the Windows 2000 host. Install the Windows NT 4.0 drivers on the Windows 2000 host for Point and Print. Use Point and Print to download the kernel mode Windows NT 4.0 driver to the Windows NT 4.0 client.

PCL 5e driver

- ISSUE:** When using Windows NT 4.0 and the PCL 5e printer driver, text appears to be clipped on the left margin of the page when using the Edge-to-Edge Printing feature.
- WORKAROUND:** Print the document using the PCL 6 printer driver.
- ISSUE:** A fatal error is received during attempts to cancel a complex booklet printing job.
- DESCRIPTION:** A fatal error is might be received when attempting to cancel a complex print job when **Booklet Printing** is selected. The fatal error occurs when using CTRL + ALT + DELETE to cancel a complex print job that appears to be hung.
- WORKAROUND:** Complex print jobs (for example, jobs with complex graphics) can take a very long time to spool. Attempting to cancel the job during spooling causes the fatal error. Allow the job to finish spooling before attempting to cancel it. You should then be able to cancel the print job without errors.
- ISSUE:** A general protection fault occurs on a Windows NT 4.0 client workstation when the user attempts to use Point and Print to install the HP LaserJet 9000 printer PCL 5e driver version 4.3.2.89, shared on a Windows 2000 host.
- DESCRIPTION:** This problem occurs when a Windows 2000 host is updated from the kernel mode PCL 5e driver (version 4.3.2.76) to the user mode PCL 5e driver (version 4.3.2.89) and a user on a Windows NT 4.0 share attempts to download the updated driver from the Windows 2000 host. Because the

new driver (version 4.3.2.89) is a user-mode driver, the Windows NT 4.0 client does not support it. This causes the general protection fault on the Windows NT 4.0 client.

WORKAROUND: Uninstall all HP LaserJet 9000 kernel mode PCL 5e drivers from the Windows 2000 host. Install the updated user mode Windows 2000 PCL 5e driver on the Windows 2000 host. Install the Windows NT 4.0 drivers on the Windows 2000 host for Point and Print. Use Point and Print to download the kernel mode Windows NT 4.0 driver to the Windows NT 4.0 client.

PS driver

ISSUE: The custom page sizes on the multipurpose trays do not work when **PostScript Custom Size** is selected.

DESCRIPTION: This problem can occur when printing a job using Microsoft Word 2000 with a Windows NT 4.0 or Windows 2000 operating system.

WORKAROUND: Click **Start**, click **Settings**, and then click **Printers**. Right-click the printer icon, and then click **Properties**. Define the custom size, using the **Forms** tab, by selecting **Create new form**. **PostScript Custom Size** does not work.

ISSUE: The watermark does not print on all copies when **First Page Only** is selected.

DESCRIPTION: The problem occurs when printing from Microsoft Word 2000 using a PS driver installed with Windows 2000, and **Collate** is selected both in Word and on the **Advanced** tab of the driver. When set to print on the first page only, and more than one copy is being printed, the watermark prints only on the first page of the first copy. The watermark does not print on the first page of subsequent copies. When printing from Microsoft Word 2000 using a PS driver installed with the Windows 95, Windows 98, or Windows Me operating systems, there is no workaround.

WORKAROUND: When printing from Microsoft Word 2000 using a PS driver installed with Windows 2000, select **Collate** in the Advanced tab on the driver, but make sure **Collate** is not selected in Word. To make sure that **Collate** is not selected, click **File**, and then click **Print**.

ISSUE: The driver sends bitmap fonts instead of Type42 fonts.

DESCRIPTION: In Office 97 (Microsoft Word and Microsoft Excel), the Windows 95, Windows 98, or Windows Me driver sends bitmap fonts instead of PS fonts.

WORKAROUND: To set Type42 fonts, click **Start**, click **Settings**, and then click **Printers**. Right-click the printer icon and click **Properties**. Click the **Font** tab, and then click **Send Font as**. Change the default setting of **Send True Type fonts As:**, which is "Outline," to "Type42" and apply it.

ISSUE: Harvard Graphics documents do not print.

DESCRIPTION: When printing a document from Harvard Graphics using the PS driver, a Dr. Watson error appears saying "An application error has occurred and an application error log is being generated. hgw98.exe. Exception: access violation (0xc0000005), Address: 0x0063dacb." The error also occurs when PS is selected as default printer and Harvard Graphics is opened.

WORKAROUND: Print using PCL 5e or PCL 6 drivers.

ISSUE: The watermark prints upside down when **N-up** is selected using the HP LaserJet 9000 printer PS driver.

DESCRIPTION: When attempting to print with **N-up** selected at 2 pages per sheet using the PS driver, the watermark prints upside down on the printout. This occurs in all operating systems.

WORKAROUND: Use the settings in the driver. Under Watermarks, set value to greater than 2.

ISSUE: Watermark does not mirror when *Mirror Image* is selected in the PS driver.

