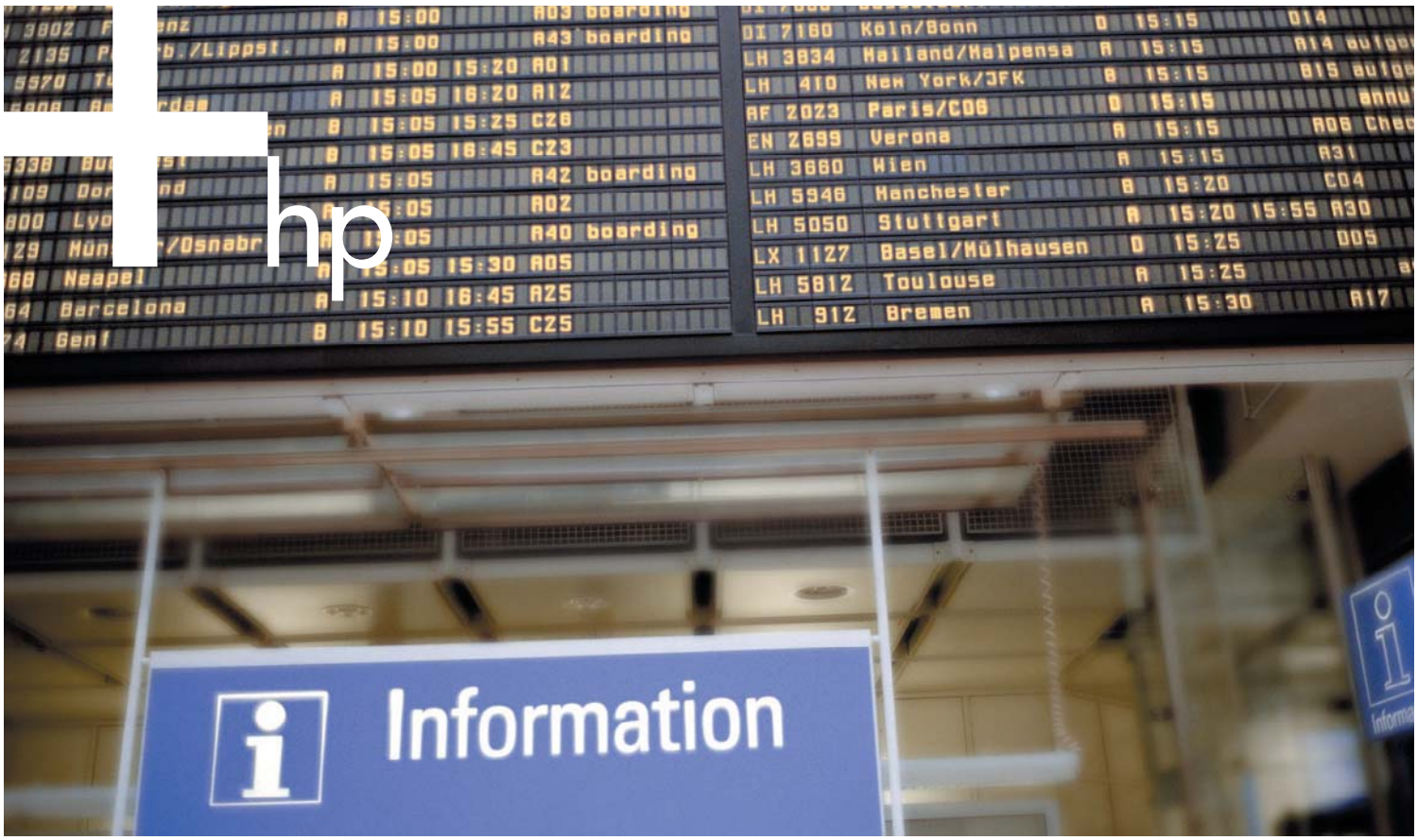
HP Color LaserJet 4700 Printer
Software Technical Reference



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HP Color LaserJet 4700 printer

Software Technical Reference

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1 Purpose and scope

Introduction

This software technical reference (STR) provides information about and troubleshooting tips for the HP Color LaserJet 4700 printing-system software.

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 Color LaserJet 4700 printer end users, as appropriate.

The following information is included in this technical reference:

- Descriptions of drivers and platforms, with system modifications
- Procedures for installing and uninstalling software components
- Descriptions of various topics that are associated with the HP Color LaserJet 4700 printer, including engineering details

The following table describes the structure of this software technical manual.

Table 1-1 Software technical reference overview

Chapter	Content

Chapter 1, Purpose and Scope	This chapter contains basic information about the HP Color LaserJet 4700 printer and its software:
	• Overview of the HP Color LaserJet 4700 printer
	• Printing-system software overview, including the following topics:
	  ◦ System requirements
	  ◦ Supported operating systems
	  ◦ availability
	• HP LaserJet software documentation

Chapter 2, Software description	This chapter provides an overview of the printing-system software installer and print drivers: • Windows software CD

Table 1-1 Software technical reference overview (continued)

Chapter	Content
	The chapter also contains general information about other software features, including the following topics: • Driver configuration for Windows • HP Driver Diagnostic Printer Check Tool • International Color Consortium profiles • PANTONE* color profiles • HP Embedded Web Server • HP Printer Utility for Macintosh (a new HP software feature) • HP Web Jetadmin
Chapter 3, HP traditional print drivers for Windows	This chapter provides detailed descriptions of the HP traditional PCL 6, PCL 5, and postscript emulation print drivers for Windows 98 and Windows Me.
Chapter 4, HP PCL 6, PCL 5, and PS emulation unidrivers for Windows	This chapter provides detailed descriptions of the HP traditional PCL 6, PCL 5, and postscript emulation print unidrivers for Windows 2000, Windows XP, and Windows Server 2003.
Chapter 5, Installing Windows printing-system components	This chapter provides instructions for installing the HP Color LaserJet 4700 printer in Windows operating systems by using various installation methods
Chapter 6, Installation for Macintosh operating systems	This chapter provides Instructions for installing the HP Color LaserJet 4700 printer in Macintosh operating systems
Chapter 7, Engineering details	This chapter contains information about special topics that are either too about the following topics: • Media attributes • Remote firmware update • Printing print-ready documents • Driver-feature comparison in various operating systems

For additional information about the location of information within these chapters, see the table of contents. An index is provided in the back of the manual.

