software technical reference

invent

hp LaserJet 9000mfp

hp LaserJet 9000mfp

software technical reference

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Table of Contents

List of tables

List of figures

1 Purpose and Scope

Introduction 13
HP LaserJet 9000mfp 14

2 Software Description

Introduction 15
Supported operating systems 15
Technology background information 16
HP LaserJet user documentation 16
Adobe Acrobat Reader 16
HP LaserJet guides. 16
HP LaserJet product printing-system installation notes 17
HP LaserJet product printing-system release notes 17
Other HP LaserJet documents 17
Bidirectional communication 18
Driver Autoconfiguration 19
Printer Status and Alerts 20
Remote firmware update. 26
Determining the current level of firmware 26
Downloading the new firmware from the HP Web site 26
Downloading the new firmware to the product 26
Remote firmware update for Windows systems 27
Windows 95, Windows 98, and Windows Me. 27
Remote firmware update for UNIX systems:. 28
Remote firmware update using FTP on a direct network connection 28
Using HP Web JetAdmin to download the firmware to the product 28
Printer messages during firmware upgrade 29
Troubleshooting a firmware update 30
HP Web Access 31
Information tab 32
Device status 32
Configuration information 33
Links to off-printer solutions 33
Settings tab 34
Remote printer configuration. 34
Networking tab 35
Configuration 35
Security 35
Diagnostics. 35
Network settings. 35
Configurable e-mail alerts 37
Digital sending 37
Configuring HP Digital Send from the control panel 38

Sending to e-mail . . . 38
Foreign Interface Harness . . . 39
E-mail command and response . . . 39
Euro character . . . 40
Printing-system components . . . 40
Printing system and installer . . . 40
CD browser for Windows systems . . . 40
Installer features . . . 42
Installable components . . . 43
Printer drivers . . . 43
PCL 5e, PCL 6, and PS drivers . . . 43
Windows 3.1x driver versions . . . 43
Windows 95, 98, Me, NT 4.0, 2000, and XP driver versions . . . 43
Macintosh and Macintosh-compatible system driver versions . . . 43
AutoCAD driver versions . . . 44
Additional driver availability . . . 44
Macintosh components . . . 44
Additional productivity tools . . . 45
HP Web Registration . . . 45
Optional software . . . 45
HP Web JetAdmin . . . 45

3 Driver features

PCL 6 and PCL 5e driver features . . . 47
Help system . . . 47
What's this? Help . . . 47
Context-sensitive Help . . . 47
Constraint messages . . . 48
Bubble Help . . . 49
Quick Sets . . . 50
Factory Defaults . . . 51
Custom Quick Sets . . . 51
HP LaserJet Multifunction Finisher Quick Sets . . . 51
Document Options . . . 52
Print on Both Sides option . . . 53
Flip Pages Up . . . 53
Booklet Printing . . . 54
Activating booklet printing . . . 55
Selecting a booklet cover . . . 56
Staple option . . . 56
Stapling a document . . . 57
Fold/Saddle Stitch . . . 58
Saddle-stitching a booklet or folding a single sheet . . . 59
Pages per Sheet . . . 59
Print Quality . . . 60
Graphics Settings group box . . . 62
Output Settings group box . . . 62
Resolution . . . 62
Resolution Enhancement technology . . . 62
Scale Patterns (WYSIWYG) . . . 63
Print all Text as Black . . . 63
Edge-to-Edge Printing . . . 63
Font Settings group box . . . 63
EconoMode . . . 63
Effects tab features . . . 64
ZoomSmart . . . 64
Print Document On: setting . . . 65
Scale to Fit option . . . 65

% of Normal Size option . . . 65
Watermarks . . . 66
Current Watermarks . . . 67
Watermark Message . . . 68
Message Angle . . . 68
Font Attributes . . . 68
Name . . . 68
Color . . . 68
Shading . . . 68
Size . . . 69
Default settings . . . 69
Paper tab features . . . 69
Printer image . . . 69
All Pages . . . 70
Other Pages . . . 71
Back Cover . . . 71
Size is: . . . 72
Custom... . . . 73
Name drop-down menu . . . 74
Dynamic command button . . . 74
Width and height controls . . . 75
Custom width and height control limits . . . 76
Paper and envelope icons . . . 76
Measurement Units button . . . 76
Close button . . . 77
Source Is: . . . 77
Type Is: . . . 78
Printer image . . . 78
Destination Features . . . 79
Hardware configuration and availability of Job Retention options . . . 80
Configuring the printer driver for a printer hard disk . . . 80
Job retention modes . . . 80
Off . . . 80
Quick Copy . . . 81
Proof and Hold . . . 81
Using a PIN for Private Job and Stored Job . . . 81
Private Job . . . 81
Stored Job . . . 82
Document identifiers used in Job Retention . . . 82
User Name . . . 82
Job Name . . . 83
Using Job Retention options when printing . . . 83
Releasing stored jobs at the printer . . . 83
Deleting a print job . . . 84
Output Bin Options . . . 84
Options . . . 84
Printer image . . . 84
Copies . . . 85
Orientation . . . 86
Image rotation versus stapling . . . 86
About . . . 88
Driver extensions . . . 89
Paper handling options . . . 91
Duplexing unit . . . 91
Mopier enabled . . . 91
MFP Module . . . 91
Tray 1 installed . . . 91
Optional Paper Destinations . . . 92
Optional Paper Sources . . . 92

Other Options . . . 93
Storage . . . 93
Printer Memory . . . 93
Fonts . . . 94
Ignore Application Collation . . . 95
Automatic Configuration . . . 96
Printer image . . . 96
Configuring the trays . . . 98
Windows PS driver features . . . 99
PS 3 Emulation support for the HP LaserJet product . . . 99
Page Setup tab features . . . 100
Advanced tab features . . . 101
Job Retention tab features . . . 102
Off . . . 102
Quick Copy . . . 102
Proof and Hold . . . 103
Private Job and Stored Job) . . . 103
PIN . . . 103
Private Job . . . 103
Stored Job . . . 103
Device Settings tab features . . . 104
HP LaserJet software CD-ROM . . . 105
In-box file layout . . . 105
HP LaserJet software CD-ROM, Windows partition . . . 105
Directory structure . . . 105
HP LaserJet software CD-ROM, Macintosh Partition . . . 105
Availability and fulfillment . . . 105
In-box CD-ROMs . . . 105
9000mfp Web ordering . . . 106
Web deployment . . . 106
Printing-system software . . . 107
Printer firmware . . . 107
Standalone drivers . . . 107
Operating system driver bundles . . . 107
Point-and-print bundles . . . 107
Other operating systems . . . 107
Software component availability . . . 108
Software component localization . . . 109

4 Installing Windows printing system components

Introduction . . . 113
System Requirements . . . 113
Windows 3.1x . . . 113
Windows 95, 98, Me, NT 4.0, 2000, and XP . . . 113
Windows 95, 98, Me, NT 4.0, 2000, and XP . . . 114
Font support . . . 114
Basic fonts . . . 114
Default Fonts . . . 114
Installation instructions . . . 119
General installation for Windows 95, 98, Me, NT 4.0, 2000, and XP OSs . . . 119
Installing from the printing system CD-ROM . . . 119
Installing from a network or from downloaded files . . . 119
Detailed Windows installation . . . 119
Typical Installation dialog box sequence . . . 120
Custom installation . . . 141
Product registration (HP WebReg) . . . 143
Customization Utility for Windows . . . 153
Silent installer . . . 154

Customized silent installer . . . 154
Command-line silent install . . . 154
Driver-only installation . . . 155
Point and Print installation for Windows 95, 98, Me, NT 4.0, 2000, and XP . . . 156
Setting a default printer . . . 157
Windows 3.1x . . . 157
Printer support . . . 157
Installing printer drivers on Windows 3.1x . . . 157

5 Installation and removal for non-Windows operating systems

Introduction . . . 159
System Requirements . . . 159
Macintosh . . . 159
IBM OS/2 . . . 159
Macintosh . . . 159
Macintosh component descriptions . . . 159
HP LaserJet PPDs . . . 160
PDEs (Mac OS X) . . . 160
HP LaserJet Utility . . . 160
Installation notes . . . 160
Online Help . . . 160
HP Auto Setup Utility . . . 160
Screen fonts . . . 160
Font support . . . 161
Installing the Macintosh printing system . . . 163
To install the HP LaserJet printer software for Macintosh OS . . . 164
Uninstalling the Macintosh printing system . . . 164
In-box disk layout . . . 164
Folders and files added through installation of the HP LaserJet software (Macintosh OS) . . . 164
Macintosh (Macintosh OS) installation . . . 165
Main Install dialog box sequence . . . 165
Printer setup using AppleTalk Chooser . . . 170
HP LaserJet Screen Fonts Installer dialog box sequence . . . 171
IBM OS/2 Warp 3.0 and greater . . . 173
OS/2 installation instructions . . . 173
Installing a printer in OS/2 when printer object is missing . . . 173
Installing a printer in OS/2 with pre-existing printer object on desktop . . . 174
Font support . . . 175
Changing a printer driver in the printer object . . . 176
Changing the printer properties . . . 176
Changing the job properties . . . 177

6 Engineering Detail

Introduction . . . 179
Digital Sending Config Applet . . . 179
General tab . . . 180
Send to E-mail tab . . . 181
Advanced E-mail Settings . . . 182
Addressing tab . . . 183
Advanced Network Addressing Settings . . . 185
Preferences tab . . . 186
Log tab . . . 187
About tab . . . 188
E-mail Servers That Function as SMTP Gateways . . . 188
Exchange 5.5 . . . 188
Exchange 2000 . . . 188

Sendmail 188
Qmail 189
Lotus Domino (Notes) 189
SMTP Gateway Verification 189
Telnet to Port 25 189
Procedure 189
Lightweight Directory Access Protocol 190
Common Abbreviations for LDAP Attributes 190
E-mail Servers that support LDAP 190
Media attributes 190
Paper-source commands 190
Media types and sizes 191
PCL 5e and PCL 6 custom paper sizes 195
Paper Type commands 197
Printer Status and Alerts 198
HP product models and drivers that support Printer Status and Alerts 198

List of tables

Table 1. Bidirectional communication support in various operating systems 18
Table 2. Default alerts selection state for connection type 25
Table 3. Update messages 29
Table 4. Troubleshooting a firmware update 30
Table 5. Troubleshooting a firmware update failure 30
Table 6. Page orientation 53
Table 7. Selected paper size 54
Table 8. HP LaserJet 9000mfp EconoMode settings 63
Table 9. Name drop-down menu text strings 75
Table 10. Custom width and height limits for the HP LaserJet 9000mfp 76
Table 11. Close dialog box text strings 77
Table 12. Long edge stapling 87
Table 13. Short edge stapling 88
Table 14. Printer behavior with Ignore Application Collation settings 95
Table 15. CD-ROM versions 106
Table 16. Software component availability for HP LaserJet 9000 product 108
Table 17. Software component localization 109
Table 18. Default Fonts 114
Table 19. Additional PS 3 fonts 116
Table 20. Choose Setup Language dialog box text strings 120
Table 21. Setup dialog box text strings 121
Table 22. Welcome dialog box text strings 122
Table 23. HP Software License Agreement dialog box text strings 123
Table 24. Web Update dialog box text strings 124
Table 25. Type of Connection dialog box text strings 125
Table 26. Select Port dialog box text strings 126
Table 27. Network Setup dialog box text strings 128
Table 28. Network Printer Configuration dialog box text strings 129
Table 29. Identify Printer dialog box text strings 131
Table 30. Specify Network Path dialog box text strings 132
Table 31. Set Network Communication Mode dialog box text strings 133
Table 32. Printer Model dialog box text strings 134
Table 33. Installation Type dialog box text strings 136
Table 34. Printer Name dialog box text strings 137
Table 35. Printer Sharing dialog box text strings 139
Table 36. Finish dialog box text strings 140
Table 37. Exit Setup dialog box text strings 141
Table 38. Custom Installation dialog box text strings 143
Table 39. Hewlett-Packard’s Electronic Registration text strings 145
Table 40. Welcome to Hewlett-Packard’s Registration dialog box text strings 146
Table 41. Hewlett-Packard’s Electronic Registration dialog box text strings (1 of 3) 148
Table 42. Hewlett-Packard’s Electronic Registration dialog box text strings (2 of 3) 150
Table 43. Hewlett-Packard’s Electronic Registration dialog box text strings (3 of 3) 151
Table 44. Exiting registration text strings 153
Table 45. Windows servers with Windows clients 156
Table 46. hp LaserJet for Macintosh installer splash screen dialog box text strings 165
Table 47. HP LaserJet Installer dialog text strings (easy install) 166
Table 48. HP LaserJet Installer dialog text strings (custom install) 168
Table 49. Installing dialog text strings 169

Table 50. Installation successful dialog text strings 169
Table 51. Important! dialog box text strings 170
Table 52. How do I select my printer? dialog text strings 171
Table 53. HP LaserJet Screen Fonts splash screen dialog text strings 171
Table 54. HP LaserJet Screen Fonts installer dialog text strings (1 of 2) 172
Table 55. HP LaserJet Screen Fonts installer dialog text strings (2 of 2) 172
Table 56. Installation was successful dialog text strings 173
Table 57. Paper source commands for the HP LaserJet 9000mfp product 191
Table 58. Supported features and attributes 191
Table 59. Input-device supported sizes for the HP LaserJet 9000mfp product 192
Table 60. Supported media sizes — duplexing unit, 3000-Sheet Stacker, and 3000-Sheet Stapler/Stacker 193
Table 61. Supported media sizes — HP Multifunction Finisher 194
Table 62. PCL 5e and PCL 6 custom paper sizes 195
Table 63. Input-device supported media 196
Table 64. Output-device supported media 196
Table 65. HP Multifunction Finisher supported media 197
Table 66. Paper-type commands 197
Table 67. Printer Status and Alert driver support 198

List of figures

Figure 1. Printer Status and Alert icons . . . 22
Figure 2. Printer Status and Alert window . . . 23
Figure 3. Refresh Rate option . . . 24
Figure 4. Documents Alert option . . . 25
Figure 5. Device Status . . . 32
Figure 6. Configuration page . . . 33
Figure 7. Configure Device . . . 34
Figure 8. Networking tab . . . 36
Figure 9. Configurable Alerts . . . 37
Figure 10. Installation CD browser main screen . . . 41
Figure 11. A typical constraint message with an OK button . . . 48
Figure 12. A property page with Bubble Help icons . . . 49
Figure 13. The default appearance of the Finishing tab . . . 50
Figure 14. Document Options group box - stapler only installed . . . 52
Figure 15. Document Options group box - duplexing unit only installed . . . 52
Figure 16. The Document Options group box - stapler and duplexing unit . . . 53
Figure 17. Activating booklet printing . . . 55
Figure 18. Selecting booklet printing type . . . 56
Figure 19. Stapling a document . . . 57
Figure 20. Stapling options . . . 58
Figure 21. Saddle-stitching a booklet . . . 59
Figure 22. Page-order preview images . . . 60
Figure 23. Print Quality Details dialog box showing Best Quality settings . . . 61
Figure 24. Print Quality Details dialog box showing 600 dpi settings . . . 62
Figure 25. Effects tab . . . 64
Figure 26. Preview images - Legal on Letter; Scale to Fit off (left) and on (right) . . . 65
Figure 27. Watermark Details dialog box . . . 67
Figure 28. Paper tab . . . 70
Figure 29. Other Pages mini-tab . . . 71
Figure 30. Back Cover mini-tab . . . 72
Figure 31. Custom Paper Size dialog box . . . 73
Figure 32. Destination tab . . . 79
Figure 33. Basics tab . . . 85
Figure 34. About This Driver dialog box . . . 89
Figure 35. Configure tab . . . 90
Figure 36. More Configuration Options dialog box . . . 93
Figure 37. Configure Font DIMMs dialog box . . . 94
Figure 38. Driver NT Forms tab . . . 97
Figure 39. Page Setup tab . . . 100
Figure 40. Advanced tab . . . 101
Figure 41. Job Retention tab . . . 102
Figure 42. Device Settings tab . . . 104
Figure 43. Choose Setup Language dialog box . . . 120
Figure 44. Setup dialog box . . . 121
Figure 45. Welcome dialog box . . . 121
Figure 46. HP Software License Agreement dialog box . . . 122
Figure 47. Web Update dialog box . . . 123
Figure 48. Type of Connection dialog box . . . 125
Figure 49. Select Port dialog box . . . 126

Figure 50. Network Setup dialog box 127
Figure 51. Network Printer Configuration dialog box 129
Figure 52. Identify Printer dialog box (1 of 2) 130
Figure 53. Identify Printer dialog box (2 of 2) 130
Figure 54. Specify Network Path dialog box. 132
Figure 55. Set Network Communication Mode dialog box 133
Figure 56. Printer Model dialog box 134
Figure 57. Installation Type dialog box. 135
Figure 58. Printer Name dialog box 137
Figure 59. Printer Sharing dialog box. 138
Figure 60. Finish dialog box 140
Figure 61. Exit Setup dialog box. 141
Figure 62. Components dialog box, Custom Installation 142
Figure 63. Hewlett-Packard's Electronic Registration dialog box. 144
Figure 64. Welcome to Hewlett-Packard's Registration dialog box 146
Figure 65. Hewlett-Packard's Electronic Registration dialog box (1 of 3). 147
Figure 66. Hewlett-Packard's Electronic Registration dialog box (2 of 3). 149
Figure 67. Hewlett-Packard's Electronic Registration dialog box (3 of 3). 151
Figure 68. Exiting registration! dialog box 152
Figure 69. hp LaserJet for Macintosh installer splash screen dialog box. 165
Figure 70. HP LaserJet Installer dialog box (easy install) 166
Figure 71. HP LaserJet Installer dialog box (custom install) 167
Figure 72. Installing dialog box. 169
Figure 73. Installation was successful dialog box. 169
Figure 74. Important! dialog box. 170
Figure 75. How do I select my printer? dialog box 170
Figure 76. HP LaserJet Screen Fonts splash screen dialog box 171
Figure 77. HP LaserJet Screen Fonts installer dialog box 172
Figure 78. Installation was successful dialog box. 173
Figure 79. Digital Sending Config Applet — General tab 180
Figure 80. Digital Sending Config Applet — Send to E-mail tab 181
Figure 81. Digital Sending Config Applet - Advanced E-mail Settings 182
Figure 82. Digital Sending Config Applet — Addressing tab 183
Figure 83. Digital Sending Config Applet - Advanced Network Addressing Settings 185
Figure 84. Digital Sending Config Applet — Preferences tab. 186
Figure 85. Digital Sending Config Applet — the Log tab 187
Figure 86. Digital Sending Config Applet — The About tab 188

1 Purpose and Scope

Introduction

This Software Technical Reference (STR) provides information and troubleshooting tips for the printing system software for the HP LaserJet 9000mfp.

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 product end-users, as appropriate.

The following information is included in this technical reference:

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

A description of the product model or models described in this STR is provided below. The printing system software for each product model accommodates the differences between models.

Note Bundle configurations might vary among geographic regions.

HP LaserJet 9000mfp

HP LaserJet 9000mfp. This model (model number C8523A) comes with 128 megabytes (MB) random access memory (RAM), expandable to 384 MB; an HP JetDirect print server; copying, HP Digital Sending Software (version 3.0), and wide-format printing capabilities; an enhanced input/output (EIO) network card and EIO hard drive; a 100-sheet multipurpose tray; two 500-sheet input trays (trays 2 and 3); a 2000-sheet input tray 4; a duplexing unit (for printing on both sides of paper); and one of three optional paper-handling devices: a 3000-sheet stacker, a 3000-sheet stapler/stacker, or a multifunction finisher.

The HP LaserJet 9000mfp belongs to the HP LaserJet 9000 Series of printers. The behavior of other models in the series is occasionally described in this document. The other models are:

- HP LaserJet 9000, with 64 MB RAM
- HP LaserJet 9000n, with 64 MB RAM, HP JetDirect print server, Enhanced Input Output (EIO) network card, and multi-purpose paper tray (Tray 1)
- HP LaserJet 9000dn, with 64 MB RAM, HP JetDirect print server, EIO network card, and multi-purpose paper tray (Tray 1), and duplex printing accessory
- HP LaserJet 9000hns, with 64 MB RAM, HP JetDirect print server, EIO network card, and multi-purpose paper tray (Tray 1), duplex printing accessory 2,000-sheet paper feeder (Tray 4), and HP 3,000-sheet stacker/stapler

2 Software Description

Introduction

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

Supported operating systems

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

- Windows 3.1*x* (PCL 6 and PCL 5e) for the HP LaserJet 9000 multifunction printer (mfp) product is supported through the use of the HP LaserJet 8100 printer drivers. The HP LaserJet 8150 driver supports PS.
- Windows 95 and Windows 98.
- Windows Millennium Edition (Me).
- Windows NT (R) 4.0 (Service packs 3 through 6).
- Windows 2000 (Service packs 1 and 2).
- Windows XP Professional and Windows XP Home Edition (Windows XP).
- IBM OS/2 2.0 or later.
- Mac OS 7.5.3 or later (supports PS).

Note The HP LaserJet PCL 5e and PCL 6 drivers and the HP LaserJet PS drivers necessary for Windows 3.1*x* systems are included on the HP LaserJet compact disc - read-only memory (CD-ROM) that came with the product.

Technology background information

This section addresses the following topics:

- "HP LaserJet user documentation" in HP LaserJet user documentation
- "Bidirectional communication" in Bidirectional communication
- "Driver Autoconfiguration" in Driver Autoconfiguration
- "Printer Status and Alerts" in Printer Status and Alerts
- "Remote firmware update" in Remote firmware update
- "HP Web Access" in HP Web Access
- "Digital sending" in Digital sending
- "Foreign Interface Harness" in Foreign Interface Harness
- "E-mail command and response" in E-mail command and response
- "Euro character" in Euro character

HP LaserJet user documentation

Adobe Acrobat Reader

The HP LaserJet software CD-ROM includes Adobe (R) Acrobat (R) Reader version 5.0 for viewing online documentation. When you click any of the documentation links in the HP LaserJet software CD browser, the installer scans the system for an installed Portable Document Format (PDF) reader. If the installer cannot find a reader, the installer presents the option to install the Adobe Acrobat Reader.

Note Adobe Acrobat Reader 4.0 or later is required to view the documents on the HP LaserJet software CD browser.

HP LaserJet guides

On the CD-ROM that came with the product, the HP LaserJet 9000mfp *start, MFP start, MFP poster,* and *introduce* guides are supplied in Adobe Acrobat Reader PDF files 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 for the HP LaserJet 9000mfp, select the **printer documentation** check box during a Custom Installation. The guides are installed in the Manuals folder on the target system.You can also choose to install the guides later.

In accordance with the Americans with Disabilities Act (ADA),Hewlett-Packard provides a screen-readable version of the HP LaserJet 9000mfp *use* guide on the HP Web Site at http://www.hp.com/support/lj9000.

The online HP LaserJet 9000mfp *use* guide is available at the http://www/hp.com/support/lj9000 Web site.

HP LaserJet product printing-system installation notes

The HP LaserJet 9000 Series Printing System Installation Notes are available on the HP LaserJet software CD-ROM. The installation notes (filename READ9000.WRI for the HP LaserJet 9000mfp) contain important information about product features, instructions for installing the printing-system software, and technical assistance. You can either view the file from the HP LaserJet software CD browser, or 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, select the **printer documentation** check box during a Custom Installation. You can also choose to install the file later. The HP LaserJet Printing System Installation Notes are installed in the Hewlett-Packard\LaserJet 9000 folder on the target system for the HP LaserJet 9000mfp product.

HP LaserJet product printing-system release notes

The Hewlett-Packard LaserJet 9000mfp Printing System Release notes, a readme text file with late-breaking information, is available on the HP LaserJet software CD-ROM. This readme file (filename README.TXT) contains an overview of the printing-system software components, late-breaking information, and other technical assistance. You can either view the file from the HP LaserJet software CD browser, or you can install it on your system. To view this text file from the HP LaserJet 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, select the **printer documentation** check box during a Custom Installation. You can also choose to install the file later. The HP LaserJet Printing System Release notes are installed in the Hewlett-Packard\LaserJet 9000 folder on the target system.

For late-breaking information about known issues and workarounds, visit the Web at the following Uniform Resource Locator (URL) address:

http://www.hp.com/go/lj9000_software

Other HP LaserJet documents

Guides for accessories and optional input trays and output bins are also available as Adobe Acrobat PDF files. You can view these documents from the HP LaserJet software CD browser by clicking **accessories documentation** and then clicking the name of the guide you wish to view. To install the file, select the **accessories documentation** check box during a Custom Installation. The following guides are available:

- HP 2000-sheet input (optional tray 4) install guide (click **2000-sheet feeder guide**)
- HP Duplex Printing Accessory install guide (click **duplexer guide**)
- HP multipurpose (tray 1) install guide (click **multipurpose tray guide**)
- HP Jetdirect Administrator's Guide (click **hp jetdirect guide**)
- HP 3000-Sheet Stapler/Stacker Use Guide (click **stacker/stapler guide**)
- HP Multifunction Finisher Guide (click **multifunction finisher guide**)

Bidirectional communication

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

Driver Autoconfiguration and Printer Status and Alerts use bidirectional communications software. The Typical Installation installs Driver Autoconfiguration in supported environments that contain the bidirectional software. Use 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.

Table 1. Bidirectional communication support in various operating systems

Connection type			Windows 95	Windows 98	Windows Me	Windows NT 4.0	Windows 2000	Windows XP (32-bit only)	Macintosh
Direct Connect[1]									
Network Port	Jetdirect	TCP/IP[2]	X	X	X	X	X	X	X
		IPX/SPX[3]	X	X	X	X	X	X	
	Standard	TCP/IP (HP)	X	X	X	X	X	X	
		TCP/IP (MS[4])					X	X	X
		IPX/SPX (HP)	X	X	X	X	X	X	
	LPR					X	X	X	X
	AppleTalk								X
Novell[4]	NetWare 4.*x*	Bindery queue	X	X	X	X	X	X	
		NDS[5] queue	X	X	X	X	X	X	
	NetWare 5.*x*	Bindery queue	X	X	X	X	X	X	
		NDS queue	X	X	X	X	X	X	
Microsoft Share	Windows 95, 98, or Me host	TCP/IP	X	X	X	X	X	X	X
		IPX/SPX	X	X	X	X	X	X	
	Windows NT 4.0, 2000, or XP[6] host	TCP/IP	X	X	X	X	X	X	X
		IPX/SPX	X	X	X	X	X	X	
		LPR	X	X	X	X	X	X	

[1]Not supported
[2]Transmission control protocol/Internet protocol
[3]Internet packet exchange/sequences packet exchange
[4]Bidirectional functionality is supported only with the client software from Novell. It is not supported with Microsoft Client Service for Netware.
[5]Novell Directory Services
[6]Printer Status and Alerts is not installed when the share computer is running Terminal Server.

Driver Autoconfiguration

The HP LaserJet 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. Some accessories that are supported by Driver Autoconfiguration are duplexing unit, optional paper trays, font dual inline memory modules (DIMMs), and the hard drive.

If the network environment supports bidirectional communication, the installer presents Driver Autoconfiguration as an installable component by default for a Typical Installation, and as 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 does not appear during installation. However, installed drivers will be configured automatically in accordance with the HP printer bundle selected during installation of the printing-system software.

Parallel, USB, and other direct connections do not support bidirectional communication. Therefore, Driver Autoconfiguration is not available with those types of connections. When other printing systems are installed, direct-connect bidirectional communication might be possible, although performance might not be optimal.

Driver Autoconfiguration works in four ways:

- In environments that support bidirectional communication, the computer communicates with the product, determines the physical configuration, and then configures the driver accordingly.
- If the configuration of the HP LaserJet product 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 **Configuration** tab. The **Update Now** button activates the HP Network Registry Agent (HPNRA) and triggers the driver to recheck the registry for new information. The HPNRA automatically updates the registry and changes the configuration information that appears on the **Configuration** tab in the Printer folder.

Note The bidirectional communication software necessary for the two methods of Driver Autoconfiguration described above 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.

- In environments that do not support bidirectional communication, the driver automatically configures options based on the HP LaserJet product bundle selected during the installation of the printing-system software. For example, if the HP LaserJet 9000dnis selected, the driver automatically configures the optional duplexing unit. There is no communication between the computer and the product. Therefore, configuration is based solely on the definition of the printer bundle. Using the same example, if the HP LaserJet 9000dnis selected during installation, the duplexing unit is configured in the driver whether or not the optional duplexing unit is physically present.
- Enterprise Autoconfiguration (EAC) is a version of bidirectional communication that provides autoconfiguration functionality for an Add Printer Wizard installation (when you do not use autoselect). An Add Printer Wizard installation that includes EAC is identical to other Add Printer installations, except that when installation is complete, the driver for the supported product is configured with the same settings as the physical configuration of the device. Configuration occurs without user interaction. This also occurs if you do not select Driver Autoconfiguration during installation using a printing software CD-ROM.

  If bidirectional communication software has been installed previously, EAC will not be activated, and the Add Printer Wizard uses the pre-existing bidirectional communication to configure the printer. If bidirectional communication software has not been installed, EAC configures the driver to match the device configuration, which it detects automatically. EAC is active only as needed to use the autoconfiguration utility, and is then shut off. The files required to install EAC remain on the user's system.

  No EAC is available for the HP LaserJet 9000mfp product if it is using Windows 95, Windows 98, or Windows Me. It is supported in Windows NT 4.0 for the PCL 5e and PCL 6 drivers, version 4.3.2.178 or later, and in Windows 2000 and Windows XP for the PCL 5e and 6 drivers, version 4.3.2.167 or later.

Printer Status and Alerts

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

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

These features are available for printers connected to a network that supports bidirectional functionality. The Printer Status and Alerts feature cannot be installed over infrared (IR), parallel, or serial ports. See “Bidirectional communication.”

Windows NT 4.0, Windows 2000, and Windows XP do not support Printer Status and Alerts with terminal servers. In Windows 95, only Internet Explorer 4.0 or later supports printer status. Also, for 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 installed. To check the version number, open Internet Explorer, click **Help**, and then click **About Internet Explorer**. The version number is reported as "Version: 5.50.XXXX.XXXX."

HP Printer Status and Alerts communicates with the printer only during an active print job to minimize network traffic.

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

- For **Device Status** (printer icons in the status window), the computer must have Internet Explorer version 4.72.X or later installed. To find the version number, open Internet Explorer and click **Help**, then click About Internet Explorer. No Internet Explorer is necessary for getting status about jobs for network-connected printers. Internet Explorer can be installed after installing Printer Status and Alerts.
- On a few applications, such as Microsoft Excel and Seagate Crystal Reports, multiple copies of the same document show up in the Printer Status and Alerts window as separate jobs. This is because these applications actually send each copy as a separate job.
- For the JAWS for Windows screen reader, the computer must have Internet Explorer version 5.0 or later installed. To find the version number, open Internet Explorer and click **Help**, then click **About Internet Explorer**. Version 5.0 is reported as Version 5.00.X or later. No Internet Explorer is necessary for getting status about jobs for network-connected printers. Internet Explorer can be installed after installing Printer Status and Alerts.
- When renaming a driver, job and device status will not be tracked until the computer is restarted.
- Drivers added after Printer Status and Alerts is installed are not recognized until the computer is restarted.
- Clicking the **Cancel** button in the Printer Status and Alerts window will not always cancel a job. This button sends a cancel request to the printer, but if the job has already been processed, it might not be possible to cancel the job (this is commonly the case with smaller jobs).
- The installation software does not allow the user to install Printer Status and Alerts over a direct connection, such as a parallel connection. If Printer Status and Alerts is tracking a networked product that is subsequently switched to an LPT port, the utility will not be able to track jobs or get device status for that product.
- When using Printer Status and Alerts with Microsoft printer sharing, the following items apply:
  - The Microsoft patch "Vredir" is required if you want to use Printer Status and Alerts on a Windows 95, Windows 98, or Windows Me computer for a printer that has been shared directly from a computer with Windows NT 4.0, Windows 2000, or Windows XP installed. Failure to install the patch could cause an intermittent blue screen to appear on the client computer.

- For Microsoft shared products, the host system must have either **Printer Status and Alerts** or the **HP Driver Autoconfiguration** option from the HP installer on the computer. Load Printer Status and Alerts on the computer sharing the printer before loading Printer Status and Alerts on the client computer.
- For Windows 95, Windows 98, and Windows Me client computers that have Printer Status and Alerts installed, installing a printer using the Point and Print method will not activate Printer Status and Alerts.

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

Figure 1. **Printer Status and Alert icons**

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

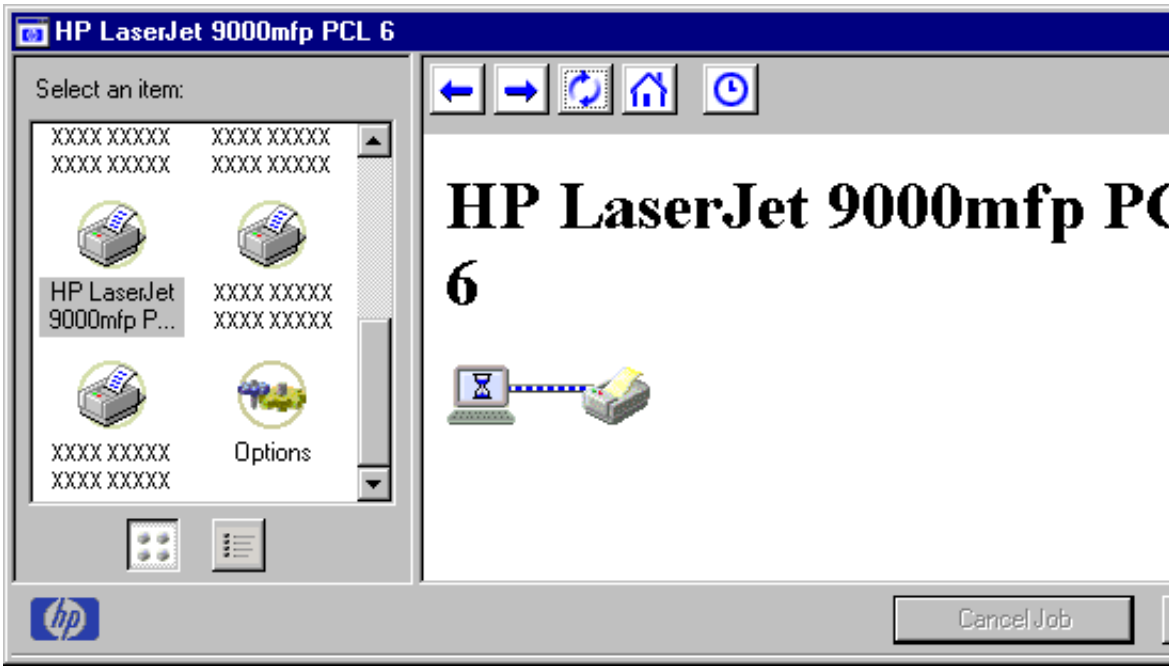


Figure 2. **Printer Status and Alert window**

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

The Printer Status and Alerts window consists of two panes. The left pane shows icons for the available products, 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 product icon in the left pane to view information about the product and supplies or to view a history of recent print jobs. The following product information is available:

- **Printer Status** shows a replica of the product control panel that indicates the current status of the HP LaserJet product.
- **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 devices, and disk storage. Click a print job icon to see information about the progress and status of the print job. Click the **Options** icon to select options for configuring pop-up status windows that contain document alerts and to set the refresh rate for showing printer status information.

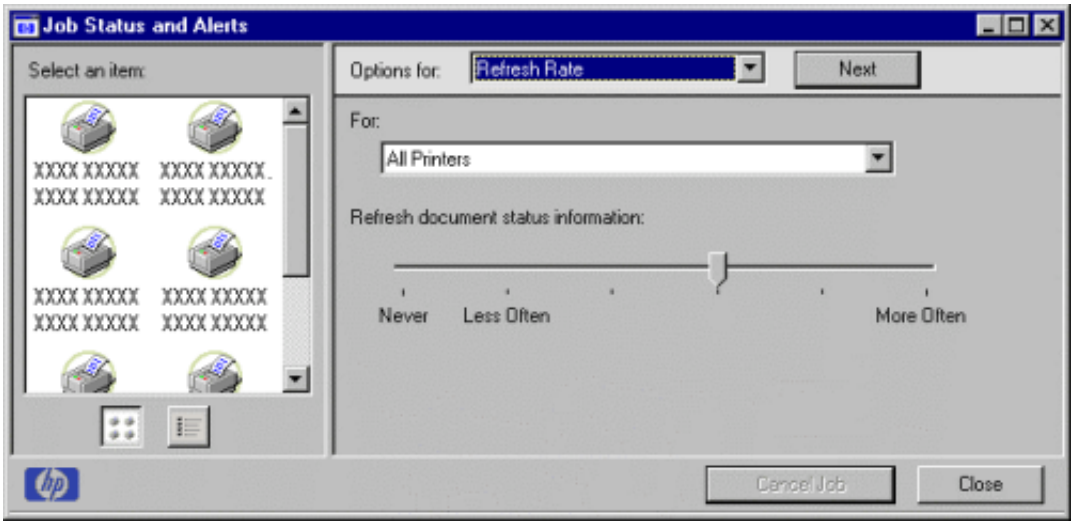


Figure 3. **Refresh Rate option**

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

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 Printer Status and Alerts window. If the **Never** setting is selected when the scope control is set to **All Printers,** then all job-status monitoring will be disabled. However, even when job-status monitoring is disabled, you can still open the status window and view the product status panels.

Changes to the refresh rate settings 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.

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

The availability of each alert option and the default selection varies depending on connection type. The following table shows the default state of the alerts panel as it relates to connection type.

Table 2. Default alerts selection state for connection type

Connection type	Alerts (first two options)	Printer warning condition	Toner low	Printer error condition
All printers	Selected and activated	Selected and activated	Selected and activated	Selected and activated
Direct connect	Selected and activated	Selected and activated	Selected and activated	Selected and activated
Network	Selected and activated	Selected and activated	Unselected and grayed out	Selected and activated

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

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

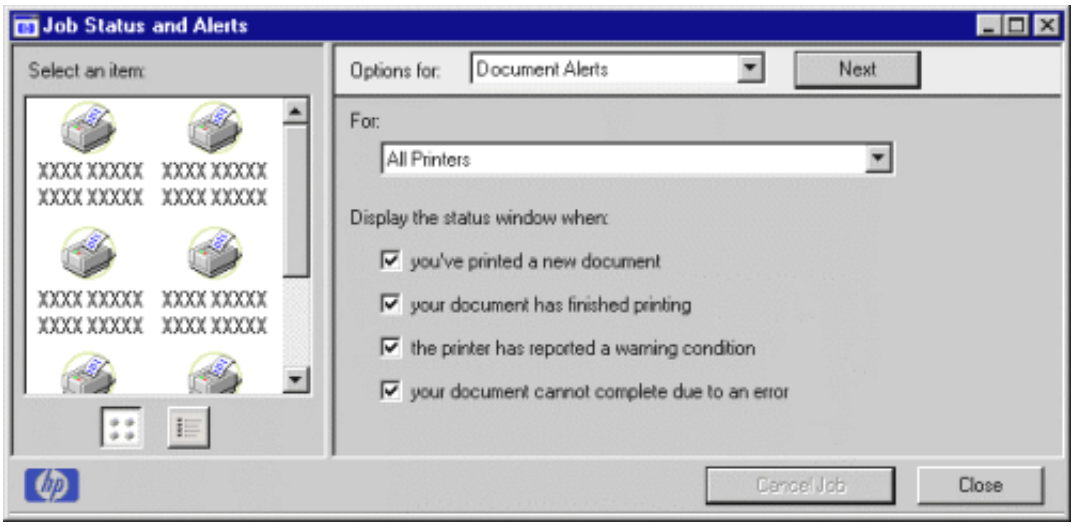


Figure 4. Documents Alert option

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

Remote firmware update

The HP LaserJet product and optional paper-handling devices feature a remote firmware update capability. The method for downloading remote firmware updates 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 your HP LaserJet product, HP will send you notification of firmware releases.

The process for remotely upgrading printer firmware involves three steps:

Step 1 Determine the current level of firmware installed on the HP LaserJet 9000mfp.

Step 2 Go to the http://www.hp.com/go/lj9000_firmware Web site and download the latest firmware.

Step 3 Download the new firmware to the product.

Determining the current level of firmware

Use the touch-screen graphical display on the control panel to determine the current level of firmware installed on the product:

Step 1 Go to the product control panel and touch the **Menu** tab.

Step 2 Touch INFORMATION on the control-panel display.

Step 3 Touch PRINT CONFIGURATION on the control-panel display.

Step 4 Look in the configuration page section marked “Device Information” for the Firmware Datecode. The firmware date code will look something like this:
03/14/2002 03.002.0

Downloading the new firmware from the HP Web site

The .RFU (remote firmware update) file and an associated readme file are packaged together as a self-extracting .EXE file. For detailed instructions about how to download the .EXE file, see the http://www.hp.com/go/lj9000_firmware Web site.

Downloading the new firmware to the product

You can send an .RFU update to a printer as long as the printer is in “ready” state; the printer will wait for all input/output (I/O) channels to become idle before cycling power.

Note If the firmware update involves a change in the format of nonvolatile random-access memory (NVRAM), any menu settings changed from the default settings will return to default settings, and must be changed again if the user wants settings different from the defaults.

The elapsed time for an update 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 update, 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 enhanced input/output (EIO) devices installed, the presence of external paper-handling devices, and the amount of memory installed.

If the remote firmware update process is interrupted before the firmware update is complete, the HP LaserJet 9000mfp is equipped with fully functional backup copy of firmware. The message RESEND UPGRADE appears on the product control panel.

Finally, any print jobs ahead of the .RFU job in the queue will be printed before the update is processed.

Note The printer automatically power cycles after processing the update.