DESCRIPTION: When a watermark and **Mirror Image** are selected in the PS driver, the document will print mirrored, but the watermark will not.

WORKAROUND: Do not use watermarks when printing mirror images.

ISSUE: There is no Hebrew or Arabic PS driver in the Hebrew and Arabic editions of Windows 95.

DESCRIPTION: The PS driver does not show up in the driver listing during an .inf install in the Hebrew and Arabic versions. Hebrew and Arabic support is available only for PCL 5e, PCL 6, Fonts, and Autoconfigure.

WORKAROUND: Install the English version of the PS driver, using **Add Printer**.

Job Retention

ISSUE: The PIN number settings for Job Retention work differently in the PS environment from those in earlier products.

DESCRIPTION: Previous instructions to set a PIN number:

To print a private job using the PS driver you have to choose one of the 50 predefined PIN numbers (20 for Windows 9x) from the **PIN** drop-down menu.

WORKAROUND: Enhanced method of setting PIN numbers:

To print a private job using the PS driver, you can choose a PIN number between 0000 and 9999 by selecting a value between 0 and 9 for each PIN digit. For example, to choose 1579 as a PIN number, select the following:

- PIN Digit 1 (for Private Job): 1
- PIN Digit 2 (for Private Job): 5
- PIN Digit 3 (for Private Job): 7
- PIN Digit 4 (for Private Job): 9

Job Status and Alerts

Supported operating systems and environments

- Job Status and Alerts is supported on Windows 95 (with WinSocket 2.0 and Internet Explorer 4.0 or later), Windows 98, Windows Me, Windows 4.0, and Windows 2000.
- Job Status and Alerts is available only for network printers. The software does not support parallel or USB connections.
- Job Status and Alerts does not support the use of Terminal Server on Windows NT 4.0 and Windows 2000.

- Windows 95 systems using Internet Explorer 3.0 or lower support only job status and not printer status.
- Unlike HP Toolbox, Job Status and Alerts only polls the printer during an active print job to minimize network traffic.

- ISSUE:** Multiple copies of the same print job show up in the Job Status and Alerts window as separate jobs.
- DESCRIPTION:** Some software applications send each copy of a print job as a separate job. Therefore, Job Status and Alerts represent each copy as a separate job.
- WORKAROUND:** Exit Job Status and Alerts when printing from software applications that send each copy of a print job as a separate job. To exit Job Status and Alerts, right-click the **Job Status and Alerts** icon in the Windows system tray. Click **Exit**. In the **Job Status and Alerts Startup** dialog box, click **Yes**, start again after reboot.
- ISSUE:** A broken connection icon appears.
- DESCRIPTION:** This problem can occur on Windows NT 4.0 client computers that are using bidirectional communication and HP Port Resolver to a remote printer using a Windows NT 4.0 share.
- WORKAROUND:**
1. Make sure that the RFC Configuration service is correctly installed on both the client and the print server host.
 2. Make sure that the RFC Name Service Provider field is set to "Windows NT Locator."
- ISSUE:** A print job stuck gets stuck and creates a bottleneck in Job Status and Alerts.
- DESCRIPTION:** This problem was observed when sending many print jobs to the same printer. If the jobs begin to timeout, one job may be left stuck in a **Canceling** status. This stuck job affects the performance of Job Status and Alerts on subsequent print jobs. The updating of job status for these new print jobs slows, causing some of the print jobs to timeout.
- NOTE:** This problem does not affect printing performance.
- WORKAROUND:** Follow this procedure to shutdown and restart Job Status and Alerts:
1. Right-click the **Job Status and Alerts** icon in the Windows system tray.
 2. Click **Exit**.
 3. When prompted, click **Yes, start again after reboot**.
 4. Click **Start**, and then click **Run**.
 5. Type "HPSTATUS.EXE", without the quotation marks.
 6. Click **OK** to start Job Status and Alerts.
- ISSUE:** When a large number of jobs (for instance, more than 40) are sent very quickly to an HP LaserJet 9000 or some legacy printers, Job Status and Alerts can sometimes have problems tracking and showing the jobs as finished. This can result in temporarily stuck icons in the Job Status and Alerts window.

- DESCRIPTION:** If this happens, the icons eventually time out and disappear, within 5 to 10 minutes.
- WORKAROUND:** Tracking multiple jobs works best when using an HP Standard TCP/IP port or Microsoft Standard TCP/IP port.
- ISSUE:** If you are using the HP LaserJet 9000 installer to install to an existing LPR port on Windows NT 4.0 or Windows 2000, the **Job Status and Alerts** option will not appear.
- DESCRIPTION:** Job Status and Alerts does not recognize the LPR port during the printing system installation.
- WORKAROUND:** Install Job Status and Alerts to an HP Standard TCP/IP port, MS Standard TCP/IP port, or HP JetDirect port, and then switch the driver(s) to LPR after installation.