Additional detailed information about the HP Color LaserJet 4700 printing-system software is published in an addendum to this STR. Information that is available only in the addendum includes:

- Lists of installed files
- System-modification information, such as changes to the registry and registry keys
- Descriptions of known software issues and solutions

HP Color LaserJet 4700

The following table contains descriptions of the HP Color LaserJet 4700 printer features that are discussed in this STR. Product configurations might vary among countries/regions.

Table 1-2 HP Color LaserJet 4700 features

Models	• Base model: HP Color LaserJet 4700 (part number Q7491A) • HP Color LaserJet 4700n (part number Q7492A) • HP Color LaserJet 4700dn (part number Q7493A) • HP Color LaserJet 4700dtn (part number Q7494A) • HP Color LaserJet 4700ph+ (part number Q7495A)
Performance	• Prints up to 31 pages per minute (ppm) for letter-sized paper and up to 30 ppm for A4-sized paper • First page prints in 10 seconds or less. The printer can be set to wake from sleep mode at a specific time each day.
Memory	• 160 megabytes (MB) of memory for the HP Color LaserJet 4700 and HP Color LaserJet 4700n; 288 MB for the HP Color LaserJet 4700dn; 544 MB for the and HP Color LaserJet 4700dtn and HP Color LaserJet 4700ph+. **NOTE** Memory specification: The HP Color LaserJet 4700 printer models use 200-pin small outline dual inline memory modules (SODIMM) that support 128 or 256 MB of random-access memory (RAM). • Two open EIO slots • Can be expanded to 544 MB: 512 MB of double data-rate synchronous random access memory (DDR-SRAM) plus 32 MB of memory on the formatter board • Optional hard-disk drive can be added in an EIO slot (an internal hard-disk drive is included with the HP Color LaserJet 4700ph+)
User interface	• Four-line back-lit graphical display on control panel • Enhanced Help with animated graphics • Embedded Web server to gain access to support and order supplies (network-connected printers)
Supported printer personalities	• HP PCL 6 • HP PCL 5c • PostScript® (PS) 3 emulation • Portable document format (PDF)

Table 1-2 HP Color LaserJet 4700 features (continued)

Hard-disk features	• Full job-storage features
	  • Proof and hold
	  • Private jobs
	  • Quick copy
	  • Stored jobs
	• Mopier mode
	• Personal identification number (PIN) printing
	• Fonts and forms

Environmental features	• Sleep-mode setting • High content of recyclable components and materials • Energy Star® compliant • Restrictions of Hazardous Substances (RoHS) Directive compliant
Font	• Internal fonts are available for both printer command language (PCL) and postscript emulation • Printer-matching screen fonts in TrueType format are available with the software solution • HP Web Jetadmin-supported forms and fonts are on the disk
Paper handling	• Prints on media sizes from 77 mm x 127 mm (3 inches x 5 inches) up to 216 mm x 356 mm (8.5 inches x 14 inches) (Legal size) • Tray 1 can process heavy-weight media from 60 g/m^2 to 220 g/m^2 (16 lb to 60 lb), as well as standard 80-lb cover stock. • Tray 2 and the optional trays can process media up to 120 g/m^2 (32 lb) in weight • Prints on a wide range of media types, including HP photo media, glossy papers, transparencies, heavy stock, labels, and envelopes • Features adjustable gloss level on page by choosing the appropriate glossy media type • Standard 100-sheet multipurpose paper tray (tray 1) supports Letter, Legal, Executive, 8.5 x 13, B5 (JIS), Executive (JIS),16K, A4, A5, and custom media • Standard 500-sheet paper feeder (tray 2) supports Letter, Legal, Executive, 8.5 x 13, B5 (JIS), Executive (JIS), 16K, A4, A5, and custom media • Up to four additional 500-sheet paper feeders (trays 3, 4, 5, and 6) support letter, legal, executive, 8.5 x 13, B5 (JIS), Executive (JIS), 16K, A4, A5, and custom media • Standard 500-sheet face-down output bin

Table 1-2 HP Color LaserJet 4700 features (continued)

	• The duplexing unit for automatic two-sided printing (duplexing) is standard on the HP Color LaserJet 4700dn, HP Color LaserJet 4700dtn, and HP Color LaserJet 4700ph+ printers. • Automatic duplexing of 120-g/m^2 (32-lb) paper at full speed produces up to 30 sides (15 sheets) per minute. • The HP 750-Sheet Stapler/Stacker prints up to 750 sheets with job offset and staples up to 30 sheets (optional for the HP Color LaserJet 4700dn and the HP Color LaserJet 4700dtn; standard on the HP Color LaserJet 4700ph+).
Accessories	• Printer hard disk, which provides storage for fonts and macros as well as additional features for Job Storage; standard on the HP Color LaserJet 4700ph+ • Small outline dual inline memory modules (SODIMMs) • Flash memory slots for additional fonts and firmware upgrades • Printer stand • The HP 750-Sheet Stapler/Stacker (standard on the HP Color LaserJet 4700ph+) **NOTE** The HP 750-Sheet Stapler/Stacker is optional for the HP Color LaserJet 4700dn and HP Color LaserJet 4700dtn. It can be installed only on printers that are equipped with the automatic duplexing unit. • Up to four additional 500-sheet paper feeders (trays 3, 4, 5, and 6)
Connectivity	• Enhanced input/output (EIO) card slots for optional connectivity. (Network connection through an HP Jetdirect embedded print server is standard on the HP Color LaserJet 4700n, HP Color LaserJet 4700dn, HP Color LaserJet 4700dtn, and HP Color LaserJet 4700ph+ models.) • Universal serial bus (USB) 2.0 connection • HP Jetdirect embedded print server for network connectivity without using an EIO slot • Standard bidirectional parallel cable interface (IEEE 1284-C compliant) • Both USB and parallel connections are supported, but cannot be used at the same time.
Supplies	• The supplies status page contains information about toner level, page count, and estimated pages remaining. • High-capacity no-shake cartridge with automatic toner-seal removal feature • The printer checks for authentic HP print cartridges when a cartridge is installed.