Remote firmware update for Windows systems

If the printer is shared on the network, then the following command can be issued from a command prompt or MS-DOS window:

```
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 (do not type the angle brackets).

The message ONE FILE COPIED SUCCESSFULLY appears on the computer screen.

The MFP control panel will alternately display RECEIVING UPGRADE and PERFORMING UPGRADE. The download takes several minutes. Please be patient. At the end of the download, the message PROCESSING JOB appears on the control panel.

The printer will automatically power cycle after processing the update. The message READY will appear on the control panel.

The download is now complete.

Print a configuration page and compare the Firmware Datecode line with the value previously shown. The value on that line should have increased.

If the printer is connected through a local port, then the .RFU file can be sent directly to the printer with a COPY command from a command prompt or MS-DOS (R) window. At the command prompt, follow the steps below for your operating system.

Windows 95, Windows 98, and Windows Me

From a command prompt or MS-DOS (R) window type the following command:

```
Mode lpt1:,,p
```

Note If the printer is attached to a parallel port other than LPT1, then substitute the proper LPT port number in the **Mode** command.

The response you receive should be similar to these examples:

```
> LPT1 Not Rerouted
> Infinite retry on parallel printer time-out
```

The .RFU file can now be sent directly to the printer with a COPY command from a command prompt or MS-DOS (R) 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).

Remote firmware update 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.

Remote firmware update using FTP on a direct network connection

If your HP LaserJet product uses a direct network connection, you can use file transfer protocol (FTP) to update your HP LaserJet firmware. Complete the following steps.

Step 1 Take note of the TCP/IP address on the EIO X JetDirect page (this is the second page of the Configuration Page printout. To print a configuration page, see “Determining the current level of firmware”).

Note Before connecting to the printer, make sure that the printer is not in Power Save Mode. Also make sure that any error messages are cleared from the control panel display.

Step 2 Open a DOS command window on your computer.

Step 3 Type `FTP <TCP/IP PRINTER ADDRESS>` (for example, if the TCP/IP address is 192.168.0.90, type `FTP 192.168.0.90`).

Step 4 Press ENTER on the keyboard.

Step 5 When prompted for user name and password, press ENTER for each.

Step 6 Type BIN at the > prompt.

Step 7 Press ENTER.

Step 8 Type:
`put <path>`
where <path> is the location where the .RFU file was downloaded from the Web. For example, type:
`PUT  C:\LJ9000\lj9000FW.RFU`
and then press ENTER.

The download process begins and the firmware is updated on the printer. The printer automatically power cycles off and on again to activate the update. This can take about five minutes. Let the process finish without further interaction with the printer or computer.

Step 9 When the printer power-cycles on and READY appears on the control panel display, close the MS-DOS command window (type `BYE`, and then press ENTER. Type `EXIT`, and then press ENTER). The firmware update is complete.

Using HP Web JetAdmin to download the firmware to the product

This procedure requires that Web JetAdmin version 6.5 or later be installed. Complete the following steps to update a single printer through HP Web JetAdmin after downloading the .RFU file from the HP Web site.

Step 1 Start HP Web JetAdmin.

Step 2 Type the TCP/IP address or IP hostname of the printer in the **Quick Device Find** field, and then click **Go**. The printer Status window appears.

Step 3 Locate the **Update** button. You might need to click the right arrow on the toolbar to locate this button.

Step 4 Click **Update**.

Step 5 When prompted for the type of update to perform, click **Update Printers**, and then click **Continue**.

Step 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, depending on the product.

Step 7 Click **Upload** to move the .RFU file from your hard drive to the HP Web JetAdmin server.

Step 8 Refresh the browser.

Step 9 Select the .RFU file from the **Select new firmware version:** drop-down menu.

Step 10 Click **Update Firmware**. HP Web JetAdmin sends the selected .RFU file to the printer.

Also, HP Web JetAdmin 6.5 can be used to perform multiple or unattended installations.

Step 1 Start HP Web JetAdmin.

Step 2 Create a device group. A simple way to do this is:

a. Click **Devices** on the **1. Choose:** drop-down menu.

b. Click **Device Model** from the **2. Filter:** drop-down menu.

c. In the **3. Criteria (Optional):** field, type your model number (for example, "9000" [without quotation marks]).

d. Click **Go**.

Step 3 In the **Device List**, select the printers you want to include in the group and click **Create Group**.

Step 4 When prompted, type a name for the new device group, and then click **OK**.

Step 5 Click **Update**.

Step 6 When prompted for the type of update to perform, click **Update Printers**, and then click **Continue**.

Step 7 From the list of HP Devices, select the printers to be updated, or click **Select All**.

Step 8 Click **Update** to install the new firmware.

Printer messages during firmware upgrade

The printer shows three messages during a normal update process:

Table 3. Update messages

Printer message	Explanation
RECEIVING UPGRADE	This message appears from the time the printer recognizes the beginning of an .RFU update until the time the printer has verified the validity and integrity of the .RFU update.

Table 3. Update messages (continued)

Printer message	Explanation
PERFORMING UPGRADE	This message appears while the printer is actually reprogramming the firmware.
WAIT FOR PRINTER TO REINITIALIZE	This message appears from the time the printer has finished reprogramming until the printer reinitializes.

Note To verify that the firmware update succeeded, print a new configuration page from the product 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 to the printer.

Troubleshooting a firmware update

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

Table 4. Troubleshooting a firmware update

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

Print jobs sent to the product while an update is in process do not interrupt the update.

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

Table 5. Troubleshooting a firmware update failure

Reason for firmware update failure	Corrective action
.RFU file is corrupted	The printer recognizes that the file is corrupted and rejects the update. Download the image from the http://www.hp.com/go/lj9000_firmware Web site again and send the new file to the printer.

Table 5. Troubleshooting a firmware update failure (continued)

Reason for firmware update failure	Corrective action
Wrong printer model contained in .RFU file	The printer recognizes the model mismatch and rejects the update. Download the correct image from the http://www.hp.com/go/lj9000_firmware Web site and send it to the printer.
Upgrade was interrupted	See the previous table in this section.
Flash hardware failure occurred	Although it is extremely unlikely, the device might have a hardware failure. Call technical support to address the problem.

Note All HP LaserJet products ship from the factory with the latest available firmware version installed in a backup partition on the EIO hard disk. If a remote firmware update fails, the printer can use the backup firmware to restart the printer. You can then attempt the remote firmware update again.

HP Web Access

The HP Web Access feature, also known as the embedded Web server (EWS), contains the following components:

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

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

In environments with a larger number of printers, where one-to-one management is impractical, HP Web Access and HP Web JetAdmin work together to provide scalable remote printer management. HP Web JetAdmin is used for consolidated management tasks, where operations are performed on a selected set of printers instead of on individual printers. For such environments, HP has provided hooks between HP Web Access and HP Web JetAdmin so that 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 simultaneously.

For additional information and a copy of the *HP Embedded Web Server for HP LaserJet Printers* guide, go to the http://www/hp.com/support/lj9000 Web site.

To view information about the printer using HP Web Access, open a supported Web browser and type in the printer IP address or host name. The IP address and host name for the printer are listed under “Protocol Information” 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** tab in the HP Web Access window.

Information tab

HP Web Access offers the following additional features. To view the information, click on the items in menu on the left of the HP Web Access **Information** tab:

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

Device status

If a printer problem exists, status information (such as whether the printer is online or the toner is low) is available through your Web browser 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.

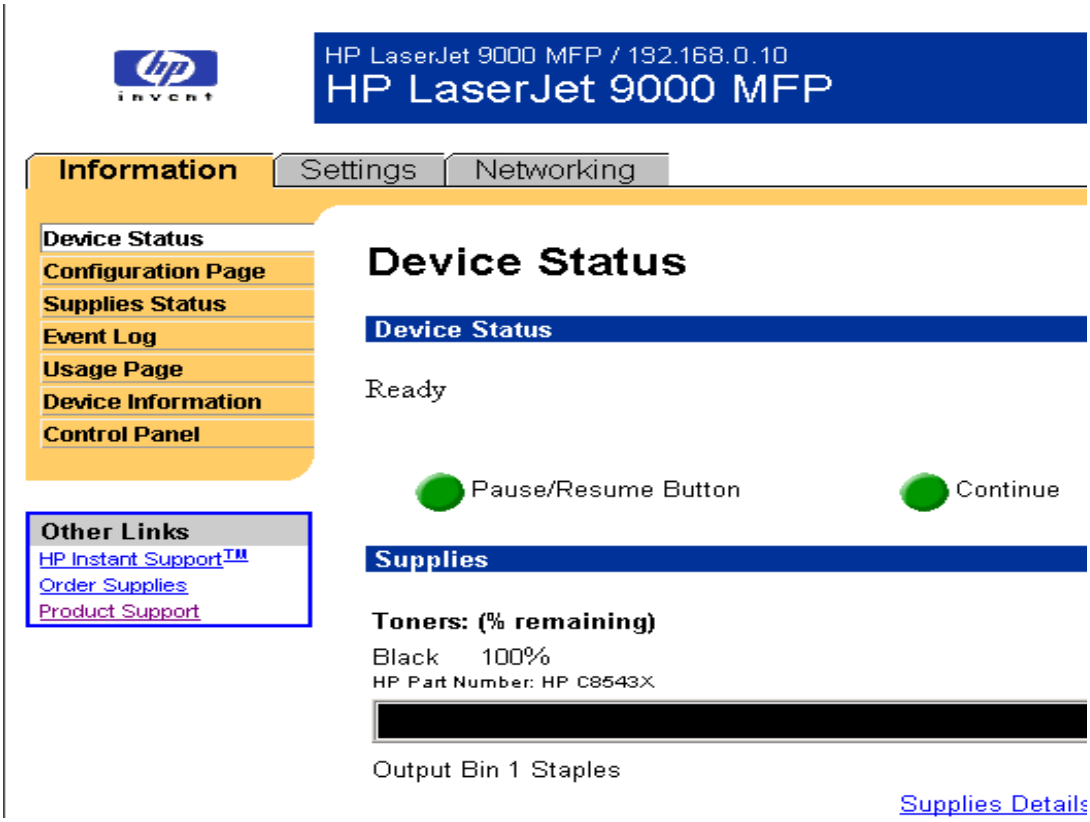


Figure 5. **Device Status**

Configuration information

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

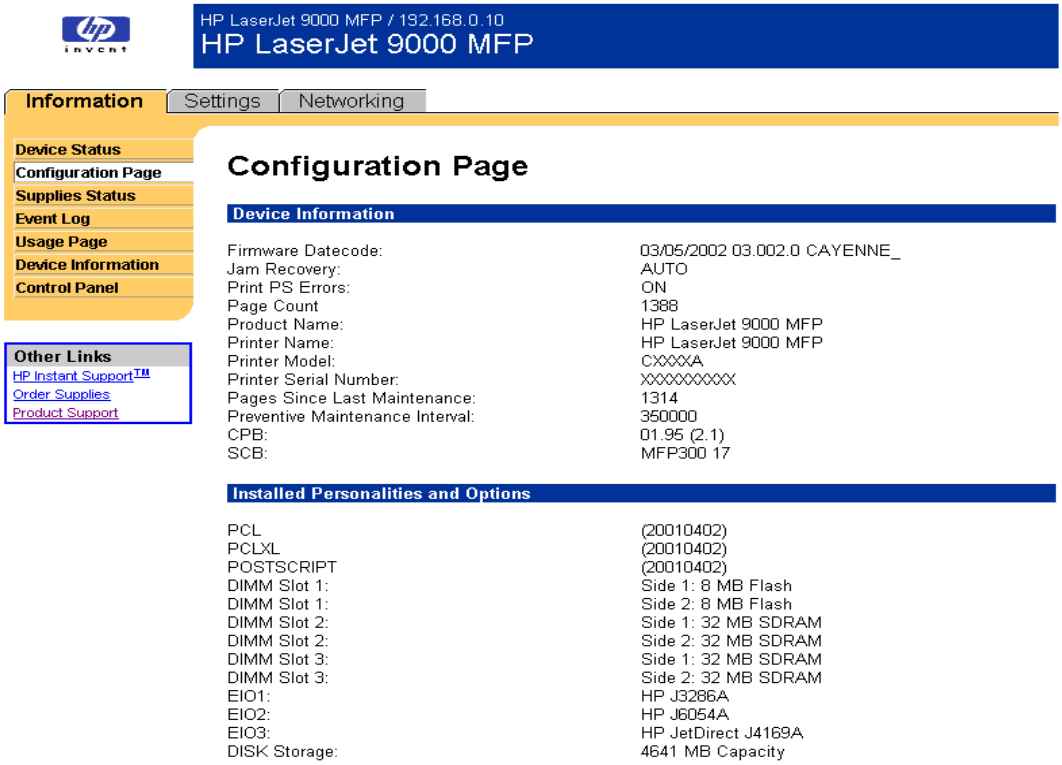


Figure 6. **Configuration page**

Links to off-printer solutions

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

- **HP Instant Support (TM**). This link connects you to a set of dynamic web resources that will help you solve specific problems and determine additional services that may be available for your device. Specific status and configuration information about the product is retained and directed to the “Solve a Problem” Web site. This site offers targeted support content and messages to help resolve problems as quickly as possible.
- **Order Supplies 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.
- **Product Support.** This link connects you with an HP product support page from which you can search for information, contact the HP customer care home page, or find additional resources for your product.

Settings tab

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

- Configure Device
- Alerts
- Email
- Security
- Other Links
- Device Information
- Language
- Time Services
- Digital Sending

Remote printer configuration

Printer configuration information can be obtained through a Web browser by opening the printer HP Web Access page and changing any of the basic configuration information on the **Settings** tab. 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.

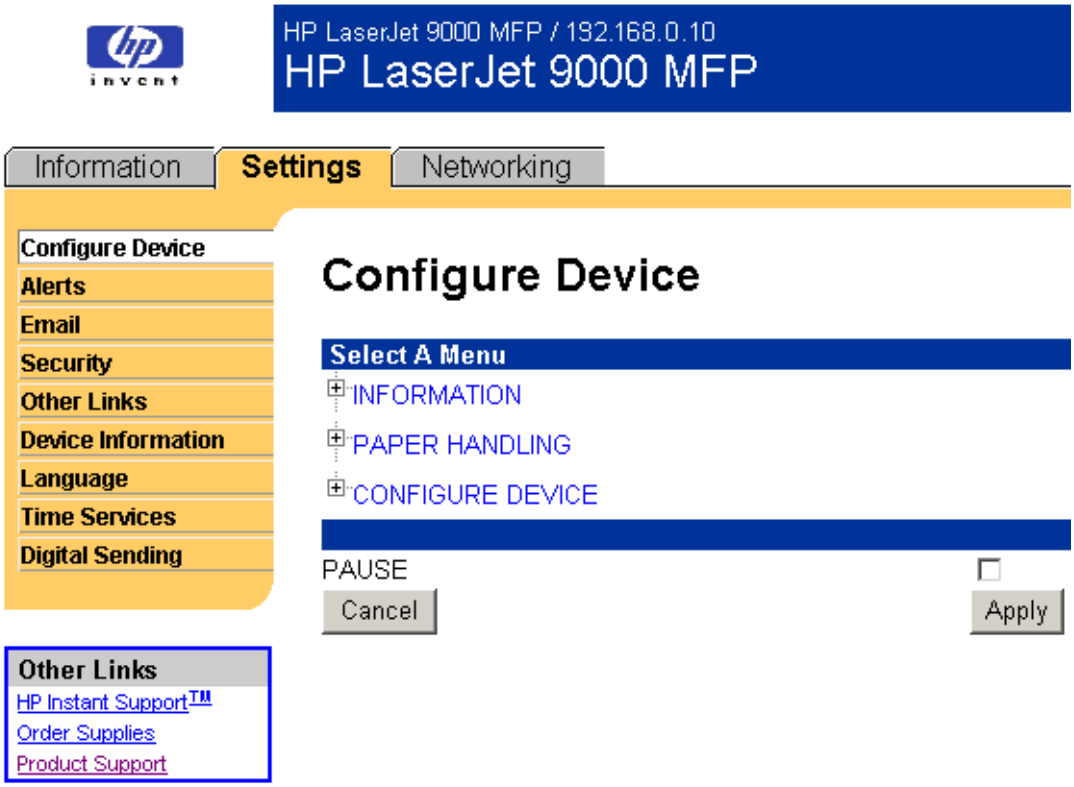


Figure 7. **Configure Device**

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

Networking tab

The menu on the left of the screen contains other networking options under three categories: configuration, security, and diagnostics.

Configuration

- Network Settings
- Other Settings
- Support Info
- Select Language

Security

- Admin Password
- SSL/TLS
- SNMPv3
- Telnet
- Access Control

Diagnostics

- Network Statistics
- Protocol Info
- Configuration Page
- Refresh Rate

Network settings

The following illustration shows the Network Settings option on the HP Web Access **Networking** tab. From this screen, you can enable and configure the following network services:

- TCP/IP
- IPX/SPX
- AppleTalk
- DLC/LLC

- SNMP

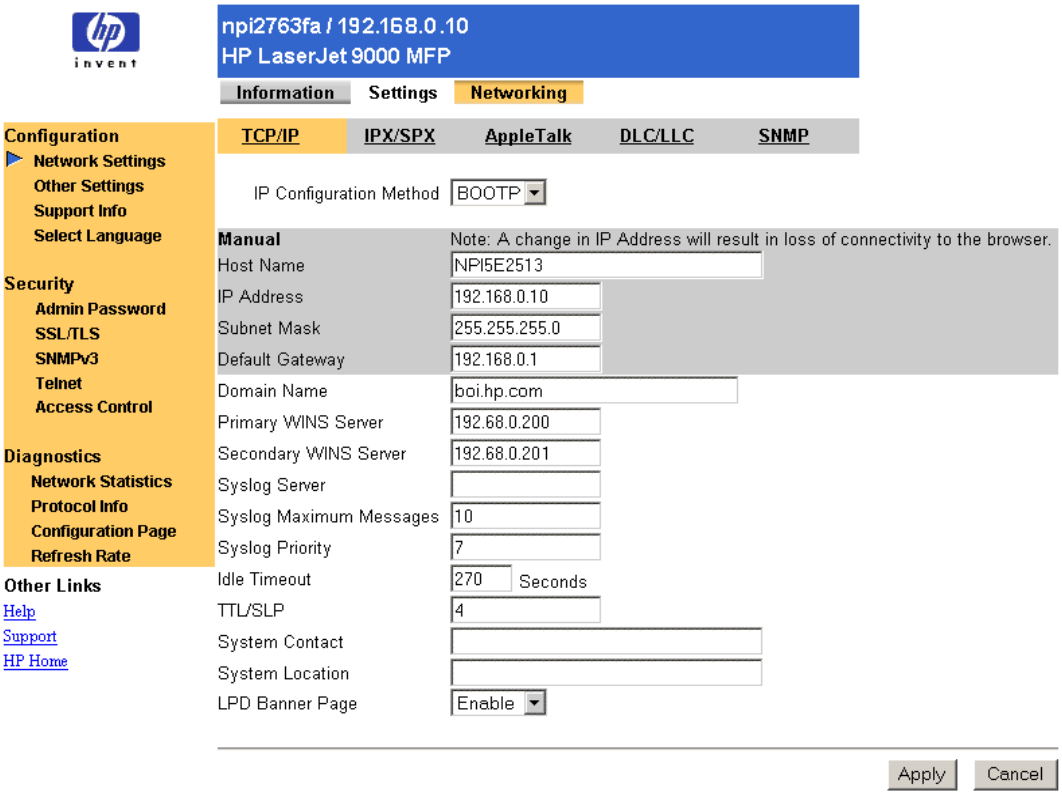


Figure 8. **Networking tab**

Configurable e-mail alerts

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

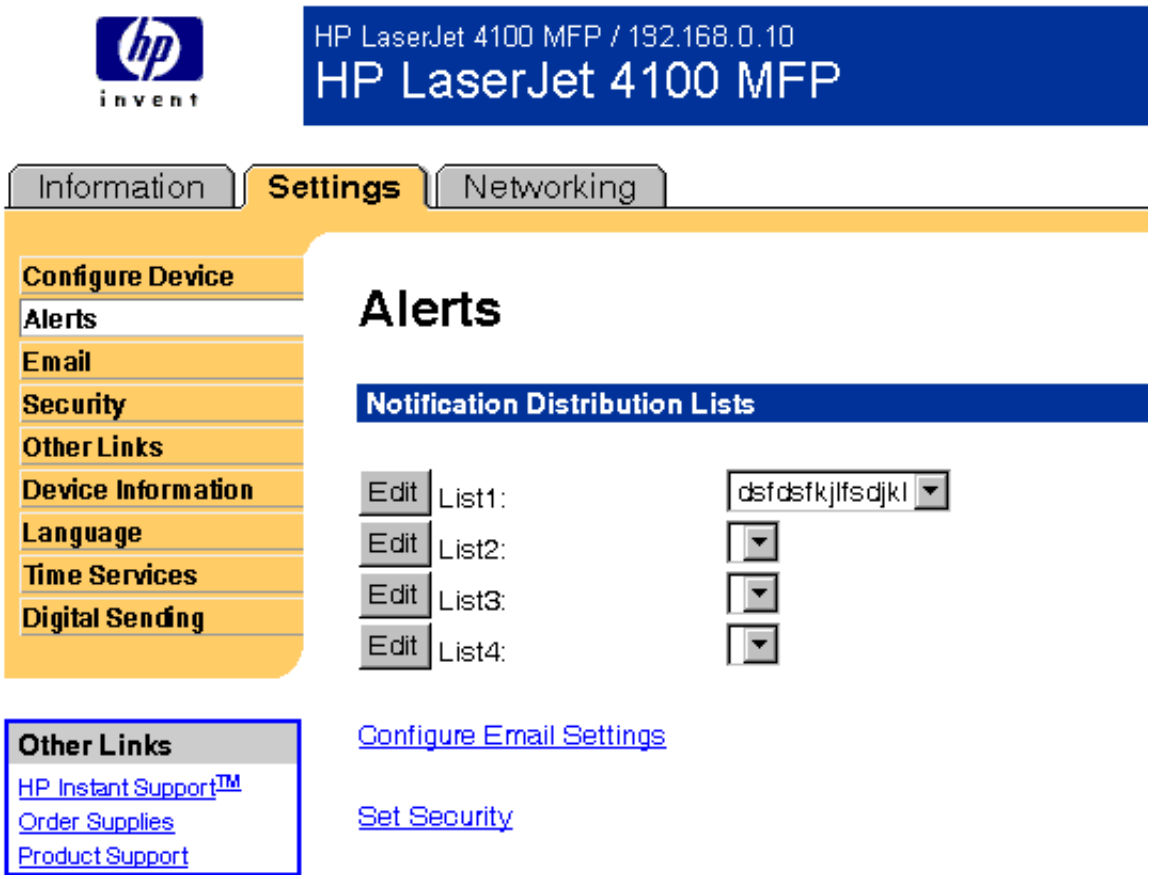


Figure 9. **Configurable Alerts**

Digital sending

hpwa_settings_01_alerts_9000mfp_020311

Use the HP MFP Digital Sender embedded solution that is included with the HP LaserJet MFP to send scanned color or black and white documents to e-mail as a .PDF, .JPEG, .TIF, or .MTIF file. The HP LaserJet MFP scans, compresses, and sends the page scans to the configured mail server.

The digital sending solution is a standard offering for the HP LaserJet MFPs.

Settings can be configured either at the control panel or by using the Digital Sending Config Applet with a Web browser.

Use the control panel to configure basic settings, and use the configuration applet for access to all available settings.

Configuring HP Digital Send from the control panel

Go to the product control panel and press CONFIGURE DEVICE, press SENDING, and then press E-MAIL.

The following options are available (press the down arrow to see any options that are not visible on the screen):

Scan Preference. You can choose either BLACK AND WHITE or COLOR.

File Type. Files can be transmitted to an e-mail address in any of these file formats:

Portable Document Format (PDF)

Tagged image file format (TIFF)

Multipage TIFF file format (M-TIFF)

Joint Photographic Experts Group (JPEG)

Find Send Gateways. This option uses the same algorithm as the **Find Settings** button in the **Addressing** tab of the Digital Sending Config Applet.

Simple Mail Transfer Protocol (SMTP) Gateway. Type the IP address of the e-mail gateway, using the right and left arrows to move between the fields. Domain Name Service names (for example, company.com) are not supported.

Lightweight Directory Access Protocol (LDAP) Gateway. Type the IP address of the e-mail gateway, using the right and left arrows to move between the fields. Domain Name Service names (for example, company.com) are not supported.

Test Send Gateways. This option uses same algorithm as the **Find Server** button on the **Send to E-mail** tab in the Digital Sending Config Applet.

Sending to e-mail

To scan and send a document to e-mail, follow these steps:

Step 1 Place your original document face-down on the scanner glass.

Step 2 If your original matches the default settings (mixed text and graphics, default media size, standard resolution, single-sided), proceed to the next step. Otherwise, navigate to the **Settings** field on the touch screen of the control panel. Here you can select document parameters for color (the options are **Black and White** or **Color**) and for file type (the options are **PDF**, **TIFF**, **M-TIFF**, or **JPEG**).

Step 3 Touch **Send Options** on the touch screen of the product control panel. The **Send Options** box replaces the **Copy Settings** box.

Step 4 Touch **E-mail**.

Step 5 Touch **From:** and, using the pop-up keyboard, type your e-mail address. The **From:** field must be filled to proceed.

Step 6 Using the same method, type the names of any **CC:** (copy) and **BCC:** (blind copy) recipients, and type the subject of your e-mail in the **Subject:** field.

Step 7 Touch **OK**.

Step 8 Press the **Start** button.

Step 9 When sending is complete, remove the original document from the scanner glass.

Additional digital sending services are available with the HP MFP Digital Sending Software, version 3. These additional services are send-to-fax, send-to-folder, send-to-application, and Windows NT authentication.

Foreign Interface Harness

The Foreign Interface Harness (FIH) provides a portal on the HP LaserJet product for third-party job accounting vendors to gain access to copy data for the HP LaserJet 9000mfp product

E-mail command and response

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

To configure your product to send e-mails, follow these steps:

Step 1 Take note of your product's TCP/IP address on the EIO X JetDirect page (this is the second page of the Configuration Page printout. To print a configuration page, see "Determining the current level of firmware".)

Step 2 Launch your web browser.

Step 3 In the **Address:** or **Go to:** field, type the TCP/IP address assigned to the product (for example, 192.168.0.20) or the host name (for example: http://myprinter). The HP Web Access home page appears.

Step 4 From the top of the HP Web Access screen, click Device.

Step 5 On the navigational bar on the left, click Alerts.

Step 6 Under **Notification Recipients**, click Edit List1.

Step 7 Under **Add Recipient Address**, type your e-mail address (for example, "name@company.com").

Step 8 Click **Apply**.

Step 9 Click **Back** to return to the **Alerts** page.

Step 10 Under **Select Events**, click **Media Path**.

Step 11 Select the **List1** check box next to CLOSE DRAWERS/DOORS/COVERS.

Step 12 Click **Apply**. A screen stating that your selections have been accepted should appear. Click **OK**.

Step 13 In the **SMTP Server:** field under Outgoing Mail, type the TCP/IP address (for example, 192.168.0.201).

Step 14 In the **Domain Name:** field under **Outgoing Mail**, type the domain name.

Step 15 Click **Apply**.

Step 16 Click **Security**.

Step 17 Under **Security**, select the **Outgoing Mail** check box.

Step 18 Click **Apply**.

Step 19 To test the configuration, open the top cover of the product, then go to your computer and verify that you have received an e-mail message from the product.

Euro character

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

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

Printing-system components

Printing system and installer

CD browser for Windows systems

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

The HP LaserJet software CD browser or printing-system installer does not support Windows 3.1*x*. To install the PCL 6, PCL 5e, or PS printer drivers for Windows 3.1*x*, use the Printer Manager function on the Windows 3.1*x* control panel.

A readme file for the Windows 3.1*x* printing system is available in the root directory of the HP LaserJet software CD-ROM. The path is: [root]/[languages]/DRIVERS/WIN3X

The following illustration shows the main screen of the printing system software CD browser, which appears when you insert the printing software CD-ROM in your CD-ROM drive.

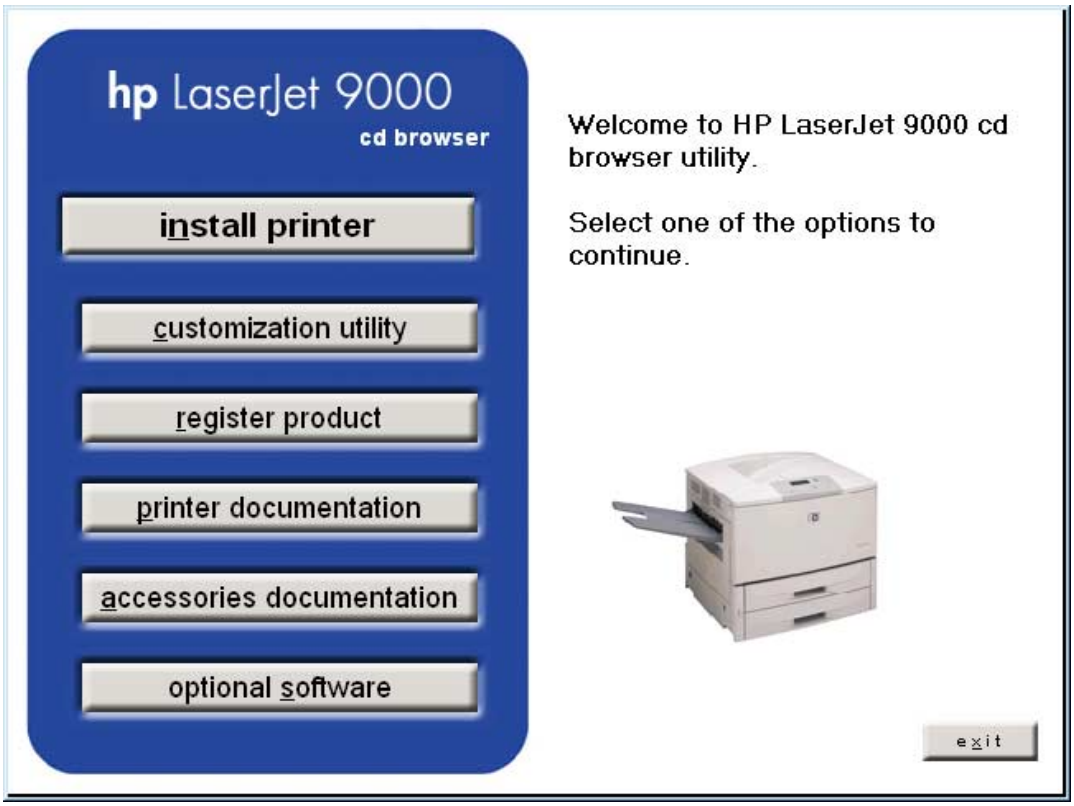


Figure 10. **Installation CD browser main screen**

The product software CD browser contains the following options for the HP LaserJet product. The text that follows each option listed below is approximately the same text that appears when you put the cursor on the option button.

Note The options on your product may vary.

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

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

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

printer documentation - This option can be used to view the HP LaserJet 9000mfp documentation. The documents are:

- start guide
- introduce guide
- MFP introduce guide
- MFP poster
- release notes

accessories documentation - View the HP LaserJet 9000mfp documentation for the following accessories:

- 2000-sheet feeder guide
- duplexer guide
- multipurpose tray guide
- hp jetidirect guide
- stacker/stapler guide
- multifunction finisher guide

Note For systems that do not have Adobe Acrobat Reader 4.0 (or later) installed, you will be given the option to download that software. Clicking any of the links to documentation that is provided in the Adobe Acrobat PDF file format opens a dialog box from which you can install Adobe Acrobat Reader software from the HP LaserJet software CD browser.

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

optional software — To increase productivity and get the most out of your HP LaserJet product, view a list of optional software available for installation. The The **hp web jetadmin** option is available for the HP LaserJet 9000mfp.

Installer features

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

This HP LaserJet product features a new common installer. This new installer offers the following features:

- The HP LaserJet software CD-ROM features a CD browser. See "CD browser for Windows systems."
- Acrobat Reader 5.0 is automatically installed.
- The installer is Web-enabled, providing access to the HP Web site for the latest software components and drivers.
- Network connection is integrated so that you can install drivers and connect to a network printer in a single process.
- The selection dialog box sets the operating-system language as the default language (for Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP only). Although system language is sensed automatically, you can use the installer to select any of the languages on the HP LaserJet software CD.
- The installer includes the HP LaserJet Uninstaller Utility.
- Product registration is available using the Web and e-mail.
- The Customization Utility is available on the CD browser.

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

If you have an Internet connection, the installer will sense the connection and provide you with the ability 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 software CD-ROM to those on the HP Web site. If newer versions are on the HP Web site, the installer downloads them.

Installable components

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

Printer drivers

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

PCL 5e, PCL 6, and PS drivers

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

All three drivers provide access to the printer paper-handling and print-quality features, such as Edge-to-Edge Printing, and Printing All Text as Black. The PS driver, however, supports Edge-to-Edge Printing, but not Printing All Text as Black.

Windows 3.1*x* driver versions

PCL 5e and PCL 6 support for Windows 3.1*x* is provided by using the HP LaserJet 8100 printer drivers for the HP LaserJet 9000mfp product. These drivers are available on the HP LaserJet software CD-ROM in the WIN3X directory. An HP LaserJet 8100 PS printer description (PPD) provides PS support for the HP LaserJet 9000mfp product.

For printer driver version numbers, go to the following URL:

http://www.hp.com/go/lj9000_software

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

PCL 5e and PCL 6 support for Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP operating systems is provided by using the HP LaserJet 9000 printer drivers for the HP LaserJet 9000mfp product. The HP LaserJet 9000 PS printer description (PPD) provides PS support for the HP LaserJet 9000mfp.

For printer driver version numbers, go to the following URL:

http://www.hp.com/go/lj9000_software

Macintosh and Macintosh-compatible system driver versions

The HP LaserJet printing solution for Macintosh is composed of the Apple LaserWriter driver, which is provided with the operating system, and HP-created PPD files. The driver uses these files to determine the features and PS commands that the printer supports. Bidirectional support in AppleTalk and USB connections 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 the new printer, then moves itself to Trash.
- installation notes.

AutoCAD driver versions

Printer drivers to support AutoCAD (TM) in MS-DOS, 16-bit Windows, and 32-bit Windows operating environments are available on the Web at the following URL:

http://www/hp.com/support/lj9000

These AutoCAD drivers are supported:

- AutoCAD 10, 11, and 12 for MS-DOS version 4.1b
- AutoCAD 13 and 14 for Windows version 4.1b
- AutoCAD 2000 and 2000LT - 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.

Go to http://www.hp.com/go/linux for further information about Linux drivers.

Macintosh components

- HP LaserJet PPDs for past projects
- ColorSync profiles
- Screen fonts

Additional productivity tools

HP Web Registration

You can use this component to register your HP LaserJet product on the HP Web site or through e-mail. After you have successfully installed the software, the installer prompts you to register your HP LaserJet product. Also, you can gain access to HP Web Registration from the HP LaserJet 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 product later, click **WebReg** from the HP LaserJet 9000 program group when you decide to complete your registration.

Optional software

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

HP Web JetAdmin

HP Web JetAdmin allows you to manage HP Jetdirect connected printers within your intranet using a browser. HP Web JetAdmin is a browser-based management tool and should be installed only on the network administrator's computer. It can be installed and run on a variety of systems:

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

- task-oriented user interface, providing configurable views for network managers
- customizable user profiles that can be customized to let network administrators include only the function viewed or used
- routing of instant e-mail notification of hardware failure, low supplies, and other printer problems to different people
- remote installation and management from anywhere by using only a standard Web browser
- advanced automatic discovery of peripherals on the network without manually entering each printer into a database
- simple integration into enterprise-management packages
- capacity to find peripherals based on parameters such as IP address, color capability, and model name
- capacity to organize peripherals into logical groups, with an option that provides virtual office maps for easy navigation

The HP LaserJet software CD browser provides a link to the HP Web site (http://www.hp.com/go/webjetadmin) to download the latest version of the HP Web JetAdmin software. Click **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 7.1
- SuSE Linux 7.1

3 Driver features

PCL 6 and PCL 5e driver features

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

Note The Windows 3.1*x* **Print** dialog box does not contain a **Properties** button to open the HP LaserJet 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 PCL 6 and PCL 5e drivers include a full-featured Help system to provide assistance with printing and configuration options.

What's this? Help