Novell Netware

- ISSUE:** When the HP LaserJet 9000 printing system is installed on a client Novell Directory Services (NDS) installation, the installations stalls.
- DESCRIPTION:** In Windows NT 4.0 and Windows 2000, the HP LaserJet 9000 NDS installation hangs at 100%. This occurs because when the Novell login screen requests that you log into the Novell server to continue the installation, the Novell login screen is hidden behind the printing system installer screen.
- WORKAROUND:** Use ALT + TAB to select the Novell login screen and log into the server normally. After login, the printing system will continue as expected.
- ISSUE:** A Windows 98 system receives a blue-screen error upon rebooting after a custom installation.
- DESCRIPTION:** In a rare case, a Windows 98 system may blue-screen if rebooted after a custom installation of the HP LaserJet 9000 printing system software. This problem was found on a Windows 98 system connected through IPX to a Windows NT 4.0 share. The system received a blue-screen error at reboot after an installation of all selectable options of a custom installation.
- ISSUE:** The **Have Disk** button does not appear in the **Add Printer** dialog box when using Point and Print to install a driver in Windows NT 4.0.
- DESCRIPTION:** This is a bug identified by Novell in NetWare 4.8 for Windows NT 4.0 and Windows 2000.
- WORKAROUND:** Novell has supplied a bug fix for this defect. The Novell file name is 250903.EXE. This file contains an updated NWSPool.DLL file. There are two methods for installing this update:
- In Windows Explorer, right-click the 250903.INF file and click **Install**.
 - In Windows Explorer, go to the C:\WINNT\SYSTEM32\ folder, rename the existing NWSPool.DLL file, and copy the updated NWSPool.DLL file to the folder.
- ISSUE:** When installing a printer using Point and Print from a Novell server, a window appears stating that HPXXX.dll cannot be found.
- DESCRIPTION:** After building the NDS queue for a printer in Novell Client 3.3, the Admin then sets up the server queue to Point and Print (the driver is uploaded to the server). The files are not uncompressed correctly and when a user tries to connect to the print queue (the driver is vended), the user gets the "Cannot find files" window. To verify whether this problem is occurring, go to the Novell server

subdirectory Sys/login/win95/print/drivers/9. If there are a number of files with the ".TMP" extension, you have verified the problem.

WORKAROUND: Install the Novell patch or support pack for Novell 3.3 available at <http://Novell.com>. To obtain the patch, click **Get Support**, click **Patches and Files**, click **Netware**, click **Novell Clients**, and then download and install the latest Client 3.3 patch.

ISSUE: Generates a Dr. Watson error after loading the driver.

DESCRIPTION: When rebooting the workstation and printing Novell Client 4.70, a Dr. Watson error is generated. This occurs when the spooler was shut down and had to be restarted.

WORKAROUND 1: The preferred course of action is to upgrade to the latest Novell client.

WORKAROUND 2: Install the 4.70 patch available at <http://Novell.com>, found at <http://novell.com> (Click **Get Support**, and then click **Patches and Files**, click **Netware**, click **Novell Clients**, and download and install the latest Client 4.70 patch). You must restart the spooler through the command prompt using the command **C:>net start spooler**.

ISSUE: A Dr. Watson Error appears when using NDPS printer agent Point and Print.

DESCRIPTION: When a Novell Client 4.71 workstation selects an NDPS printer agent through Point and Print a Dr. Watson error appears when the driver is vended to the workstation. The spooler service is being turned off.

WORKAROUND 1: The preferred course of action is to update the Novell Client to version 4.8 or later.

WORKAROUND 2: Use the MS-DOS prompt and restart the spooler, using the command **c:>net start spooler**.

WORKAROUND 3: Go to <http://Novell.com>, click **Get Support**, click **Patches and Files**, click **Netware**, click **Novell Clients**, and then download and install the latest Client 4.71 patch. Restart the spooler in the MS-DOS prompt, using the command **c:>net start spooler**.

ISSUE: After the first installation of the client (with no previous clients installed) the printers either do not work or a Dr. Watson error appears.

DESCRIPTION: When setting up a Novell Client 4.8 workstation for the first time or installing a Novell client on a system that did not have a previous version, the client turns the spooler services off.

WORKAROUND: Reboot the system or restart the spooler through the command prompt, using the command **c:>net start spooler**.

ISSUE: Novell Client 4.8: When installing a driver onto the workstation using a CD-ROM or mapping to a network drive, there is no path to get to the CD-ROM or mapped drive.

DESCRIPTION: When installing the driver from other than the Microsoft files, you normally select **Have Disk** to go to a mapped drive or a CD-ROM. The **Have Disk** button is missing in this client version.

WORKAROUND: Go to <http://novell.com>, click **Get Support**, and then click **Patches and Files**. Download and install the latest patch to correct this problem.

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