Table 1-2 HP Color LaserJet 4700 features (continued)

	• High-capacity (5,000) staple cartridge with staples-low and staples-out messaging • Internet-enabled supply-ordering capabilities through the HP Embedded Web Server

Printing-system software

This section contains information about the following topics:

- System requirements
- Supported operating systems
- Availability

System requirements

The section lists system requirements for installing and using the HP Color LaserJet 4700 printing-system software on each of these supported operating systems:

- Windows
- Macintosh
- Linux
- UNIX

Windows

The following list shows the system requirements for installing and using the HP Color LaserJet 4700 printing-system software on each of the supported operating systems:

- Pentium® or compatible processor
- Minimum 16-color/grayscale display with 640-by-480 pixel resolution (video graphics array [VGA])
- Same amount of RAM as the minimum requirements for the operating system
- 93 MB of available hard-disk space (on the same partition as the operating system) for full installation
- Onboard parallel port, USB port, or network connection

Macintosh

- PowerPC processor
- Mac OS 9 V9.2.2 or Mac OS X V10.1.5 and later.
- 256 MB RAM
- 110 MB available disk space

Linux

For information about Linux support for the printer, see the HP Linux Web site:

- www.hp.com/go/linux.

UNIX

For information about UNIX support for the printer, see the following Web site:

- www.hp.com/go/jetdirectunix_software

Supported operating systems

Windows operating systems provide full-featured support for the HP Color LaserJet 4700 printer. Operating systems that are not described in this document provide varying levels of functionality.

Throughout this manual, Windows XP is used to denote Windows XP Home Edition, Windows XP Professional, and Windows Server 2003 unless noted otherwise.

Information relating to networking functions is specific to products that have network capabilities.

If your computer is running a 64-bit Windows operating system, you must install the corresponding 64-bit print driver. For instructions, see Installing print drivers by using Add Printer

The HP Color LaserJet 4700 has not been tested with and is not supported in the Windows 3.1*x* or Windows 95 operating systems.

The Windows NT 4.0 operating system does not support the HP Color LaserJet 4700. Print drivers for the printer are not included on the printing-system software CD and are not available on the Web. Other drivers might work on the printer, but printing quality might be compromised and their use is not supported by HP.

For more information about the HP Color LaserJet 4700, go to: www.hp.com/support/clj4700

Standalone drivers

The following operating systems support the HP Color LaserJet 4700 printing-system software, including the HP traditional PCL 6, PCL 5, and PS emulation drivers and unidrivers:

- Windows 98
- Windows Me
- Windows 2000 (Service packs 1 and 2)
- Windows XP Home Edition (32-bit)
- Windows XP Professional (Service Pack 1 and later; 32-bit and 64-bit)
- Windows Server 2003 (32-bit and 64-bit)

Print driver support in other operating systems

The HP Color LaserJet 4700 is also supported in the following operating environments:

- Mac OS 9 V9.2.2
- Mac OS X (V10.1.5 or later)
- Linux (available at www.hp.com/go/linuxprinting)
- UNIX (available at www.hp.com/go/jetdirectunix_software)
- UNIX model scripts. Available*only* on the Web: www.hp.com/go/unixmodelscripts.

- Windows Terminal Server
- Citrix Terminal Server
- Windows Cluster Server 8
- HP OpenVMS (available at h71000.www7.hp.com/openvms/print/)
- Tru64 UNIX printing. For further information, go to h30097.www3.hp.com/printing/.
- SAP printing. For further information, go to www.hp.com/go/sap/print.
- HP Install Network Printer Wizard (INPW). Available *only* from the Web site: www.hp.com/go/inpw_software.

Availability

This section provides information about the availability of the HP Color LaserJet 4700 printing-system software and related software and firmware. Printing-system software on a CD is available from HP fulfillment centers.

Printing-system software on the Web

All software that is contained on the installation CD is also available on the Web.

Web deployment is the preferred method for obtaining the latest software. The Web site offers an option for automatic e-mail notification about new software releases.

NOTE This STR describes drivers that are shipped with the printing-system software CD. This STR does *not* describe drivers that might be released for use by support personnel.

Printing-system software

The HP Color LaserJet 4700 printing-system software is available for download from www.hp.com/go/clj4700_software.

NOTE Only 32-bit print drivers are available on the printing-system software CD. If your computer is running a 64-bit operating system, you must install a 64-bit print driver. The 64-bit print drivers for Windows XP and Windows Server 2003 are available on the Web at www.hp.com/go/clj4700_software.

For information about driver support in various operating systems, see Supported operating systems.

For more information about installing printer drivers for Windows, see Installing Windows printing-system components.

Software component availability

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

These drivers are available on the HP Web site:

www.hp.com/go/clj4700_software

NOTE All components listed below are available both on the printing-system software CD and on the Web, except for Windows XP and Windows Server 2003 64-bit drivers and components, which are available *only* on the Web.

Table 1-3 Software component availability for HP Color LaserJet 4700

Component	Windows 98 and Windows Me	Windows 2000 and Windows XP (32-bit)[1]	Windows XP and Windows Server 2003 (64-bit)	Macintosh
Drivers				
HP Traditional PCL 5 Driver and HP Traditional PCL 6 Driver	x			
HP PCL 6 Unidriver and HP PCL 5 Unidriver		x	x	
PS Emulation Unidriver		x	x	
PS Emulation Driver (Windows 98 and Windows Me)	x			
HP Driver Preconfiguration	x	x	x	
Installer				
Common Windows Installer	x	x		
Customization Utility Wizard	x	x		
CD Browser	x	x		
Add Printer Wizard install	x	x	x	
Web Registration	x	x		
Mac OS 9 V9.2.2 PPDs				x
Mac OS X V10.1.5 and later				x

[1] This information also applies to Windows Server 2003.

In-box printing-system software CDs

The software CD for the HP Color LaserJet 4700 printer contains a variety of files for installing the printing-system software on your computer. This section describes the files that are available on the software CD and provides additional information about support and availability.

CD structure

The HP Color LaserJet 4700 printing-system software CD is divided into two partitions: one for installing the product in Windows operating systems, and the other for Macintosh operating systems. The files include documentation files and files that are required to install and uninstall the printing-system components.

HP LaserJet software CD, Windows partition

The root directory in the Windows partition of the software CD contains the AUTORUN.EXE file, SETUP.EXE file, and the following directories and support files:

- 0000
- autorun
- Drivers
- Fonts
- HW
- Manuals
- System32
- Temp
- WebReg

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

- Drivers
- Manuals

File layouts differ by language for each regional version of the software CD.

To view the files, insert the HP Color LaserJet 4700 printing-system software CD, right-click **Start**, click **Explore**, and then select the CD-ROM drive.