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

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

Context-sensitive Help

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

Constraint messages

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

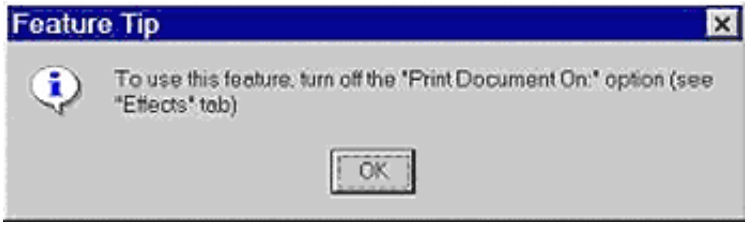


Figure 11. **A typical constraint message with an OK button**

Whenever a constraint message appears with **OK** and **Cancel** buttons, 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. The following illustration shows Bubble Help icons on a driver tab.

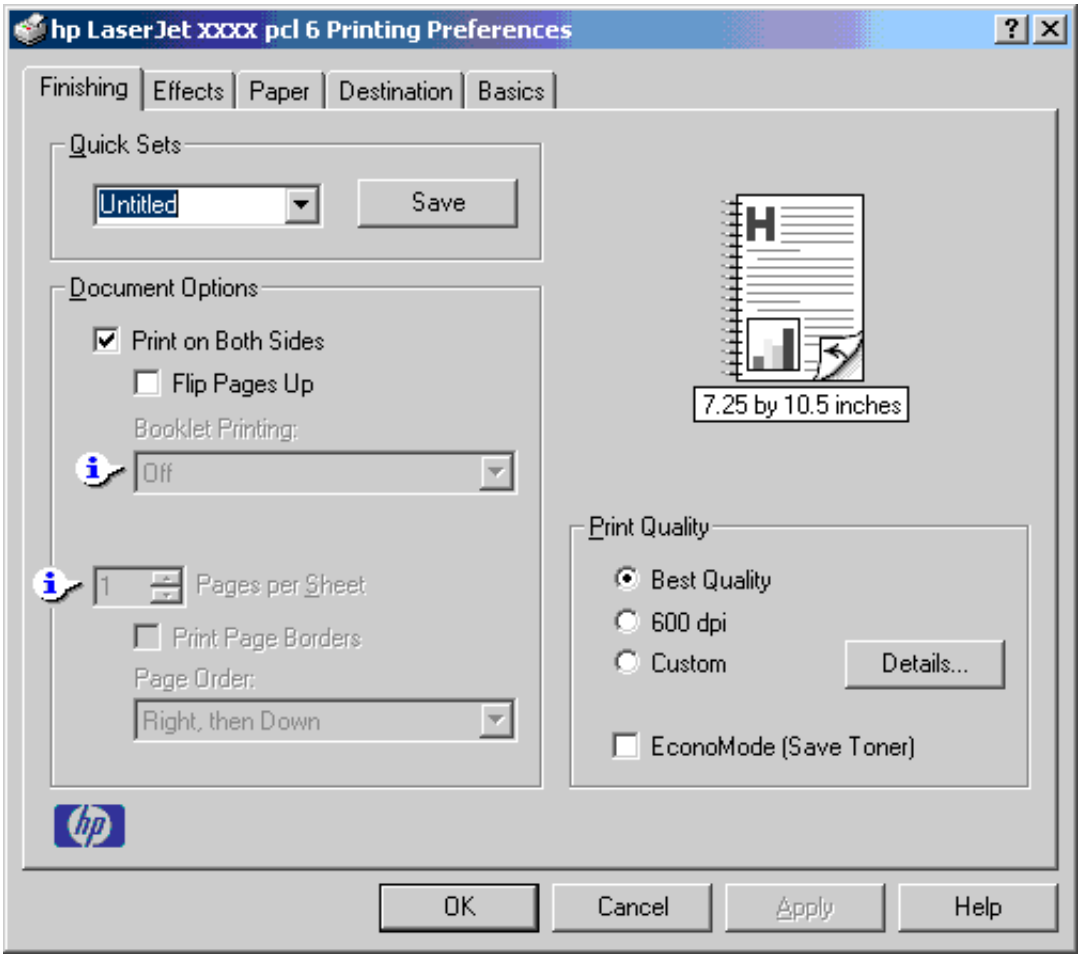


Figure 12. **A property page with Bubble Help icons**

The bubble typically appears next to a disabled control, although it can also accompany an enabled control if there is an important note concerning its use. Moving the pointer over the bubble changes the arrow to a gloved hand, which indicates that the area underneath the pointer is selectable. When the bubble is selected by using either the mouse or the keyboard, a message box appears 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.

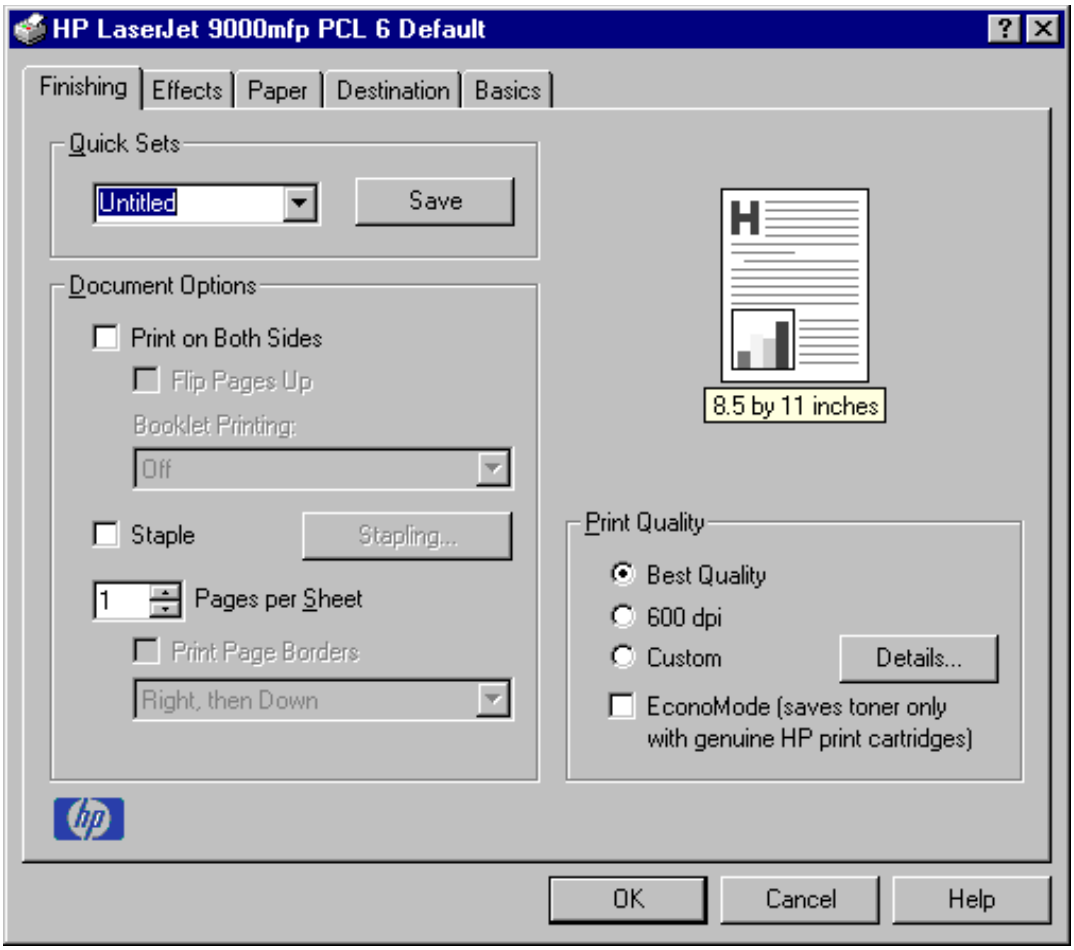


Figure 13. **The default appearance of the Finishing tab**

The options in the **Print Quality** group box might vary, depending on your HP LaserJet product. For the HP LaserJet 9000mfp, the second option is **600 dpi**, and the **EconoMode** selection indicates that you can save toner only with genuine HP print cartridges.

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).

Factory Defaults

The default setting is **Factory Defaults**. The driver also provides a quick set for printing the *use* guide (User's Guide).

Custom Quick Sets

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**.

HP LaserJet Multifunction Finisher Quick Sets

The HP LaserJet Multifunction Finisher is an optional accessory for the HP LaserJet 9000mfp. It provides stacking capacity for up to 1000 sheets of printmedia, stapling of as many as 50 sheets of paper per document, and folding and saddle stitching of booklets that contain up to 10 sheets of paper.

If the driver is configured to support the HP LaserJet Multifunction Finisher, four additional booklet Quick Sets will appear. Unlike **Factory Defaults**, **User's Manual** and the booklet Quick Sets can be deleted. These drivers can store a maximum of ten user-defined Quick Sets on a particular system. If you attempt to save too many, a message box appears that reads, "There are too many Quick Sets defined. Please delete some before adding new ones."

Note The preset Quick Sets, User's Manual, and booklet count as five towards the Quick Set limit of ten.

The preset booklet quick sets are:

- Booklet on Letter. Settings: Print on Both Sides ON, left binding, image size half letter, Paper size letter, destination Booklet Bin, finishing option Fold/Saddle Stitch.
- Booklet on 11x17. Settings: Print on Both Sides ON, left binding, image size letter, Paper size 11x17, destination Booklet Bin, finishing option Fold/Saddle Stitch.
- Booklet on A4. Settings: Print on Both Sides ON, left binding, image size half A4, Paper size A4, destination Booklet Bin, finishing option Fold/Saddle Stitch.
- Booklet on A3. Settings: Print on Both Sides ON, left binding, image size A4, Paper size A3, destination Booklet Bin, finishing option Fold/Saddle Stitch.

Document Options

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

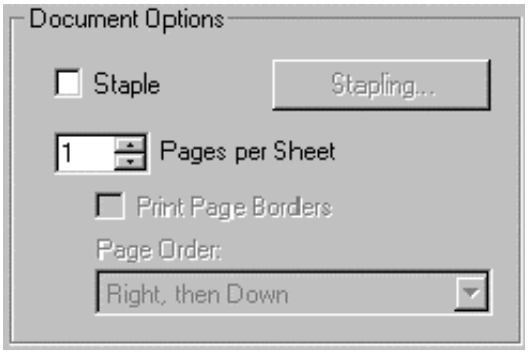


Figure 14. **Document Options group box - stapler only installed**

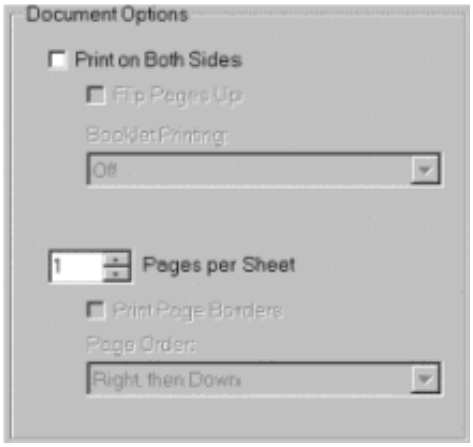


Figure 15. **Document Options group box - duplexing unit only installed**

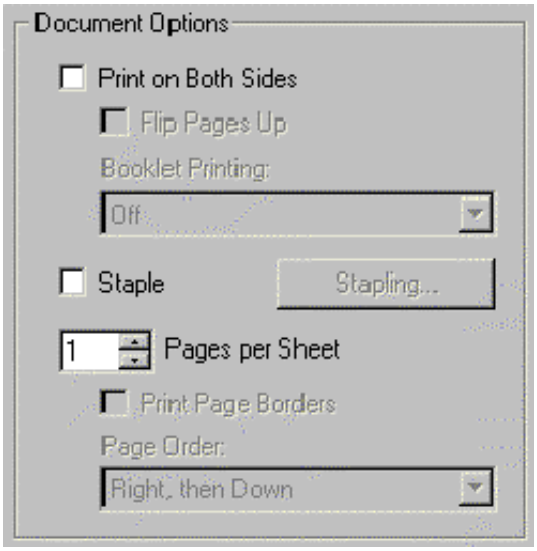


Figure 16. **The Document Options group box - stapler and duplexing unit**

Print on Both Sides option

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

- **Type is:** on the **Paper** tab 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, 11 x 17, or 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.

Flip Pages Up

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

Table 6. **Page 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 portion of the preview image with an arrow that points in the direction that the page is flipped.

Booklet Printing

The **Booklet Printing** drop-down menu, visible when **Print on Both Sides** is selected, offers eight 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.

Table 7. 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) B4 (JIS) (Left Binding) B4 (JIS) (Right Binding)
Legal	Off Legal (Left Binding) Legal (Right Binding)
A4	Off A4 (Left Binding) A4 (Right Binding) A3 (Left Binding) A3 (Right Binding)
B4 (JIS)	B4 (JIS) (Left Binding) B4 (JIS) (Right Binding)

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

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

- **Print on Both Sides** is selected.
- **Percent of Normal Size** (on the **Effects** tab) is 100.
- **Pages per Sheet** is 1.
- **Paper Size** is Letter, Legal, A4, or B4 (JIS).
- **Print Document On:** (on the **Effects** tab) is not selected.

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

Activating booklet printing

Note The following instructions apply only to PCL drivers. Booklet Printing is supported by HP PS (PostScript) driver for Windows 95, Windows 98, Windows Me, Window NT 4.0, Windows 2000, or Windows XP through applications that provide booklet printing configuration settings.

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

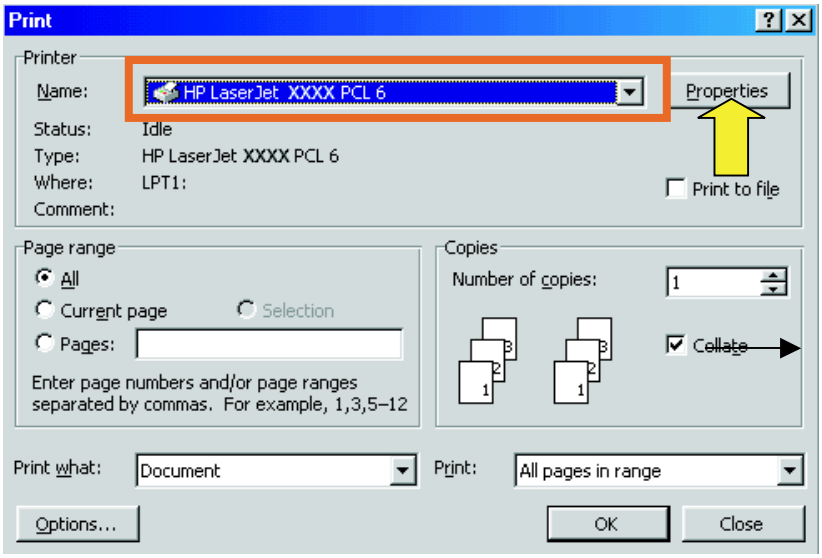


Figure 17. **Activating booklet printing**

Step 2 Click the **Finishing** tab. On the drop-down menu, select **Print on Both Sides** and **Booklet Printing Type**.

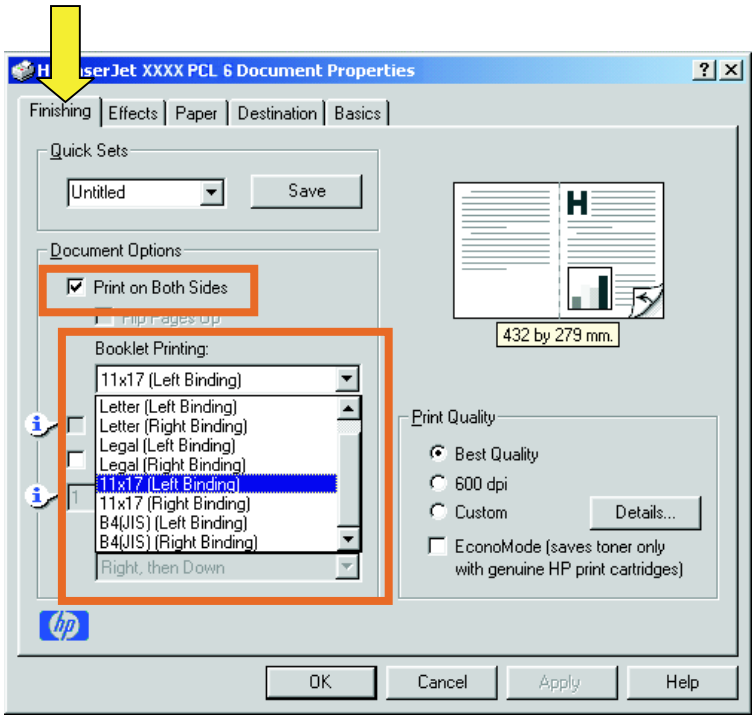


Figure 18. **Selecting booklet printing type**

Selecting a booklet cover

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

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

Step 2 Click the **Paper** tab, then select the **Use different paper for first page** check box.

Step 3 Click the **First Page** tab. On the **Size is:**, **Source is:**, and **Type is:** menus, select the size, source, and type settings for your cover.

Step 4 Click the **Other Pages** tab. On the **Size is:**, **Source is:**, and **Type is:** menus, select the size, source, and type settings for the inside sheets of your print job.

Step 5 Click the **Back Cover** tab. The back cover, if there is one, must be the same size as the booklet cover and the inside sheets. The **No back cover** is the default setting. If your print job has a back cover that uses the same source and type settings you selected in the **First Page** tab, select **Use the first page source**. If not, select **Use an alternate source**, and then select the back-cover settings in the **Source is:**, and **Type is:** menus.

Staple option

The **Staple** option is available on the HP LaserJet 9000mfp for all media sizes when the HP Multifunction Finisher or 3000-Sheet Stapler/Stacker is installed. Use the **Size is:** option on the **Paper** tab to select the media size.

Stapling a document

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

Step 2 Click the **Finishing** tab.

Step 3 Select the **Staple** check box.

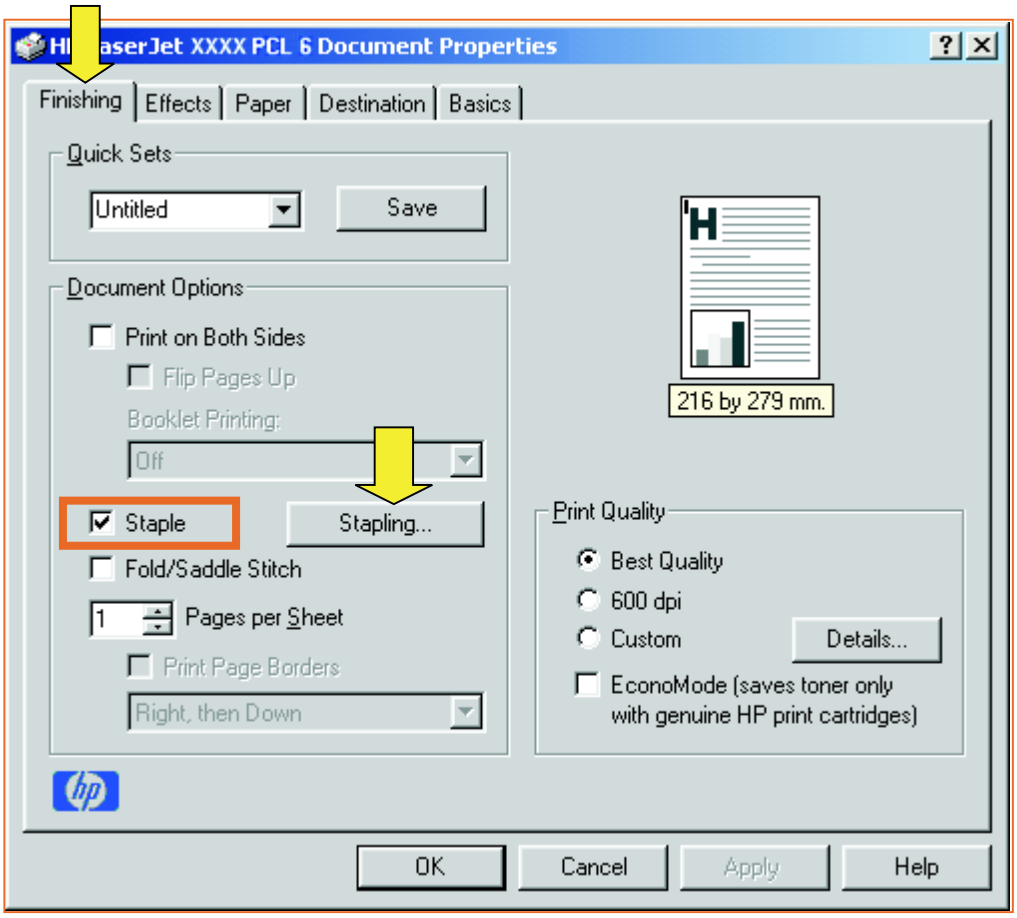


Figure 19. **Stapling a document**

Click **One Staple** or **Two Staples** to modify the staple quantity.

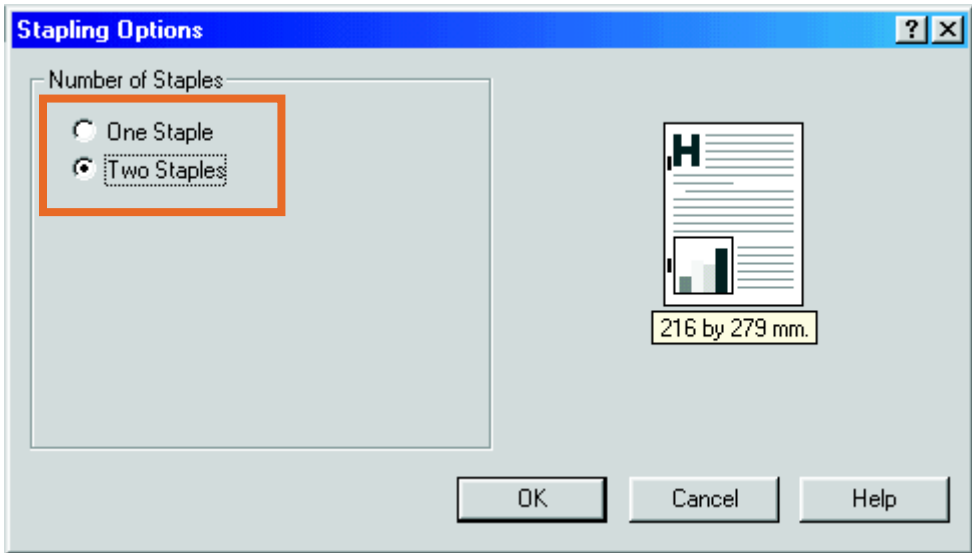


Figure 20. **Stapling options**

Fold/Saddle Stitch

The **Fold/Saddle Stitch** option is available on the **Finishing** tab when **HP Multifunction Finisher** is selected in the **Optional Paper Destination** drop-down menu of the **Configuration** tab.

Saddle-stitching a booklet or folding a single sheet

The procedure is the same for saddle-stitching a booklet or folding a single sheet:

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

Step 2 Click the **Finishing** tab.

Step 3 Select the **Fold/Saddle Stitch** check box. This will ensure that the document is folded.

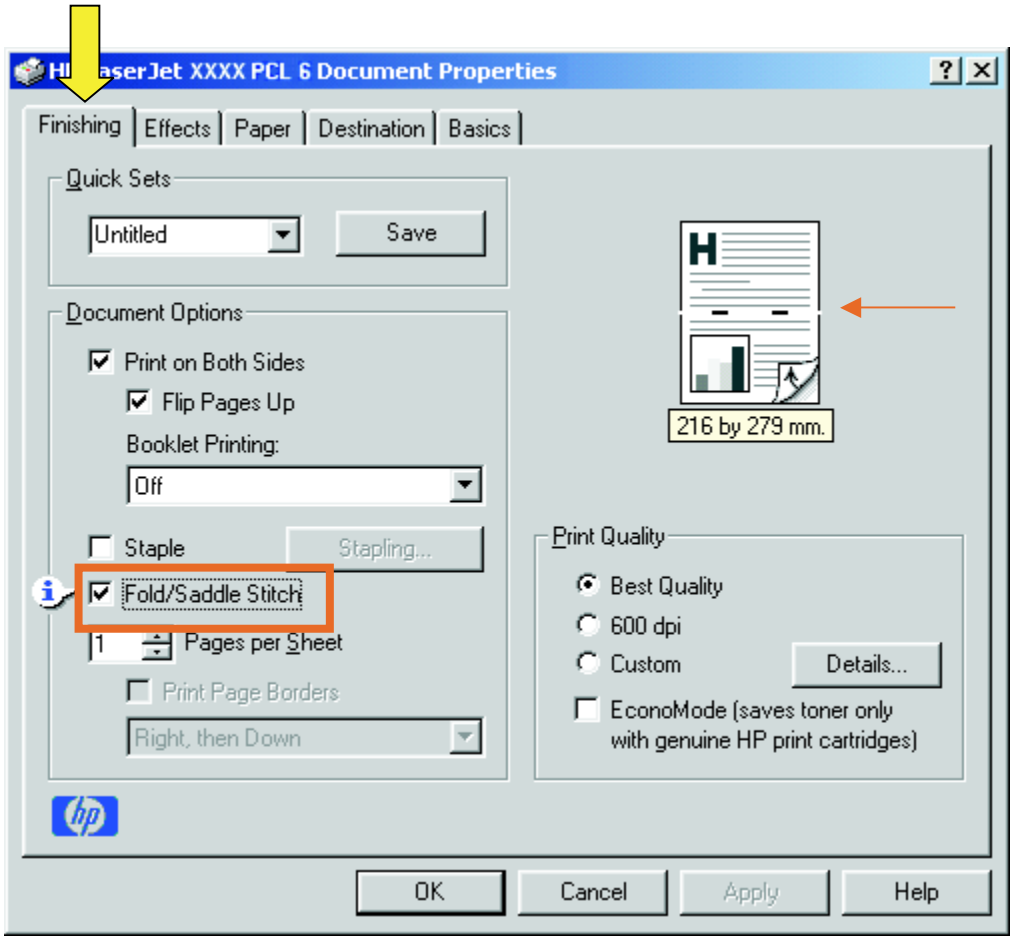


Figure 21. **Saddle-stitching a booklet**

Pages per Sheet

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

Related controls that are indented beneath the **Pages per Sheet** edit box are **Print Page Borders** and a drop-down menu for selecting the page order.

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

There are four options for page order:

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

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

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

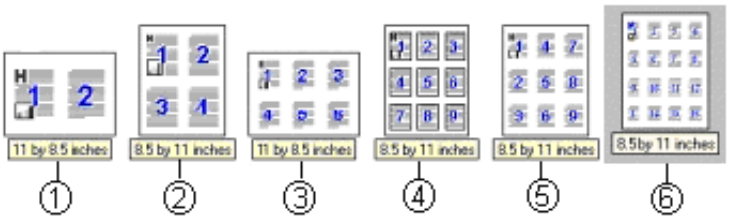


Figure 22. **Page-order preview images**

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 printer driver **Print Quality** group box provides options that control resolution, graphics settings, and font settings. The group box includes the following options:

- **Best Quality** (settings predefined)
- **600 dpi** (settings predefined)
- **Custom** (automatically selected when any changes are made to Best Quality or 600 dpi)
- **EconoMode** (the default setting is OFF).

The **Print Quality** group box also includes a **Details** button. Clicking this button opens the dialog box. The **Print Quality Details** dialog box provides options for various print-quality settings. If you select either **Best Quality** or **600 dpi** and then change the 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 illustration shows sample default settings for **Best Quality**. The menu on your HP LaserJet product might vary.

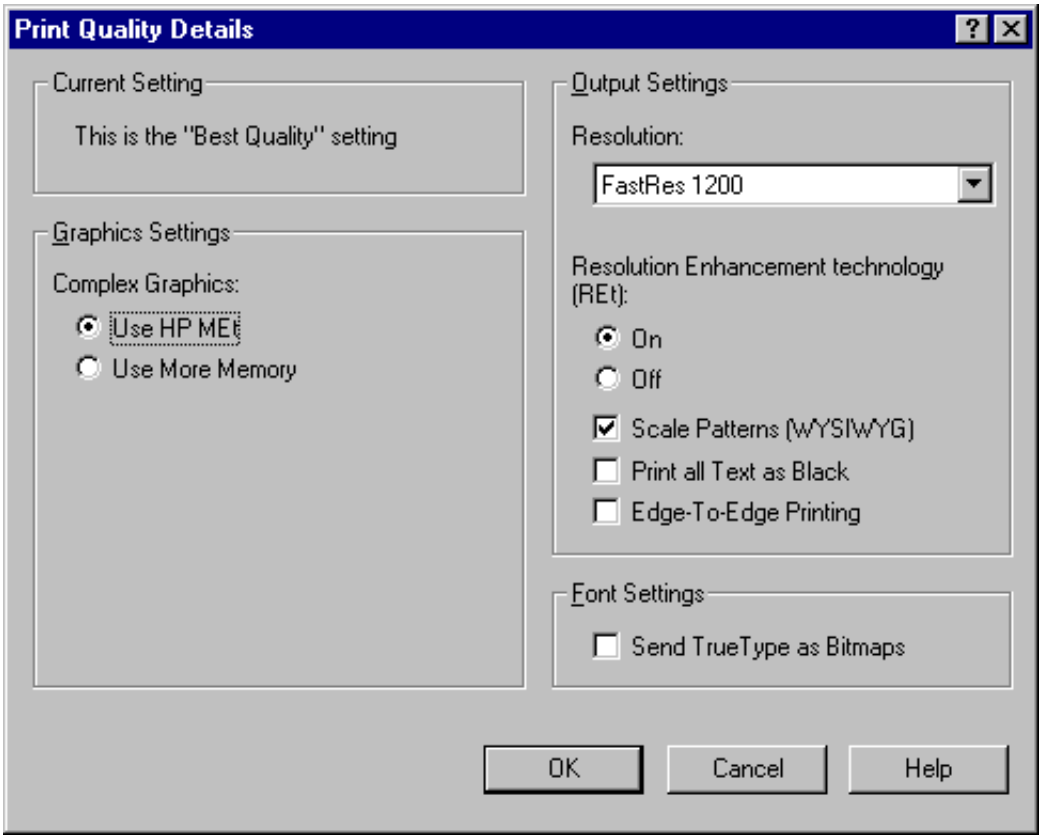


Figure 23. **Print Quality Details dialog box showing Best Quality settings**

The following illustration shows the default settings on the **Print Quality Details** tab for **600 dpi**.

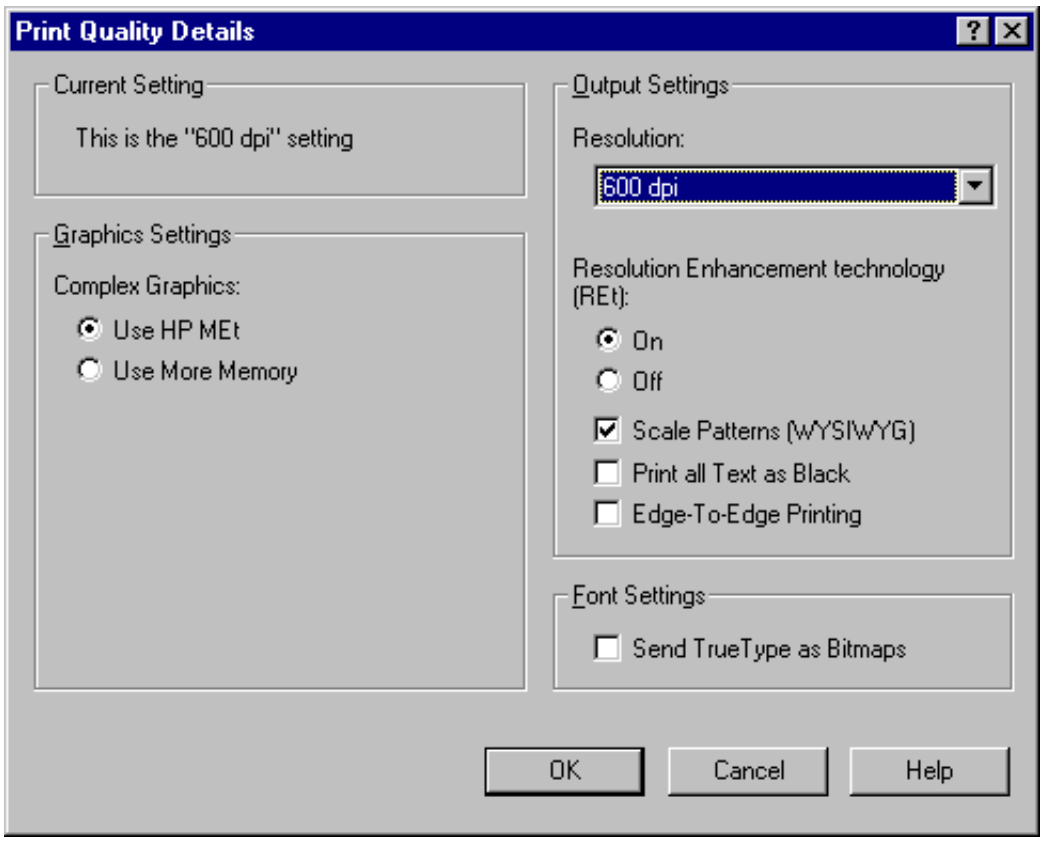


Figure 24. **Print Quality Details dialog box showing 600 dpi settings**

Graphics Settings group box

The **Graphics Settings** group box includes two options for **Complex Graphics.** Use these options to 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**.

Output Settings group box

The **Output Settings** group box contains controls for selecting **Resolution and Resolution Enhancement technology (REt)**.

Resolution

The resolution settings for the HP LaserJet 9000mfpare:

- 600 dpi
- FastRes 1200

Resolution Enhancement technology

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

Scale Patterns (WYSIWYG)

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

Print all Text as Black

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

Edge-to-Edge Printing

Edge-to-Edge Printing is off by default. When it is selected, you can use this option to 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.

Font Settings group box

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

EconoMode

The **EconoMode** check box turns this toner-saving feature on and off independently of the other **Print Quality** tab settings. When this check box is selected, the preview image lightens to reflect the expected effect of this feature. The **EconoMode** option, when selected, works only with genuine HP print cartridges. Even if the option is selected, it does not work with third-party print cartridges. The option is off by default.

The EconoMode option can also be activated from the product control panel. If the **Economode** setting on the product control panel is on, the display panel setting overrides the setting on the printer driver **Print Quality** tab. If the **Economode** setting on the product control panel is off, then the setting on the printer driver **Print Quality** tab overrides the control-panel display setting, except as noted in the following table.

Table 8. HP LaserJet 9000mfp EconoMode settings

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

Table 8. HP LaserJet 9000mfp EconoMode settings (continued) (continued)

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

Effects tab features

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

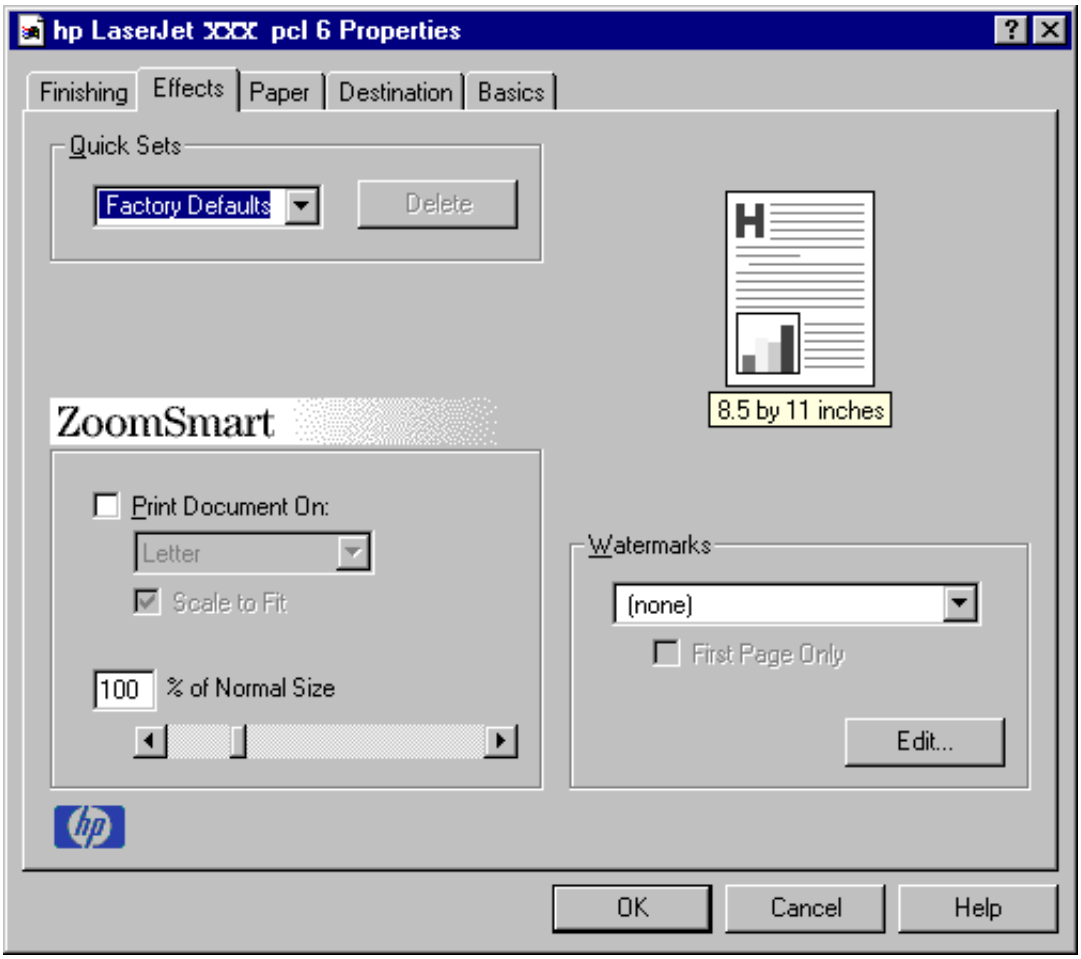


Figure 25. Effects tab

ZoomSmart

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

Print Document On: setting

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

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

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

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

Scale to Fit option

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

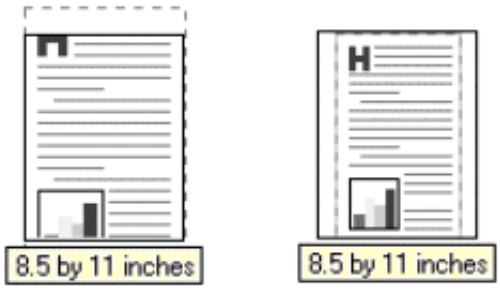


Figure 26. Preview images - Legal on Letter; Scale to Fit off (left) and on (right)

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

% of Normal Size option

The **% of Normal Size** option provides a slider bar for scaling the percentage setting. The default setting in the entry box is 100 percent of normal size. Normal size is defined as the paper size selected within the driver or what the driver receives from the 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

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

- (none)
- Confidential
- Draft
- SAMPLE

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

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

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

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

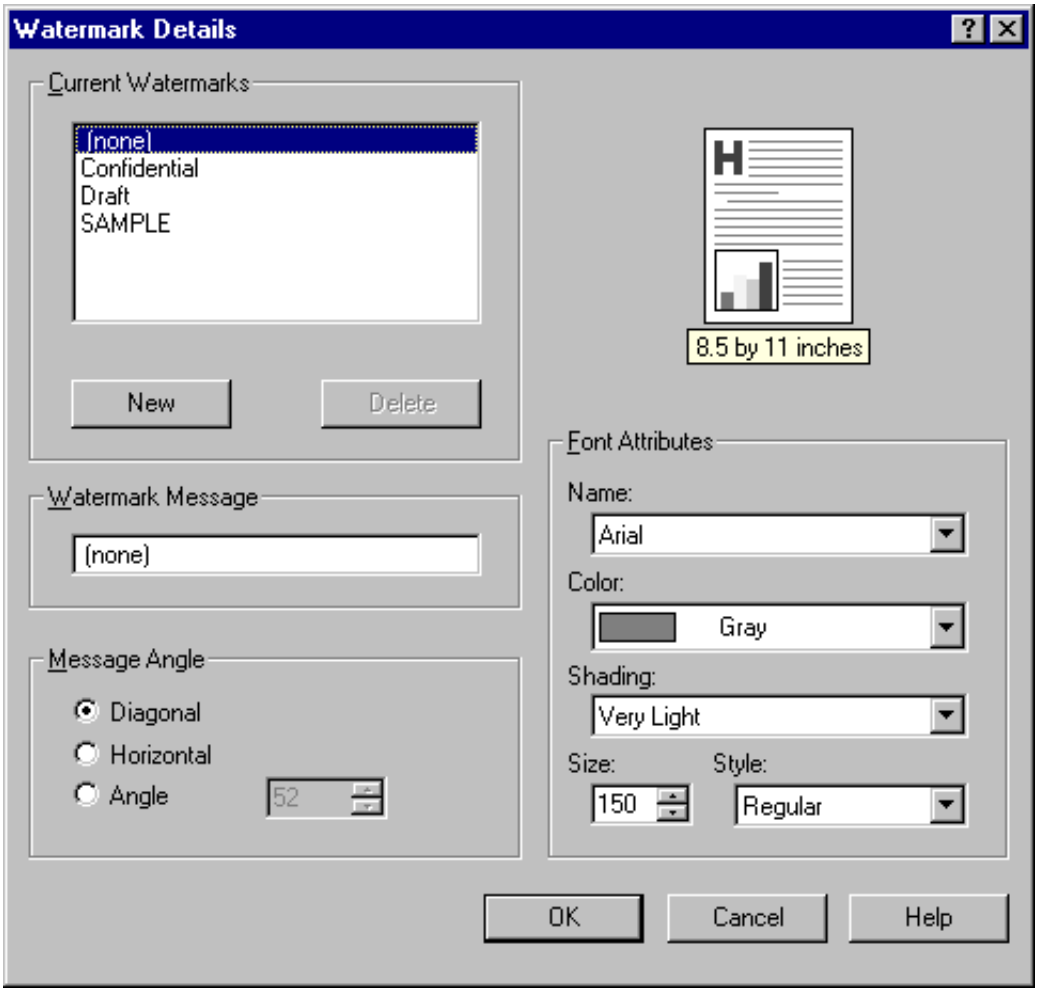


Figure 27. **Watermark Details dialog box**

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

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

Current Watermarks

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

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

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

Watermark Message

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

Message Angle

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

Font Attributes

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

Name

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

Color

For the HP LaserJet 9000mfp, the only **Color:** selection is **Gray**.

Shading

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

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

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

Size

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

Default settings

The default settings for new watermarks are **Arial** (R) font, **Gray** color, **Very Light** shading, **150 points**, and **Regular** style. The default settings for preset watermarks are **Arial** font, **Gray** color, **Very Light** shading**,** and **Bold** style. The default point size for preset watermarks is language-dependent, and varies.

Paper tab features

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

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

Printer image

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

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

- Auto Select does not have a corresponding area to highlight in the printer image.
- Selecting **Manual Feed, Tray 1, Tray 2, Tray 3, or Tray 4 in the drop-down menu** highlights the corresponding part in the printer image.
- Selecting the area that represents tray 1, 2, 3, or 4 in the bitmap will always select the corresponding tray in the Source Is: option. Manual Feed, which is available from the Source is: option, cannot be selected by selecting the bitmap.
- On the **Paper** tab, only input trays have printer-image hot spots and can be highlighted. Output bins must be selected from the **Destination** tab.

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

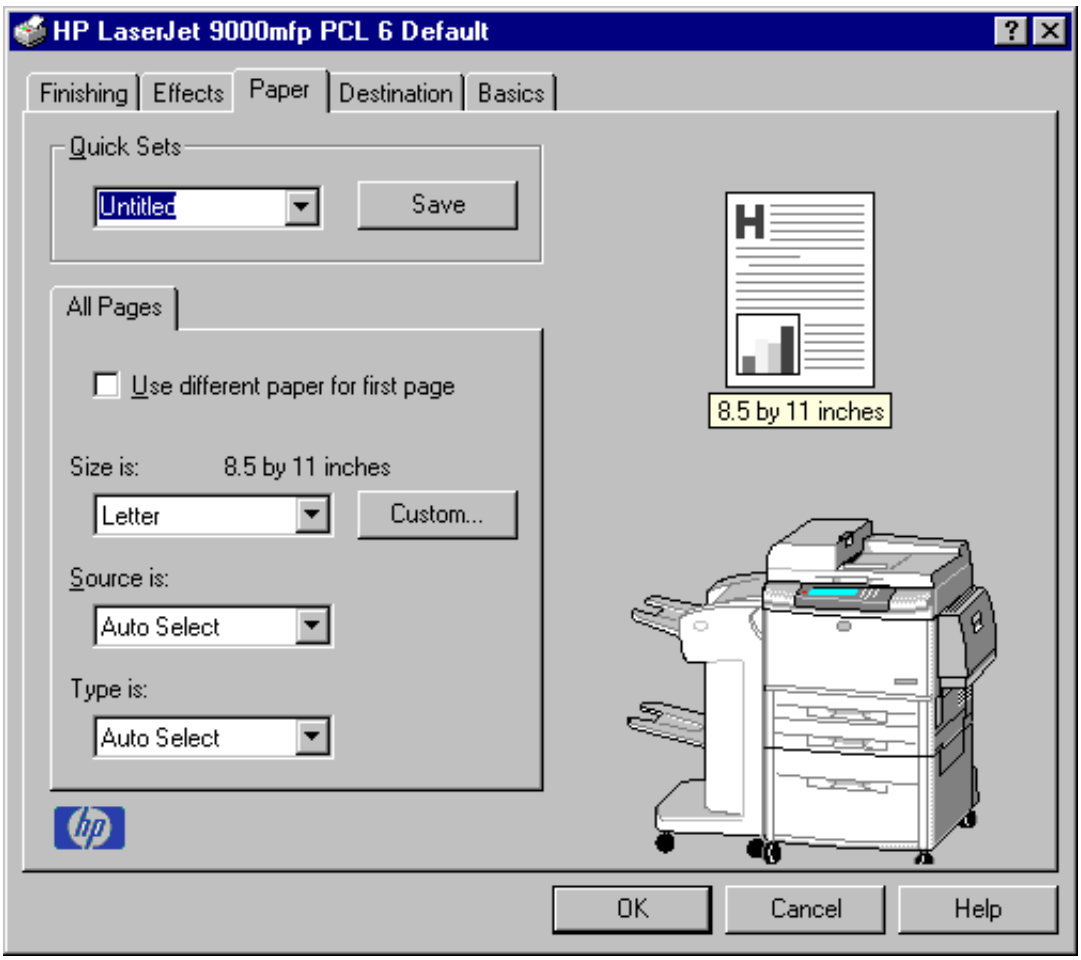


Figure 28. **Paper tab**

All Pages

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

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

Figure 29. **Other Pages mini-tab**

Back Cover

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

- **No back cover**
- **Use the first page source**
- **Use an alternate source:**

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

- **Source is:**
- **Type is:**

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

Back Cover is available only when the **Print on Both Sides** check box is selected and the **Booklet Printing:** drop-down menu (both these options are on the **Finishing** tab) is set on **Off**.

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

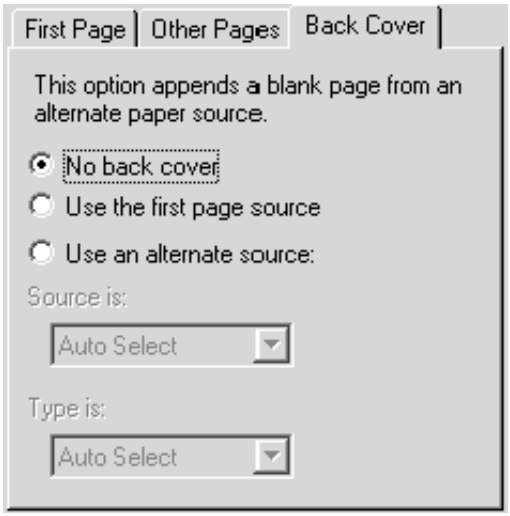


Figure 30. **Back Cover mini-tab**

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. Clicking here toggles the units of measure between inches and millimeters, offering the same options on the dimensions label in the preview image. Selecting a new size from the drop-down menu updates the media-dimensions text label as well as the preview image. Changing the orientation (on the **Basics** tab) also updates the dimensions text label.

Size can be specified only for the first page or for all pages. On the **Other Pages** and **Back Cover** mini-tabs, the **Size is:** 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.

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.

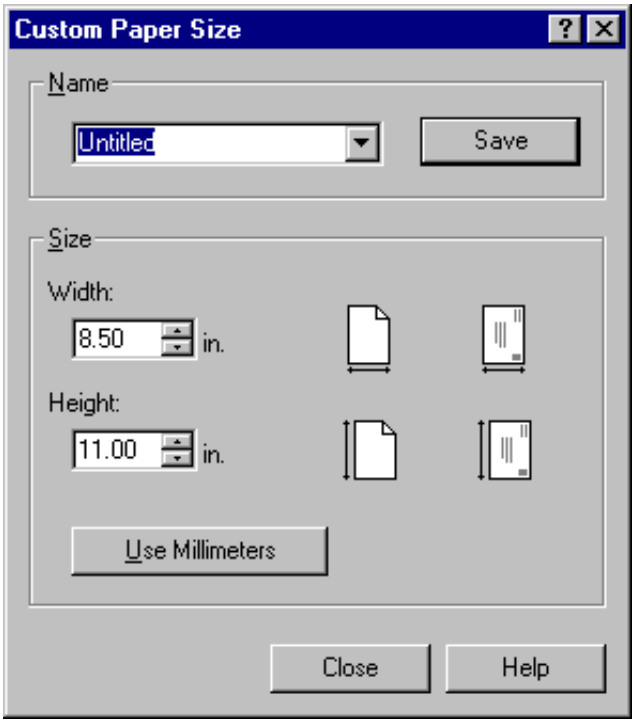


Figure 31. **Custom Paper Size dialog box**

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

Note In Windows 95, Windows 98, and Windows Me, the custom paper-size entry and storage are case-sensitive. For example, the names “Big” and “BIG” can coexist. However, in Windows NT 4.0, Windows 2000, and Windows XP, the custom paper-size entry is case-sensitive. Therefore, “Big” and “BIG” cannot coexist.

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

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

Name drop-down menu

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

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

Dynamic command button

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

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

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

Table 9. Name drop-down menu text strings

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

Width and height controls

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

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

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

The resolution of each control is one millimeter or one-tenth of an inch, depending 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 9000mfp 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.

Table 10. Custom width and height limits for the HP LaserJet 9000mfp

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 (3.9 inches by 7.5 inches)	312 mm by 470 mm (12.28 inches by 18.46 inches)
Tray 2	148 mm by 210 mm (3.9 inches by 7.5 inches)	297 mm by 432 mm (11.7 inches by 17.0 inches)
Tray 3	148 mm by 210 mm (3.9 inches by 7.5 inches)	297 mm by 432 mm (11.7 inches by 17.0 inches)
2000-sheet HCI 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)
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)
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 face-up bin	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)
Multifunction Finisher	98 mm by 191 mm (3.9 inches by 7.5 inches)	191 mm by 470 mm (7.5 inches by 18.46 inches)

Paper and envelope 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.

Table 11. Close dialog box text strings

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

On the **Paper** tab, the printer image contains hot spots for selecting a media source(tray 2, tray 3, or tray 4). When the pointer moves over a hot spot, the arrow reverts to the gloved hand used in the Bubble Help, the preview image, and other areas. The current media source is highlighted in a bright green color on the printer bitmap.

Destination tab features

The **Destination** tab provides options for job retention and output bins.

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

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

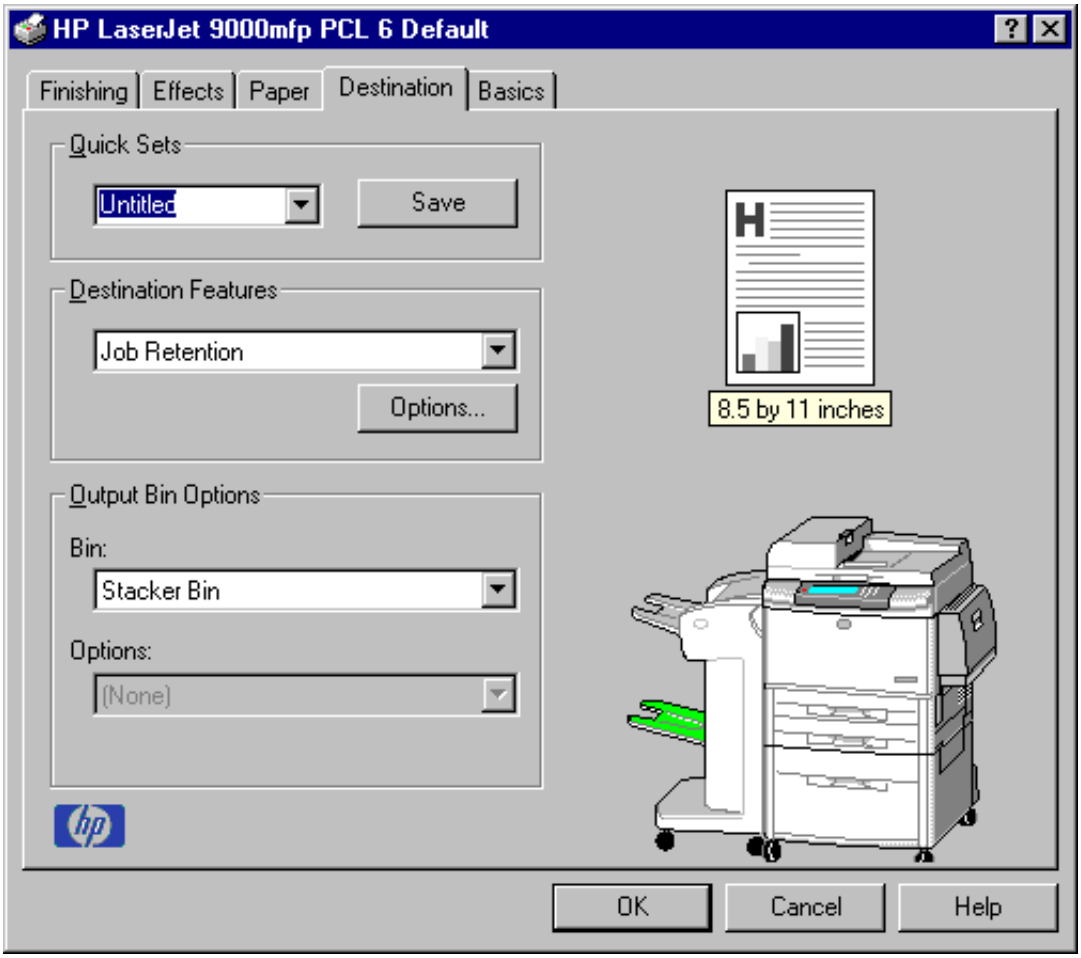


Figure 32. **Destination tab**

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

The HP LaserJet 9000mfpis equipped with a hard disk to accommodate the following Job Retention options:

- Proof and Hold
- Private Job
- Quick Copy
- Stored Job

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 steps:

Note These steps must be completed for each driver.

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

Step 2 Open the Printers window.

Step 3 Right-click the printer icon. This opens a drop-down menu. Click **Properties**. The **Properties** dialog box appears.

Step 4 Click the **Configure** tab.

Step 5 Click **Other Options**.

Step 6 Under **Storage**, click the **Printer Hard Disk** check box.

Step 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 product.

Job retention modes

Note The Job Retention feature is not supported under Windows 3.1*x*.

Using the HP LaserJet product's Job Retention feature, you can store documents at the printer 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 feature has been enabled, you can access its features in the **Destination** tab of the printer driver.

The HP LaserJet product 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 stores the print job on the printer hard disk, and prints only the first copy of the job, allowing you to check the first copy. If the document prints correctly, you can print the remaining copies of the print job from the printer control panel. The number of proof-and-hold print jobs that can be stored in the printer is set from the printer control panel.

Using a PIN for Private Job and Stored Job

The Private Job and Stored Job options can be secured by a four-digit personal identification number (PIN). This number must be entered in the printer control panel before it prints the job.

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 the PIN is 0000 for **Private Job** and **Stored Job** with **Require PIN to Print** checked.

Private Job

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

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.

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 user name and job name.

User Name

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

Job Name

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** fields can contain no more than 16 characters each, and are limited to A through Z and 0 through 9, because the name is displayed on the printer control panel. If you try to enter a lowercase character, it automatically shifts to uppercase. If you try to enter a character with an ASCII code of less than 32 or greater than 126 characters, the character is removed from the edit field, along with all characters that follow it. If you try to enter more than 16 characters, any character beyond 16 is truncated. When the dialog box is closed, or the edit box loses focus, an empty string is replaced with “Untitled”. In those languages for which “Untitled” cannot be translated without the use of invalid characters, the driver uses a string of three dashes. The acceptable characters for job name and user name vary for each operating system. The string must be displayable on the printer control panel.

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 option button.

Note These instructions are specific to the Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP 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.

Step 1 Touch **Menu** to enter the menus.

Step 2 Touch RETRIEVE JOB, and then press the Select button.

Step 3 Touch your job name and press the Select button.

Step 4 Touch PRINT (The PRINT selection might have an icon next to it indicating that the job is locked. If so, type the PIN number and then touch the job name.

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.

Step 1 Touch **Menu** to enter the menus.

Step 2 Touch RETRIEVE JOB, and then press the select button.

Step 3 Touch your job name and press the select button.

Step 4 Touch DELETE (The DELETE selection might have an icon next to it indicating that the job is locked. If so, type the PIN number and then touch the job name.

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.

Depending upon the bundle and the driver configurations, the HP LaserJet 9000mfp 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.
- Optional Multifunction Finisher. This booklet printing device creates booklets and stapled documents in a variety of sizes.

Options

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

Printer image

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

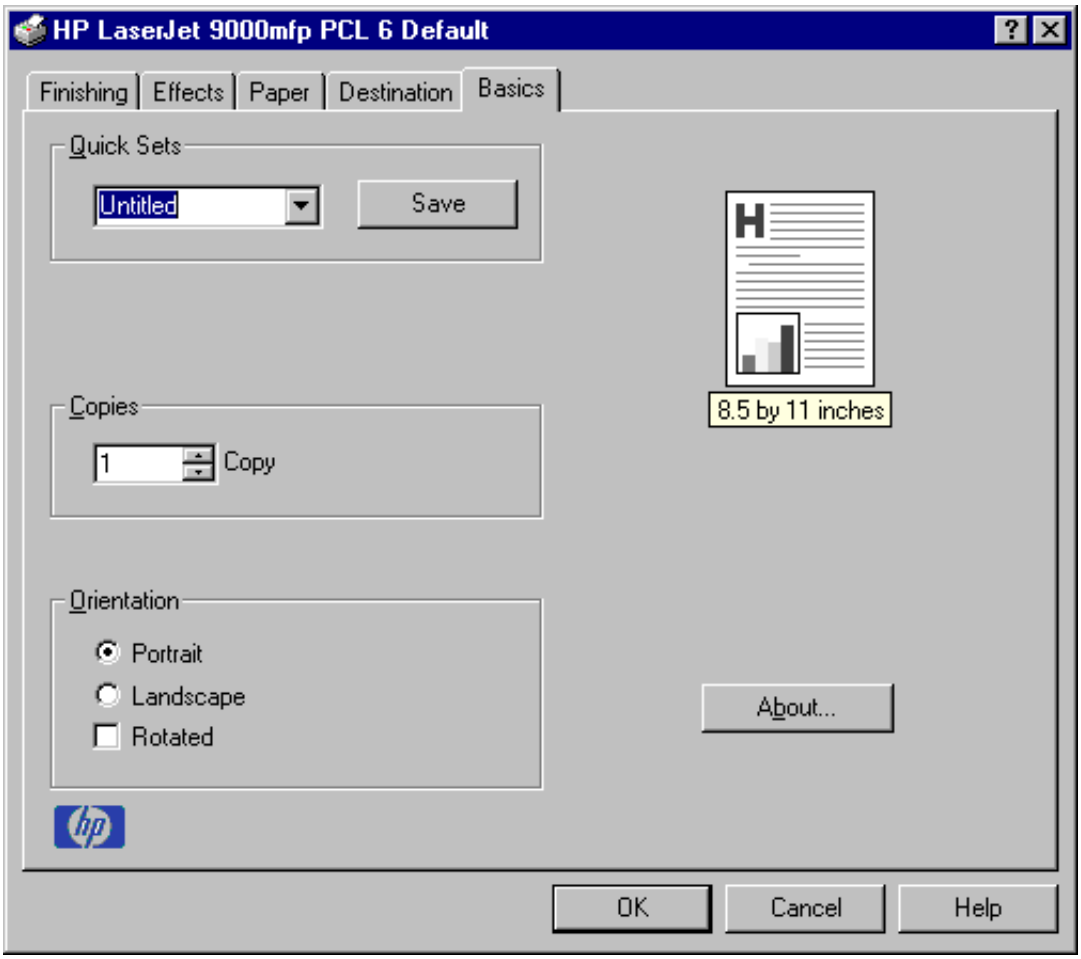


Figure 33. **Basics tab**

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 32000 for the HP LaserJet 9000mfp. The copies value will not advance from the maximum number (32000) to 1 when the up arrow is used, or change from 1 to the maximum number (32000) when the down arrow is used. Invalid entries into the edit box (such as non-numerical input, numbers less than 1 or greater than the maximum allowed) are changed to the last valid value entered when you click on another group box or leave the **Basics** tab. 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. It is recommended to set the number of copies in the application, wherever possible.

Orientation

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

The three orientation options have these configurations:

- Portrait. The top edge of the document is the shorter edge of the paper.
- Landscape. The top edge of the document is the longer edge of the paper.
- 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.

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, 11 x 17 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.

Table 12. Long edge stapling

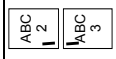
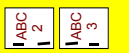
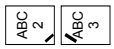
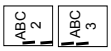
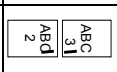
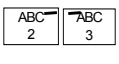
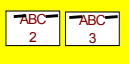