HP LaserJet software CD, Macintosh partition

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

- Mac OS X (installer for Mac OS X operating system)
- Mac OS 9 (installer for Mac OS 9 operating system)
- PDF

File layouts differ by language for each regional version of the software CD.

CD versions

The HP Color LaserJet 4700 printing-system software CD is available in five versions, each of which contains printing-system software in various languages, as follows:

- **CD AM – Americas and Europe (Part No. Q7491-60101):**
  - DE = German (Deutsch)
  - EN = English
  - ES = Spanish (Español)
  - FR = French (Français)

- IT = Italian (Italiano)
- NL = Dutch (Nederland)
- PT = Brazilian Portuguese (Português)
- CA = Catalan (Català)

- **CD WE – Western Europe and Arabic (Part No. Q7491-60102):**
  - AR = Arabic
  - DN = Danish (Dansk)
  - EN = English
  - FR = French (Français)
- **CD NE – Northern Europe and Russian (Part No. Q7491-60103):**
  - EN = English
  - FI = Finnish (Suomi)
  - NO = Norwegian (Norsk)
  - RU = Russian (Russ)
  - SV = Swedish (Svenska)
  - TR = Turkish (Turkçe)
- **CD EE – Eastern Europe (Part No. Q7491-60104):**
  - CZ = Czech (Cesky)
  - EL = Greek
  - EN = English
  - HE = Hebrew
  - HU = Hungarian (Magyar)
  - PL = Polish (Polski)
- **CD AS – Asia (Part No. Q7491-60105):**
  - EN = English
  - JA = Japanese
  - KO = Korean
  - TH = Thai
  - ZHCN = Simplified Chinese
  - ZHTW = Traditional Chinese

Each of the following tables lists one of the software CD versions, along with the printing-system software components that are supported in each language.

NOTE Drivers for various languages do not necessarily correspond to geographic countries/regions. European languages, for instance, are distributed on three CDs.

Table 1-4 CD AM – Americas and Europe

Component	CA	DE	EN	ES	FR	IT	NL	PT
HP Traditional Postscript 3 Emulation Driver		x	x	x	x	x	x	x
HP Traditional PCL 6 Driver		x	x	x	x	x	x	x
HP Traditional PCL 5 Driver		x	x	x	x	x	x	x
HP PCL 6 Unidriver	x	x	x	x	x	x	x	x
HP PCL 5 Unidriver	x	x	x	x	x	x	x	x
PS Emulation Unidriver	x	x	x	x	x	x	x	x
Common Windows Installer		x	x	x	x	x	x	x
Add Printer Wizard Installer		x	x	x	x	x	x	x
Customization Utility Wizard		x	x	x	x	x	x	x
CD Browser		x	x	x	x	x	x	x
HP Preconfiguration		x	x	x	x	x	x	x
HP Color LaserJet 4700 User Guide (.PDF)	x	x	x	x	x	x	x	x
HP Color LaserJet 4700 User Guide (.CHM)		x	x	x	x	x	x	x
HP Jetdirect Administrator's Guide		x	x	x	x	x	x	x
HP Color LaserJet 4700 Printing System Install Notes		x	x	x	x	x	x	x
HP Embedded Web Server User Guide		x	x	x	x	x	x	x
HP Device Installer Customization Wizard		x	x	x	x	x	x	x

Table 1-5 CD WE – Western Europe and Arabic

Component	AR	DN	EN	FR
HP Traditional Postscript 3 Emulation Driver	x	x	x	x
HP Traditional PCL 6 Driver	x	x	x	x

Table 1-5 CD WE – Western Europe and Arabic (continued)

Component	AR	DN	EN	FR
HP Traditional PCL 5 Driver	x	x	x	x
HP PCL 6 Unidriver	x	x	x	x
HP PCL 5 Unidriver	x	x	x	x
PS Emulation Unidriver	x	x	x	x
Common Windows Installer	x	x	x	x
Add Printer Wizard Installer	x	x	x	x
HP Device Installer Customization Wizard	x	x	x	x
CD Browser	x	x	x	x
HP Driver Preconfiguration Support Guide	x	x	x	
HP Color LaserJet 4700 User Guide (.PDF)	x	x	x	x
HP Color LaserJet 4700 User Guide (.CHM)		x	x	x
HP Jetdirect Administrator's Guide		x	x	x
HP Color LaserJet 4700 Printing System Install Notes	x	x	x	x
HP Embedded Web Server User Guide		x	x	x
HP Device Installer Customization Wizard	x	x	x	x

Table 1-6 CD NE – Northern Europe and Russian

Component	EN	FI	NO	RU	SV	TR
HP Traditional Postscript 3 Emulation Driver	x	x	x	x	x	x
HP Traditional PCL 6 Driver	x	x	x	x	x	x
HP Traditional PCL 5 Driver	x	x	x	x	x	x
HP PCL 6 Unidriver	x	x	x	x	x	x
HP PCL 5 Unidriver	x	x	x	x	x	x
PS Emulation Unidriver	x	x	x	x	x	x
Common Windows Installer	x	x	x	x	x	x
Add Printer Wizard Installer	x	x	x	x	x	x
HP Device Installer Customization Wizard	x	x	x	x	x	x
CD Browser	x	x	x	x	x	x
HP Driver Preconfiguration Support Guide	x	x	x	x	x	x
HP Color LaserJet 4700 User Guide (.PDF)	x	x	x	x	x	x

Table 1-6 CD NE – Northern Europe and Russian (continued)

Component	EN	FI	NO	RU	SV	TR
HP Color LaserJet 4700 User Guide (.CHM)	x	x	x	x	x	x
HP Jetdirect Administrator's Guide	x	x	x	x	x	x
HP Color LaserJet 4700 Printing System Install Notes	x	x	x	x	x	x
HP Embedded Web Server User Guide	x	x	x	x	x	x
HP Device Installer Customization Wizard	x	x	x	x	x	x