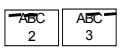
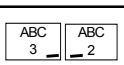
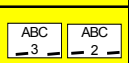
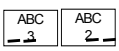
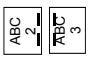
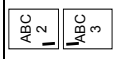
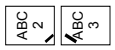
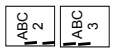
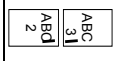
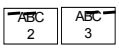
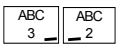
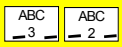
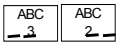
Feed direction	Orientation	Duplex	Paper Size	1 staple	2 staples	3 staples	6 staples	Angled	Custom
Long edge	Portrait	Simplex	Letter			Same side as two staples	Same side as two staples		
Long edge	Portrait Rotated	Simplex	Letter			Same side as two staples	Same side as two staples	**Not available**	
Long 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**	

Table 13. Short edge stapling

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**	

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. The figure below shows the **About** box. The information varies according to HP LaserJet model number, driver, date, and versions.

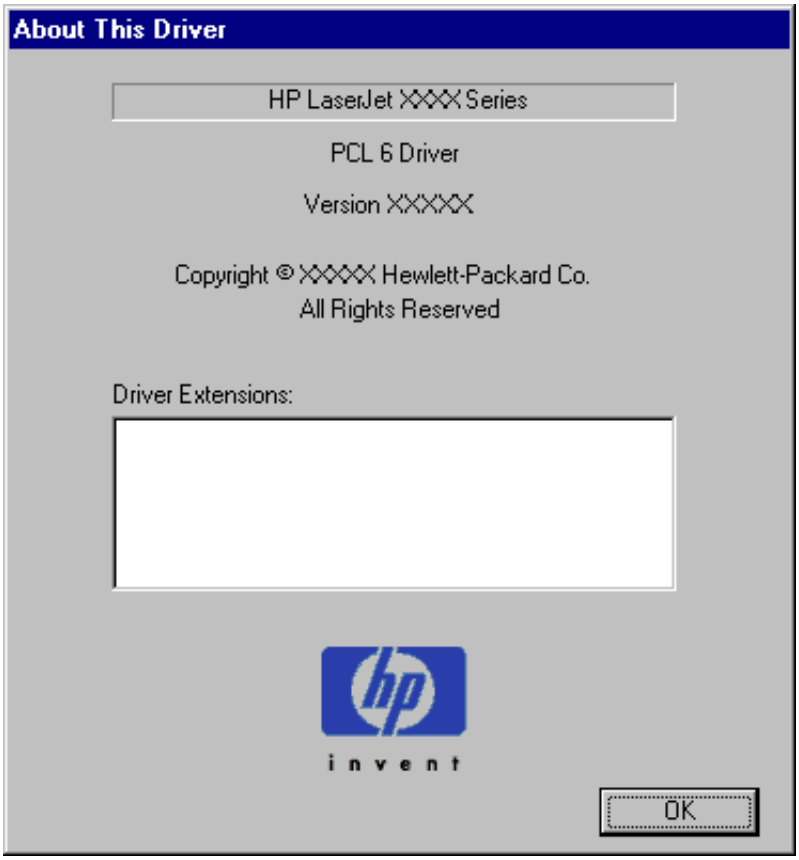


Figure 34. **About This Driver dialog box**

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 available when the driver is opened from the Printers folder by clicking **Properties**. When you open the driver from within an application, 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.

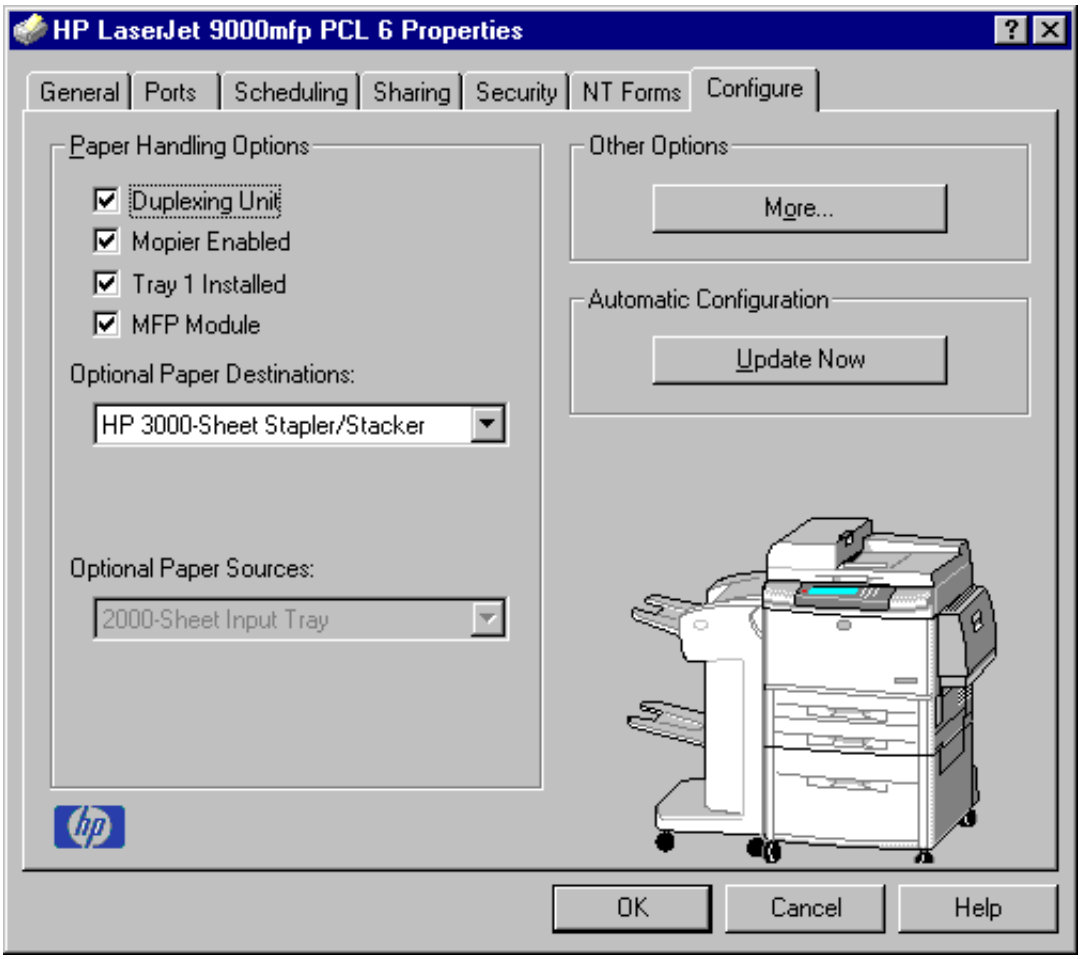


Figure 35. **Configure tab**

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

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

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. Multiple original printing (mopying) increases printer performance and reduces network traffic by sending the job to the printer once, then storing it on the hard disk. The rest of the copies are printed at the printer's fastest speed. All documents can be created, controlled, managed, and finished from the desktop, eliminating the extra step of going to a photocopier.

The HP LaserJet 9000mfp supports the Transmit Once mopying feature, and the **Mopier Enabled** option is selected by default.

The HP Laserjet 9000mfp ships with 128 MB or more of memory installed.

MFP Module

Select the **MFP Module** check box if the HP LaserJet product is a multifunction printer (mfp). The **MFP Module** option affects the printer image by applying the scanner bitmap to the top of the printer. Also, the Driver Work Space value is 19.08 MB; the total memory is 128 MB; the **Top Bin (Face Down)** option is removed from the **Output Bin Options** drop-down menu on the **Destination** tab; the HP 2000-sheet high-capacity input (HCI) tray 4 is automatically configured and rendered unconfigurable in the **Optional Paper Sources:** drop-down menu on the **Configure** tab, and **Tray 1 Installed** is checked, the **duplex unit** is checked, and **Printer Hard Disk** is checked under **Other Options** (**More...**) feature of the **Configure** tab, and **HP Multifunction Finisher** is available in the **Optional Paper Destinations:** drop-down menu on the **Configuration** tab. This option is checked by a successful bidirectional communication query or when the mfp bundle is selected during installation. Unselecting this box will cause the printer bitmap to show the HP LaserJet 9000 product with standard top bin and the top bin will be an available destination once again.

Tray 1 installed

Tray 1 is available on the HP LaserJet 9000mfp. Tray 1 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
- HP Multifunction Finisher

If the 3000-Sheet Stapler/Stacker or Multifunction Finisher is configured on the **Configure** tab, the **Staple** option is included on the **Finishing** tab.

The **Optional Paper Destinations** control is a drop-down list containing the various multi-bin output devices that are supported by the HP LaserJet 9000mfp. This includes the HP LaserJet 3000-sheet Stapler/Stacker and the HP LaserJet 3000-sheet Stacker. In addition, the HP LaserJet Multifunction Finisher will be listed if **MFP Module** is checked. Configuring the HP Multifunction Finisher will cause four additional Quick Sets to appear, **Booklet on Letter**, **Booklet on 11x17**, **Booklet on A4**, and **Booklet on A3** (see the “Quick Sets” section). The first item in this list is "(none)," which is the default setting. The selection made from this list will be shown in the printer image and will affect the choices available on the **Destination** tab. Each of these devices has a different effect on the **Destination** tab. Note that these devices cannot be attached to the printer unless the 2000-sheet tray 4 is in place. So, when any of these devices is chosen, the HP LaserJet XY Input Tray (HCI) is automatically configured and grayed.

When the **Multifunction Finisher** is selected in the **Optional Paper Destinations:** drop-down menu on the **Configure** tab, **Booklet Bin** is added to the **Output Bin Options** drop-down menu on the **Destination** tab. In addition, the **Fold/Saddle Stitch** option is added to the **Document Options** group box on the **Finishing** tab.

Any change made to this setting will reset the output bin (specified in the **Destination** tab) to the default setting.

Optional Paper Sources

The **Optional Paper Sources:** drop-down menu lists optional paper sources for the HP LaserJet 9000mfp. The list of available paper sources varies, depending on your product, its input accessories, and the product configuration settings on the **Configure** tab.

For the HP LaserJet 9000mfp, the Input Tray option (tray 4) is grayed out in the **Optional Paper Sources:** drop-down menu, since tray 4 is pre-installed and is therefore no longer an “optional” paper source. Tray 4 can be chosen using the **Paper** tab.

Other Options

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

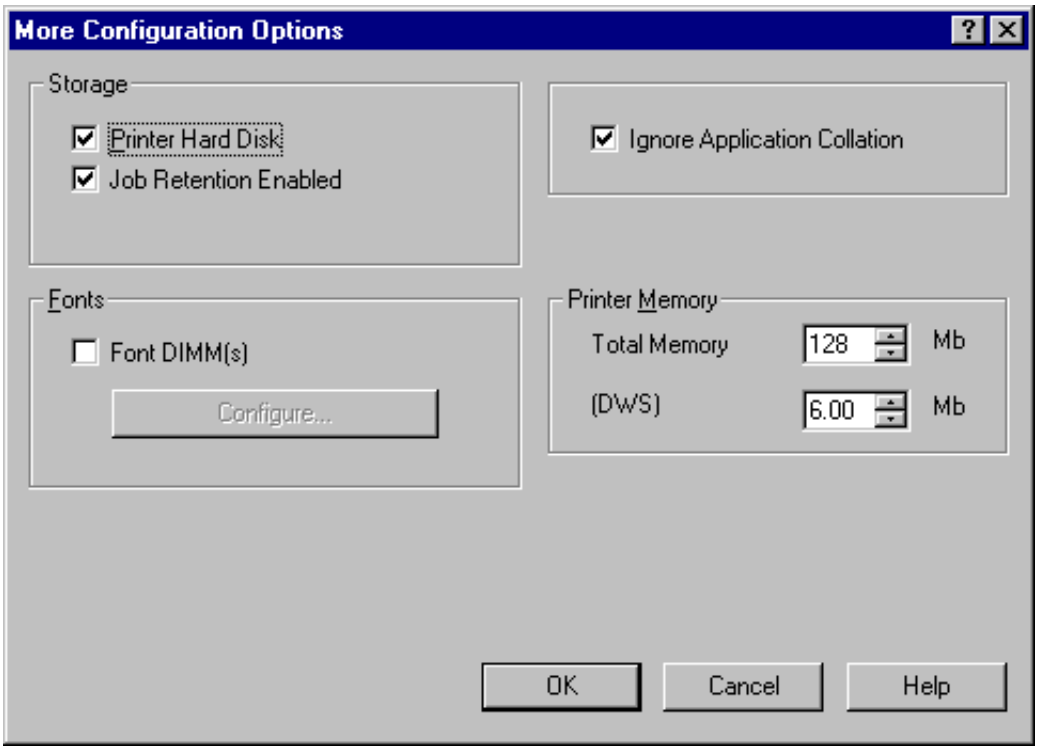


Figure 36. **More Configuration Options dialog box**

Storage

In **Storage**, you can specify whether a printer hard disk is installed and 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. **Job Retention Enabled** determines whether **Job Retention** appears as a feature on the **Destination** tab. Because this is the only possible Destination Feature for the HP LaserJet product, this also determines if the **Destination Features** group box appears on the **Destination** tab. If **Job Retention Enabled** is not selected in this dialog box, the **Destination Features** drop-down menu does not appear on the **Destination** tab.

The **Job Retention Enabled** check box is disabled unless the **More...** dialog box of the **Configure** tab indicates the printer has a hard disk and at least 128 MB of RAM installed. When the **Printer Hard Disk** check box under **More Options** is selected, and 128 MB of RAM is installed, the **Job Retention Enabled** check box is selected by default.

Printer Memory

Total Memory. This shows the total amount of memory physically installed in the printer. Total Printer Memory updates from a successful bidirectional query.

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 **DWS**, print a configuration page and find the **DWS** value in the Memory section of the configuration page. The **DWS** value might change if you switch printer model settings. Then, enter that value in the **DWS** box in the **More Configuration Options** dialog box. An accurate **DWS** 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.

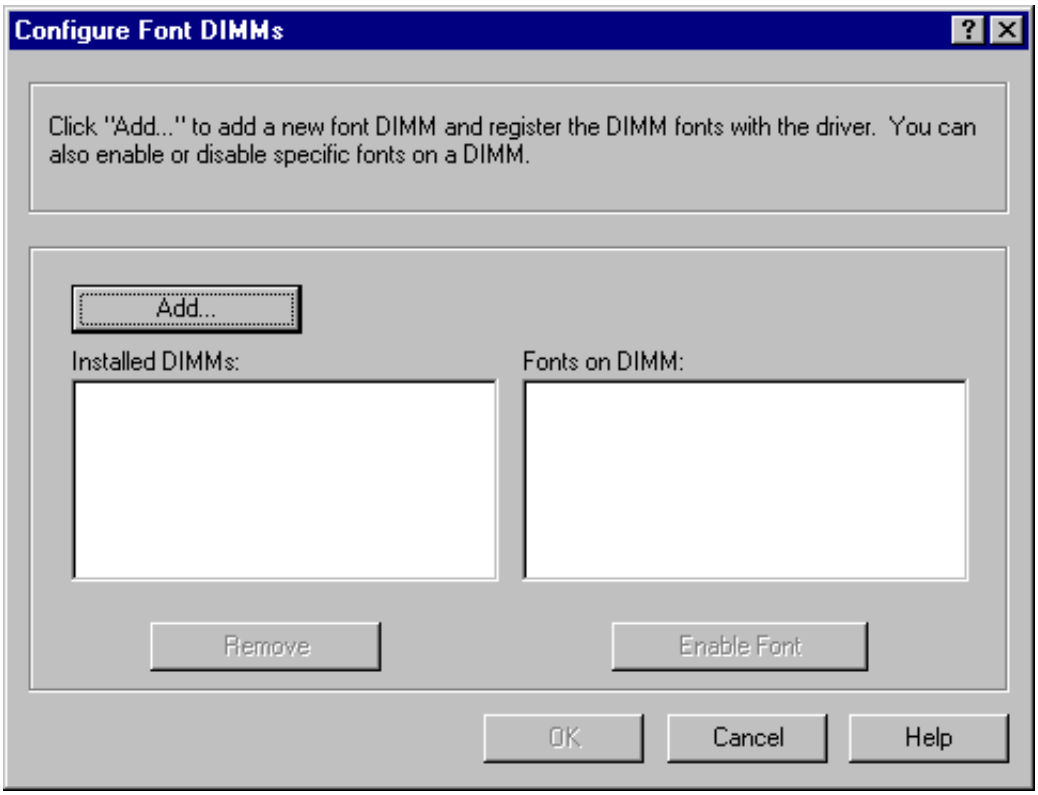


Figure 37. **Configure Font DIMMs dialog box**

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.
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 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.

The table below shows the expected behavior for a two-page print job when the number of copies is three.

Table 14. Printer behavior with Ignore Application Collation settings

Hard disk on printer	Mopier Enabled check box	Ignore Application Collation check box	Application Collation check box in Print Dialog	Commands sent by printer	Pages sent to printer	Pages output from printer
Yes	On	On	On Off None	QTY=3	1,2	1,2,1,2,1,2
Yes	On	On	On	QTY=3	1,2	1,2,1,2,1,2
Yes	On	Off	Off	Copies=3	1,2	1,1,1,2,2,2
Yes/No	Off	Off	On	Copies=1	1,2,1,2,1,2	1,2,1,2,1,2
Yes/No	Off	Off	Off	Copies=3	1,2	1,1,1,2,2,2
Yes/No	Off	Off	None	Copies=1	1,2,1,2,1,2	1,2,1,2,1,2
Yes/No	Off	Off	None	Copies=3	1,2	1,1,1,2,2,2
No	On	On	On Off None	QTY=3	1,2	1, 2

Table 14. Printer behavior with Ignore Application Collation settings (continued)

Hard disk on printer	Mopier Enabled check box	Ignore Application Collation check box	Application Collation check box in Print Dialog	Commands sent by printer	Pages sent to printer	Pages output from printer
No	On	Off	On Off None	QTY=3	1,2	1, 2

Placing the **Ignore Application Collation** setting in the printer properties means that, on a Windows NT network, clients connecting to the printer through a network share cannot change its value; only the print queue administrator has the power to decide how the printer driver is set up.

The **Ignore Application Collation** setting is not a means to print non-collated copies. If you want to print non-collated copies, disable mopying.

Automatic Configuration

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

Printer image

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

NT Forms tab features

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

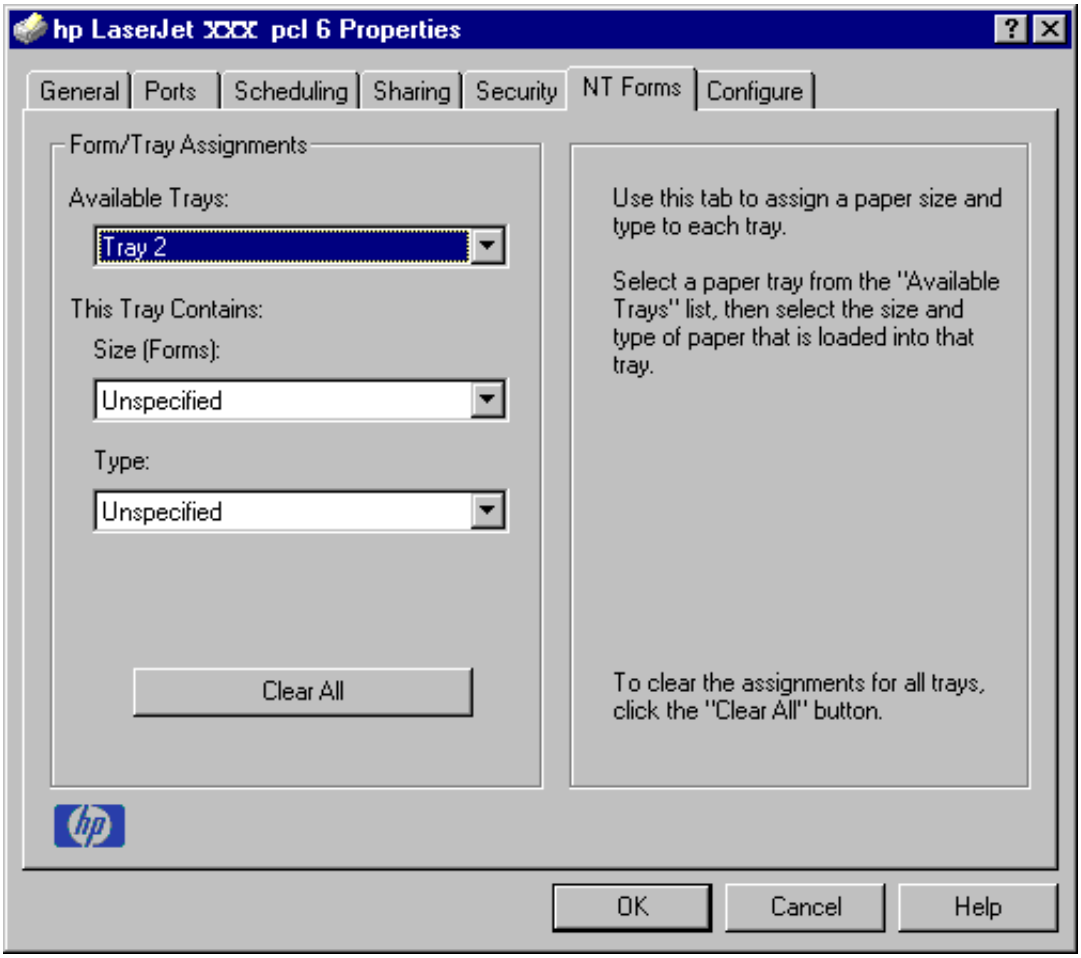


Figure 38. **Driver NT Forms tab**

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 product 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 product, 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 product. 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 PScript printer driver.

PS 3 Emulation support for the HP LaserJet product

The 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 printer PS Level 3 emulation PPD, available on the HP LaserJet 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.

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**

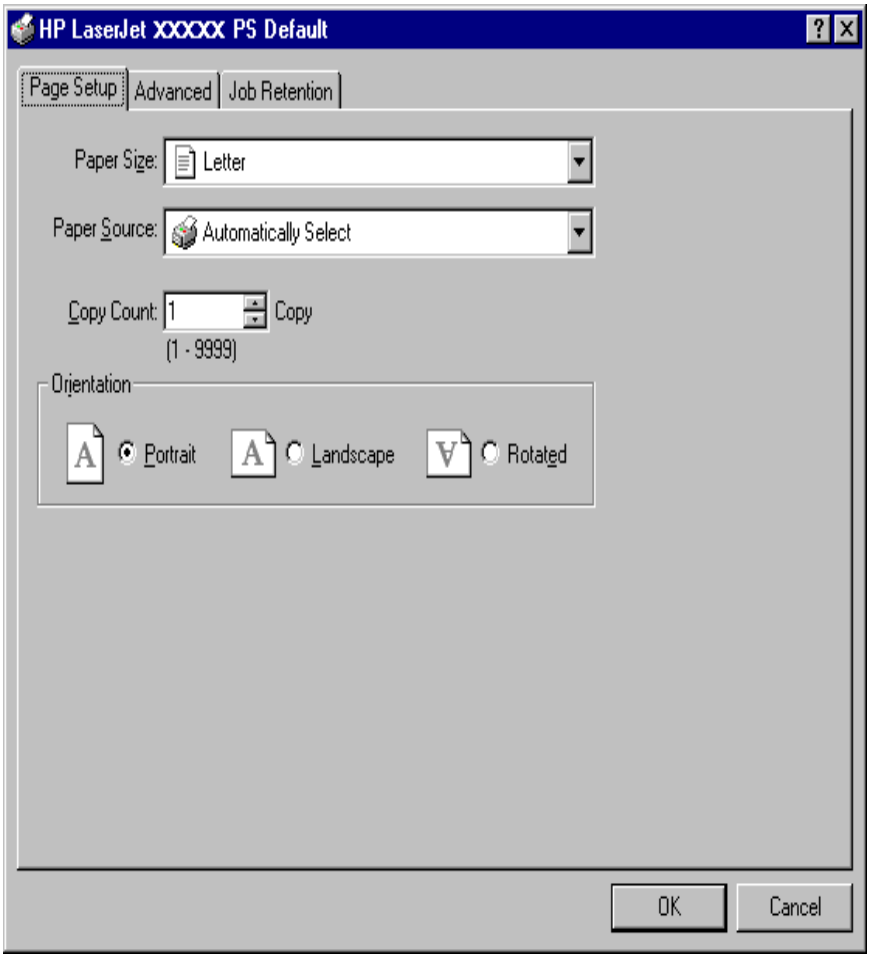


Figure 39. **Page Setup tab**

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)

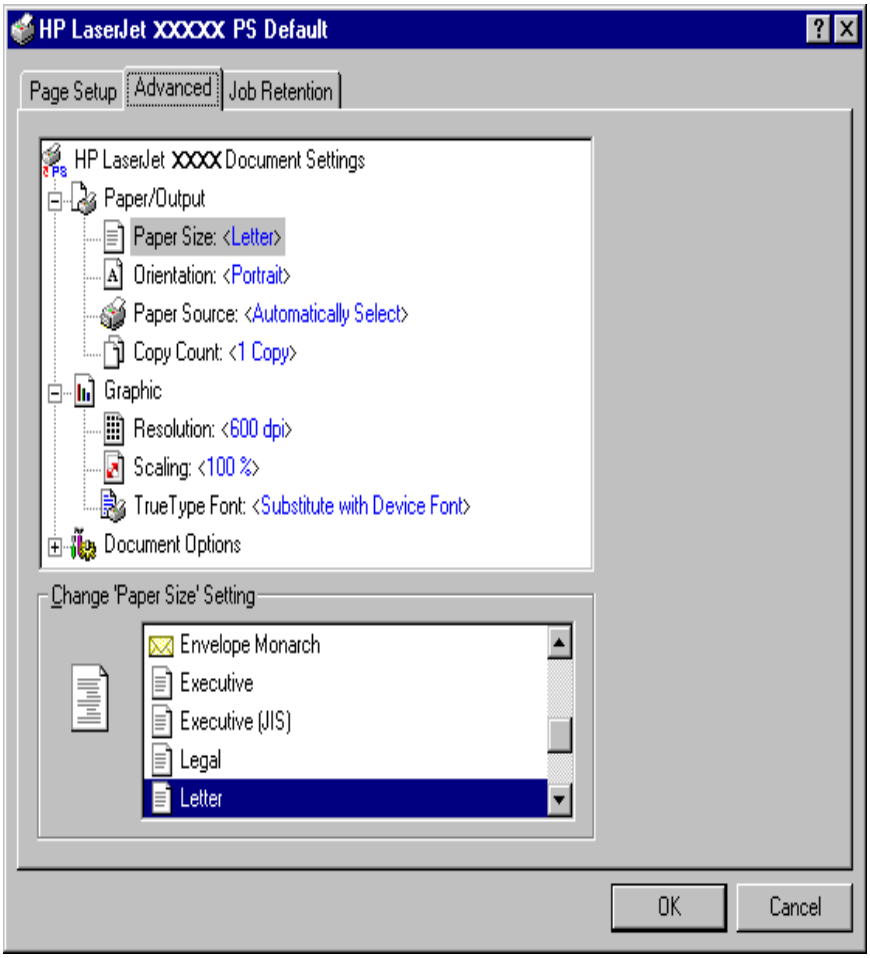


Figure 40. **Advanced tab**

Job Retention tab features

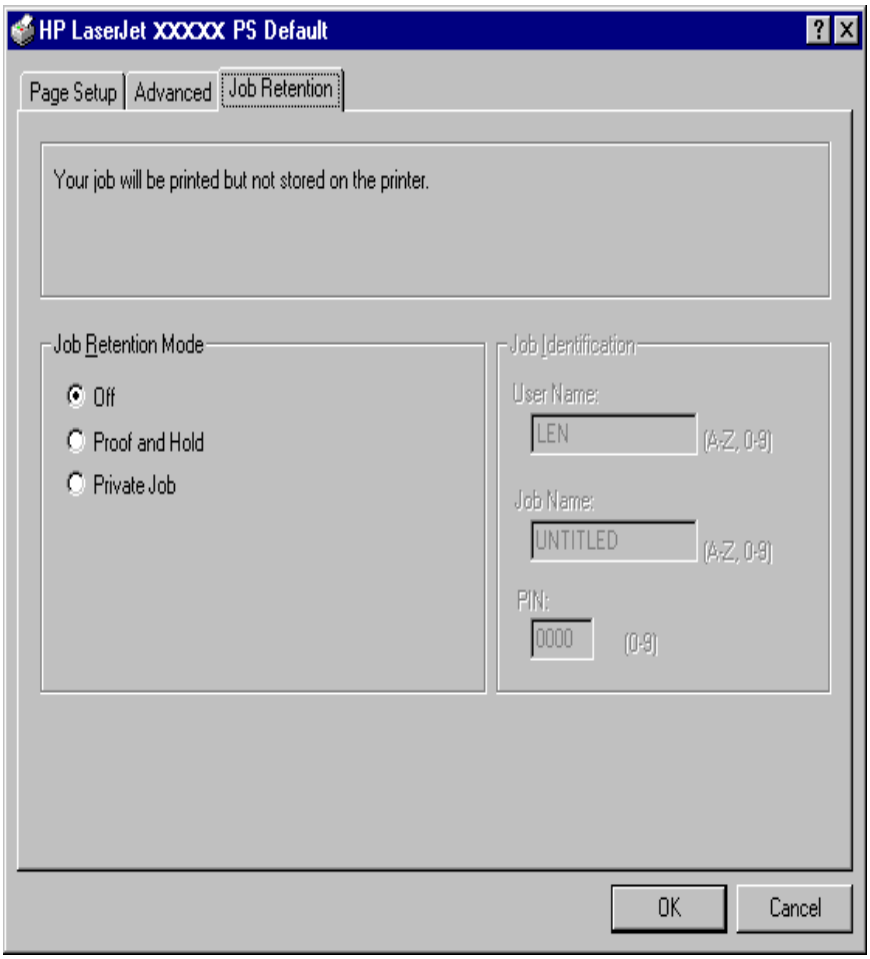


Figure 41. **Job Retention tab**

The HP LaserJet product offers the following PS 3 emulation **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

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

Private Job and Stored Job)

The Private Job and Stored Job options can be secured by a four-digit personal identification number (PIN).

PIN

You can assign a four-digit PIN to a print job when you are using the Private Job or Stored Job feature. This number must be entered in the printer control panel before it prints the job.

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 the PIN is 0000 for **Private Job** and **Stored Job** with **Require PIN to Print** checked.

Private Job

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

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

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.

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.

Device Settings tab features

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

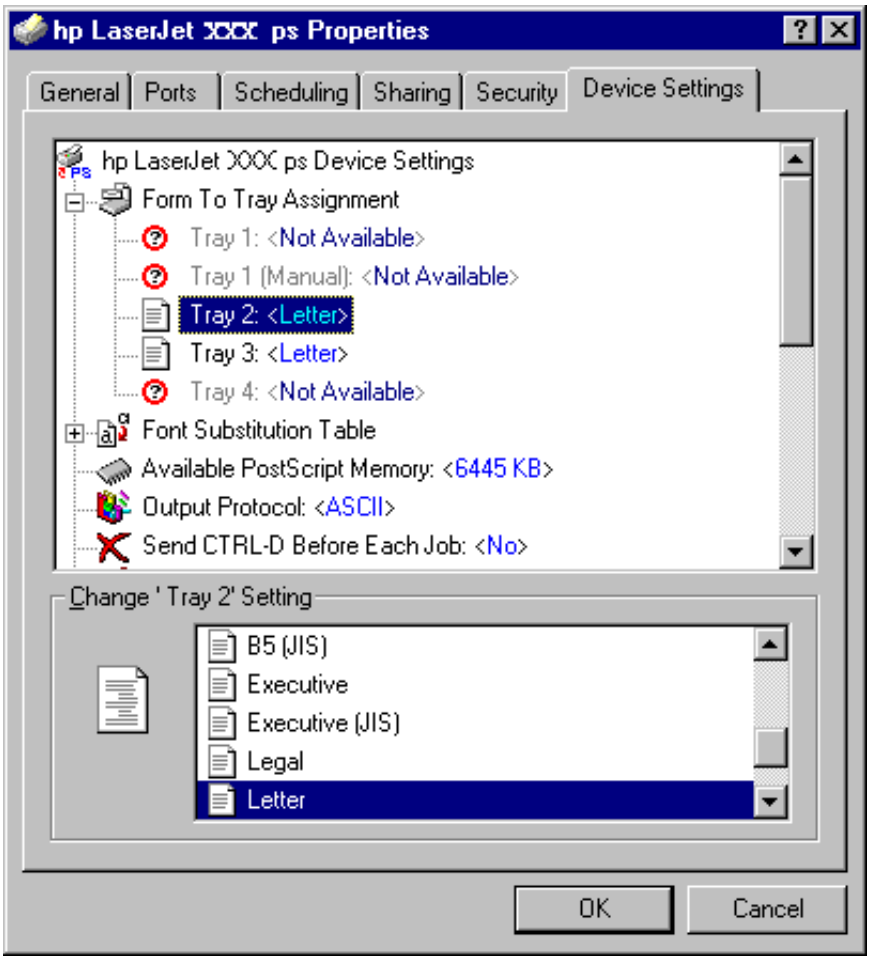


Figure 42. **Device Settings tab**

HP LaserJet software CD-ROM

In-box file layout

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

HP LaserJet software CD-ROM, Windows partition

Directory structure

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

- Root directory
- Drivers directory
- Fonts directory
- Manuals directory
- Reader directory
- Additional software
- Setup

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

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

HP LaserJet software CD-ROM, Macintosh Partition

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

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

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

Availability and fulfillment

This section provides information about the availability of the HP LaserJet printing system software and related software and firmware. Software and firmware are available on CD-ROM from HP fulfillment centers or can be downloaded from the http://www.hp.com/go/lj9000_software Web site.

In-box CD-ROMs

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

Table 15. CD-ROM versions

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

9000mfp **Web ordering**

The HP LaserJet 9000mfp 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 HP LaserJet products 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 printing system software is available for download from the HP Web site at:

http://www.hp.com/go/lj9000_software

The software supports the following operating systems:

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

Printer firmware

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

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

Note PCL 5e is not supported in Asian languages.

Operating system driver bundles

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

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

Point-and-print bundles

The HP LaserJet 9000mfpPCL 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 software components by operating system.

In the following table, “3.x” refers to Windows 3.1*x*. “9x/Me” refers to Windows 95, Windows 98, and Windows Me. “2K” refers to Windows 2000. “4.0” refers to Windows NT 4.0. “XP” refers to Windows XP.

Table 16. Software component availability for HP LaserJet 9000 product

Component	3.x	9x/ Me	4.0	2K/ XP	OS/2	Mac	UNIX	Linux
Drivers								
PCL 6		X	X	X				
PCL 5e		X	X	X				
PCL 6 8100	X							
PCL 5e 8100	X							
PCL5 Unidriver GPD				X				
PScript Driver & PPD	X	X	X	X				
Mac QuickDraw PPD						X		
OS/2 IBM Drivers					X			
AutoCAD	X	X	X					
Installers								
Common Windows Installer		X	X	X				
CD-ROM Browser		X	X	X				
Customization Utility		X	X	X				
Network Installer		X	X	X				
Fonts		X	X	X				
INF File (Add Printer)	X	X	X	X				
Plug & Play		X	X	X				
Point & Print		X	X	X				
Add Printer	X	X	X	X				
3.1*x* Font Installer[1]	X							
Macintosh Installer for OSs 8 and 9						X		
Macintosh Installer for OS X						X		
Web Registration		X	X	X				
Bidirectional communication								
Network Bidirectional Communications		X	X	X				
Remote management and status								
Web JetAdmin			X	X			X	
Applet for Web JetAdmin			X	X			X	
Macintosh LJ Utility						X		
Printer Status and Alerts		X	X	X				

Table 16. Software component availability for HP LaserJet 9000 product (continued)

Component	3.x	9x/ Me	4.0	2K/ XP	OS/2	Mac	UNIX	Linux
Autoconfiguration		X	X	X				
Online Documentation								
Adobe Acrobat Reader	X	X	X	X		X		
HP LaserJet 9000mfp start Guide	X	X	X	X		X		
HP LaserJet 9000mfp *use* guide	X	X	X	X		X		
HP LaserJet 9000mfp Installation	X	X	X	X		X		
HP LaserJet 9000mfp Release Notes	X	X	X	X		X		
2000-sheet Feeder Guide	X	X	X	X		X		
Duplexing unit Guide	X	X	X	X		X		
Multipurpose Tray Guide	X	X	X	X		X		
HP Jetdirect Guide	X	X	X	X		X		
Stacker/Stapler Guide	X	X	X	X		X		
Multifunction Finisher Guide		X	X	X		X		
Online Manual Printer	X	X	X	X		X		
Mac PS Help						X		
Help	X	X	X	X		X		
Other								
PS Fonts	X	X	X	X				
PS Fonts DIMM		X	X	X		X		

[1]Supported as a stand-alone utility.

Software component localization

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

Components that are not available in any given language are supported in English.

Table 17. Software component localization

Component	Operating system	AR	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, XP	x[1]	x	x	x	x	x[1]	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Printer Status and Alerts	9x, 4.0, 2000, XP	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
HP Resource Manager	9x, 4.0, 2000, XP			x	x	x		x	x	x	x	x		x									

Table 17. Software component localization (continued)

Component	Operating system	AR	EN	FR	IT	GE	HE	SP	JN	KO	TC	SC	SW	DU	PG	NW	FN	DN	CZ	PO	RU	HU	TU
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	9x, 4.0, 2000, XP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PCL 5e	9x, 4.0, 2000, XP	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X
Printing System Installation Notes ReadMe	9x, 4.0, 2000, XP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Printing System Release Notes (Late-breaking ReadMe	9x, 4.0, 2000, XP		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, XP, UNIX		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, XP, UNIX		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
Online manuals (PDF)	9.x, 4.0, 2000, XP		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 OS/2 Driver - PS	OS/2		IBM	IBM	IBM	IBM		IBM					IBM	IBM	IBM	IBM	IBM	IBM					
Standard Fonts	9x, 4.0, 2000, XP	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
PS3 Fonts	9x, 4.0, 2000, XP	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X

[1]For the Windows NT 4.0 operating system, the English driver is used.

Language Key:
AR = Arabic
EN = 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

4 Installing Windows printing system components

Introduction

This section provides system requirements and procedures for installing and removing the HP LaserJet printing system software using Windows operating systems. It also provides information about font support and system modifications. The following Windows operating systems are supported:

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

System Requirements

The system requirements necessary to install and use the HP LaserJet printing system software on each supported operating system are listed below.

Note The available disk space listed in the subsections below must be available on the same partition as the operating system.

Windows 3.1*x*

- 386 processor or higher
- Minimum 16 color/greyscale display with 640 x 480 pixel resolution (VGA)
- 16 MB RAM
- 20 MB of available disk space for full installation

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

- Pentium processor
- Minimum 16 color/greyscale display with 640 x 480 pixel resolution (video graphics array [VGA])
- Same as the minimum requirements for the operating system
- 64 MB of available disk space for full installation

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

This section addresses the following topics:

- Font support
- General installation for Windows 95, WIndows 98, WIndows Me, Windows NT 4.0, WIndows 2000, and Windows XP operating systems
- Detailed WIndows installation instructions
- Setting a default printer

Font support

Basic fonts

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

- Arial (R)
- Courier New Italic
- Times New Roman Italic
- Arial Italic
- Courier New Bold
- Times New Roman Bold
- Arial Bold
- Courier New Bold Italic
- Times New Roman Bold Italic
- Arial Bold Italic
- Symbol
- Wingdings
- Courier New
- Times New Roman

Default Fonts

The following default fonts are installed through a Typical Installation of the HP LaserJet printing system software.

Table 18. Default Fonts

File name	Font name
albr85w.TTF	Albertus Extra Bold
albr55w.TTF	Albertus Medium
olvr55w.TTF	Antique Olive
olvr75w.TTF	Antique Olive Bold
olvr56w.TTF	Antique Olive Italic
cgor45w.TTF	CG Omega
cgor65w.TTF	CG Omega Bold

Table 18. Default Fonts

File name	Font name
cgor66w.TTF	CG Omega Bold Italic
cgor46w.TTF	CG Omega Italic
cgtr45w.TTF	CG Times
cgtr65w.TTF	CG Times Bold
cgtr66w.TTF	CG Times Bold Italic
cgtr46w.TTF	CG Times Italic
clar67w.TTF	Clarendon Condensed Bold
coronet.TTF	Coronet
cpsr45w.TTF	CourierPS
cpsr65w.TTF	CourierPS Bold
cpsr66w.TTF	CourierPS Bold Oblique
cpsr46w.TTF	CourierPS Oblique
garr45w.TTF	Garamond
garr65w.TTF	Garamond Bold
garr46w.TTF	Garamond Italic
garr66w.TTF	Garamond Kursiv Halbfett
helr45w.TTF	Helvetica
helr65w.TTF	Helvetica Bold
helr66w.TTF	Helvetica Bold Oblique
helr47w.TTF	Helvetica Narrow
helr67w.TTF	Helvetica Narrow Bold
helr68w.TTF	Helvetica Narrow Bold Oblique
helr48w.TTF	Helvetica Narrow Oblique
helr46w.TTF	Helvetica Oblique
avgr45w.TTF	ITC Avant Garde Gothic Book
avgr46w.ttg	ITC Avant Garde Gothic Book Oblique
avgr65w.TTF	ITC Avant Garde Gothic Demi
avgr66w.TTF	ITC Avant Garde Gothic Demi Oblique
bokr75w.TTF	ITC Bookman Demi
bokr76w.TTF	ITC Bookman Demi Italic
bokr35wq.TTF	ITC Bookman Light
bokr36w.TTF	ITC Bookman Light Italic
chanc___.TTF	ITC Zapf Chancery Medium Italic
dings___.TTF	ITC Zapf Dingbats
letr65w.TTF	Letter Gothic
letr65w.TTF	Letter Gothic Bold
letr46w.TTF	Letter Gothic Italic
marigold.TTF	Marigold
ncsr75w.TTF	New Century Schoolbook Bold
ncsr76w.TTF	New Century Schoolbook Bold Italic

Table 18. Default Fonts

File name	Font name
ncsr56w.TTF	New Century Schoolbook Italic
ncsr55w.TTF	NEw Century Schoolbook Roman
palr65w.TTF	Palatino Bold
palr66w.TTF	Palatino Bold Italic
palr46w.TTF	Palatino Italic
palr45w.TTF	Palatino Roman
symps__.TTF	SymbolPS
timr65w.TTF	Times Bold
timr66w.TTF	Times Bold Italic
timr46w.TTF	Times Italic
timr45w.TTF	Times Roman
unvr65w.TTF	Univers Bold
unvr66w.TTF	Univers Bold Italic
unvr67w.TTF	Univers Condensed Bold
unvr68w.TTF	Univers Condensed Bold Italic
unvr57w.TTF	Univers Condensed Medium
unvr58w.TTF	Univers Condensed Medium Italic
unvr55w.TTF	Univers Medium
unvr56w.TTF	Univers Medium Italic

Ninety-two additional PS 3 fonts are also available on the CD-ROM.

Table 19. Additional PS 3 fonts

File name	Font name
PS_12639.TTF	Albertus MT
PS_12640.TTF	Albertus MT Italic
PS_14530.TTF	Albertus MT Light
PS-11120.TTF	Antique Olive CompactPS
PS_11119.TTF	Antique Olive Roman
PS_11118.TTF	Antique Olive Roman Bold
PS_11846.TTF	Antique Olive Roman Italic
PS_24516.TTF	Apple Chancery Italic
PS_12704.TTF	Bodoni Poster
PS_14508.TTF	Bodoni PosterCompressed
PS_12581.TTF	BodoniPS
PS_12585.TTF	BodoniPS Bold
PS_12586.TTF	BodoniPS Bold Italic
PS_12582.TTF	BodoniPS Italic
PS_24517.TTF	Candid
PS_24518.TTF	Chicago

Table 19. Additional PS 3 fonts (continued)

File name	Font name
PS_14513.TTF	Clarendon Light
PS_10269.TTF	ClarendonPS
PS_12968.TTF	ClarendonPS Bold
PS_10369.TTF	Cooper Black
PS_10370.TTF	Cooper Black Italic
PS_14514.TTF	Copperplate32bc
PS_14515.TTF	Copperplate33bc
PS_10249.TTF	Coronet
PS_10267.TTF	Eurostile
PS_10268.TTF	Eurostile Bold
PS_14512.TTF	Eurostile Bold ExtendedTwo
PS_14511.TTF	Eurostile ExtendedTwo
PS_10267.TTF	Eurostile Medium
PS_24509.TTF	Geneva
PS_13872.TTF	GillSans
PS_13874.TTF	GillSans Bold
PS_13875.TTF	GillSans Bold Italic
PS_14053.TTF	GillSans Condensed
PS_14054.TTF	GillSans Condensed Bold
PS_14051.TTF	GillSans ExtraBold
PS_13873.TTF	GillSans Italic
PS_13870.TTF	GillSans Light
PS_13871.TTF	GillSans Light Italic
PS_12542.TTF	Goudy
PS_12544.TTF	Goudy Bold
PS_10695.TTF	Goudy Bold Italic
PS_12545.TTF	Goudy ExtraBold
PS_12543.TTF	Goudy Italic
PS_14526.TTF	Helvetica Condensed
PS_14528.TTF	Helvetica Condensed Bold
PS_14529.TTF	Helvetica Condensed Bold Italic
PS_14527.TTF	Helvetica Condensed Italic
PS_24519.TTF	Hoefler Text
PS_24521.TTF	Hoefler Text Black
PS_24522.TTF	Hoefler Text Black Italic
PS_24520.TTF	Hoefler Text Italic
PS_24523.TTF	Hoefler Text Ornaments
PS_14503.TTF	Joanna MT
PS_14505.TTF	Joanna MT Bold
PS_14506.TTF	Joanna MT Bold Italic

Table 19. Additional PS 3 fonts (continued)

File name	Font name
PS_14504.TTF	Joanna MT Italic
PS_13778.TTF	Letter Gothic Italic
PS_13777.TTF	Letter GothicPS
PS_13779.TTF	Letter GothicPS Bold
PS_13780.TTF	Letter GothicPS Bold Italic
PS_12675.TTF	Lubalin Graph
PS_12677.TTF	Lubalin Graph Bold
PS_12625.TTF	Lubalin Graph Bold Italic
PS_12623.TTF	Lubalin Graph Italic
PS_94073.TTF	Marigold
PS_14525.TTF	Mona Lisa Recut
PS_24524.TTF	Monaco
PS_24510.TTF	New York
PS_12506.TTF	Optima
PS_12510.TTF	Optima Bold
PS_12511.TTF	Optima Bold Italic
PS_12507.TTF	Optima Italic
PS_14072.TTF	Oxford Italic
PS_11546.TTF	Stempel Garamond Roman Italic
PS_11545.TTF	StempelGaramond Roman
PS_11547.TTF	StempelGaramond Roman Bold
PS_11548.TTF	StempelGaramond Roman Bold Italic
PS_14507.TTF	Taffy
PS_13501.TTF	Univers 45 Light
PS_14023.TTF	Univers 45 Light Bold
PS_14024.TTF	Univers 45 Light Bold Italic
PS_13502.TTF	Univers 45 Light Italic
PS_14030.TTF	Univers 47 Condensed Light Bold
PS_14040.TTF	Univers 47 CondensedLIght Bold Italic
PS_14021.TTF	Univers 55
PS_14022.TTF	Univers 55 Italic
PS_14029.TTF	Univers 57 Condensed
PS_14039.TTF	Univers 57 Condensed Italic
PS_13548.TTF	Univers Extended Italic
PS_13547.TTF	Univers ExtendedPS
PS_14481.TTF	Univers ExtendedPS Bold Italic
PS_14480.TTF	Univers ExtendedPS Italic

Installation instructions

General installation for Windows 95, 98, Me, NT 4.0, 2000, and XP OSs

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

If the HP LaserJet product is connected through a file or print server, the HP LaserJet printing system software must first be installed on the server before being installed on any client systems. If the HP LaserJet printing system software is not first installed on the server, bidirectional communication, some Driver Autoconfiguration methods, and Printer Status and Alerts will not be available to the client systems.

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

When the HP LaserJet printing system installer runs, the HP LaserJet uninstaller is always added to the system.

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

Installing from the printing system CD-ROM

To install the HP LaserJet printing system from the CD-ROM that came with your product, follow these instructions:

Step 1 Close all applications.

Step 2 Insert the CD-ROM in the CD-ROM drive.

Step 3 Click **install printer** and follow the screen prompts.

Step 4 If your CD-ROM does not autostart, browse to the SETUP.EXE file in the root location of the CD-ROM.

Installing from a network or from downloaded files