Table 1-7 D EE – Eastern Europe

Component	CZ	EL	EN	HE	HU	PL
HP Traditional Postscript 3 Emulation Driver	x	x	x	x	x	x
HP Traditional PCL 6 Driver	x	x	x	x	x	x
HP Traditional PCL 5 Driver	x	x	x	x	x	x
HP PCL 6 Unidriver	x	x	x	x	x	x
HP PCL 5 Unidriver	x	x	x	x	x	x
PS Emulation Unidriver	x	x	x	x	x	x
Common Windows Installer	x	x	x	x	x	x
Add Printer Wizard Installer	x	x	x	x	x	x
HP Device Installer Customization Wizard	x	x	x	x	x	x
CD Browser	x	x	x	x	x	x
HP Driver Preconfiguration Support Guide	x	x	x	x	x	x
HP Color LaserJet 4700 User Guide (.PDF)	x	x	x	x	x	x
HP Color LaserJet 4700 User Guide (.CHM)	x	x	x		x	x
HP Jetdirect Administrator's Guide	x		x		x	x
HP Color LaserJet 4700 Printing System Install Notes	x	x	x	x	x	x
HP Device Installer Customization Wizard	x	x	x	x	x	x

Table 1-8 CD AS – Asia

Component	EN	JA	KO	TH	ZHCN	ZHTW
HP Traditional Postscript 3 Emulation Driver	x	x	x	x	x	x
HP Traditional PCL 6 Driver	x	x	x	x	x	x
HP Traditional PCL 5 Driver	x					
HP PCL 6 Unidriver	x	x	x	x	x	x
HP PCL 5 Unidriver	x	x	x	x	x	x
PS Emulation Unidriver	x	x	x	x	x	x
Common Windows Installer	x	x	x	x	x	x
Add Printer Wizard Installer	x	x	x	x	x	x
HP Device Installer Customization Wizard	x	x	x	x	x	x
CD Browser	x	x	x	x	x	x
HP Driver Preconfiguration Support Guide	x		x		x	x
HP Color LaserJet 4700 User Guide (.PDF)	x	x	x	x	x	x
HP Color LaserJet 4700 User Guide (.CHM)	x	x	x	x	x	x
HP Jetdirect Administrator's Guide	x	x	x		x	x
HP Color LaserJet 4700 Printing System Install Notes	x	x	x	x	x	x
HP Device Installer Customization Wizard	x	x	x	x	x	x

HP LaserJet documentation

The following figure shows the printer documentation screen, which appears when you click **printer documentation** on the main screen of the HP Color LaserJet 4700 printing-system software CD.

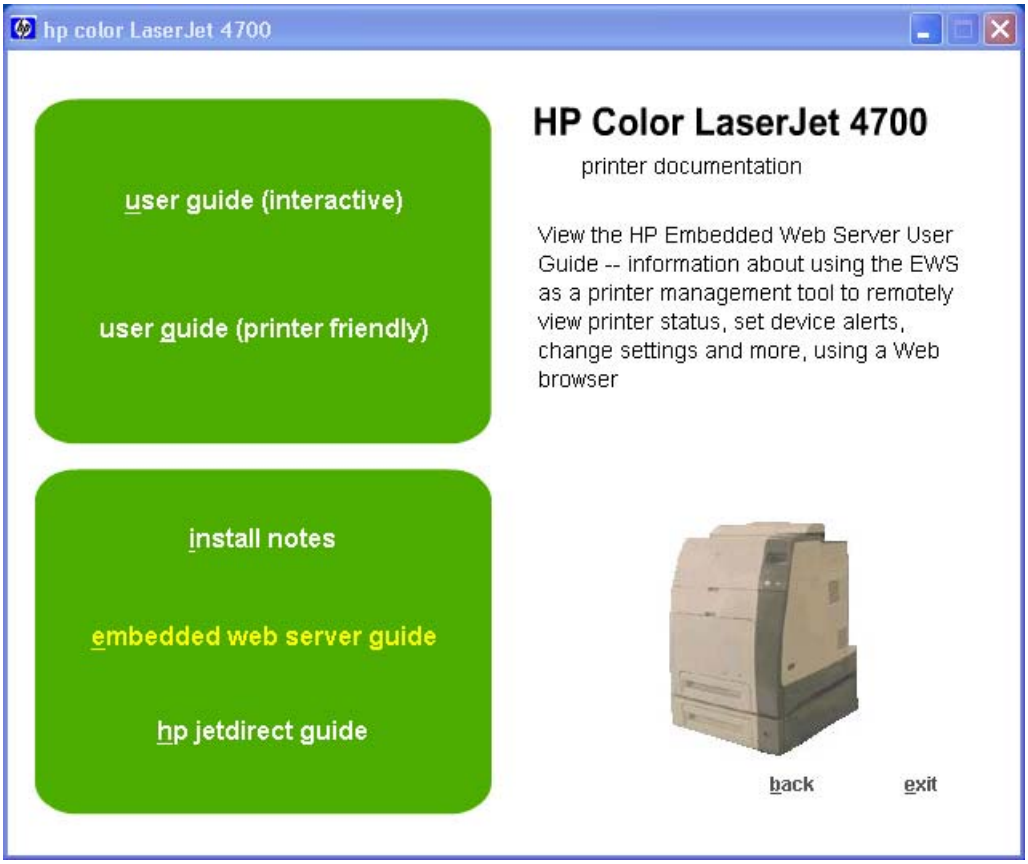


Figure 1-1 Installation software CD printer documentation screen

The following table lists the availability of HP Color LaserJet 4700 printing-system documentation by operating system.

Table 1-9 Documentation availability

Document	Windows 98/ Me	Windows 2000/XP/ Server 2003	Macintosh
HP Color LaserJet 4700 User Guide (.PDF file)	x	x	x
HP Color LaserJet 4700 User Guide (.CHM file)	x	x	
HP Color LaserJet 4700 Printing System Install Notes	x	x	
HP Embedded Web Server User Guide	x	x	x
HP Driver Preconfiguration Support Guide	x	x	
HP Jetdirect Administrator's Guide	x	x	x
HP Device Installer Customization Wizard	x	x	

Access to HP LaserJet documents depends on the type of document and its location. Some documents can be opened from the CD Browser. Others appear on the software CD and can be opened by navigating to the folder where they reside. Still others are available on the Web through links in the CD Browser or CD folders. Documents are available in the following file formats:

- **Portable Document Format (.PDF)**. The HP Color LaserJet 4700 printing-system software CD includes Adobe Acrobat Reader for viewing online documentation. If your system does not have Adobe Acrobat Reader 4.0 or later installed, clicking any of the links to documentation that is provided in the .PDF file format opens a version of Adobe Acrobat Reader software that runs from the HP Color LaserJet 4700 printing-system software CD. The Adobe Acrobat Reader software is *not* installed on your computer and can only run while the printing-system software CD is in the CD-ROM drive.
- **Compiled HTML (.CHM)**. When you click a documentation link to a .CHM document, a Microsoft HTML Viewer opens the file on your computer screen.
- **Hypertext Markup (.HTM)**. When you click a documentation link to an .HTM document, a Web browser opens the file on your computer screen.
- **Rich Text format (.RTF)**. This is a text file. You can navigate to files and open them in Microsoft Word or Microsoft WordPad.

HP Color LaserJet 4700 User Guide

The *HP Color LaserJet 4700 User Guide* describes the basic features of the product.

To view this guide from the software CD, follow these steps:

1. In the main screen of the CD browser, click **printer documentation**.
2. Click **view user guide**.

The guide opens as a Windows Help file (.CHM file). This readable, onscreen version of the guide is provided in accordance with the Americans with Disabilities Act (ADA).

You can also gain access to the file by following these steps:

1. Insert the software CD into the CD-ROM drive.
2. Navigate to the Manuals\<language> folder.
3. Open the file that has the appropriate file name:

   CLJ4700_USE_XXWW.CHM

NOTE The "XX" in the file name corresponds to the language. For instance, the file name for the French version of the guide is CLJ4700_USE_FRWW.CHM

The *HP Color LaserJet 4700 User Guide* is provided as a .PDF file, which you can print. To print the guide, follow these steps:

1. In the CD Browser, click **printer documentation**.
2. Click **user guide (printer friendly)**. The guide opens.
3. Print the guide.

You can also gain access to the file by following these steps:

1. Insert the software CD into the CD-ROM drive.
2. Navigate to the Manuals\<language> folder.
3. Open the file that has the appropriate file name:

   CLJ4700_USE_XXWW.PDF

NOTE The "XX" in the file name corresponds to the language. For instance, the file name for the French version of the guide is CLJ4700_USE_FRWW.PDF

When you have the file open, you can click **File** and then click **Save As** to save a copy of the file to another location.

HP Color LaserJet 4700 Printing System Install Notes

The *HP Color LaserJet 4700 Printing System Install Notes* is .HTM file that contains important information about product features, instructions for installing the printing-system software, and technical assistance.

To view this file from the software CD, click **printer documentation** on the main screen of the CD Browser, and then click **install notes**.

To view this guide from the software CD, follow these steps:

1. In the main screen of the CD browser, click **printer documentation**.
2. Click **install notes**.

You can also gain access to the file by following these steps:

1. Insert the software CD into the CD-ROM drive.
2. Navigate to the Manuals\<language> folder.
3. Open the file that has the appropriate file name:

   CLJ4700_INSTALL-NOTE_XXWW.HTM

NOTE The "XX" in the file name corresponds to the language. For instance, the file name for the French version of the document is CLJ4700_INSTALL-NOTE_FRWW.HTM.

HP Embedded Web Server User Guide

The *HP Embedded Web Server User Guide* (in .PDF format) provides information about device status, settings, and networking for the HP Color LaserJet 4700 printer.

To view this file from the software CD, click **printer documentation** on the main screen of the CD Browser, and then click **install notes**.

To view this guide from the software CD, follow these steps:

1. In the main screen of the CD browser, click **printer documentation**.
2. Click **embedded web server guide**.

You can also gain access to the file by following these steps:

1. Insert the software CD into the CD-ROM drive.
2. Navigate to the Manuals\<language> folder.
3. Open the file that has the appropriate file name:

   CLJ4700_EWS_XXWW.PDF

NOTE The "XX" in the file name corresponds to the language. In French, the file name is CLJ4700_EWS_FRWW.PDF.

When you have the file open, you can click **File** and then click **Save As** to save a copy of the file to another location.

HP Jetdirect Administrator's Guide

The *HP Jetdirect Administrator's Guide* is a network administrator's guide (in .PDF format) that contains information about connecting the product directly to a network.

To view this file from the software CD, click **printer documentation** on the main screen of the CD Browser, and then click **install notes**.

To view this guide from the software CD, follow these steps:

1. In the main screen of the CD browser, click **printer documentation**.
2. Click **hp jetdirect guide**.

You can also gain access to the file by following these steps:

1. Insert the software CD into the CD-ROM drive.
2. Navigate to the Manuals\<language> folder.
3. Open the file that has the appropriate file name:

   HPJDIAG_XXWW.PDF

NOTE The "XX" in the file name corresponds to the language. In French, the file name is HPJDIAG_FRWW.PDF.

When you have the file open, you can click **File** and then click **Save As** to save a copy of the file to another location.

HP Driver Preconfiguration Support Guide

You can gain access to the file by following these steps:

1. Insert the software CD into the CD-ROM drive.
2. Navigate to the Manuals\<language> folder.
3. Open the file that has the appropriate file name:

   PRECONFIG_SUPPORT_ENWW.PDF

NOTE The *HP Driver Preconfiguration Support Guide* is available only in English on the software CD.

When you have the file open, you can click **File** and then click **Save As** to save a copy of the file to another location.

HP Device Installer Customization Wizard

The *HP Device Installer Customization Wizard* (in.RTF format) provides network administrators with information about options and installation settings that can be selected for the Installer Customization Wizard.

You can gain access to the file by following these steps:

1. Insert the software CD into the CD-ROM drive.
2. Navigate to the Manuals\<language> folder.
3. Open the file that has the appropriate file name:

   CUSTOMIZATION_README_XXWW.RTF

NOTE The "XX" in the file name corresponds to the language. In French, the file name is CUSTOMIZATION_README_FRWW.RTF.

When you have the file open, you can click **File** and then click **Save As** to save a copy of the file to another location.

2 Software description

Introduction

The HP Color LaserJet 4700 comes with software and installers for Microsoft Windows and Apple Computer, Inc. Linux and UNIX systems are supported, and software is available on the Web. For information about specific system installers, drivers, and components, see the section that corresponds to that system.

NOTE The HP Toolbox is not available on the HP Color LaserJet 4700 printer.

This chapter contains information about the following topics:

- Printing-system software
- Driver Configuration for Windows
- HP Driver Diagnostic Printer Check Tool
- International Color Consortium profiles
- PANTONE* color profiles
- HP Embedded Web Server
- HP Printer Utility for Macintosh
- HP Web Jetadmin

Printing-system software

This section contains information about the following topics:

- Windows Software features
- Macintosh printing-system software

Windows Software features

This section contains information about the following topics:

- Printing system and installer
- HP LaserJet print drivers

Printing system and installer

The following sections contain information about the printing-system software and the installer on the software CD that came with the product.