Follow these instructions if you downloaded the files from the Web, or if you are installing the printing system files from a network. You may need to see your administrator for the location of the printing system software file.

Step 1 Browse to the location of the SETUP.EXE file.

Step 2 Double-click the SETUP.EXE file.

Step 3 Click **install printer** and continue to follow the instructions until the product is installed. For detailed installation instructions, see “Detailed Windows installation.”

Detailed Windows installation

This section provides information about the installation dialog box sequence for installing the HP LaserJet printing system software in Microsoft Windows environments. You can choose to install the software by using either a Typical Installation or a Custom Installation.

Typical Installation dialog box sequence

Note The dialog boxes shown here appear in the Windows NT 4.0 installation sequence. The order and appearance of dialog boxes can vary among operating systems.

The Typical Installation includes the following components:

- HP LaserJet PCL 6 driver.
- Screen fonts.
- Driver Autoconfiguration (in environments that support bidirectional communication). This option will not appear in unsupported bidirectional communications environments.

When you select the **Install Printer** option from the HP LaserJet software CD-ROM browser, the **Choose Setup Language** dialog box appears. This dialog box does not display when the setup language is Arabic or Hebrew.

Figure 43. **Choose Setup Language dialog box**

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

Table 20. Choose Setup Language dialog box text strings

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

Next, the **Setup** dialog box appears.

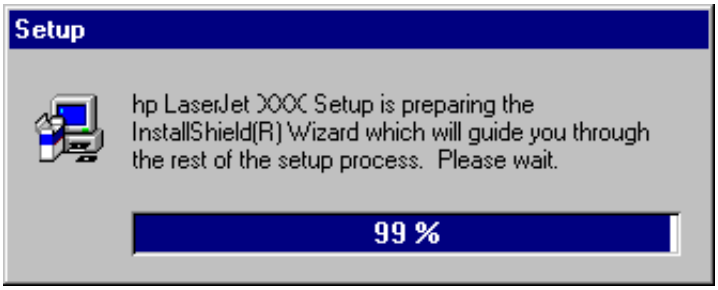


Figure 44. **Setup dialog box**

Note While the **Setup** dialog box appears, the installer is decompressing files into the system Temp directory. The elapsed time to complete this action depends upon the performance of the system.

Table 21. Setup dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Setup	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.	No user options. This is an information-only dialog box.

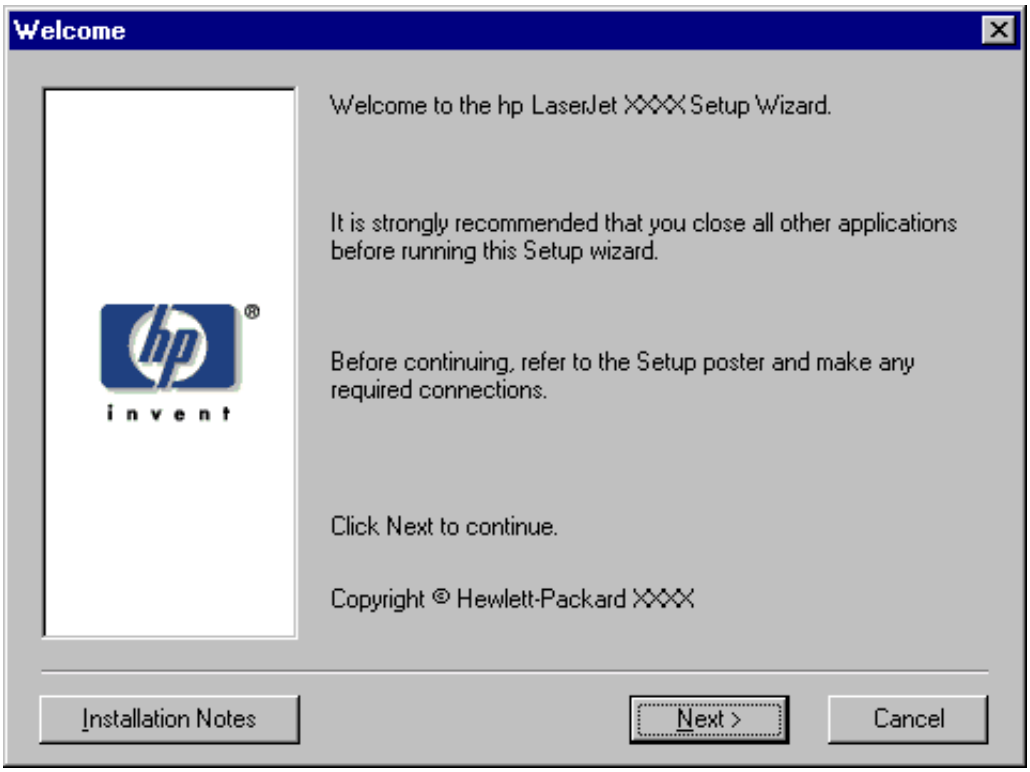


Figure 45. **Welcome dialog box**

Table 22. Welcome dialog box text strings

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

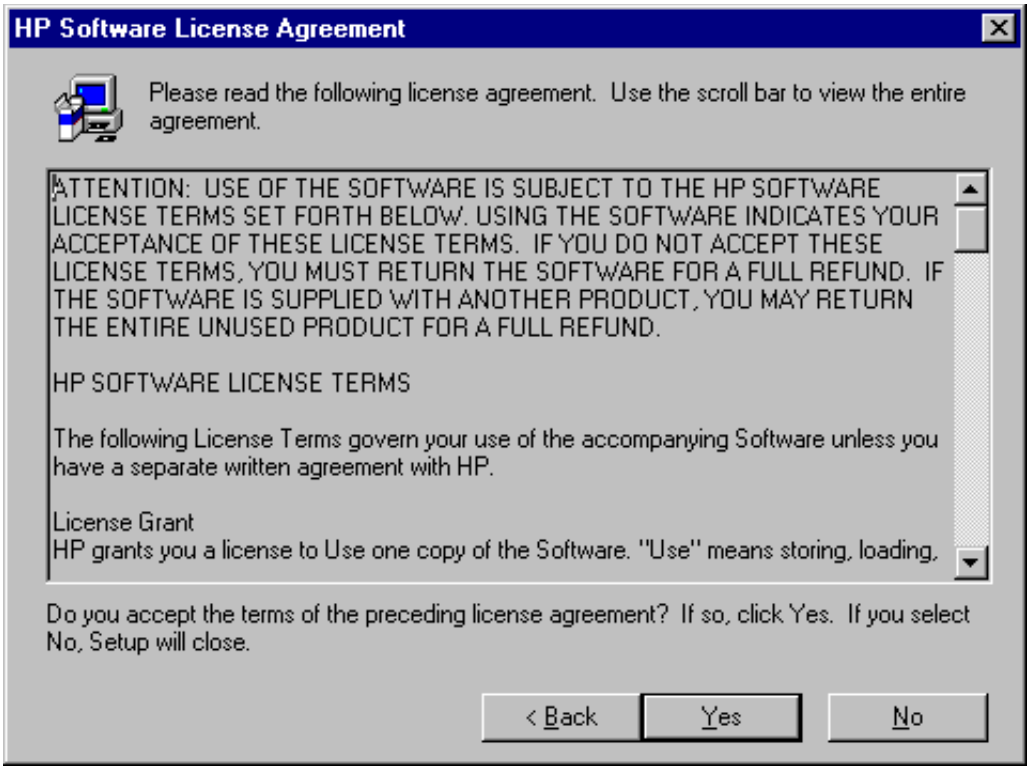


Figure 46. HP Software License Agreement dialog box

Table 23. HP Software License Agreement dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
HP Software License Agreement	Please read the following license agreement. Use the scroll bar to view the entire agreement. [Scrolling fields with text of license agreement] Do you accept the terms of the preceding license agreement? If so, click Yes. If you click No, Setup will close.	**Yes** takes you to the **Web Update** dialog box. **Back** returns you to the Welcome dialog box. **No** takes you to the **Exit Setup** dialog box.

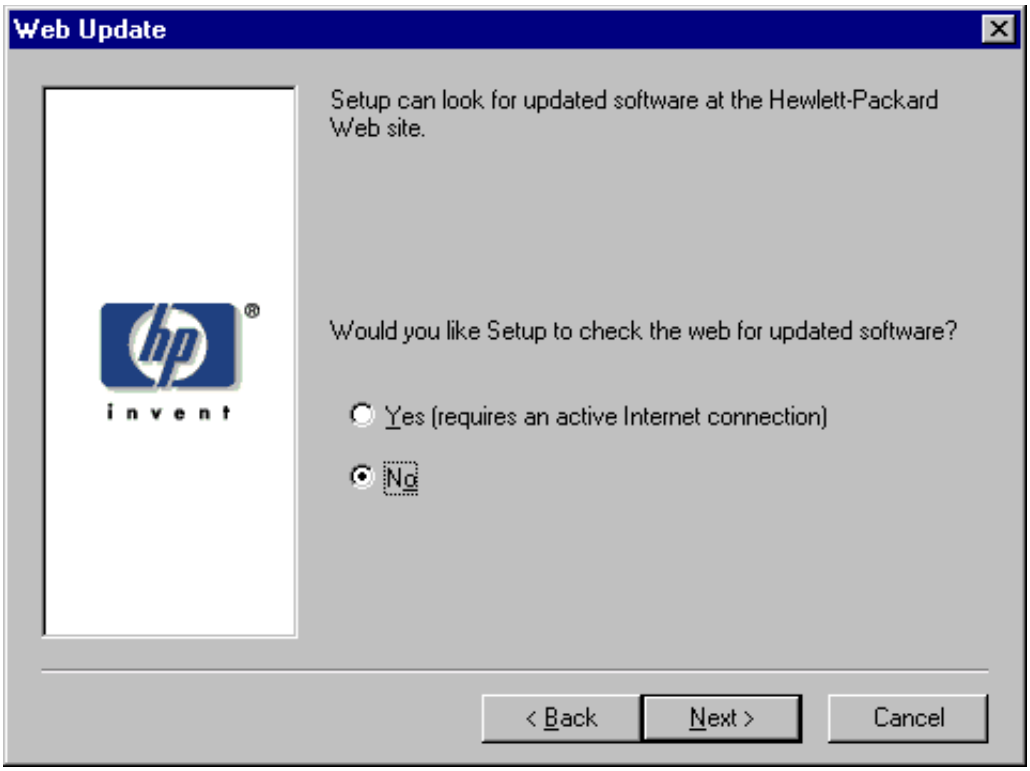


Figure 47. Web Update dialog box

Table 24. Web Update dialog box text strings

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

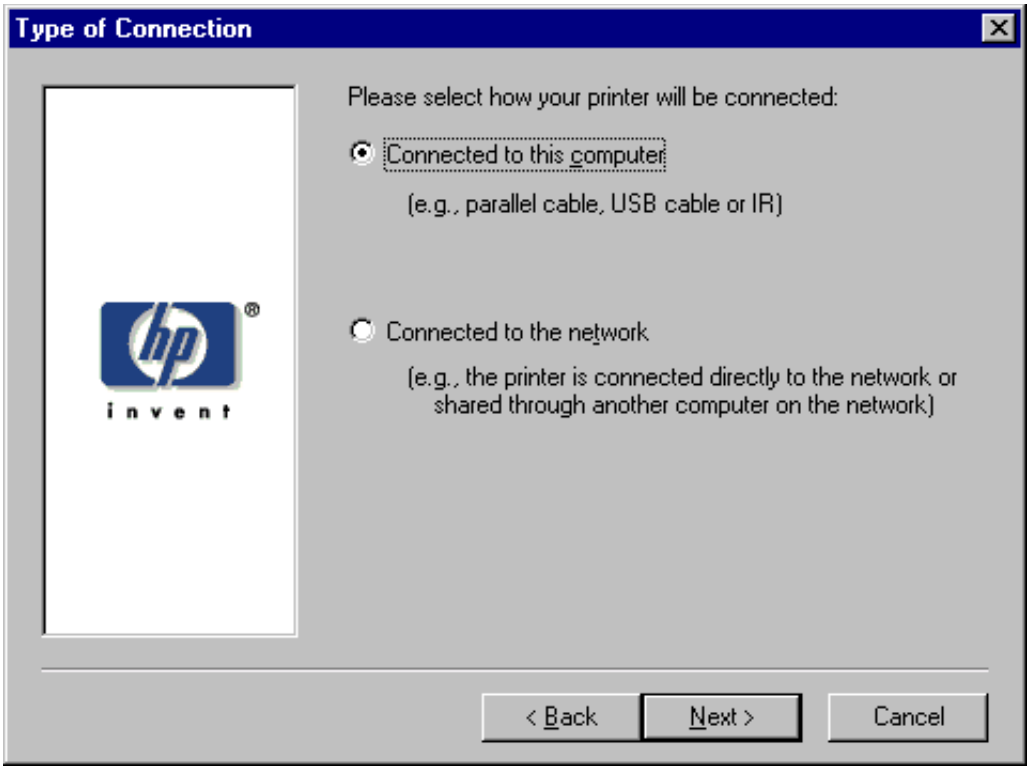


Figure 48. **Type of Connection dialog box**

Table 25. Type of Connection dialog box text strings

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

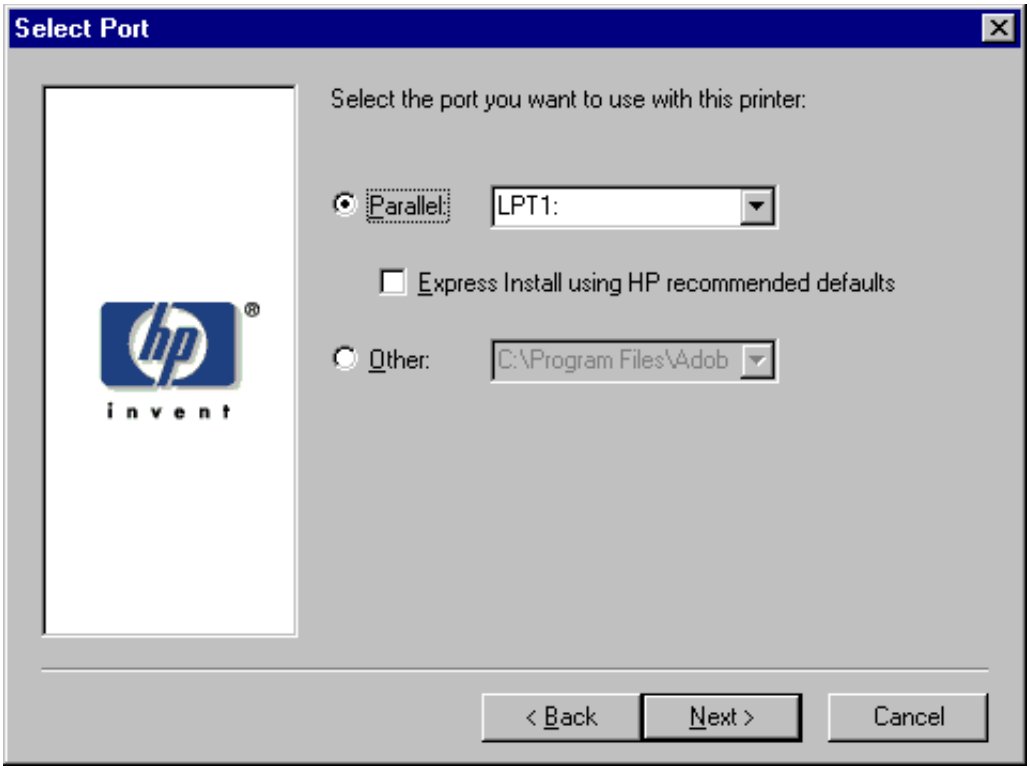


Figure 49. **Select Port dialog box**

Table 26. Select Port dialog box text strings

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 [option button] [Default. When selected, a pull-down list of parallel ports is available.] Other [option button] [When selected, a pull-down list of other port types is available]	Regardless of the port chosen (Parallel or Other), clicking **Next** takes you to the printer **Model** dialog box. Clicking **Back** returns you to the **Type of Connection** dialog box. Clicking **Cancel** takes you to the **Exit Setup** dialog box.

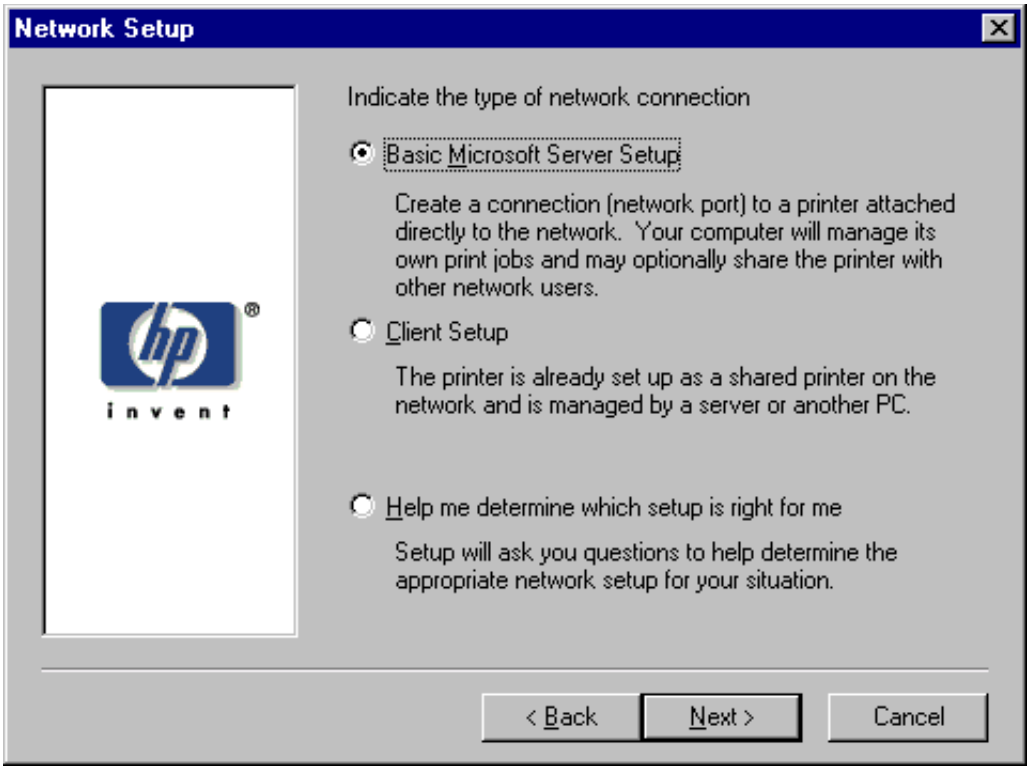


Figure 50. **Network Setup dialog box**

Table 27. Network Setup dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Network Setup [If **Connected to the network** was selected in the **Type of Connection** dialog box], **Next** takes you to the **Network Printer Configuration** dialog box.	Indicate the type of network connection 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. [option button] Client Setup The printer is already set up as a shared printer on the network and is managed by a server or another computer. [option button] 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. [option button]	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. 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. **Back** returns you to the **Type of Connection** dialog box. **Cancel** takes you to the **Exit Setup** dialog box.

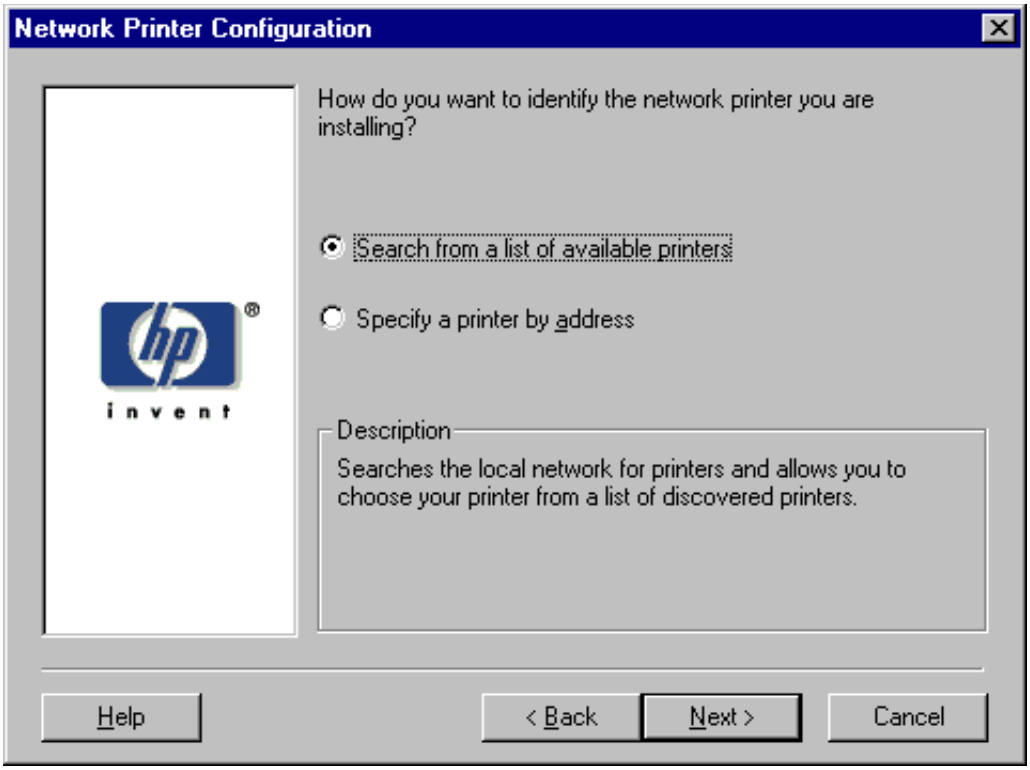


Figure 51. **Network Printer Configuration dialog box**

Table 28. Network Printer Configuration dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Network Printer Configuration	How do you want to identify the network printer you are installing?	If you click **Search from a list of available printers**, **Next** takes you to the **Identify Printer** dialog box.
	Search from a list of available printers [option button]	If you click **Specify a printer by address**, **Next** takes you to the **Identify Printer** dialog box.
	[Description] Searches the local network for printers and allows you to choose your printer from a list of discovered printers.	Always choose **Specify a printer by address** when the printer address is available. On large networks, selecting **Search from a list of available printers** might not result in the location of a specific printer.
	Specify a printer by address	**Back** returns you to the **Network Setup** dialog box.
	[option button]	**Cancel** takes you to the **Exit Setup** dialog box.
	[Description] Allows you to specify your printer by entering one of the following attributes: Hardware Address, IP Address, IP Hostname, or IPX Address.	
	Description	
	[Conditional text]	

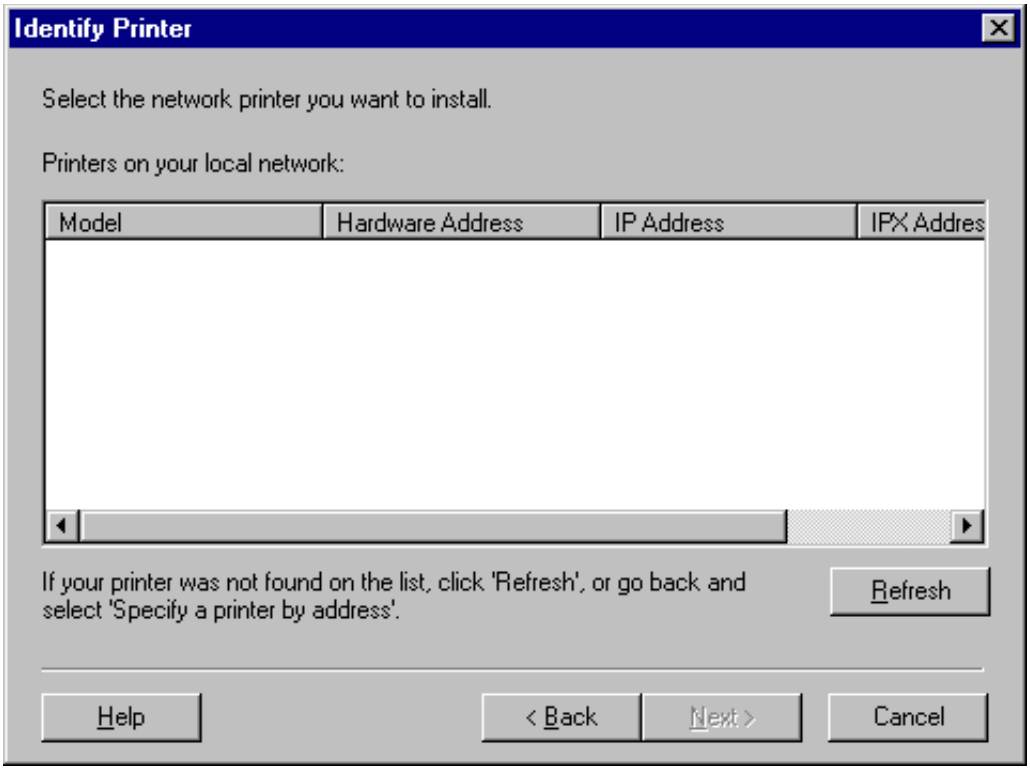


Figure 52. **Identify Printer dialog box (1 of 2)**

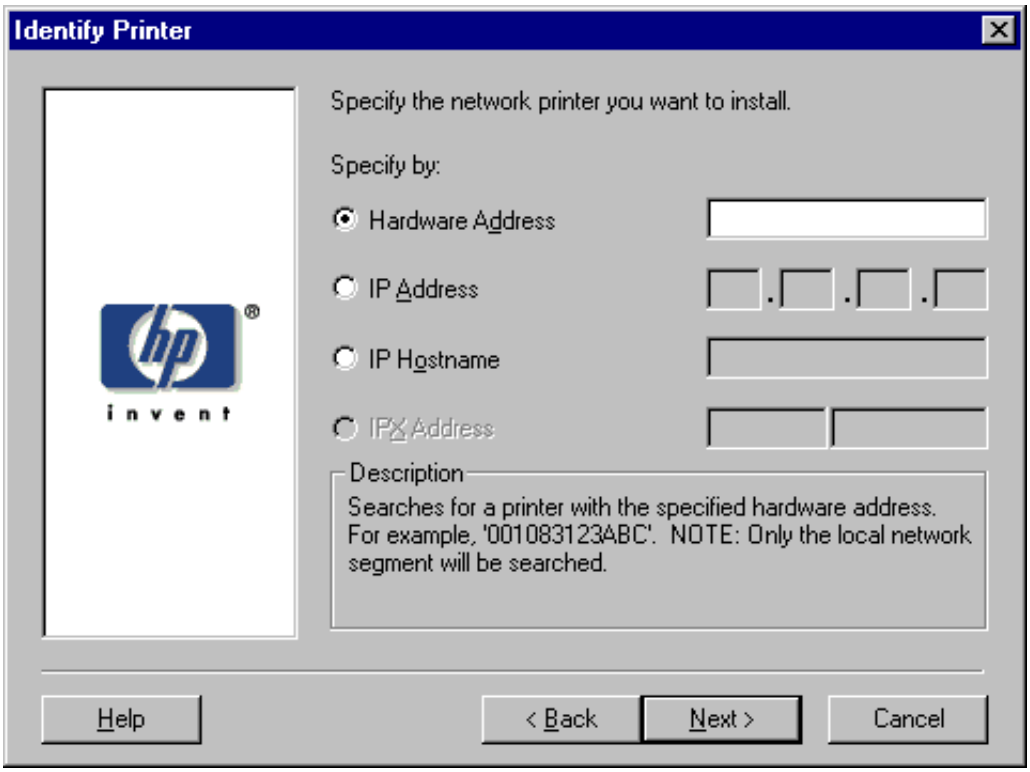


Figure 53. **Identify Printer dialog box (2 of 2)**

Table 29. Identify Printer dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Identify Printer	Select the network printer you want to install. Printers on your local network: [List, with attributes of Hardware Address, IP Address, and IPX Address listed, if available] If your printer is not found on the list, click 'Refresh', or go back and click 'Specify a printer by address'. OR Specify the network printer you want to install. Specify by: Hardware Address. [option button] [text field] IP Address [option button} [text fields] IP Hostname [option button] [text field] IPX Address [option button} [text fields] Description [Conditional text]	If you identify the printer by selecting from the list, and your HP LaserJet product appears in the list and is selected, **Next** takes you to the **Set Network Communication Mode** dialog box. If your HP LaserJet product is not found on the network, click **Refresh** or go back to the **Network Printer Configuration** dialog box to specify the device by address. **Refresh** updates the list of network printers. If you identify the printer by specifying a specific network address, **Next** takes you to the **Set Network Communication Mode** dialog box. **Back** returns you to the **Network Printer Configuration** dialog box. **Cancel** takes you to the **Exit Setup** dialog box.

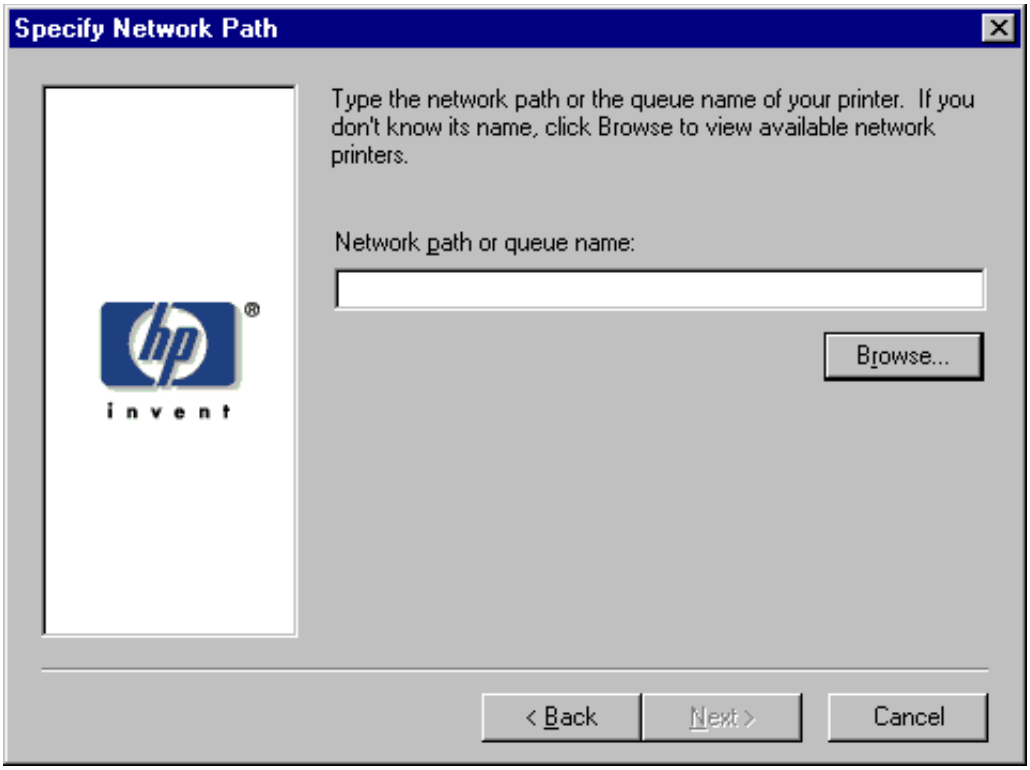


Figure 54. **Specify Network Path dialog box**

Table 30. Specify Network Path dialog box text strings

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

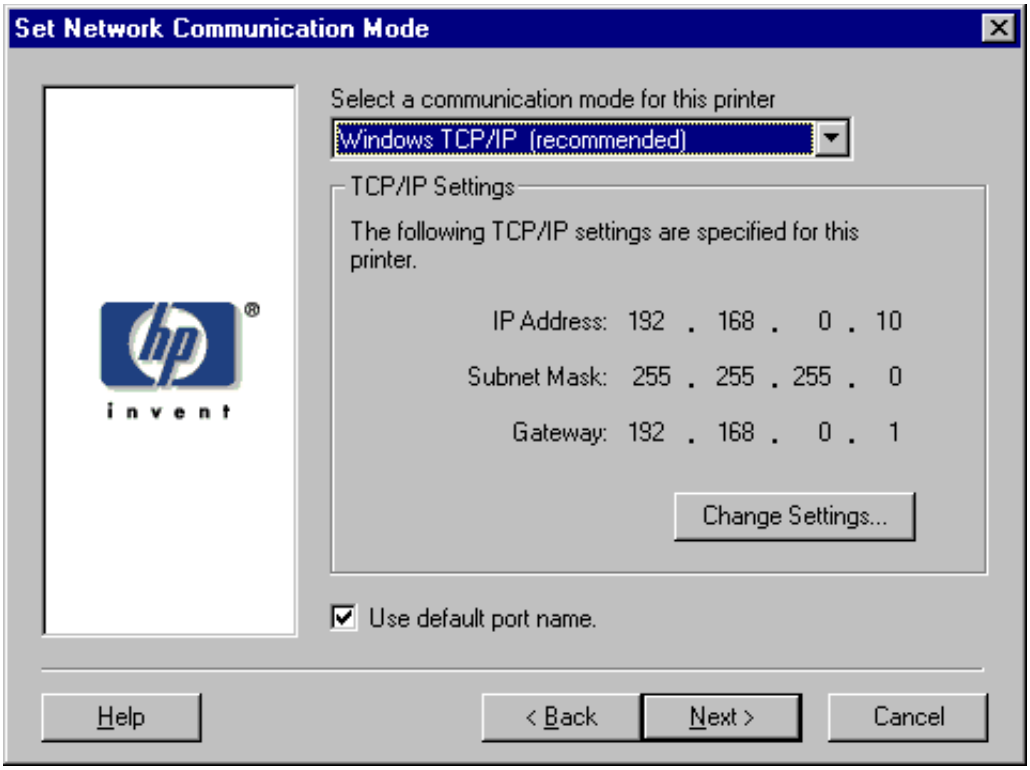


Figure 55. **Set Network Communication Mode dialog box**

Table 31. Set Network Communication Mode dialog box text strings

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

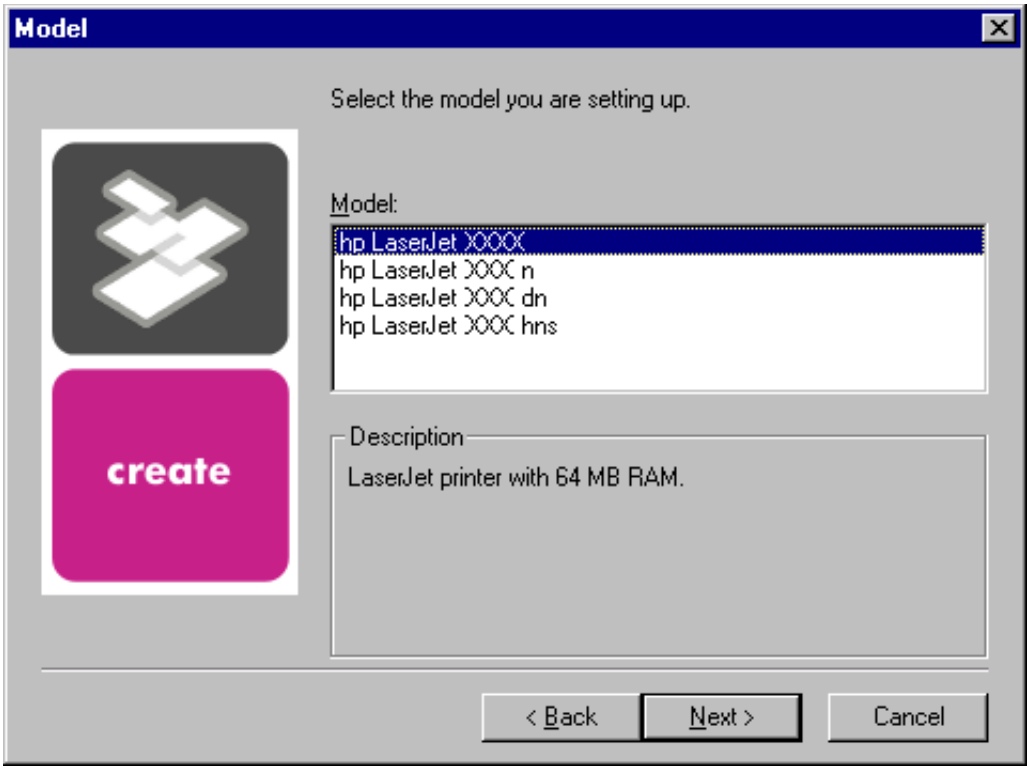


Figure 56. **Printer Model dialog box**

Table 32. Printer Model dialog box text strings

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

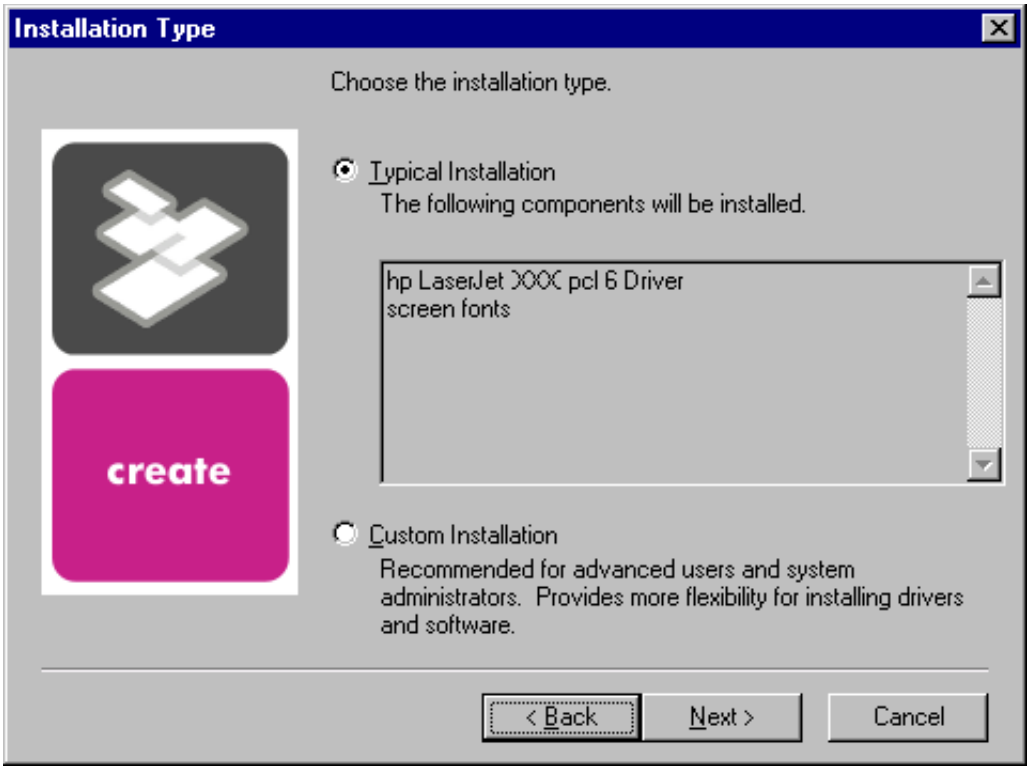


Figure 57. **Installation Type dialog box**

Table 33. Installation Type dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Installation Type	Choose the installation type. Typical Installation [option button] The following components will be installed: · HP LaserJet 9000 PCL 6 Driver · Driver Autoconfiguration (if connecting to a network port) · Screen Fonts Custom Installation [option button] Recommended for advanced users and system administrators. Provides more flexibility for installing drivers and software.	If **Typical Installation** is selected, **Next** takes you to the **Printer Name** dialog box. If **Custom Installation** is selected, Next takes you to the **Components** dialog box. Back returns you to the printer **Model** dialog box. **Cancel** takes you to the **Exit Setup** dialog box. NOTE: For direct connection installations, **Driver Autoconfiguration** is not an available option.

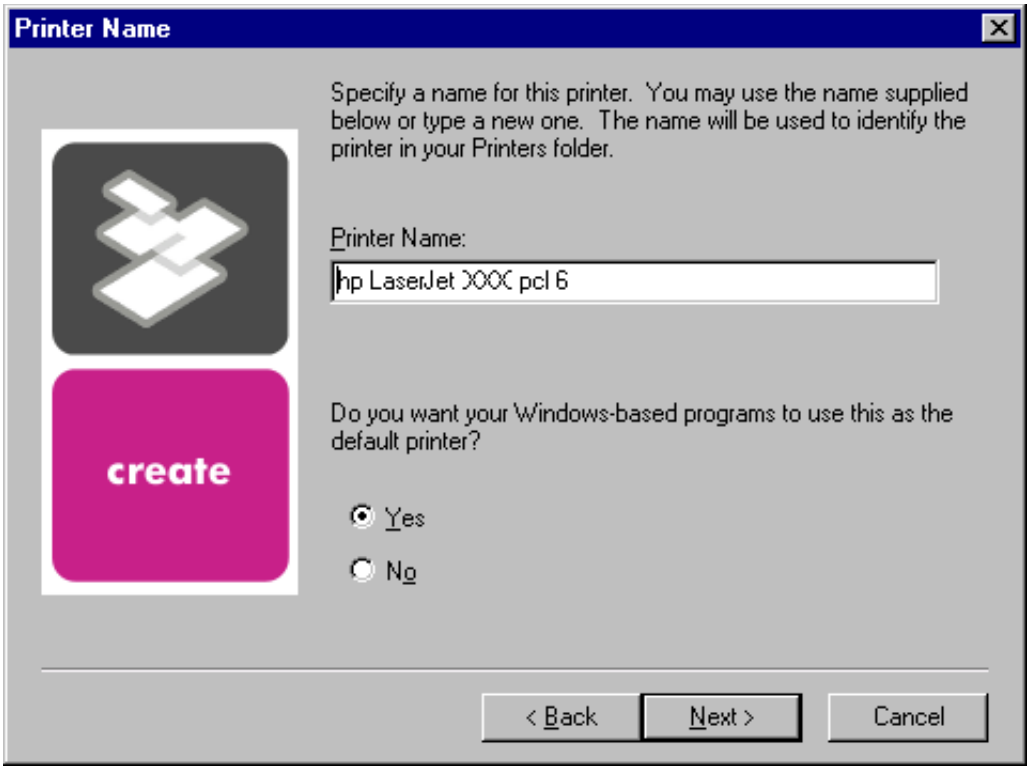


Figure 58. **Printer Name dialog box**

Table 34. Printer Name dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Printer Name	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. Printer Name: [text entry field] Do you want your Windows-based programs to use this as the default printer? Yes [option button] No [option button]	**Next** takes you to the **Printer Sharing** dialog box. The default printer name in the text field is **HP LaserJet 9000 PCL 6**. **Back** returns you to the **Installation Type** dialog box. **Cancel** takes you to the **Exit Setup** dialog box.

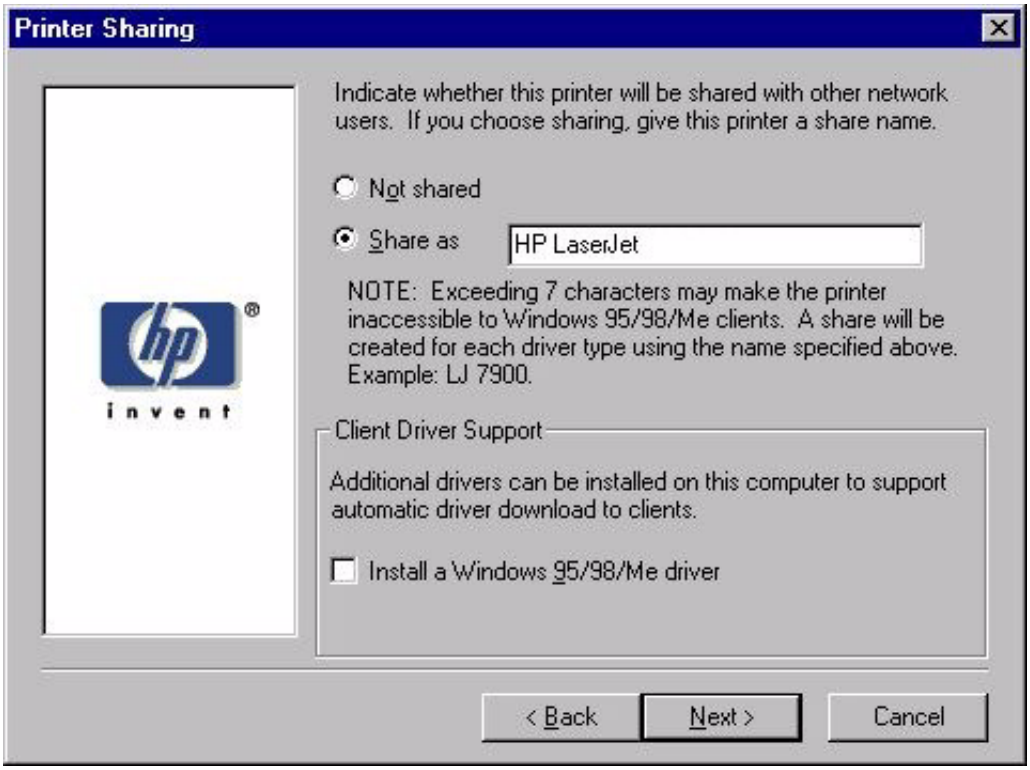


Figure 59. **Printer Sharing dialog box**

Note When you do not share the printer, additional driver support is not available. If you share the printer on Windows NT 4.0, Windows 2000, or Windows XP operating systems by selecting **Share as**, you must type a name. You can also provide additional printer driver support for other operating systems.

Table 35. Printer Sharing dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Printer Sharing	Indicate whether this printer will be shared with other network users. If you choose sharing, give the printer a share name. Not shared [option button] Share as [text entry field] NOTE: Exceeding 12 characters can make the printer inaccessible to Windows 95/98 clients. (Windows Me is not displayed but is supported.) Client Driver Support Additional drivers can be installed on this computer to support automated driver download to clients. Install a Windows 95 (or Windows 98 or Windows Me) driver. [check box]	**Next** starts the file copy process. **Back** returns you to the **Printer Name** dialog box. **Cancel** takes you to the **Exit Setup** dialog box.

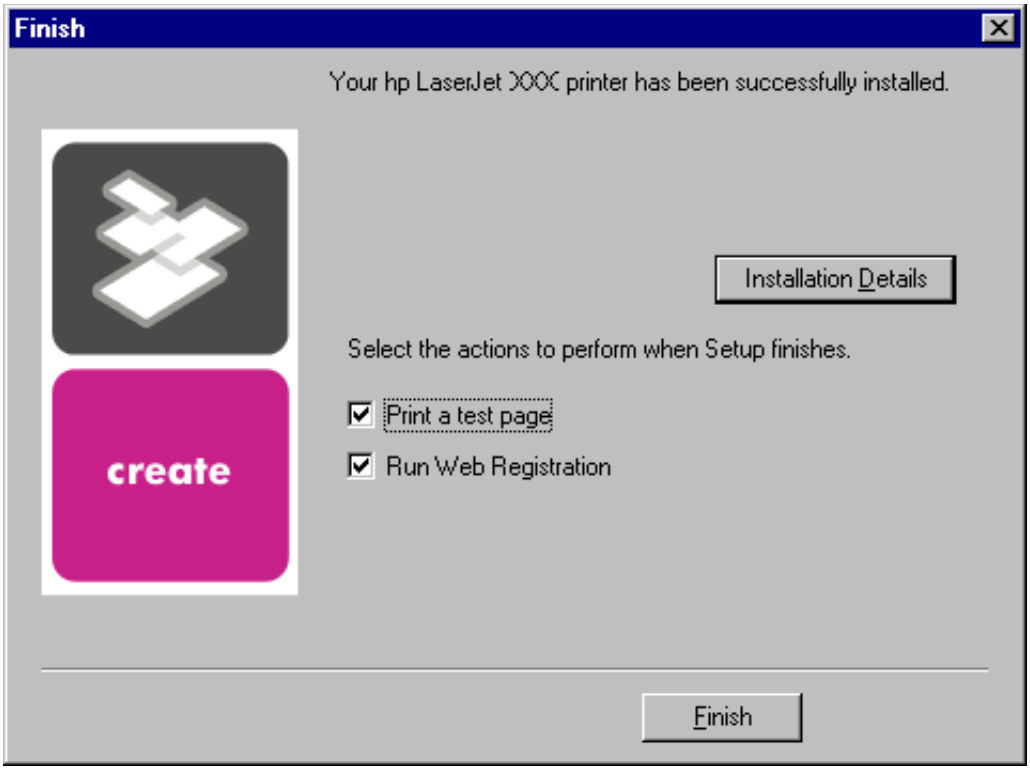


Figure 60. **Finish dialog box**

Table 36. Finish dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Finish	Your HP LaserJet 9000 printer has been successfully installed.	**Finish** completes the installation process and initiates test-page printing and Web-page registration if those options are selected.
	Installation Details [button]	Click **Installation Details** to display a modal dialog box that shows installation details.
	Select the actions to perform when Setup finishes.	
	Print a test page [check box]	NOTE: If the computer must be restarted, the Print a test page and Web Registration functions will occur after the computer is started.
	Web Registration [check box]	

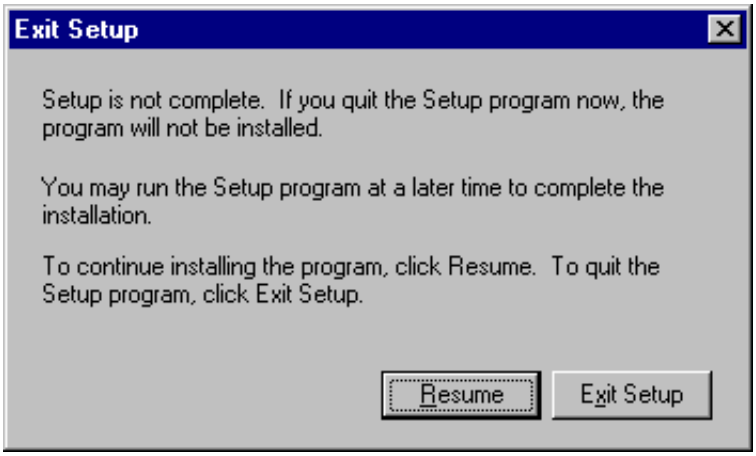


Figure 61. **Exit Setup dialog box**

Table 37. Exit Setup dialog box text strings

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 PCL 6 driver
- HP LaserJet PCL 5e driver
- HP LaserJet PS driver
- screen fonts
- printer documentation
- accessory documentation

Note Windows NT 4.0, Windows 2000, and Windows XP computers running a terminal server do not support the **Printer Status and Alerts** option.

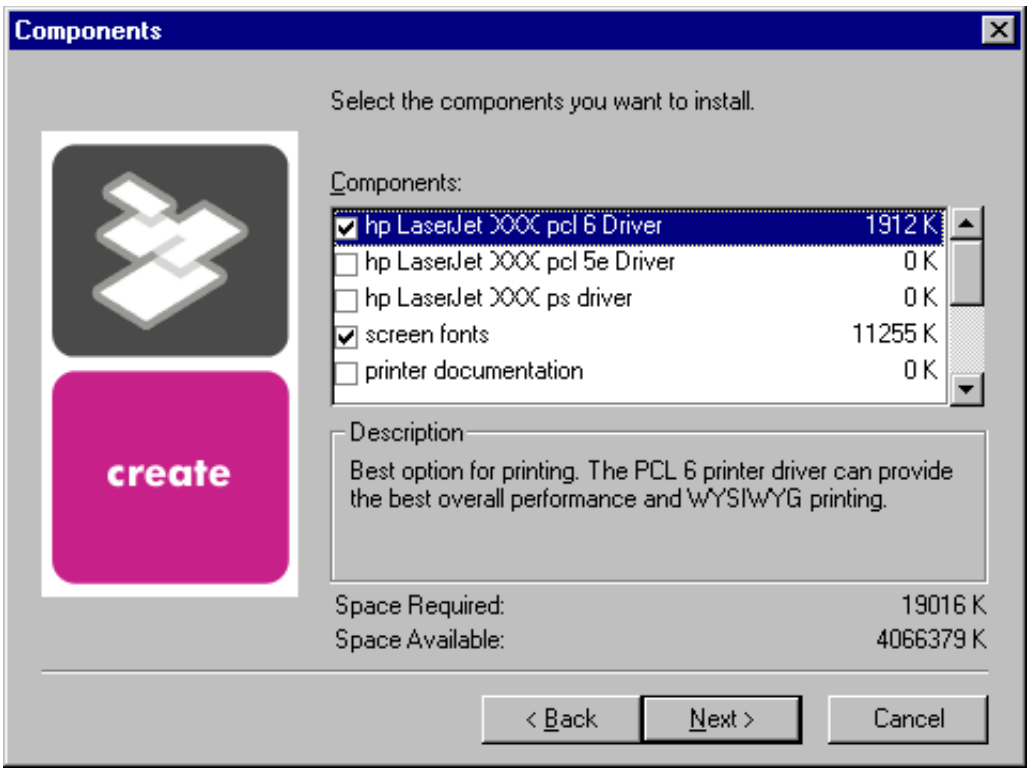


Figure 62. **Components dialog box, Custom Installation**

Table 38. Custom Installation dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Components	Select the components you want to install. Components: Description [Conditional text, according to the item currently highlighted in the list] Space Required [Specifies disk space required to install components currently selected in list] Space Available [Specifies disk space available on disk drive specified in **Choose Destination Location** dialog box (00)]	**Next** takes you to the **Printer Name** dialog box. **Back** returns you to the **Installation Type** dialog box. **Cancel** takes you to the **Exit Setup** dialog box. NOTE: Custom Installation automatically selects the options available in the Typical Installation. You can also select from among the following components: · PCL 5e driver · PS driver · screen fonts · printer documentation · accessory documentation

Product registration (HP WebReg)

The HP LaserJet software CD-ROM browser provides two options for registering the HP LaserJet product:

- Registration through the Internet to the http://register.hp.com Web site
- Registration by e-mail

Note Web registration for Hebrew and Arabic is in English.

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

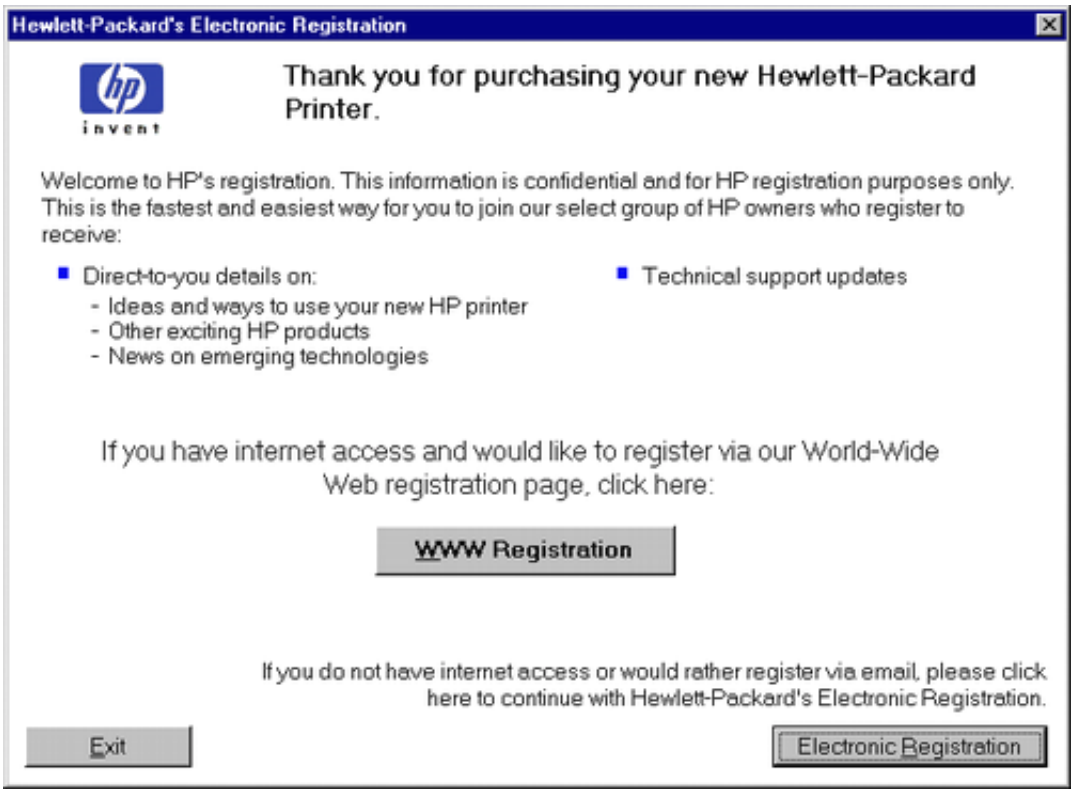


Figure 63. **Hewlett-Packard's Electronic Registration dialog box**

Table 39. Hewlett-Packard's Electronic Registration text strings

Title of dialog box	Text in dialog box	User options and descriptions
Hewlett-Packard's Electronic Registration	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: Direct-to-you details about: • ideas and ways to use your new HP product. • other exciting HP products. • news about emerging technologies. Technical support updates. If you have internet access and would like to register using our World Wide Web registration page, click here: WWW Registration [button] [default option] 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. Electronic Registration [button] Exit [button]	Click the **WWW Registration** button to open the default Web browser and connect to the product registration page at the http://register.hp.com Web site. Click the **Electronic Registration** button to open the **Welcome to Hewlett-Packard's Registration** dialog box. Click the **Exit** button to open the **Exiting Registration!** dialog box.

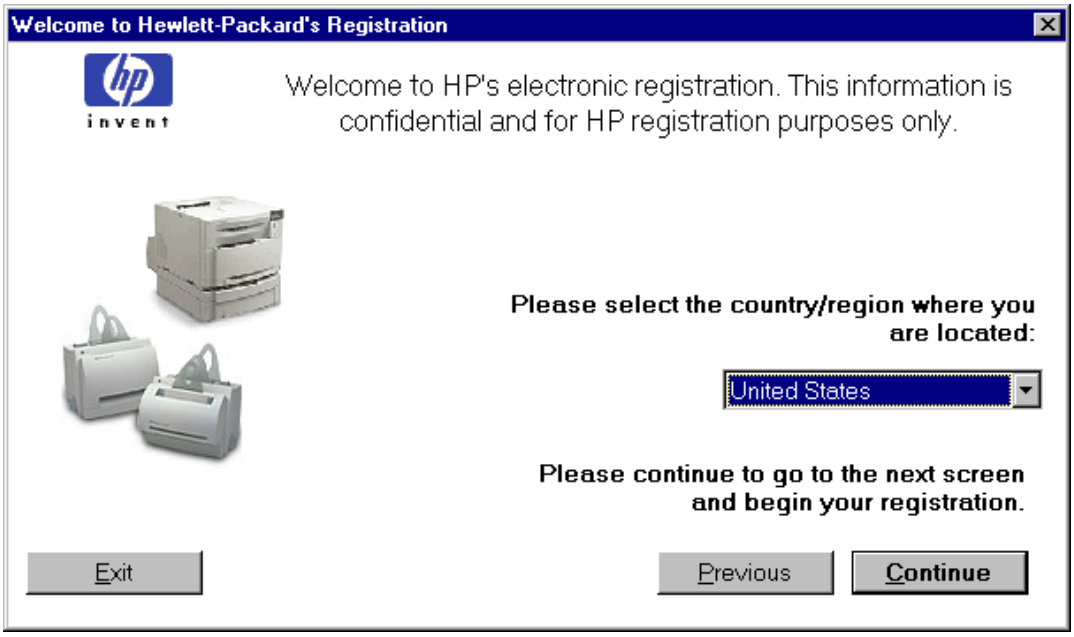


Figure 64. **Welcome to Hewlett-Packard's Registration dialog box**

Table 40. Welcome to Hewlett-Packard's Registration dialog box text strings

Title of dialog box	Text in dialog box	User options and descriptions
Welcome to Hewlett-Packard's Registration	Welcome to HP's electronic registration. This information is confidential and for HP registration purposes only. Please select the country/region where you are located. [drop-down menu] Please continue to go to the next screen and begin your registration Previous [button] Continue [button] [default option] Exit [button]	Click the **Previous** button to return to the **Hewlett-Packard's Electronic Registration** dialog box. Click the **Continue** button to start a sequence of three screens. The first screen provides fields for typing your registration information. The second screen prompts you for information about your HP LaserJet 9000 product. The third screen gives you the option of sending the e-mail message to register the product. Click the **Exit** button to open the **Exiting Registration!** dialog box.

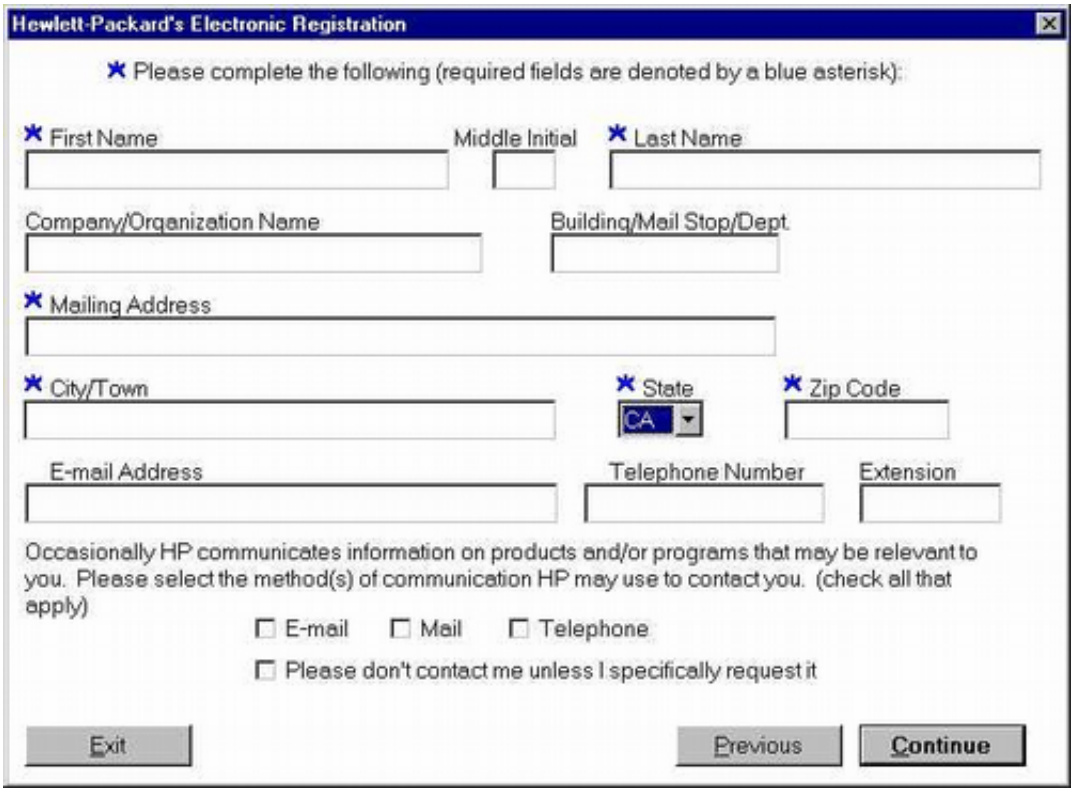


Figure 65. **Hewlett-Packard's Electronic Registration dialog box (1 of 3)**

Table 41. Hewlett-Packard's Electronic Registration dialog box text strings (1 of 3)

Title of dialog box	Text in dialog box	User options and descriptions
Hewlett-Packard's Electronic Registration [This is the first of three screens.]	Please complete the following (required fields are denoted by a blue asterisk): [The following items are fields unless otherwise noted.] 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 Occasionally HP communicates information about products and/or programs that might be relevant to you. Please select the method(s) HP can use to contact you. (check all that apply) E-mail [check box] Mail [check box] Telephone [check box] Please don't contact me unless I specifically request it [check box] Previous [button] Continue [button] Exit [button]	Click the **Previous** button to go back to the **Welcome to Hewlett-Packard's Registration** dialog box. Click the **Continue** button to go to the second screen in this sequence. Click the **Exit** button to open the **Exiting Registration!** dialog box.

Figure 66. **Hewlett-Packard's Electronic Registration dialog box (2 of 3)**

Table 42. Hewlett-Packard's Electronic Registration dialog box text strings (2 of 3)

Title of dialog box	Text in dialog box	User options and descriptions
Hewlett-Packard's Electronic Registration [This is the second of three screens.]	Please tell us about the Hewlett-Packard product you purchased: Where will your new Hewlett-Packard product primarily be used? [drop-down menu] Which Hewlett-Packard product did you purchase? [drop-down menu] When did you purchase your Hewlett-Packard product? [field] Serial Number [field] Approximately how many employees work at your...site? Worldwide? What is your job responsibility as it relates to HP products?	Click the **Previous** button to go back to the first screen in this sequence. Click the **Continue** button to go to the third screen in this sequence. Click the **Exit** button to open the **Exiting Registration!** dialog box. Type the date you purchased your Hewlett-Packard product. Type the product's serial number. The questions about the number of employees and your job responsibility (answering is optional) appear only if you answered that you will use your Hewlett-Packard product primarily for business or telecommuting. Dropdown boxes with possible answers are provided for your convenience.

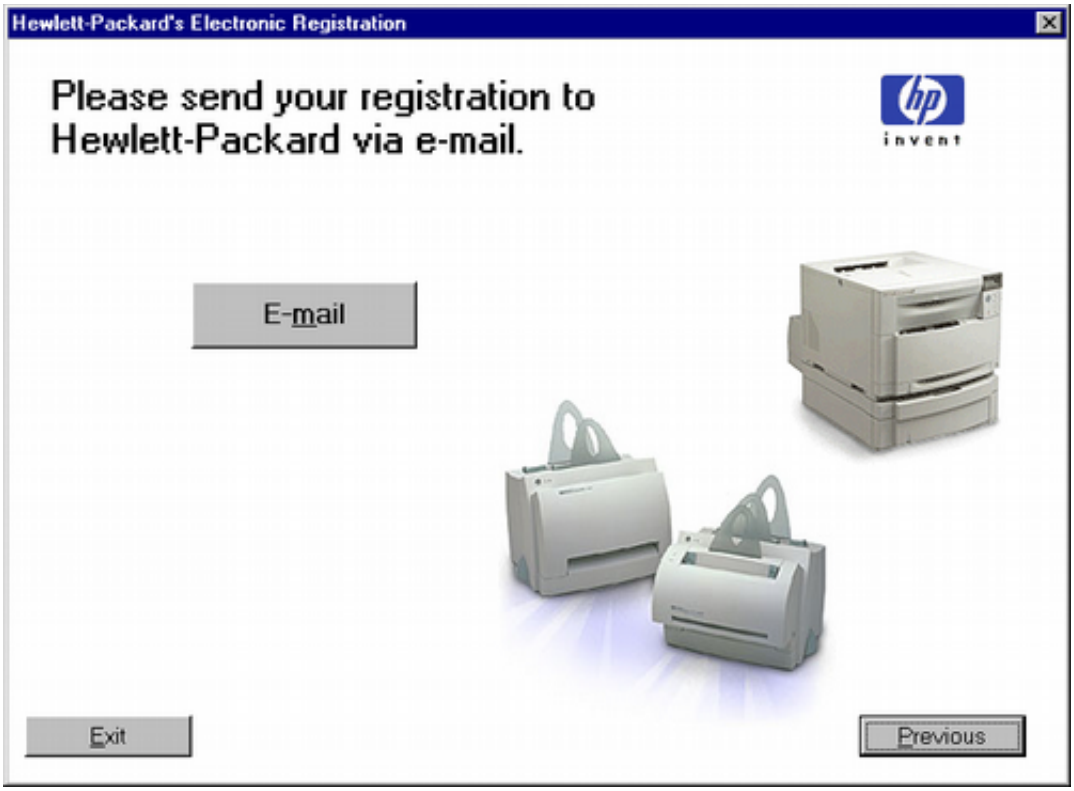


Figure 67. **Hewlett-Packard's Electronic Registration dialog box (3 of 3)**

Table 43. Hewlett-Packard's Electronic Registration dialog box text strings (3 of 3)

Title of dialog box	Text in dialog box	User options and descriptions
Hewlett-Packard's Electronic Registration [This is the third 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.

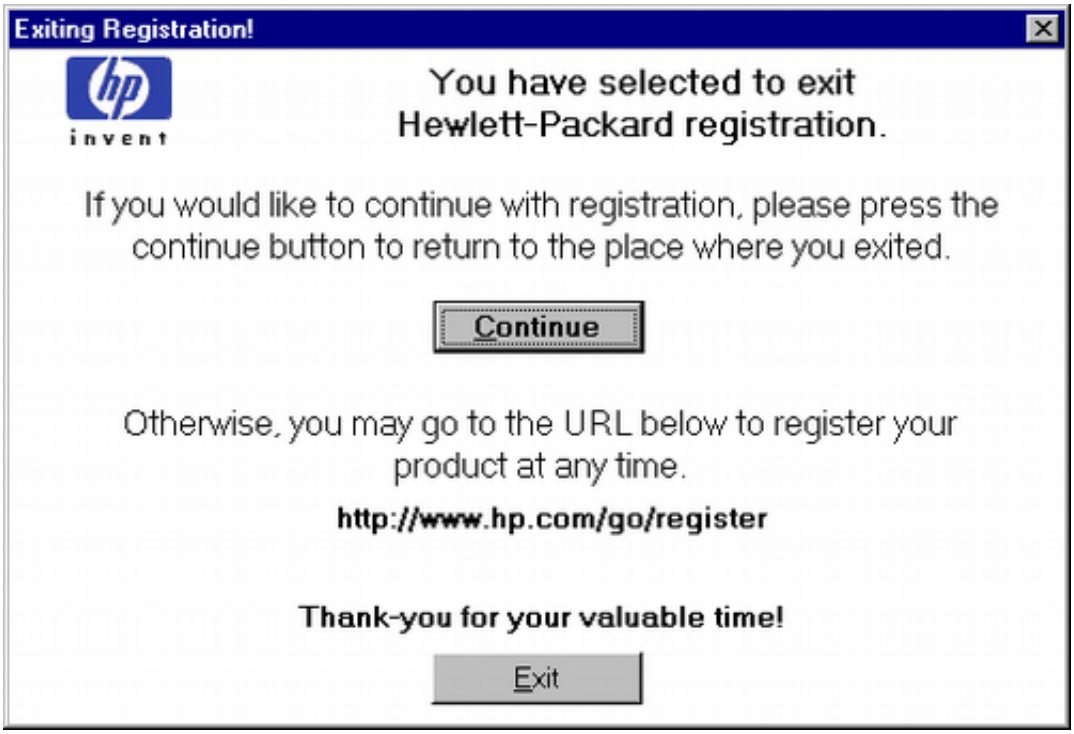


Figure 68. **Exiting registration! dialog box**

Table 44. Exiting registration text strings

Title of dialog box	Text in dialog box	User options and descriptions
Exiting Registration!	You have selected to exit Hewlett-Packard's registration. If you would like to continue with registration, please press the continue button to return to the place where you exited. Continue [button] [default option] Otherwise, you can go to the universal resource locator (URL) below to register your product at any time. http://register.hp.com Thank you for your valuable time! Exit [button]	Click the **Continue** button to go back to the screen where you were when you clicked the **Exit** button. Click the **Exit** button to close the WebReg utility.

Customization Utility for Windows

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

- **Copy printer drivers only.** Using this option, you can copy the HP LaserJet 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**. Using this option, you can create either an interactive or silent (unattended) installer customized by any of the following selections:
  - operating system
  - printer model
  - printing system components
  - iInteractive or silent (unattended) installer

- **Copy entire printing system installer**. Using this option, you can copy the HP LaserJet printing system installer to a selected form of high-capacity media such as a network drive. The customization utility prompts these choices:
  - Language
  - Operating system

Silent installer

You can use the HP LaserJet printing system software to 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 that contains specific drivers and utilities, allowing users to run the installer without further interaction.

Silent installation can be performed in two ways:

- Customized silent installer
- Command-line silent installer

Customized silent installer

Use this option to select the printing-system components to include in the silent installation. You can select the operating system, language, printer models, drivers, utilities, and documentation to install.

Command-line silent install

This method cannot be customized and installs only the printing-system components that are included in the Typical Installation.

Note Values that follow equal signs (=) in a command line must not contain intervening spaces.

Method 1: Command line

Type the following at the command line (do not type the beginning and ending quotation marks):

"<CD-ROM-ROOT>/SETUP/SETUP.EXE /U /PORT=XXXX /PRINTER=N /PD=N"

Method 2: SETUP.LST

Use the SETUP.LST file to specify command-line arguments to the installer for an unattended installation. You can send command-line arguments in one of the following ways:

- Send the command directly to the installer.
- Send the command using the SETUP.LST file located in the setup directory.
- Use a combination of the two methods.

For example, this file contains two options: **/port** and **/printer**. The installer operates 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=4** for the installer, it operates in unattended mode and chooses the HP LaserJet 9000mfp. 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** is used to specify the default port when performing an unattended installation. The value specified by xxxx should be a valid port and should contain no spaces.
- **/printer=n** is used to specify the default printer when doing an unattended installation. The value specified by “n” is an integer that references the list of available printers. For example, the following printers are available for the HP LaserJet 9000 series printer installation:

  0 = HP LaserJet 9000 printer

  1 = HP LaserJet 9000n printer

  2 = HP LaserJet 9000dn printer

  3 = HP LaserJet 9000hns printer

  4 = HP LaserJet 9000mfp printer

- **/pd=n** is used to specify whether the selected printer is the default printer, when you have multiple printers connected to your network. The value specified by n is an integer (that is, 0 or 1). For this argument, 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 software CD-ROM. In the defaults section, add the following syntax:

[Defaults]

Options= /port=<value> /printer=<number> /pd=<number>

Driver-only installation

Step 1 Close all software applications.

Step 2 Click **Start**, click **Settings**, and then click **Printers**.

Step 3 Double-click **Add Printer**.

Step 4 Answer the questions in the **Add Printer Wizard** dialog box until you reach the screen with the printer manufacturer list.

Step 5 Click **Have Disk**.

Step 6 Browse to the driver location using one of these options:

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

Step 7 Select the appropriate .INF file.

Step 8 Click **Open**, and then click **OK**.

Step 9 Select the appropriate printer.

Step 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, 2000, and XP

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

Point and Print is a Microsoft term 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.

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 NT, Windows 2000, and WIndows XP drivers from HP are supported only on Intel *X*86 (R) processor types. Any other processor types must use Windows NT drivers from Microsoft.

To install the printer driver on a Windows NT 4.0, Windows 2000, or Windows XP server, you must have administrator privileges.

To completely install the Windows NT 4.0 printer driver on the Windows NT 4.0 server (or, 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 PScript driver version 4.0 or later.

For all operating systems, use the Add Printer Wizard to install the appropriate operating system driver on the server and client machines, as shown in the following table.

Table 45. Windows servers with Windows clients

Computer function	Steps
Server and clients	1. Click **Start**, click **Settings**, and then click **Printers**.
Server and clients	2. In the Printers folder, double-click the **Add Printer** icon to start the Add Printer Wizard.
Server only	3. Click **Next**, and then click **Local Printer**. Click **Next**. If your operating system is Windows 95, Windows 98, or Windows Me, go to step 6.
Server and clients	4. Select the appropriate port in the list of ports, or click **Add Port** to connect to a network port not in the list of available ports.
Server and clients	5. Select the printer model in the list of available printers, or click **Have Disk** if installing the driver from an alternative source, such as disk, CD-ROM, or software download. If installing from a software download, you must know the path where the software has been downloaded.
Server only	6. After the installation is complete, highlight the **Printer** icon and click **File**, and then click **Properties**. In the Printer Properties window, click the **Sharing** tab.
Server only	7. You must enable the File and Print Sharing service for either Microsoft networks or Novell networks on the server.

Table 45. Windows servers with Windows clients (continued)

Computer function	Steps
Server only	8. To exit Properties, click **OK**. A hand appears beneath the **Printer** icon in the Printers folder, indicating that the printer is shared.
Client only	9. You can install the driver using Point and Print in one of the following four ways: · In Network Neighborhood, locate the server and double-click the printer share name. · In Network Neighborhood, locate the server. Then 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: · For Windows 95, Windows 98, and Windows Me, click **Network Printer**. · For Windows NT 4.0, Windows 2000, and Windows XP, click **Network printer server**.