HP Color LaserJet 4700 printing-system software CD for Windows systems

For the Microsoft® Windows® environment (Windows 98, Windows Millennium Edition (Windows Me), Windows 2000, Windows XP, and Windows Server 2003), the HP Color LaserJet 4700 printing-system software CD provides an interactive CD browser that you can use to install the print drivers and related components, and to gain access to online user documentation, a customization utility, Adobe® Acrobat® Reader software, and optional HP software.

The following figure shows the main screen of the HP Color LaserJet 4700 printing-system software CD, which appears when you insert the printing-system software CD in your CD-ROM drive. If the screen does not appear when you insert the software CD, follow these steps to open the CD browser:

1. Click **Start**.
2. Click **Run**.
3. Click **Browse...**. and navigate to the root directory of the software CD
4. Double-click the SETUP.EXE file to start the installer.

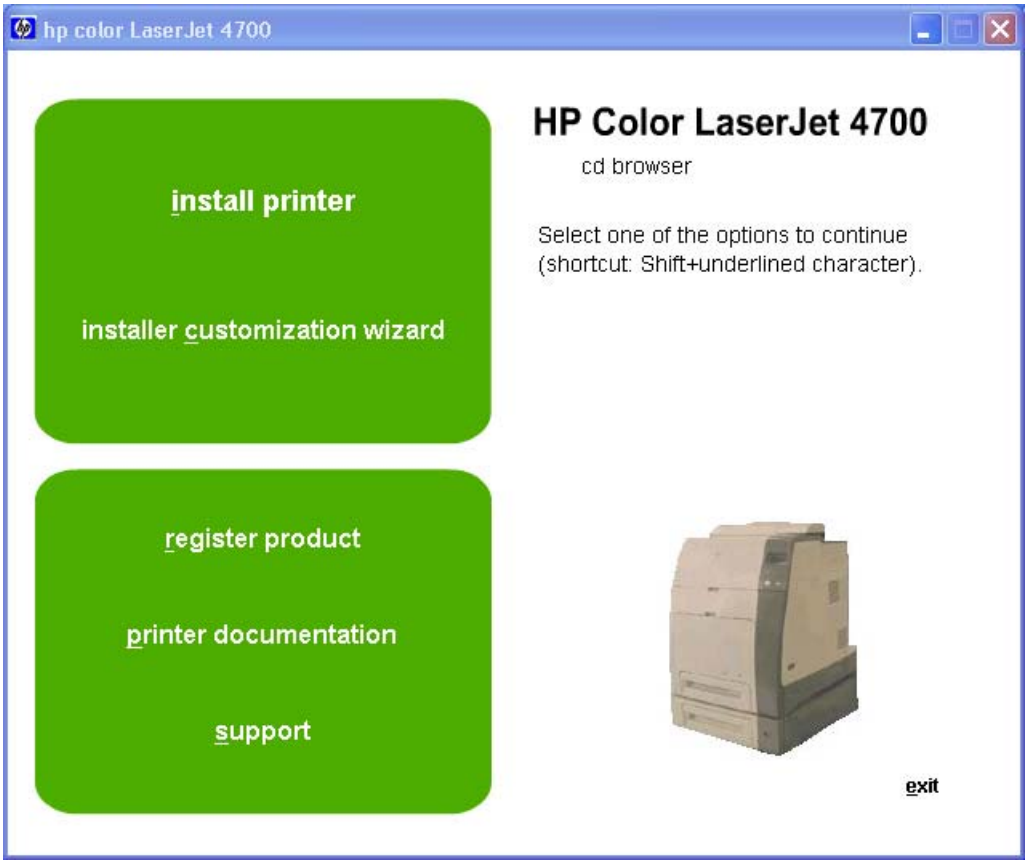


Figure 2-1 Installation software CD browser

The main screen of the software CD contains installation options in the upper-left panel and documentation options in the lower-left panel. As you move your cursor over each option, a description of the option appears above the product image.

NOTE The options on your product might differ from the illustration.

install printer. The installation wizard guides you through the HP Color LaserJet 4700 printing-system software installation. You are given the choice of performing a Typical Installation, a Minimum Installation, or a Custom Installation. If you select Typical Installation, only the necessary software is installed. If you select Custom Installation, you can select the components that you want to install.

installer customization wizard. Use this wizard to customize the HP Color LaserJet 4700 installer by presetting the installation options in a response file. The installer that you have customized can then be used for silent, unattended installation.

register product. Use this option to register your product online. After Web registration, you can gain access to support and services, manage your profile, and sign up for free support alerts, driver notices, and personalized newsletters.

printer documentation. Use this option to view the HP Color LaserJet 4700 user documentation. The following document options are available when you click this option:

- **user guide (interactive)**
- **user guide (printer friendly)**

- **install notes**
- **embedded web server guide**
- **hp jetdirect guide**

NOTE If your system does not have Adobe Acrobat Reader 4.0 or later installed, clicking any of the links to documentation that is in portable document format (.PDF) opens a version of Adobe Acrobat Reader that runs from the HP Color LaserJet 4700 printing-system software CD. The CD Browser version of Acrobat Reader is in English only, but can be used to open localized versions of .PDF documents. The Adobe Acrobat Reader software is *not* installed on your computer and can only run while the printing-system software CD is in the CD-ROM drive. Adobe Acrobat Reader is also available at the following Web site: www.adobe.com.

support. To increase productivity and get the most use from your HP Color LaserJet 4700 printer, you can view a list of optional software programs and links to HP Web sites. The following options are available:

- Click **hp web jetadmin** to download HP Web Jetadmin software from the Web for a Web browser-based network-management tool.
- Click **color matching information** for information about simulating PANTONE*® MATCHING SYSTEM colors and installing International Color Consortium (ICC) color profiles for the HP Color LaserJet 4700 printer.
- Click **supplies** for information about ordering HP Color LaserJet 4700 printer supplies.
- Click **product information** for HP Color LaserJet 4700 printer support information and updates.
- Click **hp.com** to go to the HP home Web page for information about products and services, support, drivers, and HP online stores.