Client only	10. Click **Next.** Type the network path or queue name, or choose **Browse** to search the network to locate the appropriate path.
Client only	11. In Network Neighborhood, locate the server and double-click. Then locate the printer share name and right-click.
Client only	12. Click **Install** to complete the installation through the Add Printer Wizard.

Setting a default printer

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

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

Step 2 Select the printer you want to set as the default printer.

Step 3 From the **File** menu, click **Set As Default**. A check mark appears next to the menu option.

Step 4 Click **Close**.

Windows 3.1*x*

Printer support

- The PS emulation driver supports the HP LaserJet product, but only on standalone versions of Windows 3.1*x*. Other PS printers can be supported with additional PPDs.
- The PCL 6 and PCL 5e drivers support HP LaserJet products.

Installing printer drivers on Windows 3.1*x*

Windows 3.1*x* is not supported by the CD-ROM browser and printing system installer for the HP LaserJet product. Printing from Windows 3.1*x* is supported using 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 3.1*x* control panel:

Step 1 Close all programs. Turn off virus checkers and TSR programs. After installation, these programs can be turned back on.

Step 2 Go to Main in the Program Manager and click **Control Panel**.

Step 3 Click **Printers**.

Step 4 Under **Printer**, choose **Add**.

Step 5 Under the list of printers, choose **Unlisted** and click **Install**.

Step 6 Browse to the driver location using one of the options below:

- **CD-ROM**. Browse to the appropriate <CD-ROM Drive>:\<Language>\Drivers\Win3.x directory for your operating system and language.
- **Internet download**. Browse to the <CD-ROM Drive>:\<Language>\Drivers\Win3.x folder where the Web files were downloaded and decompressed.

Step 7 Select the appropriate printer and click **OK**.

Step 8 Follow the remaining instructions to complete the printer installation.

5 Installation and removal for non-Windows operating systems

Introduction

This section provides system requirements and procedures for installing and removing the HP LaserJet printing system software for other supported operating system than Windows. It also provides information about font support and system modifications. Supported operating systems include:

- Macintosh
- IBM OS/2

System Requirements

System requirements necessary to install and use the HP LaserJet printing system software on each supported operating system are listed below.

Macintosh

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

IBM OS/2

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

Macintosh

Macintosh component descriptions

The printer includes the following software for Macintosh computers.

PPDs (Mac OS 8.6 to 9.x and Mac OS X classic)

HP LaserJet PPDs

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

PPDs, in combination with the LaserWriter driver, provide access to the printer features and allow the computer to communicate with the printer. An installation program for the PPDs is provided on the printing software CD-ROM.

For Mac OS 8.6 to 9.x, the Apple LaserWriter 8 driver must be installed to use the PPD file. Use the Apple LaserWriter 8 driver that came with your Macintosh. For Mac OS X, use Print Center to print.

PDEs (Mac OS X)

Printer Dialog Extensions (PDEs) are code plug-ins that provide access to printer features, such as number of copies, duplexing, and quality settings. An installation program for the PDEs and other software is provided on the printing software CD-ROM.

HP LaserJet Utility

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

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

- customize the printer's control panel messages.
- name the printer, assign it to a zone on the network, download files and fonts, and change most of the printer settings.
- set a password for the printer.
- From the computer, lock out functions on the printer's control panel to prevent unauthorized access. (See the printer software help.)

Installation notes

This text file contains important information about product features, instructions for installing the printing-system software, and technical assistance.

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.

Font support

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

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

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

- Clarendon Condensed Bold
- Symbol
- Albertus Medium
- Coronet
- Times New Roman
- Antique Olive
- Courier
- Univers
- Arial
- Garamond
- Univers Condensed
- CG Omega
- Letter Gothic
- Wingdings
- CG Times
- Marigold

The following bitmap screen fonts reside on the HP LaserJet product:

- ITC Avant Garde Gothic Book
- Helvetica
- Palatino
- ITC Avant Garde Gothic Book Oblique
- Helvetica Bold
- Palatino Bold
- ITC Avant Garde Gothic Demi
- Helvetica Bold Oblique
- Palatino Bold Italic
- ITC Avant Garde Gothic Demi Oblique
- Helvetica Oblique

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

The following fonts are resident on all HP LaserJet products, 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 software CD browser, or obtain them from the HP Web site at http://www.hp.com/go/lj9000 CD-ROM.

- Albertus Extra Bold
- CG Times Italic
- Marigold
- Albertus Medium
- Clarendon Condensed Bold
- Symbol
- Antique Olive
- Coronet
- Times New Roman
- Antique Olive Bold
- Courier
- Times New Roman Bold
- Antique Olive Italic
- Courier Bold
- Times New Roman Bold Italic
- Arial Courier Bold Oblique

- Times New Roman Italic
- Arial Bold
- Courier Italic
- Univers Bold
- Arial Bold Italic
- Garamond Antiqua
- Univers Bold Italic
- Arial Italic
- Garamond Halbfett
- Univers Condensed Bold Italic
- CG Omega
- Garamond Kursiv
- Univers Condensed Medium
- CG Omega Bold
- Garamond Kursiv Halbfett
- Univers Condensed Medium Italic
- CG Omega Bold Italic
- Letter Gothic
- Univers Medium
- CG Omega Italic
- Letter Gothic Bold
- Univers Medium Italic
- CG Times
- Letter Gothic Italic
- Univers Italic
- CG Times Bold
- CG Times Bold Italic
- Wingdings
- CG Times Bold Italic

Installing the Macintosh printing system

On a Macintosh-compatible computer, the installation procedures are the same for a network administrator, a network client, and a single user. Install the software on any computer with access rights to the printer.

Note

If the computer is connected to the product 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 product.

The HP LaserJet product 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.

In the following instructions, “XXXX” represents the HP LaserJet product model number.

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 printer software for Macintosh OS

Step 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.

Step 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**.

Step 3 The main **Installer** dialog box appears. Click **Install** and then follow the instructions on the screen to complete the software installation.

Step 4 When software installation is complete, click **Restart**.

Step 5 Run the Apple Desktop Printer Utility.

Step 6 Click **HP Printer (USB)** and then click **OK**.

Step 7 Click **Change** in the USB Printer Selection area.

Step 8 Click **HP Printer (USB)** and then click **OK**.

Step 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 XXXX**, and then click **Select**.

Step 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 Installer - Integrated installer program.

Folders and files added through installation of the HP LaserJet 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 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 (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 69. **hp LaserJet for Macintosh installer splash screen dialog box**

Table 46. hp LaserJet for Macintosh installer splash screen dialog box text strings

Title of dialog box	Text in dialog box	User Options and Descriptions
Splash screen [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 70. **HP LaserJet Installer dialog box (easy install)**

Table 47. HP LaserJet Installer dialog text strings (easy install)

Title of dialog box	Text in dialog box	User Options and Descriptions
HP LaserJet Installer	Easy Install [drop-down menu] Click the **Install** button to install: · Printer Descriptions · HP LaserJet Utility · Installation Notes · ColorSync Profiles Disk space available: [conditional] Approximate disk space needed: [conditional] The folder "HP LaserJet Folder" will be created on the disk "Macintosh HD" Select Folder [button] Quit [button] Install [button] (default option)	If you want to install the files in a location other than the default "Macintosh HD," click **Select Folder** to specify a location. You can also choose a **Custom installation** option from the drop-down menu at upper left. Click the **Read Me** button to open the Installer readme file. Click the **Install** button to start the installation on the selected disk Click the **Quit** button to quit the Installer without making changes to the system.

Figure 71. **HP LaserJet Installer dialog box (custom install)**

Table 48. HP LaserJet Installer dialog text strings (custom install)

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

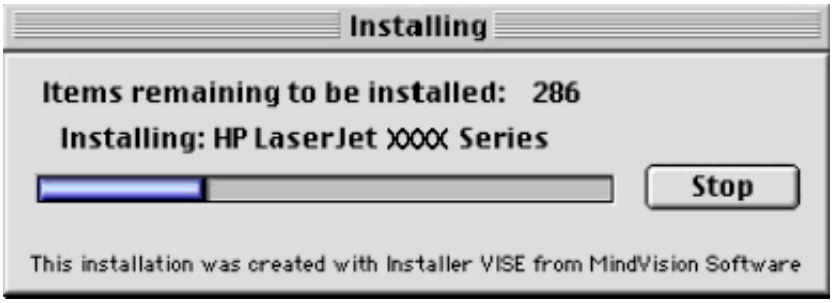


Figure 72. **Installing dialog box**

Table 49. Installing dialog text strings

Title of dialog box	Text in dialog box	User Options and Descriptions
Installing	Items remaining to be installed: [conditional number] Installing: HP LaserJet XXXX Series Stop [button]	This dialog box shows installation progress. No action is required unless you wish to stop the installation. Click the **Stop** button to interrupt the install file copy process.

Figure 73. **Installation was successful dialog box**

Table 50. Installation successful dialog text strings

Title of dialog box	Text in dialog box	User Options and Descriptions
[This untitled dialog box begins with the words "Installation was successful."]	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. The Printer Setup Assistant opens. Click the **Continue** button to return to the HP LaserJet Installer.

Printer setup using AppleTalk Chooser

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

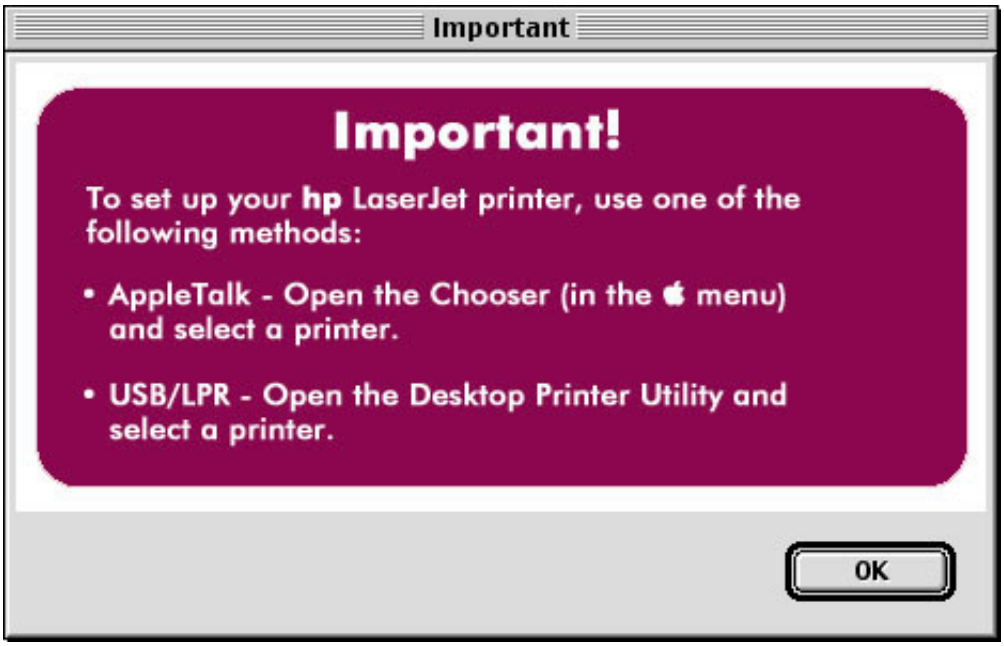


Figure 74. **Important! dialog box**

Table 51. Important! dialog box text strings

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

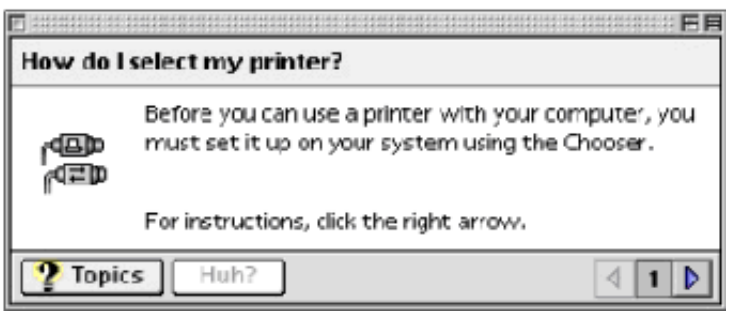


Figure 75. **How do I select my printer? dialog box**

Table 52. How do I select my printer? dialog text strings

Title of dialog box	Text in dialog box	User Options and Descriptions
How do I select my printer?	For instructions, click the right arrow. Topics [button] [An eight-panel Apple Guide sequence describes how to gain access to the Macintosh Chooser and how to select and set up the printer.]	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 76. HP LaserJet Screen Fonts splash screen dialog box

Table 53. HP LaserJet Screen Fonts splash screen dialog text strings

Title of dialog box	Text in dialog box	User Options and Descriptions
HP LaserJet Screen Fonts	HP LaserJet Screen Fonts [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 77. **HP LaserJet Screen Fonts installer dialog box**

Table 54. HP LaserJet Screen Fonts installer dialog text strings (1 of 2)

Title of dialog box	Text in dialog box	User Options and Descriptions
HP LaserJet Screen Fonts	Click the **Install** button to install: Screen Fonts Items will be installed on the disk "Apple External HD" Quit [button] Install [button] (default option}	Click the **Install** button to start the installation. Click the **Quit** button to quit the Installer without making changes to the system.

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

Table 55. HP LaserJet Screen Fonts installer dialog text strings (2 of 2)

Title of dialog box	Text in dialog box	User Options and Descriptions
Installing	Items remaining to be installed: [conditional number] Stop [button]	Click the **Stop** button to interrupt the install file copy process.

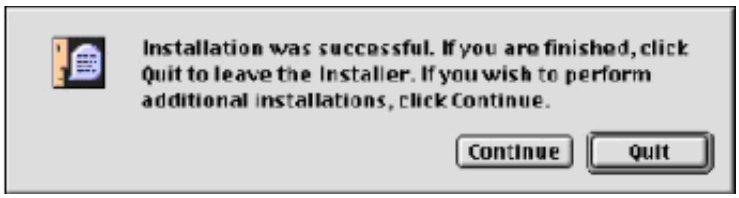


Figure 78. **Installation was successful dialog box**

Table 56. Installation was successful dialog text strings

Title of dialog box	Text in dialog box	User Options and Descriptions
[This untitled dialog box begins with the words "Installation was successful."]	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

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 printer object is missing

Use this procedure when a printer object does not appear on the computer desktop. To create a printer object and install a printer driver, follow these steps:

Note Use this procedure if the OS/2 desktop does not have a printer object. A system can have this configuration if no printer was selected during OS/2 installation, or if all the print objects have been deleted from the desktop.

Step 1 Open the templates folder that is located in OS/2 system folder after OS/2 installation.

Step 2 Click the **Printer** template. Press and hold the right mouse button.

Step 3 Drag the template to Desktop.

Step 4 Release the right mouse button.

Step 5 Type a name for the printer in the **Name** field.

Step 6 Select a port to which the printer is connected.

Step 7 Click **Install new printer driver**. A window appears with a list of the printer drivers that are shipped with O/S2.

Step 8 Click **Other printer driver**.

Step 9 Point to the downloaded printer drivers.

Step 10 Click **Refresh**. Wait until the window fills with printer drivers.

Step 11 Select a driver by clicking the left mouse button over the desired driver.

Step 12 Click **Install**.

Installing a printer in OS/2 with pre-existing printer object on 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.

Step 1 Select the **Printer** object using the right mouse button.

Step 2 Click **Settings**.

Step 3 Click the **Printer Driver** tab.

Step 4 Select one of the **Printer Driver** objects using the right mouse button.

Step 5 Click **Install**.

Step 6 Click **Other OS/2 printer driver**.

Step 7 Point to the downloaded printer drivers.

Step 8 Click the **Refresh** button. Wait until the window fills with printer drivers.

Step 9 Select a driver by clicking the left mouse button over the desired driver.

Step 10 Click the **Install** button.

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

Font support

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

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

- CG Times Bold
- Line Printer
- CG Times Bold Italic
- Marigold

Changing a printer driver in the printer object

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 **Titlebar** icon.

The printer object is now set up to use a different printer driver. To customize the settings for this printer driver, see "Changing the printer properties" or "Changing the job properties."

Changing the printer properties

Printer properties describe how a particular printer is physically set up. Examples of printer properties include the amount of memory in a printer, forms defined by the printer, forms associated with the printer paper trays, and installed printer patterns.

To set or change printer properties:

Step 1 Point to the Printer object. Right-click the **Printer** object.

Step 2 Click **Settings**.

Step 3 Click the **Printer Driver** tab.

Step 4 Select the printer driver, and then right-click the mouse button.

Step 5 Click **Settings**.

Step 6 Change the properties to match the printer setup.

Step 7 Double-click the **Titlebar** icon.

The printer object is now set up to print a job. For information about how to print a job, see the OS/2 tutorial or the information folder 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:

Step 1 Right-click the **Printer** object.

Step 2 Click **Settings**.

Step 3 Click the **Job Properties** tab.

Step 4 Change the properties.

Step 5 Click **Save**.

The default job properties associated with a printer object are now set up. For more information about how to print a job, see the OS/2 tutorial or the information folder.

6 Engineering Detail

Introduction

This section presents engineering detail for the following topics:

- Digital Sending Config Applet
- Media attributes
- Printer Status and Alerts

Digital Sending Config Applet

The Digital Sending Config Applet provides an interface between the digital sending functions of the HP LaserJet MFP and your computer using a Web browser. To gain access to the Digital Sending Config Applet, open your Web browser and type your product TCP/IP address to open HP Web Access. Click the **Settings** tab, then click **Digital Sending** in the menu on the left.

Note Some browsers require downloading Java libraries from the Sun Web site.

General tab

The fields in the **General** tab help to identify the administrator for this MFP. When used with HP Digital Sending Software version 3.0, this tab has options for delivering administrative alerts to this person.

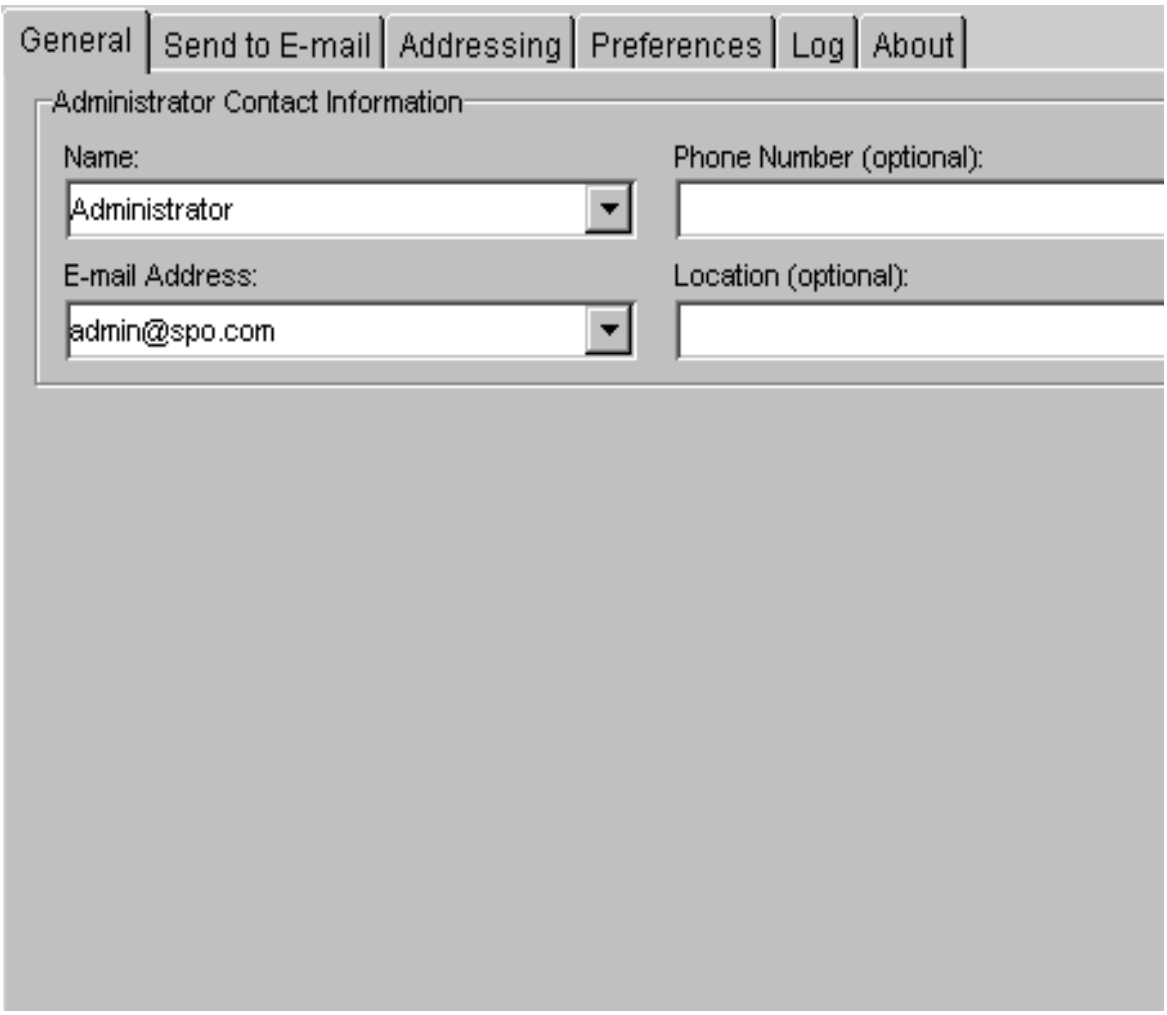


Figure 79. **Digital Sending Config Applet — General tab**

The **Administrator Contact Information** group box contains the following fields:

- Name:
- E-mail Address:
- Phone Number (optional):
- Location (optional):

Send to E-mail tab

The **Send to E-mail** tab is shown in the following illustration.

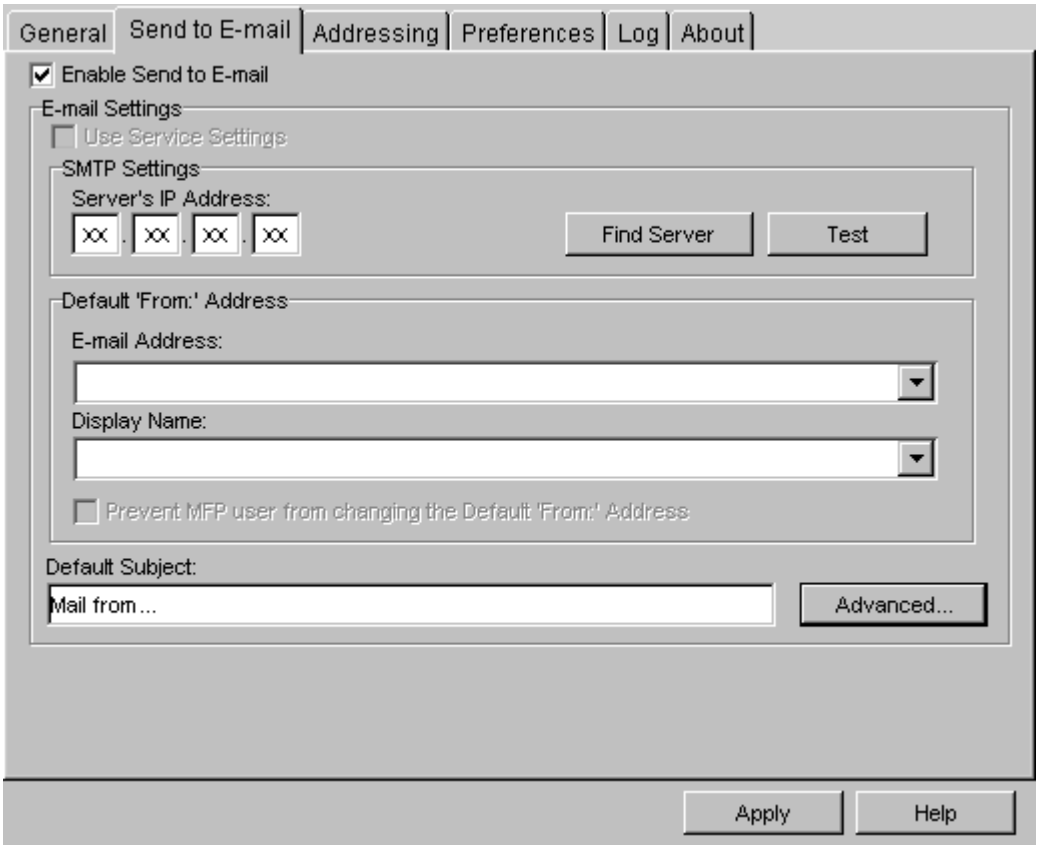


Figure 80. **Digital Sending Config Applet — Send to E-mail tab**

Click the **Enable Send to E-mail** check box to use the feature.

Note You will not be able to exit from this tab if the SMTP server TCP/IP address is not configured.

Select the **Use Service Settings** check box to allow Digital Sending Software version 3.0 to override these settings.

The **Server's IP Address** field in the **SMTP Settings** group box shows the server TCP/IP address, which determines the network address of the e-mail gateway. DNS names are not supported.

Click the **Find Server** button to acquire SMTP gateway information in one of two ways:

1. Broadcast a predetermined query on the local subnet that MFP devices listen for.
2. If DNS is configured, query the DNS server for the "mail exchanger" (mx) record, which defines where SMTP network traffic is routed.

Select the **Test** button to verify the e-mail server at the configured address in one of two ways:

1. Start an SMTP conversation on TCP port 25 with the HELO command.

2. Attempt to send an e-mail by using the MAIL FROM command. This verifies that the gateway will accept messages.

Use the **Default 'From': Address** group box to create default settings for e-mail sent from your MFP.

The SMTP protocol will not allow a message to be sent if it does not contain a return address. The address in the **E-mail Address:** field under **Default 'From:' Address** will be added to the **From:** field. It can be overridden by typing in a different address.

Text typed in the **Display Name:** box is the alias that appears in the **From:** field instead of the e-mail address.

Text typed in the **Default Subject:** box will automatically be populated in the **Subject:** field. It can be overridden by typing in different text.

Advanced E-mail Settings

To gain access to these settings, click the **Advanced...** button on the **Send to E-Mail** tab.

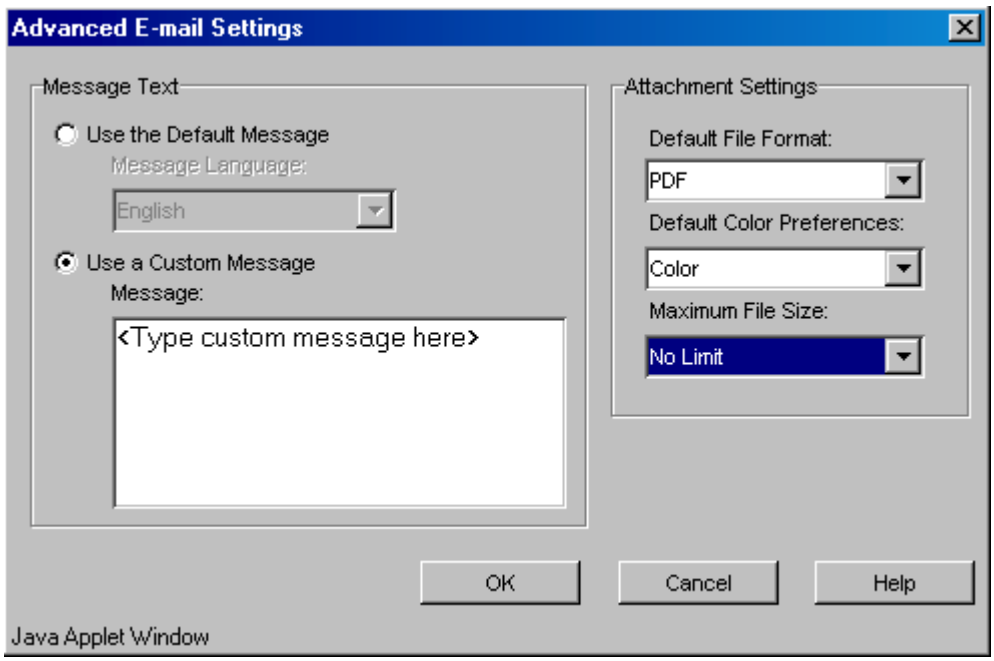


Figure 81. **Digital Sending Config Applet - Advanced E-mail Settings**

Information in the **Message Text** group box defines the content of the e-mail message that includes the scanned attachment. If you click **Use Default Message**, the **Message Language** drop-down menu becomes available. If you click **Use a Custom Message:**, you can type your own message.

Information in the **Attachment Settings** group box determines the default settings for the scanned attachment:

- Default File Format
- Default Color Preferences
- Maximum File Size

Addressing tab

The **Addressing** tab is shown in the following illustration.

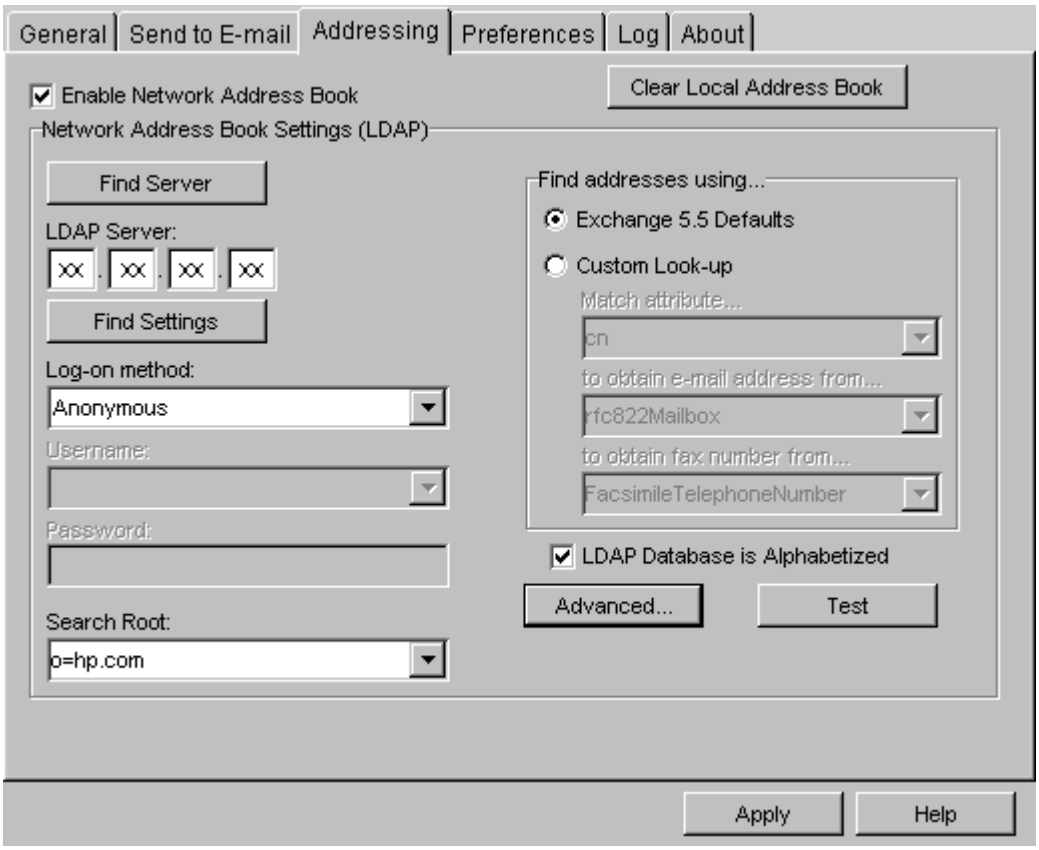


Figure 82. **Digital Sending Config Applet — Addressing tab**

Select the **Enable Network Address Book** check box to use an LDAP database for address queries.

An address book is stored locally on the MFP and is available to all users. When an address is typed at the control panel, the MFP queries the user about whether to save the address.

Click the **Clear Local Address Book** button to delete all addresses from the local address book.

Note This address book is not accessible or editable from the legacy Address Book Manager application.

The **Network Address Book Settings (LDAP)** group box includes controls for configuring network settings for the address book.

Click the **Find Server** button to acquire LDAP servers on the network by broadcasting a predetermined query on the local subnet that MFP devices listen for.

You can type the network address of the LDAP server in the **LDAP Server:** field. DNS names are not supported.

Click the **Find Settings** button to determine LDAP database search root by using the following methods:

1. Connecting to the LDAP database at the configured port and querying for the “base dn” record.
2. Querying for address records using various values for the search root, including the null search value and values discovered from the base dn record.
3. Querying for e-mail and fax records using standard LDAP attribute values.

In the **Log-on method:** field, the settings are:

- **Anonymous** — no username or password is submitted to the LDAP server with the query.
- **Simple** — the values from the **Username** and **Password** boxes are used to authenticate to the LDAP server. This is not NTLM authentication. The username and password are set up by an administrator for this instance of an LDAP database.

Use the **Search Root** box to indicate where in the LDAP database hierarchy to begin searching for the requested address record.

Use the **Find addresses using…** group box to find addresses according to certain attributes.

Select **Exchange 5.5 Defaults** to use a predefined set of LDAP attribute associations to locate address records. Alternatively, you can select **Custom Look-up** to locate address records with the following customizable attributes:

- **Match attribute...** — Select **UID**, **CN**, **SN**, **givenName**, or type the value.
- **to obtain e-mail address from...** — Select **rfc822Mailbox**, **email**, or type the value.
- **to obtain fax number from...** — Select **FacsimileTelephoneNumber** or type the value.

The user name you type at the control panel is used to find matches for records in the LDAP database that are filed under the **UID**, **CN**, **SN**, or **givenName** attributes. When a match is found, the email and fax addresses are completed by using the addresses stored in the attributes named in the **to obtain e-mail address from...** and **to obtain fax number from...** fields.

Note Fax numbers are supported only if you are using Digital Sending Software version 3.0.

Select the **LDAP Database is Alphabetized** check box to sort the records that are returned from an LDAP search. This is required for automatic completion.

Click the **Test** button to query the LDAP database with the configured look-up options and obtain any records.

Advanced Network Addressing Settings

The **Advanced Network Addressing Settings** mini-tab is shown in the following illustration.

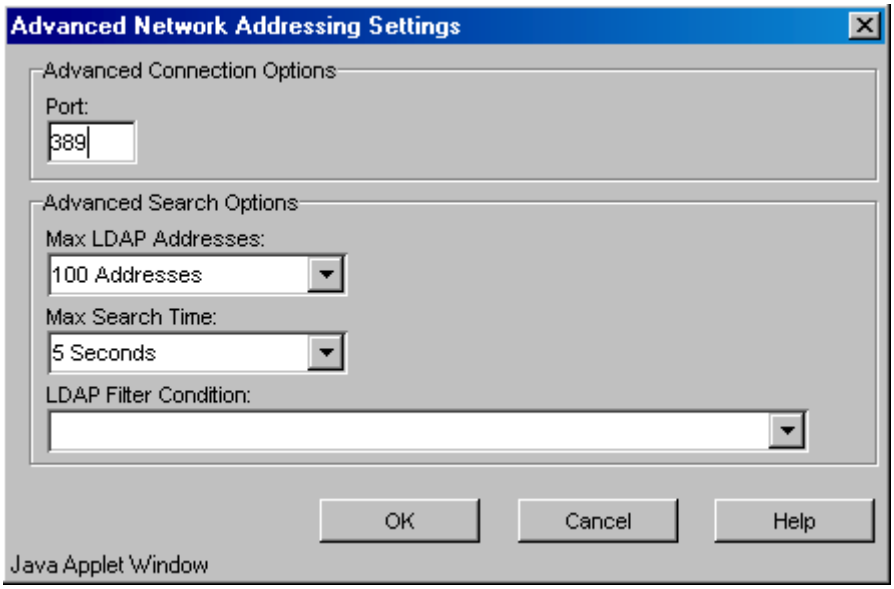


Figure 83. **Digital Sending Config Applet - Advanced Network Addressing Settings**

Use the **Port:** box under **Advanced Connection Options** to determine the TCP port through which the MFP communicates with the LDAP server.

Use the boxes under **Advanced Search Options** to set the following controls:

Max LDAP Addresses: This value determines how many records are returned in a single database query.

Max Search Time: This value determines the timeout interval for a database query.

LDAP Filter Condition: Additional search conditions must be in the form of a valid LDAP filter. For example, “L = any city, any state, any country” limits the search to addresses located in that city.

Preferences tab

The **Preferences** tab is shown in the following illustration.

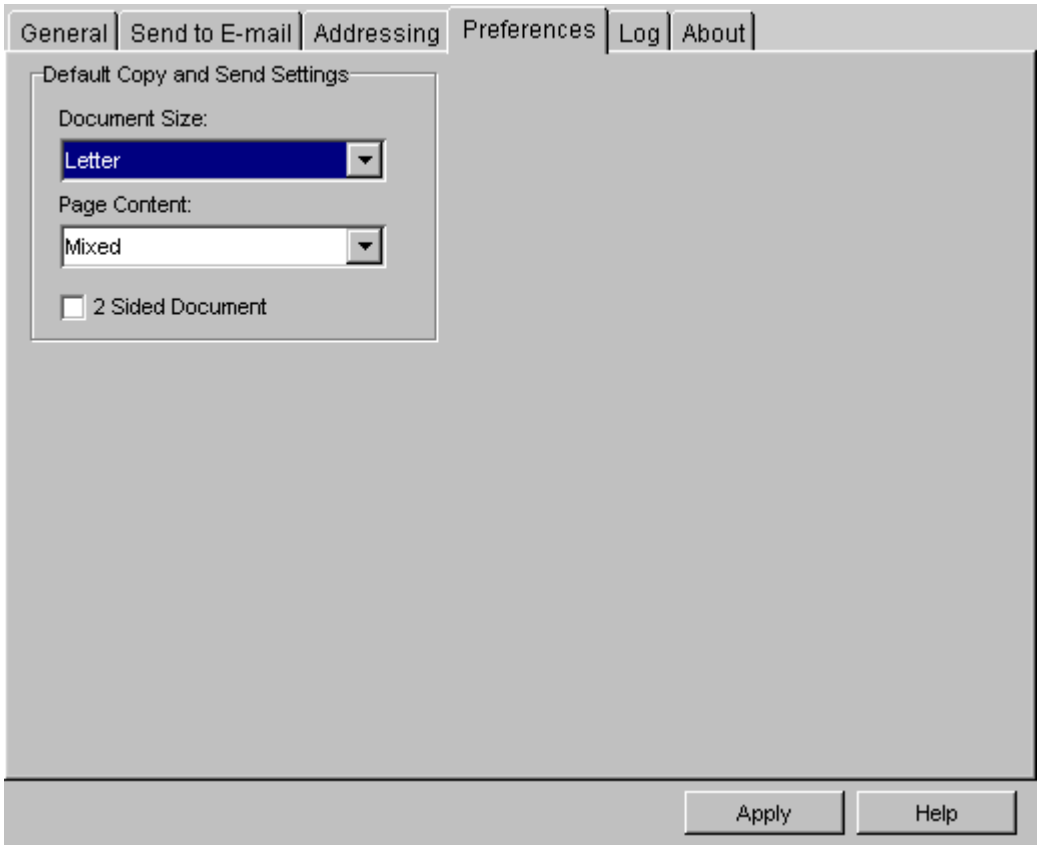


Figure 84. **Digital Sending Config Applet — Preferences tab**

On the **Preferences** tab, use **Default Copy and Send Settings** to set the default settings for document size, expected page content, and duplexing:

- Document Size
- Page Content
- **2 Sided Document** check box

Log tab

The **Log** tab is shown in the following illustration.

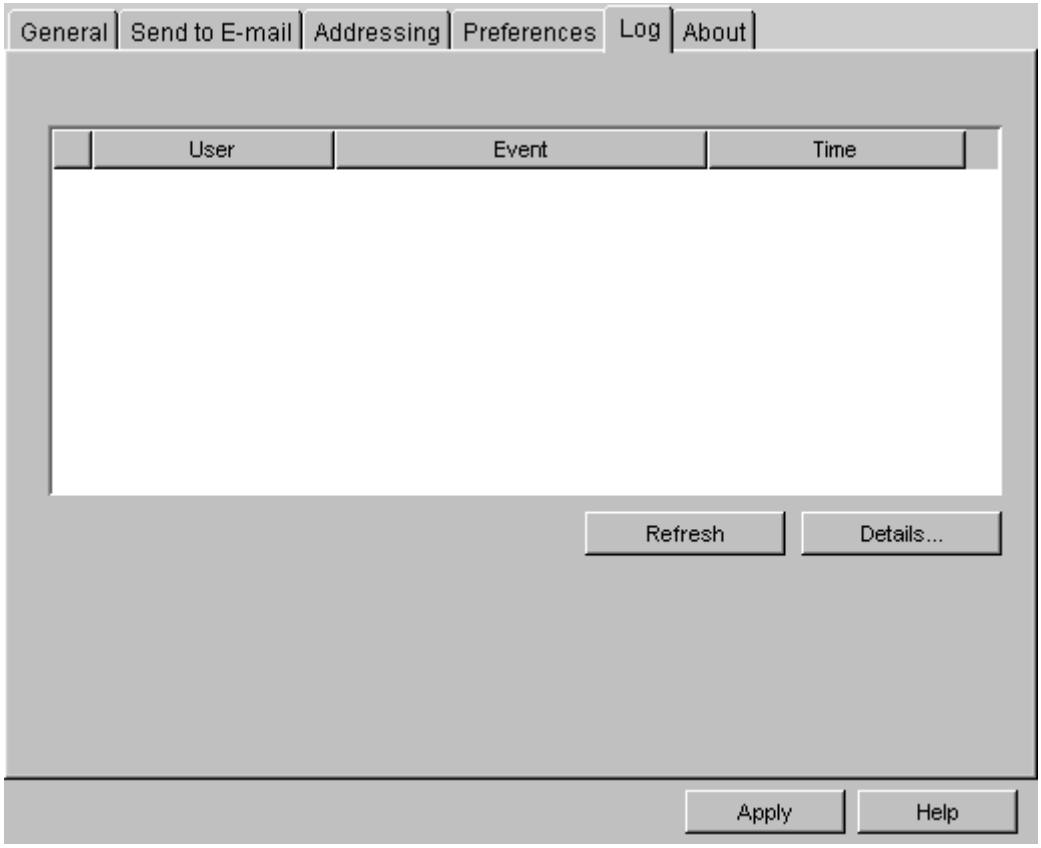


Figure 85. **Digital Sending Config Applet — the Log tab**

Click **Refresh** to refresh log events.

Click **Details** to view additional details about the selected log event.

About tab

The **About** tab is shown in the following illustration.

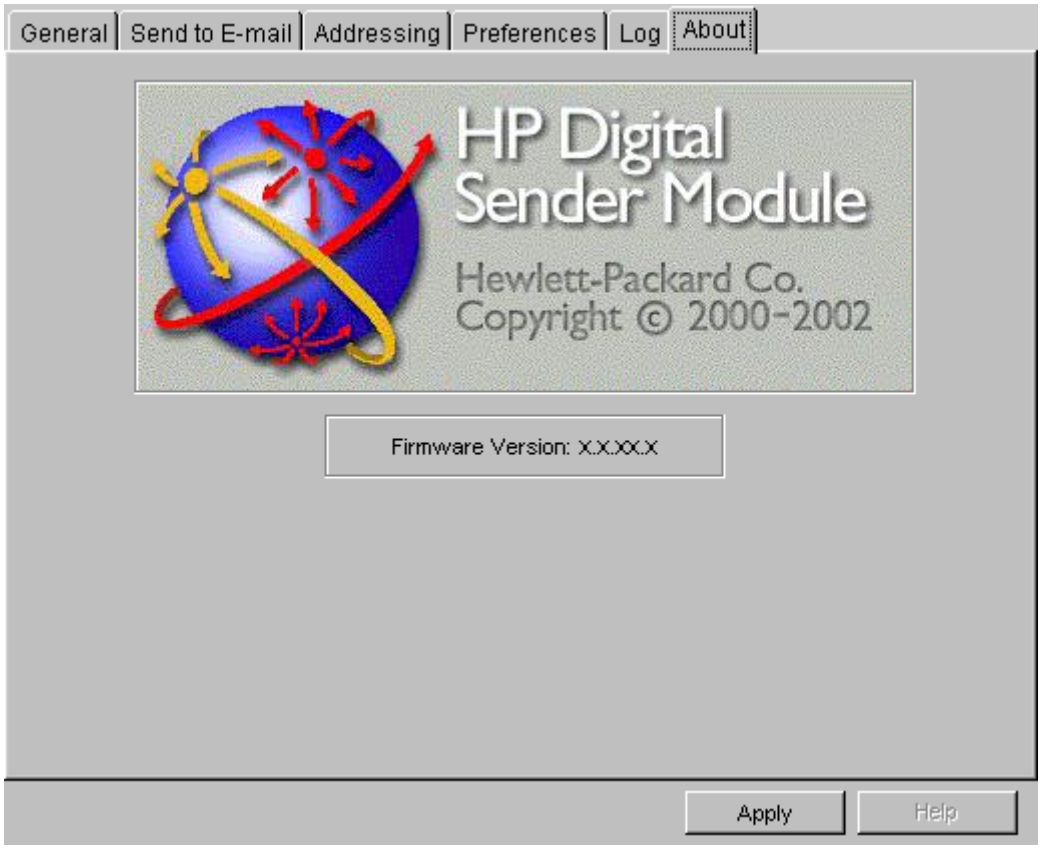


Figure 86. **Digital Sending Config Applet — The About tab**

The **About** tab shows the MFP firmware version.

E-mail Servers That Function as SMTP Gateways

Exchange 5.5

In Exchange 5.5, the Internet Mail Service (IMS) is responsible for the transfer of SMTP mail. To transfer the mail successfully, the IMS must be configured with a route to another gateway.

Exchange 2000

Exchange 2000 (IIS5) does not directly support SMTP, but it is installed with IIS5, which does support the SMTP service. Exchange 2000 integrates with Active Directory. It does not have its own data store. Similarly, IIS5 manages the SMTP service for Exchange 2000. You can verify that the SMTP service in Windows 2000 is running by viewing Administrative Tools > Services.

Sendmail

Sendmail runs as a Unix daemon (service) - In many large networks, as in HP's network, several Exchange servers are routed to a Sendmail gateway, which can serve as a kind of firewall.

Qmail

Qmail is very similar to Sendmail. Qmail does not accept a 'bare line-feed character' in any of the SMTP content. We have seen several problems with the standalone Digital Sender products because of this. Earlier versions of the DSM 2.x and the 9100C sent messages with bare line feed characters.

Lotus Domino (Notes)

The SMTP MTA or Message Transfer Agent must be configured in Domino for it to work as an SMTP gateway.

SMTP Gateway Verification

Telnet to Port 25

By opening a telnet session and sending an e-mail, you not only verify that you can communicate with the SMTP gateway, you also verify that the SMTP gateway is correctly configured to route Internet e-mail. To fully verify this, you should use an e-mail account outside of the local network - for example, a Hotmail® account.

By verifying that e-mail can be sent, you can rule out any problem with the particular gateway you have configured for the HP LaserJet 9000mfp to use.

Procedure

You cannot backspace in a telnet session. Any characters that you type will be sent one character at a time to the SMTP gateway, backspaces included. Note also that SMTP is not case-sensitive.

Step 1 Open a command prompt, type “telnet <smtp gateway> 25", and press Enter (where <smtp gateway> is the fully qualified domain name or IP address of the SMTP gateway) to establish communication with the SMTP gateway on port 25.

Step 2 Type “help” and the Enter key. Note the different SMTP options that are returned.

Step 3 To start a conversation with the SMTP gateway, type “HELO <smtp gateway>” and press Enter. Note that the response contains a list of attributes as well as the type of SMTP gateway that you are communicating with.

Step 4 To initiate the sending of an e-mail, type “mail from: <your e-mail address> and press Enter

Step 5 Type “rcpt to: <your e-mail address>” and press Enter.

Step 6 Type “subject: This is a test message.”

Step 7 Type “data:” and press Enter.

Step 8 Whatever you type next goes into the body of the message.

Step 9 To send the message type “.” and press Enter.

Step 10 Type “quit” and press Enter to end the Telnet session.

You should see the test e-mail message in your inbox in a few seconds.

Lightweight Directory Access Protocol

Lightweight Directory Access Protocol (LDAP) is a directory access service (RFC1777). LDAP stores attribute-based data in hierarchical data structures.

Common Abbreviations for LDAP Attributes

- Uid, NTDomainAccountName, or SamAccountName: User id
- Cn: Common Name
- Sn: Surname
- Mail or rfc822mailbox: e-mail address
- o: Organization
- dc: Domain Component
- st: State

E-mail Servers that support LDAP

- If Exchange 5.5 is installed in Windows 2000 with Active Directory, and the Active Directory connector is not configured, both by default enable LDAP. Since both cannot use port 389, one or the other may have been configured for a different port number.
- Windows 2000 Active Directory is also very hierarchical in nature. LDAP is tightly integrated with Active Directory.

Note When using Active Directory, the entire, fully-qualified domain name must be defined using the “DC=” qualifier. For example, for the “City.Company.com” domain name, use “DC=City, DC=Company, DC=com”.

- Sendmail runs in Unix.

More information about open source LDAP can be found at the following URL:

http://www.openldap.org

Media attributes

This section includes the following information about media attributes:

- paper-source commands
- media types and sizes
- PCL 5e and PCL 6 custom paper sizes

Paper-source commands

The PCL 5e escape sequence for paper source is “Esc&l#H” (the “l” is a lowercase “L” rather than the numeral “1”). See the table 9 for values of #. For example, “Esc& l1H” is the command for tray 2.

The PCL 6 escape sequence for paper source is “ubyte # MediaSource”. See the table 9 for values of #. For example, “ubyte 4 MediaSource” is the command for tray 2.

Table 57. Paper source commands for the HP LaserJet 9000mfp product

Paper source	PCL 5e	PCL 6
Tray 1	4	3
Tray 2	1	4
Tray 3	5	5
Tray 4	20	8
Auto Select	7	1
Manual Feed	2	2

Media types and sizes

The tables in this section provide information about media features, media attributes, and paper-handling constraints for the HP LaserJet products.

Note The following table lists the features and attributes of various media listed under the **Size Is:** drop-down menu on the **Paper** tab. The list order can vary, depending on the product and operating system. The list will contain all the sizes shown below, and might contain sizes from other drivers.

Table 58. Supported features and attributes

Paper sizes	Width	Height	PCL 5 escape value[1]	PCL 6[2]	PCL 5 margin x,y portrait	PCL 5 margin x,y landscape	PCL 6 margins
Letter[3]	216 mm (8.5 inches)	279 mm (11.0 inches)	2	“LETTER”	150,100	120,100	100, 100
Legal	216 mm (8.5 inches)	356 mm (14.0 inches)	3	“LEGAL”	150,100	120,100	100, 100
Executive	184 mm (7.25 inches)	267 mm (10.5 inches)	1	“EXEC”	150,100	120,100	100, 100
A5	148 mm (5.83 inches)	210 mm (8.27 inches)	25	“A5”	150,100	120,100	100, 100
A4[3]	210.0 mm (8.27 inches)	297 mm (11.69 inches)	26	“A4”	142, 100	118, 100	100, 100
A3	297 mm (11.69 inches)	420 mm (16.53 inches)	27	“A3”	142, 100	118, 100	100, 100
Envelope Commercial #10	105 mm (4.12 inches)	241 mm (9.5 inches)	81	“COM10”	150, 100	120, 100	100, 100
Envelope DL (ISO)	110 mm (4.3 inches)	220 mm (8.66 inches)	90	“DL”	142, 100	118, 100	100, 100
Envelope C5 (ISO)	162 mm (6.38 inches)	229 mm (9.01 inches)	91	“C5”	142, 100	118, 100	100, 100
Envelope B5 (ISO)	176 mm (6.93 inches)	250 mm (9.84 inches)	100	“B5 ENV”	142, 100	118, 100	100, 100

Table 58. Supported features and attributes

Paper sizes	Width	Height	PCL 5 escape value[1]	PCL 6[2]	PCL 5 margin x,y portrait	PCL 5 margin x,y landscape	PCL 6 margins
Envelope Monarch	98 mm (3.87 inches)	190 mm (7.5 inches)	80	“MONARCH”	150, 100	120,100	100, 100
11 by 17	279 mm (11.0 inches)	432 mm (17.0 inches)	6	“LEDGER”	100, 100	100, 100	100, 100
B4 (JIS)	257 mm (10.12 inches)	364 mm (14.33 inches)	46	“JIS B4”	100, 100	100, 100	100, 100
B5 (JIS)	182 mm (7.16 inches)	257 mm (10.12 inches)	45	“JIS B5”	142,100	142, 100	100, 100
Double Postcard[4]	148 mm (5.83 inches)	200 mm (7.87 inches)	72	“JPOSTD”	100, 100	100, 100	100, 100
16K[4]	197 mm (7.75 inches)	273 mm (10.75 inches)	17	“ROC16K”	150, 100	100, 100	100, 100
8K[4]	273 mm (10.75 inches	394 mm (15.5 inches)	19	“ROC8K”	100, 100	100, 100	100, 100
Executive (JIS)[4]	216 mm (8.5 inches)	330 mm (12.99 inches)	18	“JISEXEC”	150, 100	120, 100	100, 100
Custom (leading edge) (other edge)	Minimum: 98 mm (3.87 inches) Maximum: 356 mm (12.28 inches)	Minimum: 312 mm (12.28 inches) Maximum: 470 mm (18.5 inches)	101	[5]	[5]	[5]	[5]

[1]The PCL 5e escape sequence for paper size is Esc&l#H. The values in this column are for #.
[2]The PCL 6 command for paper size is ubyte array(String)MediaSize. The values in this column are the values for “String”.
[3] Long-edge feed (others are short-edge feed).
[4]In Windows NT 4.0, this paper size is treated as a custom size.
[5]For custom sizes, the PCL 6 Wizard specifies actual dimensions - for example, for 8-inch by 9-inch custom size, “real32_8.000000 9.000000 CustomMediaSize”.

The following table shows paper sizes that are supported by HP LaserJet 9000mfp product input devices, trays 1 through 4. Envelopes and labels can only be fed to the product from tray 1.

Table 59. Input-device supported sizes for the HP LaserJet 9000mfp product

Standard paper sizes	Tray 1	Tray 2	Tray 3	Tray 4 HCI
Letter[1]	Y	Y	Y	Y
Legal	Y	Y	Y	Y
Executive	Y	Y	Y	Y
A5	Y	Y	Y	N

Table 59. Input-device supported sizes for the HP LaserJet 9000mfp product

Standard paper sizes	Tray 1	Tray 2	Tray 3	Tray 4 HCI
A4[3]	Y	Y	Y	Y
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
16K	Y	N	N	N
8K	Y	N	N	N
Executive (JIS)	Y	N	N	N
Oversize 11.7 by 17.7	Y	N	N	N
Custom	Y[2]	Y[3]	Y[3]	Y[3]

[1]Long-edge feed (others are short-edge feed).
[2]This input device supports custom paper sizes that meet 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).
[3]This input device supports custom paper sizes that meet 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 lists media sizes that are supported by the following HP LaserJet 9000mfp output devices:

- duplexing unit
- HP 3000-Sheet Stacker
- HP 3000-Sheet Stapler/Stacker

Table 60. Supported media sizes — duplexing unit, 3000-Sheet Stacker, and 3000-Sheet Stapler/Stacker

Paper sizes	Duplexing unit	3000-Sheet Stacker		3000-Sheet Stapler/Stacker		
		Face up	Face down	Face up	Face down	Stapling
Letter[1]	Y	Y	Y	Y	Y	Y
Legal	Y	Y	Y	Y	Y	Y
Executive	Y	Y	Y	Y	Y	Y[2]
A5	Y	Y	Y	Y	Y	Y[2]
A4	Y	Y	Y	Y	Y	Y
A3	Y	Y	Y	Y	Y	Y

Table 60. Supported media sizes — duplexing unit, 3000-Sheet Stacker, and 3000-Sheet Stapler/Stacker (continued)

Paper sizes	Duplexing unit	3000-Sheet Stacker		3000-Sheet Stapler/Stacker		
		Face up	Face down	Face up	Face down	Stapling
Envelope #10	N	Y	N	Y	N	N
Envelope DL	N	Y	N	Y	N	N
Envelope C5	N	Y	N	Y	N	N
Envelope B5	N	Y	N	Y	N	N
Envelope Monarch	N	Y	N	Y	N	N
11 by 17	Y	Y	Y	Y	Y	Y
B4 (JIS)	Y	Y	Y	Y	Y	Y
B5 (JIS)	N	Y	Y	Y	Y	Y[2]
Double Postcard[3]	N	Y	Y	Y	Y	Y
16K[3]	N	Y	Y	Y	Y	Y
8K[3]	N	Y	Y	Y	Y	Y
Executive (JIS)	N	Y	Y	Y	Y	Y
Oversize[3]	N	Y	Y	Y	Y	Y[4]
Custom[3,5]	N	Y	Y	Y	Y	Y

[1]Letter and A4 paper are both long-edge and short-edge feed. Other paper sizes are short-edge feed.
[2]When the **6-staples** option is selected, the device puts in only 4 or 5 staples, depending on the staple-position calibration.
[3]This is not standard paper. It is supported as a custom size.
[4]The angle staple position and opposite stapled position are not supported.
[5]Paper size 98 mm x 191 (3.86 x 7.52 inches) stays in the printer and does not reach the output device.

The following table lists media sizes that are supported by the HP Multifunction Finisher for the HP LaserJet 9000mfp.

Table 61. Supported media sizes — HP Multifunction Finisher

Paper sizes	Multifunction Finisher			
	Stacker bin		Booklet bin	Stapling
	Face up	Face down		
Letter	Y	Y	Y[1]	Y
Legal	Y	Y	Y	Y
Executive	Y	Y	Y	Y
A5	Y	Y	Y	Y
A4	Y	Y	Y[1]	Y
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

Table 61. Supported media sizes — HP Multifunction Finisher (continued)

Paper sizes	Multifunction Finisher			
	Stacker bin		Booklet bin	Stapling
	Face up	Face down		
Envelope Monarch	Y	N	N	N
11 by 17	Y	Y	Y	Y
B4 (JIS)	Y	Y	Y	Y
B5 (JIS)	Y	Y	Y	Y
Double Postcard	Y	N	Y	Y
16K	Y	Y	Y	Y
8K	Y	Y	Y	Y
Executive (JIS)	Y	Y	Y	Y
Oversize	Y	N	Y	Y
Custom	Y	Y[2]	Y	Y

[1]Short-edge feed only (Letter and A4 paper must be rotated when loading the selected input tray).
[2]All custom sizes from standard input trays can be flipped over and delivered face-down.

PCL 5e and PCL 6 custom paper sizes

The following table shows custom paper sizes available for the HP LaserJet 9000mfp.

Table 62. 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 (7.52 inches) Maximum: 470 mm (18.50 inches)
Trays 2 through 4	Custom (leading edge) (other edge)	Minimum: 148 mm (5.83 inches) Maximum:297 mm (11.69 inches)	Minimum: 210 mm (8.27 inches) Maximum:432 mm (17.01 inches)

Note The PS driver does not support custom paper sizes.

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

Table 63. Input-device supported media

Input media types (PS string)	Tray 1	Tray 2	Tray 3	HCI Tray 4
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
Card stock[1]	Y	Y	Y	Y
Rough	Y	Y	Y	Y

[1]Tray 1 accepts card stock 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 that are supported by these HP LaserJet 9000mfp output devices:

- duplexing unit
- 3000-Sheet Stacker/Stapler
- 3000-Sheet Stapler/Stacker

Table 64. Output-device supported media

Output media types	Duplexing unit	3000-Sheet Stacker		3000-sheet stacker		
		Face up	Face down	Face up	Face down	Stapling
Plain	Y	Y	Y	Y	Y	Y
Preprinted[1]	Y	Y	Y	Y	Y	Y
Letterhead[1]	Y	Y	Y	Y	Y	Y
Transparency	N	Y	Y	Y	Y	N
Prepunched	Y	Y	Y	Y	Y	Y
Labels	N	Y	N	Y	N	N
Bond	Y	Y	Y	Y	Y	Y
Recycled	Y	Y	Y	Y	Y	Y
Color	Y	Y	Y	Y	Y	Y
Card stock	Y	Y	N	Y	N	N
Rough[2]	Y	Y	Y	Y	Y	Y

[1]Media must be properly oriented when loaded in selected input trays.
[2]Stapling and/or folding is not recommended.

The following table identifies the media types that are supported by the HP LaserJet 9000mfp Multifunction Finisher.

Table 65. HP Multifunction Finisher supported media

Output media types	Multifunction Finisher			
	Stacker bin		Booklet bin	Stapling
	Face down	Face up		
Plain	Y	Y	Y	Y
Preprinted	Y	Y	Y	Y
Letterhead	Y	Y	Y	Y
Transparency	Y	Y	N	N
Prepunched	Y	Y	Y[1]	Y[2]
Labels	Y	N	N	N
Bond	Y	Y	Y	Y
Recycled	Y	Y	Y	Y
Color	Y	Y	Y	Y
Card stock	Y	Y[3]	Y[3,4]	Y[3,5]
Rough	Y	Y	Y	Y

[1]Mechanically feasible, but impractical.
[2]Media must be properly oriented when loaded in selected input trays.
[3]Up to a weight of 199 grams per square meter. Between 199 grams per square meter, and 216 grams per square meter, only face-up delivery is supported.
[4]Only covers are supported.
[5]Stapling is allowed to a maximum weight of 199 grams per square meter.

Paper Type commands

The PCL 5e escape sequence for paper type is “Esc&n#Wdpapertype”, where “n#” is the number of characters in the paper type plus 1. For example, in the sequence “Esc&n6WdPlain”, “Plain” has 5 letters plus 1 for a total of 6.

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

Some paper type options listed in the table below might not be defined in the printer driver.

Table 66. Paper-type commands

Esc&	n#	Wd	Paper type
Esc&	5	Wd	Bond
Esc&	10	Wd	Card stock[1]
Esc&	6	Wd	Color
Esc&	7	Wd	Labels
Esc&	11	Wd	Letterhead
Esc&	6	Wd	Plain
Esc&	11	Wd	Preprinted
Esc&	11	Wd	Prepunched

Table 66. Paper-type commands

Esc&	n#	Wd	Paper type
Esc&	9	Wd	Recycled
Esc&	6	Wd	Rough
Esc&	13	Wd	Transparency[2]

[1]The correct command for card stock is “Esc&n11WdCard Stock”, with a space between the “d” and the “S”, and with an uppercase “S”.
[2]You must spell out the word “Transparency” in the string, although it is abbreviated on the printer control panel.

Printer Status and Alerts

HP product models and drivers that support Printer Status and Alerts

The following table lists the HP product models and drivers that support Printer Status and Alerts.

Table 67. Printer Status and Alert driver support

Product model	Drivers supported
HP Color LaserJet 4500[1]	PCL 6, PCL 5e (but not the older RASDD version), PS
HP Color LaserJet 4550	PCL 6, PCL 5e, PS
HP Color LaserJet 8500	PS
HP Color LaserJet 8550[4]	PCL 5c, PS
HP LaserJet 4000 Series[2]	PCL 6, PCL 5c, PS
HP LaserJet 4050 Series	PCL 6, PCL 5e, PS
HP LaserJet 4100 Series	PCL 6, PCL 5e, PS
HP LaserJet 5000 Series[2]	PCL 6, PCL 5e, PS
HP LaserJet 8000[3]	PCL 6, PCL 5e, PS
HP LaserJet 8100 Series	PCL 6, PCL 5e, PS
HP LaserJet 8150 Series	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

[1]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 for this printer that will be supported by Printer Status and Alerts will be available soon. Check http://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.
[2]The original drivers released with the HP LaserJet 4000 series and HP LaserJet 5000 Series printers do not support Printer Status and Alerts. Since those products were introduced, the drivers have been updated. The new drivers support Printer Status and Alerts.
[3]The PCL6 driver for the HP LaserJet 8000 is not supported in Windows 95, Windows 98, and Windows Me.
[4]The original MS version of the HP Color LaserJet 8550 PS driver (included on the CD that came with the product) is not supported. A new version, available at http://www.hp.com, is supported.

For an updated list of products that support the Printer Status and Alerts feature, open the text file HPSASDRV.MTX located in the Windows subdirectory.

Index

Symbols

% of Normal Size option in printer drivers 65
.hpb files 95
.inf file (add printer) 108
.pcm files 95
.rfu (remote firmware update) files
  corrupted 30
  description 26
  wrong printer model contained in 31

Numerics

3000-sheet stapler/stacker. *See* stapler/stacker

A

About tab in Digital Sending Config Applet 188
About This Driver dialog box 89
accessories
  autoconfiguration 19
  documentation 17, 42
  media supported by output devices 196, 197
  monitoring with Printer Status and Alerts utility 20, 24
  stapler/stacker 56
  supported paper sizes for HP LaserJet 9000mfp 193, 194
  verifying installed options 24
accounting vendor portal 39
Acrobat Reader requirement for documentation 16
addresses and address books, configuring for digital sending 182, 183
Addressing tab in Digital Sending Config Applet 183
administrator
  configuring contact information and alerts 180
  identifying 180
Adobe Acrobat Reader requirement for documentation 16
Adobe PS Level 3 printer drivers 99
Advanced tab in printer drivers 101
alerts
  administrator 180
  configuring pop-up windows 20, 24
  configuring refresh rate 24
  disabling in Printer Status and Alerts utility 24
  e-mail 37
  icons 22
  monitoring with Printer Status and Alerts utility 20
  printer status 198
All Pages tab in printer drivers 70
Apple LaserWriter driver 43
AppleTalk 43
AppleTalk Chooser, installing printers 170
Arabic registration 143
attachments, configuring for digital sending e-mail 182
Auto Select
  option for media source 77
  option for paper type 78
AutoCAD printer drivers
  availability of components by operating system 108
  supported versions 44
autoconfiguration
  accessories supported 19
  availability of components by operating system 108
  description 19
automatic e-mail notifications about software and firmware releases 106

B

Back Cover tab in printer drivers 72
back covers
  including for documents 71
  selecting for booklets 56
Basics tab in printer drivers 85
Best Quality printer driver setting 60
bidirectional communication
  autoconfiguration 19
  availability of components by operating system 108
  description 18
  for parallel and USB connections 19
  supporting operating systems and network environments 18
bindery
  See also NDS; Novell NetWare
binding options 53, 54
bins. *See* output bins
bitmaps, sending TrueType fonts as 63
black, printing all text as 63
booklets
  binding options 54
  impositioning 55
  page borders option 59
  page order option 59
  pages per sheet option 59
  paper sizes for which disabled 54
  printing 54
  quick sets 51
  selecting back cover 56
  selecting cover 56
borders option for printing 59
Bubble Help 49
bundle configurations
  geographic variations 13
  HP LaserJet 9000mfp 14

C

Cancel button in messages 48
CD browser for HP LaserJet printing system software
  availability of components by operating system 108
  description 40, 41
CD-ROM for installation
  availability and fulfillment 105
  in-box file layout 105
  regional versions 105
changing
  job properties 177
  printer driver in printer object 176
  printer properties 176
  watermarks 68
character, euro 40
Choose Setup Language dialog box 120
codes for firmware level 26
collating
  multiple original print jobs 91
  overriding settings in software programs 95

colors
configuring for digital sending e-mail 182
selecting for watermarks 68
commands
paper source 190
paper type 197
Complex Graphics option in printer drivers 62
Components dialog box 142
confidential documents, printing 81, 82, 103, 104
configuration
automatic using Driver Autoconfiguration 19
verifying physical configuration 79
verifying printer 69
viewing remotely 34
configuration page
printing 26
viewing remotely using HP Web Access 33
configurations
geographic variations 13
HP LaserJet 9000mfp 14
Configure Font DIMMs dialog box 94
Configure tab in driver help 90
configuring 180
administrator contact information and alerts 180
destinations 92
devices remotely 34
digital sending 38, 179
duplexing unit 91
e-mail alerts 37
e-mail command and response 39
font DIMMs 94
job retention 93
LDAP for digital sending 183
links to off-printer solutions 33
mopier 91
paper destinations 92
paper sources 92
pop-up windows in Printer Status and Alerts utility 20, 24
predefined user settings for printing 50
printer driver hard disk 80
printer driver work space 94
printer memory 93
printer storage 93
refresh rate for printer status and alerts 24
Tray 1 91
trays for Windows operating systems 97
conflict in settings for printing 78
connections
EtherTalk 163
LocalTalk 163
parallel for Macintosh operating systems 163
consumables
monitoring with Printer Status and Alerts utility 20, 24
monitoring with Supplies Status page 32
contact information for administrator, viewing and configuring 180
control panel, viewing simulation with Printer Status and Alerts utility 20
copies
conflict between printer driver and application 86
maximum number 85
printing noncollated 96
selecting number to print 85
setting number to print 85, 100
Copies option in printer drivers 85
covers
including for document back 71
selecting for booklets 56
Current Watermarks option in printer drivers 67
Custom installation
Windows operating systems 141
Custom Paper Size dialog box 73
custom paper sizes
defining 69
limits on width and height 76
naming 75
PCL 5e 195
PCL 6 195
removing 74, 75
renaming 74, 75
selecting 74
setting 73
setting width and height 75
supported by HP LaserJet 9000mfp 193
supported by HP LaserJet 9000mfp output devices 194, 195
supported by PS printer driver 195
viewing list of supported 72
custom paper types 78
Customization Utility for installation 153

D

defaults
installed fonts 114
job properties for printer objects 177
number of quick-copy and proof-and-hold jobs 81, 102
printer 157
printer driver Basics options 85
printer driver Configure options 90
printer driver Destination options 79
printer driver Effects options 64
printer driver Finishing options 50
printer driver Paper options 69
watermarks 69
deleting. *See* removing
Destination Features options in printer drivers 79
Destination tab in printer drivers 79
destinations, configuring 92
Device Settings tab in printer drivers 104
Device Status 32
devices
configuring remotely 34
monitoring with Printer Status and Alerts utility 24
verifying installation 24
viewing status 32
dialog boxes
About This Driver 89
Choose Setup Language 120
Components 142
Configure Font DIMMs dialog box 94
Custom Paper Size 73
Exit Setup 141
Exiting Registration 152
Finish 140
Hewlett-Packard's Electronic Registration 144, 147
HP LaserJet for Macintosh Installer splash screen 165
HP LaserJet Installer (custom install) 167
HP LaserJet Installer (easy install) 166
HP LaserJet Installing 169
HP LaserJet Screen Fonts Installer 171
HP Software License Agreement 122
Identify Printer 130
Installation Type 135

dialog boxes, continued
Model 134
More Configuration Options 93
Network Printer Configuration 129
Network Setup 127
Print Quality Details (600 dpi) 62
Print Quality Details (Best Quality) 61
Printer Name 137
Printer Sharing 138
Select Port 126
Set Network Communication Mode 133
Setup 121
Specify Network Path 132
Type of Connection 125
Watermark Details 67
Web Update 123
Welcome 121
Welcome to Hewlett-Packard's Registration 146
different paper for first page 70
digital sending
configuring from control panel 37
configuring from the control panel 38
configuring from Web browser 179
description 37
Digital Sending Config Applet
About tab 188
Addressing tab 183
description 179
General tab 180
Log tab 187
opening 179
Preferences tab 186
Send to E-mail tab 181
DIMMs (dual inline memory modules)
availability of fonts by operating system 108
fonts 94
directory structure on installation CD-ROM 105
disabling
alerts 24
job retention 80, 102
disk storage, verifying installed options 24
Document Options for printer drivers 52
documentation for product 41
availability of components by operating system 108
description 16
localization of components by operating system 109
location on installation CD-ROM 105
obtaining 16
documents
configuring settings for all pages 70
folding and saddle-stitching 58
including back cover 71
indentifier for job retention 82
printing confidential or sensitive 81, 82, 103, 104
scaling for different paper sizes 65
scaling to fit target paper size 65
selecting number to copy 85
setting different first page 70
stapling 56
dots per inch (dpi) setting in printer drivers 60, 62
double-sided printing. *See* duplexing
downloading
firmware updates 26
firmware updates using HP Web JetAdmin 28
firmware upgrades 105
HP LaserJet printing system software 107
operating system driver bundles 107
software 105
standalone printer drivers 107
dpi (dots per inch) setting in printer drivers 60, 62
Driver Autoconfiguration 19
Driver Work Space (DWS) option in printer drivers 94
drivers. *See* printer drivers
dual inline memory modules (DIMMs). *See* DIMMs (dual inline memory modules)
duplex printing accessory. *See* duplexing unit
duplexer. *See* duplexing unit
duplexing
binding option 53
option. *See* Print on Both Sides option
setting default 53
duplexing unit
configuring 91
custom paper size limits on width and height 76
paper sizes supported by HP LaserJet 9000mfp 193, 194
Print on Both Sides option 53
DWS (Driver Work Space) option in printer drivers 94

E

EconoMode option in printer drivers 60, 63
Edge-to-Edge Printing option in printer drivers 63
Effects tab in printer drivers 64
e-mail
alerts 37
command and response 39
configuring for digital sending from control panel 38
configuring for digital sending in Web browser 181
notifications about software and firmware releases 26, 106
registration of product 143
using to send scanned documents 37
verifying communication 189
e-mail servers
Exchange 2000 188
Exchange 5.5 188
Lotus Domino (Notes) 189
Qmail 189
Sendmail 188
supporting LDAP 190
enabling. *See* configuring
envelopes
dimensions supported 191
paper sizes supported by HP LaserJet 9000mfp output devices 194
supported by HP LaserJet 9000mfp 193
error messages. *See* messages
EtherTalk connection 163
euro character 40
Event Log page, viewing with HP Web Access 32
Exchange 2000 e-mail server 188
Exchange 5.5 e-mail server 188
Exit Setup dialog box 141
Exiting Registration dialog box 152
extensions for printer drivers 89

F

face-down bin. *See* output bins
face-up bin. *See* output bins
fax numbers supported for digital sending 184
features
HP LaserJet 9000mfp 14
HP LaserJet printing system software installer 42
printer driver 47
FIH (Foreign Interface Harness 39

files
added through installation of HP LaserJet printing system for Macintosh operating systems 164
configuring format and size for digital sending e-mail 182
.hpb 95
included on installation CD-ROM 105
.inf (add printer) 108
.pcm 95
PPD 43, 108, 109, 160
Find Server button
for LDAP server 183
for SMTP gateway 181
Finish dialog box 140
Finishing tab in printer drivers 50
firmware
automatic notification of releases 106
determining current level 26
downloading 106
notification of new releases 26
updating remotely 26
viewing version number for MFP 188
firmware update. *See* RFU (remote firmware update)
first page, setting to be different 70
Flip Pages Up option for duplexing 53
Fold/Saddle Stitch option in printer driver 58
folders added through installation of HP LaserJet printing system for Macintosh operating systems 164
folding documents 58
font DIMMs 94
Font Settings option in printer drivers 63
fonts
availability of components by operating system 108
euro character 40
HP 80 114
installing for IBM operating systems 173
installing for Macintosh operating systems 171
localization of components by operating system 109
location on installation CD-ROM 105
options in printer drivers 63
printer driver options 94
selecting for watermarks 68
support for IBM operating systems 173
support for Macintosh operating systems 160
support for Windows operating systems 114
TrueType, controlling in printer driver 101
TrueType, sending as bitmaps 63
Foreign Interface Harness (FIH) 39
fulfillment centers 105

G

General tab in Digital Sending Config Applet 180
graphic options, setting in printer driver 101
Graphics Settings for printer drivers 62

H

hard disk
configuring printer driver 80, 93
removing jobs 84
sending jobs directly to 82, 103
Hebrew registration 143
help
Bubble 49
for PCL 5e and PCL 6 drivers 47
localization by operating system 109
What's this? 47
Hewlett-Packard's Electronic Registration dialog box 144, 147
history information for jobs 20
HP 80 fonts installed for HP LaserJet printing system software 114
HP Auto Setup Utility for Macintosh operating systems 160
HP LaserJet 9000mfp
availability of software components 108
configurations 14
custom paper size limits on width and height 76
EconoMode settings 63
features 14
media supported by input devices 195
media supported by output devices 196
models 14
multibin output devices supported 92
optional output devices 84
paper sizes supported by 3000-Sheet Stacker and 3000-Sheet Stapler/Stacker 193
paper sizes supported by duplexing unit 193
paper sizes supported by HP Multifunction Finisher 194
paper sizes supported by input devices 192
paper sizes supported by Multifunction Finisher 194
paper source commands 191
paper source options 92
stapling option 56
HP LaserJet for Macintosh Installer splash screen dialog box 165
HP LaserJet Installer (custom install) dialog box 167
HP LaserJet Installer (easy install) dialog box 166
HP LaserJet Installing dialog box 169
HP LaserJet Multifunction Finisher
configuring as destination 92
media supported 196
paper sizes supported by HP LaserJet 9000mfp 193, 194
Quick Sets 51
HP LaserJet printing system software
availability of components by operating system 108
bidirectional communication technology 18
CD browser 40
components 40
Custom installation for Windows operating systems 141
downloading 107
installable components 43
installation CD-ROM 105
installing on Macintosh operating systems 163
localization of components by operating system 109
operating systems supported 15
printer drivers 43
Printer Status and Alerts utility 20
requirements for IBM operating systems 159
requirements for Macintosh operating systems 159
Typical installation for Windows operating systems 120
versions 40
HP LaserJet Screen Fonts Installer dialog box 171
HP LaserJet Utility 160
HP Resource Manager, localization by operating system 109
HP Software License Agreement dialog box 122
HP Web Access
description 31
localization of components by operating system 109
printer configuration page 33
HP Web JetAdmin
availability of components by operating system 108
description 45
localization of components by operating system 109
supported operating systems 45
using to download firmware 28
using with HP Web Access 31
website 45

HP Web Registration 45
HPB files 95

I
IBM operating systems
availability of components 108
changing job properties 177
changing printer driver in printer object 176
changing printer properties 176
font support 173
installing fonts 173
installing printers when printer object missing from desktop 173
installing printers when printer object present on desktop 174
localization of components by operating system 109
printer drivers 44
requirements for HP LaserJet printing system software 159
supporting HP LaserJet printing system software 15
icons
printer in Destinations tab 78, 84, 96
printer in Paper tab 69
status and alert 22
Identify Printer dialog box 130
Ignore Application Collation option in printer drivers 95
images
orientation 86
rotating versus stapling 86
scaling on pages 64
impositioning for booklet printing 55
IMS (Internet Mail Service) 188
inches
selecting as unit of measure 72
switching to millimeters 76
INF file (add printer) 108
installation
customizing 153
Microsoft Point and Print 156
printer drivers only 155
requirements for IBM operating systems 159
requirements for Macintosh operating systems 159
requirements for Windows operating systems 113
silent 154
using autoconfiguration 19
Installation Type dialog box 135
installers
availability of components by operating system 108
for HP LaserJet printing system software 41, 42
for Macintosh operating system 165
localization of components by operating system 109
installing
fonts for IBM operating systems 173
fonts for Macintosh operating systems 171
HP LaserJet printing system software 40, 119
Macintosh printing system 163
Microsoft Point and Print 156
online documentation 16
only printer driver 155
Printer Status and Alerts utility 20
printers using AppleTalk Chooser 170
using Customization Utility 153
using silent installer 154
Windows printing system 113
Internet Mail Service (IMS) 188

J
Java software included with HP Web Access 31
JetAdmin. *See* HP JetAdmin
Job Retention option in printer drivers
description 79
disabling 80, 102
document identifier 82
enabling 93
job retention mode 80
limitations among printer drivers 83
using when printing 83
Job Retention tab in printer drivers 102
jobs
changing properties 177
collating multiple original print 91
disabling monitoring in Printer Status and Alerts utility 24
history information 20
identifier for job retention 82
managing memory using printer drivers 62
monitoring with Printer Status and Alerts utility 20
naming 83
private 81, 103
private stored 82, 104
proof-and-hold 81, 103
quick copy 81, 102
releasing stored 83
removing from memory or hard disk 84
sending directly to hard disk 82, 103
sending directly to printer memory 81, 103
setting number of copies to print 85
stored 81, 82, 103
using PINs 81, 103

L
landscape orientation
description 86
duplex-binding option 53
languages
for Macintosh operating systems 164
Hebrew and Arabic registration 143
key to abbreviations 110
localization of components by operating system 109
supported on installation CD-ROM 105
LDAP (Lightweight Directory Access Protocol)
common abbreviations for attributes 190
configuring for digital sending 183
description 190
e-mail servers that support 190
Web site 190
license agreement 122
Lightweight Directory Access Protocol (LDAP). *See* LDAP (Lightweight Directory Access Protocol)
links to off-printer solutions 33
Linux operating systems
availability of components 108
printer drivers 44
localization of components by operating system 109
LocalTalk connection 163
Log tab in Digital Sending Config Applet 187
long-edge stapling 86
Lotus Domino (Notes) e-mail server 189

M

Macintosh LaserJet Utility, availability of components by operating system 108
Macintosh operating systems
availability of components 108
component descriptions 159
directory structure on installation CD-ROM 105
folders and files added through installation of HP LaserJet software 164
font support 160
HP LaserJet printing system software components 44
installable components 43
installing fonts 171
installing printers 170
installing printing system 163
localization of components by operating system 109
requirements for HP LaserJet printing system software 159
supported printer drivers 43
supporting bidirectional communication 18
supporting HP LaserJet printing system software 15
uninstalling printing system 164
managing
memory for print jobs using printer drivers 62
printers using HP Web Access 31
using HP Web JetAdmin 45
manuals. *See* documentation for product
Measurement Units button 76
media
attributes for paper-source, type, and size 190
configuring destinations 92
supported by input devices 196
supported by output devices 196, 197
supported types and sizes 191
viewing list of supported sizes 72
memory
managing for jobs using printer drivers 62
printer error messages 62
removing jobs 84
sending jobs directly to printer 81, 103
storing documents in printer 80
Memory Enhancement technology (MEt) option in printer drivers 62
messages
Bubble Help 49
configuring for digital sending e-mail 182
firmware update 29
printer memory-error 62
MEt (Memory Enhancement technology) option in printer drivers 62
MFP Module option in printer driver 91
Microsoft Point and Print installation 156
millimeters
selecting as unit of measure 72
switching to inches 76
Model dialog box 134
model numbers, viewing 88
models
HP LaserJet 9000mfp 14
moire effect, resolving 63
monitoring
disabling in Printer Status and Alerts utility 24
print jobs and printer status using Printer Status and Alerts utility 20
mopier, enabling 91
More Configuration Options dialog box 93
multifunction finisher. *See* HP LaserJet Multifunction Finisher

N

naming
custom paper sizes 74, 75
jobs 83
NDS
See also bindery; Novell NetWare
NetWare. *See* Novell NetWare 199
network operating systems. *See* IBM operating systems; Linux operating systems; operating systems; Macintosh operating systems; UNIX operating systems; Windows operating systems
Network Printer Configuration dialog box 129
Network Setup dialog box 127
nonvolatile random-access memory (NVRAM). *See* NVRAM (nonvolatile random-access memory)
notifications
configuring e-mail 37
e-mail software and firmware releases 106
new firmware releases 26
Novell Directory Printer Services (NDPS). *See* NDPS (Novell Directory Printer Services)
Novell NetWare
operating systems supporting bidirectional communication 18
NT Forms tab in printer driver 97
numbers
firmware level 26
NVRAM (nonvolatile random-access memory), changes from firmware update 26

O

OK button in messages 48
online documentation for product
availability of components by operating system 108
description 16
installing 16
obtaining 16
viewing 16
online help for Macintosh operating systems 160
operating systems
availability of components 108
localization of components 109
supported by HP Web JetAdmin 45
supporting bidirectional communication 18
supporting HP LaserJet printing system software 15
See also IBM operating systems; Linux operating systems; Macintosh operating systems; UNIX operating systems; Windows operating systems
optimizing printer driver performance 94
Optional Paper Destinations menu 92
Optional Paper Sources menu 92
Options menu 84
order of pages 59
ordering
from HP Web site 106
orientation of image on page
description 86
setting in printer driver 100
See also landscape orientation; portrait orientation; rotated orientation
OS/2. *See* IBM operating systems
Other Options options in printer drivers 93
Other Pages tab in printer driver 71

output bins
custom paper size limits on width and height 76
media supported 196, 197
paper sizes supported by HP LaserJet 9000mfp 193, 194
printing options 84
selecting on Configure tab 96
selecting on Destination tab 78, 84
Output Settings options in printer drivers 62

P

Page Order option in printer drivers for booklets 59
page orientation
duplex-binding options 53
setting in printer driver 100
Page Setup tab in printer drivers 100
Pages per Sheet menu 59
paper
configuring destinations 92
supported by input devices 196
supported by output devices 196, 197
Paper Handling options in printer driver 91
paper level, monitoring with Printer Status and Alerts utility 20
paper sizes
disabled for printing booklets 54
priority when settings conflict 78
selecting for first and subsequent pages 72
setting for custom 75
setting in printer driver 100, 101
supported 191
supported by HP LaserJet 9000mfp input devices 192
supported by HP LaserJet 9000mfp output devices 193, 194
paper source commands
description 190
for HP LaserJet 9000mfp 191
paper sources
configuring 92
setting in printer driver 100
Paper tab in printer drivers 69
paper type commands 197
paper types
adding manually from the driver 78
auto select 78
priority when settings conflict 78
supported 78, 191
parallel connections
bidirectional communication 19
for Macintosh operating systems 163
PCL (printer command language)
supporting operating systems 15
PCL 5e
localization by operating system 109
paper type commands 197
PCL 5e printer driver 15
autoconfiguration 19
bidirectional communication 19
custom paper sizes 195
description 43
font DIMMs 95
help system 47
support for Windows 3.1*x* 157
PCL 6 printer driver 15
autoconfiguration 19
bidirectional communication 19
custom paper sizes 195
description 43
font DIMMs 95
help system 47
localization by operating system 109
support for Windows 3.1*x* 157
PCM files 95
Percentage of Normal Size option in printer drivers 65
PIN, assigning to print jobs 81, 103
plug and play component availability by operating system 108
point and print component availability by operating system 108
portrait orientation
description 86
duplex-binding option 53
postcards
supported by HP LaserJet 9000mfp 193
supported by HP LaserJet 900mfp 194, 195
supported dimensions 192
PostScript (PS) printer driver. *See* PS (PostScript) printer driver
PPDs (printer definition files)
availability of components by operating system 108
description 43, 160
localization of components by operating system 109
Preferences tab in Digital Sending Config Applet 186
Print all Text as Black option in printer drivers 63
Print Document On option in printer drivers 65
print jobs. *See* jobs
Print on Both Sides option in printer drivers 53
Print Page Borders option in printer drivers for booklets 59
Print Quality Details dialog box
600 dpi 62
Best Quality 61
print quality options in printer drivers 60
Print Quality portion of Finishing tab 50
printer command language (PCL)
supporting operating systems 15
printer definition files (PPDs). *See* PPDs (printer definition files)
printer driver options
% of Normal Size 65
binding 54
booklet printing 54
Complex Graphics 62
Copies 85
Current Watermarks 67
Destination Features 79
Document Options 52
dpi setting 60, 62
Driver Work Space (DWS) 94
duplex-binding options 53
EconoMode 63
Edge-to-Edge Printing 63
Flip Pages Up 53
Fold/Saddle Stitch 58
Font Settings 63
Fonts 94
Graphics Settings 62
Ignore Application Collation 95
Job Retention 80, 82, 83, 93, 102
MEt (Memory Enhancement technology) 62
MFP Module 91

printer driver options, continued
Other Options 93
Output Settings 62
Pages per Sheet 59
Paper Handling Options 91
Print all Text as Black 63
Print Document On 65
Print on Both Sides 53
Print Page Borders 59
print quality 60
Printer Memory 93
Private Job 81, 103
Proof and Hold 81, 103
Quick Copy 81, 102
Resolution 62
REt (Resolution Enhancement technology) 62
Scale Patterns (WYSIWYG) 63
Scale to Fit 65
Size is 72
Staple 56, 92
Storage 93
Stored Job 82, 83, 103
Watermarks 66
ZoomSmart 64
printer driver tabs
Advanced 101
All Pages 70
Back Cover 72
Basics 85
Configure 90
Destination 79
Device Settings 104
Effects 64
Finishing 50
Job Retention 102
NT Forms 97
Other Pages 71
Page Setup 100
Paper 69
printer drivers
adding paper types manually 78
Adobe PS level 3 99
AutoCAD 44
autoconfiguration 19
availability of components by operating system 108
changing in printer object 176
configuring for hard disk 80
downloading Macintosh, AutoCAD, and IBM 107
downloading standalone 107
downloading system driver bundles 107
enabling hard disk or job retention for storage 93
extensions 89
features 47
help system for PCL 5e and PCL 5 47
included with HP LaserJet printing system software 43
installing for Windows 3.1*x* 157
installing only 155
installing when printer object missing from desktop 173
installing when printer object present on desktop 174
localization of components by operating system 109
location on installation CD-ROM 105
managing memory for print jobs 62
optimizing performance 94
PCL 5e 15
PCL 6 15
printer drivers, continued
support for Macintosh operating systems 43
support for Windows operating systems 43
supporting operating systems 15
supporting Printer Status and Alerts 198
viewing version number and date 88
Printer Memory options in printer drivers 93
Printer Name dialog box 137
printer objects
changing printer driver 176
creating 173
installing printer when missing from desktop 173
installing printer when present on desktop 174
Printer Sharing dialog box 138
Printer Status and Alerts utility
availability of components by operating system 108
description 20
disabling monitoring 24
icons 22
installing 20
list of products that support 198
localization of components by operating system 109
restrictions for HP projects 21
supporting operating systems and browsers 21
printers
changing properties 176
configuring memory 93
configuring storage 93
default 157
downloading firmware 107
information provided by image in printer driver Destinations tab 78, 84, 96
information provided by image in printer driver Paper tab 69
installing using AppleTalk Chooser 170
managing using HP Web Access 31
printing
booklets 54
confidential or sensitive documents 81, 82, 103, 104
configuration page 26
configuring user-defined settings 50
noncollated copies 96
priority when settings conflict 78
setting number of copies 85
using Job Retention option while 83
printing system software. *See* HP LaserJet printing system software
Private Job option in printer drivers
description 81, 103
private stored jobs 82, 104
Proof and Hold option in printer drivers
description 81, 103
maximum number of jobs 81, 102
Properties button for Windows 3.1*x* 47
PS (PostScript) printer driver
custom paper sizes 195
description 43
features 99
operating systems supported by 15
PS 3 Emulation support for HP LaserJet products 99
PS 3 fonts
localization of components by operating system 109

Q

Qmail e-mail server 189
quality of print options in printer drivers 60
Quick Copy option in printer drivers
  availability 81, 102
  description 81, 102
  maximum number of jobs 81, 102
Quick Sets
  custom 51
  description 50
  for HP LaserJet Multifunction Finisher 51
  preset booklet 51
  too many defined 51

R

refresh rate
  configuring for printer status alerts 24
  description 24
regions
  supported by installation CD-ROM 105
registration of product
  availability of components by operating system 108
  for Hebrew and Arabic 143
  options 143
  using HP Web Registration 45
releasing stored jobs 83
remote firmware update. *See* RFU (remote firmware update)
remote management using HP Web Access 31
removing
  custom paper sizes 74, 75
  private jobs 81, 103
  stored jobs 82, 103
renaming custom paper sizes 74, 75
requirements
  for IBM operating systems 159
  for Macintosh operating systems 159
  for Windows operating systems 113
Resolution Enhancement technology (REt) option in printer drivers 62
Resolution option in printer drivers 62
resolution, setting in printer drivers 101
REt (Resolution Enhancement technology) option in printer drivers 62
retention of jobs. *See* Job Retention option in printer drivers
RFU (remote firmware update)
  changes to NVRAM 26
  description 26
  description of files 26
  files corrupted 30
  interrupted 31
  messages 29
  troubleshooting 30
  verifying success 30
  wrong printer model contained in files 31
rotated orientation 86
rotating images
  description 86
  versus stapling 86

S

saddle-stitching documents 58
saving toner using EconoMode 63
Scale Patterns (WYSIWYG) option in printer drivers 63
Scale to Fit option in printer drivers 65
scaling
  documents for different paper sizes 65
  documents to fit target paper size 65
  images on pages 64
  setting percentage 65, 101
scanning documents
  to e-mail 37
  to fax 37
Select Port dialog box 126
Send to E-mail tab in Digital Sending Config Applet 181
Sendmail e-mail server 188
servers
  configuring for digital sending e-mail 181
  configuring for LDAP 183
  e-mail that function as SMTP gateways 188
  supporting LDAP 190
Set Network Communication Mode dialog box 133
Setup dialog box 121
shading, selecting for watermarks 68
short-edge stapling 88
silent installer 154
Size is option in printer drivers 72
SMTP gateway
  acquiring information about 181
  configuring settings 181
  e-mail servers 188
  verifying 189
software
  automatic notification of releases 106
  downloading 106
  embedded virtual machine for Java 31
  HP Digital Sender Module 37
  HP Web Access 31
  included with product 15
Software License Agreement dialog box 122
Source Is menu 77
Specify Network Path dialog box 132
Staple option in printer driver 56, 92
stapler. *See* stapler/stacker
stapler/stacker
  availability of 56
  configuring as destination 92
  custom paper size limits on width and height 76
  media supported 196
  paper sizes supported by HP LaserJet 9000mfp 193, 194
stapling
  documents 56
  long edge 86
  short edge 88
  versus image rotation 86
status
  configuring pop-up windows 20, 24
  configuring refresh rate 24
  disabling in Printer Status and Alerts utility 24
  icons 22
  monitoring with Printer Status and Alerts utility 20, 24
Storage options in printer drivers 93
Stored Job option in printer drivers
  description 81, 82, 103
  releasing stored jobs 83
  requirements 82, 103
storing documents in printer memory 80
subject, configuring for digital sending e-mail 182
supplies
  monitoring with Printer Status and Alerts utility 20, 24
  monitoring with Supplies Status page 32
Supplies Status page, viewing with HP Web Access 32
system requirements. *See* requirements

T

Test button in Digital Sending Config Applet 181
testing
  e-mail server 181
  SMTP gateway 189
third-party software portal through Foreign Interface Harness (FIH) 39
toner
  monitoring level with Printer and Status Alerts utility 20
  saving using EconoMode 63
Transmit Once mopying feature 91
Tray 1, configuring 91
trays
  auto select 77
  configuring for Windows operating systems 97
  controlling in printer driver 104
  custom paper size limits on width and height 76
  media supported 196
  paper sizes supported by HP LaserJet 9000mfp 192
  paper sizes supported by PCL 5e and PCL 6 printer drivers 195
  paper source commands 191
  verifying installation 24
  viewing available 77
troubleshooting
  firmware update 30
TrueType fonts
  controlling in printer driver 101
  sending as bitmaps 63
Type Is menu 78
Type of Connection dialog box 125
Typical installation
  Windows operating systems 120

U

uninstalling
  Macintosh printing system 164
  Windows printing system 119
units of measurement, switching between inches and millimeters 72, 76
UNIX operating systems
  availability of components 108
  printer drivers 44
updating status and alerts 24
upgrades. *See* RFU (remote firmware update)
URLs. *See* Web sites
Usage Page, viewing with HP Web Access 32
USB connections 19
utilities
  availability of components by operating system 108
  HP Auto Setup for Macintosh operating systems 160
  HP LaserJet Utility for Macintosh operating systems 160
  localization of components by operating system 109
  Printer Status and Alerts 20

V

versions
  firmware level 26
  HP LaserJet printing system software 40
  installation CD-ROM 105
  printer drivers supported 43
  viewing number 88

W

Watermark Details dialog box 67
watermarks
  creating new 67
  editing existing 68
  limit to number of 67
  preset 66
  printing only on first page 66
  selecting font, color, shading, size, and style 68
  selecting from available 66
  selecting shading 68
  setting message angle 68
Watermarks option in printer drivers 66
Web JetAdmin
  localization by operating system 109
  using to download firmware 28
  using with HP Web Access 31
Web sites
  documentation 16
  firmware 26, 105, 106
  firmware update 26
  LDAP 190
  Microsoft Winsock2 patch 21
  software 105, 106
Web Update dialog box 123
Welcome dialog box 121
Welcome to Hewlett-Packard's Registration dialog box 146
What's this? help 47
Windows 3.1*x*
  substitute for Properties button 47
  support for job retention 80
  support for printers 157
Windows operating systems
  configuring trays 97
  directory structure on installation CD-ROM 105
  font support 114
  installing Microsoft Point and Print function 156
  installing printing system 113
  localization of components by operating system 109
  PCL 5e and PCL6 printer drivers 15
  printer drivers supported 43
  PS (PostScript) printer driver 99
  requirements for installing printing system components 113
  supporting bidirectional communication 18
  supporting HP LaserJet printing system software 15
Wizards, availability of components by operating system 108
workspace option for printer drivers 94

Z

ZoomSmart option in printer drivers 64

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