Installer features

The common installer is designed to provide a simple and consistent installation method for the product. The common installer is available for the Windows 98, Windows Me, Windows 2000, Windows XP, and Windows Server 2003 operating systems.

The common installer offers the following features:

- The HP Color LaserJet 4700 printing-system software CD features an interactive software interface. See HP Color LaserJet 4700 printing-system software CD for Windows systems.
- Network connection is integrated so that you can install drivers and connect to a networked product in a single process.
- The selection dialog box sets the operating-system language as the default language (for Windows 98, Windows Me, Windows 2000, Windows XP, and Windows Server 2003 only). You can use the installer to select any of the languages on the HP Color LaserJet 4700 printing-system software CD.

The HP Color LaserJet 4700 printing-system software CD also includes the following features:

- The HP LaserJet Uninstaller Utility
- The HP Customization Utility for custom installations

All of the Windows system components are installed by using the HP Color LaserJet 4700 series printing-system installer. The installer automatically detects your language of choice and your operating system. You can select the type of installation that you prefer: Typical Installation, Custom Installation, or Minimum Installation.

HP LaserJet print drivers

HP Color LaserJet 4700 print drivers provide the printing features and communication between the computer and the product. The printing system includes software for end users and network administrators who are working in the following operating environments:

- Microsoft Windows 98 and Windows Me
- Windows 2000, Windows XP (32-bit and 64-bit), and Windows Server 2003 (32-bit and 64-bit)
- Apple Mac OS 9.x and later, and Mac OS X (V10.1 and later)

In Windows operating systems, automatic configuration, driver updates after a new configuration, and preconfiguration features are available with the HP Color LaserJet 4700 printer.

NOTE For the latest information about the printing-system software components, see the readme files on the CD. For additional information about installing the printing-system software, see the HP Color LaserJet 4700 Printing System Install Notes on the printing-system software CD.

All of the drivers provide access to the paper-handling and print-quality features, and are described in chapters 3 and 4 of this manual.

HP PCL 6, PCL 5, and PS emulation drivers

All of the Windows drivers are supported by Microsoft 32-bit operating systems. Separate versions of the HP PCL 6, PCL 5, and PS emulation unidrivers are available for Windows XP and Windows Server 2003 64-bit operating systems. These 64-bit drivers are not included on the printing-system software CD, but they can be downloaded from the following HP Web site:

www.hp.com/go/clj4700_software

The following drivers are available on the HP Color LaserJet 4700 printing-system software CD:

- The HP Traditional PCL 5 Driver for Windows 98, and Windows Me
- The HP Traditional PCL 6 Driver for Windows 98 and Windows Me
- The HP Traditional Postscript 3 Emulation Driver for Windows 98 and Windows Me
- The HP PCL 6, PCL 5, and PS emulation 3 emulation unidrivers for Windows 2000, Windows XP, and Windows Server 2003

NOTE If you select a Typical Installation during installation of the printing-system software, the HP PCL 6 Unidriver is installed by default for Windows 2000, Windows XP, and Windows Server 2003, and the HP Traditional PCL 6 Driver is installed by default for Windows 98 and Windows Me.

Table 2-1 Print drivers included with the HP Color LaserJet 4700 printer

Operating System[1]	PCL 6	PCL 5	PS emulation
Windows 98 and Windows Me	X	X	X
Windows 2000	X	X	X
Windows XP	X	X	X
Windows Server 2003	X	X	X
Macintosh OS			X

[1] Not all product features are available from all drivers or operating systems. See the online Help in your driver for information about the features that are available.

Print-driver version numbers for Windows operating systems

The HP Color LaserJet 4700 PCL 6 and PCL 5 traditional print drivers are supported by the Windows 98 and Windows Me operating systems. The PS Emulation Driver software provides postscript feature support for the HP Color LaserJet 4700. The HP PCL 6, PCL 5, and PS emulation unidrivers are supported by Windows 2000, Windows XP, and Windows Server 2003.

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

- **Finishing**
- **Effects**
- **Paper**
- **Job Storage**
- **Basics**

If you are using an HP unidriver in a Windows 2000, Windows XP, or Windows Server 2003 environment, follow these steps to find driver-version information:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers and Faxes** (in Windows XP and Windows Server 2003) or **Printers** (in Windows 2000).
4. Right-click the printer icon.
5. Click **Properties**.
6. Click the **About** tab.

NOTE For a list of print drivers, updated HP printing-system software, and product-support information, go to:

www.hp.com/go/clj4700_software

Macintosh printing-system software

This section discusses the following topics:

- Mac OS 9 Classic support
- Macintosh printing system

Mac OS 9 Classic support

Mac OS 9 Classic is not fully supported by Hewlett-Packard. It is not a native operating system but a virtual operating system running on top of Mac OS X (HP software is designed and tested for native operating systems). Additionally, no support is offered for Virtual PC, also a virtual operating system. Information known to HP on specific issues related to the classic environment or driver may be relayed to customers.

At this time, support offered for Mac OS 9 Classic is on a "best effort" basis. HP understands that because certain Apple computers may not offer native Mac OS 9, Classic is the only option. "Best effort" support will attempt the following:

- Installation of the software/hardware
- Test installation to verify software/hardware works
- Limited troubleshooting

When problems arise within the Mac OS 9 Classic environment, approved software or hardware, HP uses the following resources to resolve the problem:

- Internal resources, such as knowledgebase systems, engineers, and resource desk
- Apple support
- The Web
- Known solutions

If these resources do not resolve the problem, contact Apple or the virtual operating system vendor.

While issues occurring with virtual operating systems are not supported, HP continues to offer full support for its products in native Mac OS 9, where the supplied product software is designed to support Mac OS 9 and is within the normal support period.

Macintosh printing system

The HP Color LaserJet 4700 printing system for Macintosh is composed of the Print Center for Mac OS X (V10.1.5 and later) and the Apple LaserWriter driver for Mac OS 9.2.2, which are provided with the operating system, and HP-created PPD files. The driver uses these files to determine the features and postscript commands that the product supports. Bidirectional support in AppleTalk connections supports autoconfiguration of the software. The following are components that can be installed:

- The HP Color LaserJet Installer for Mac OS 9 V9.2.2 and Mac OS X V10.1.5 and later
- SYSTEM/EXTENSIONS/PRODUCT DESCRIPTIONS (for Mac OS X Classic)
- LIBRARY/PRINTERS/PPDS/CONTENTS/RESOURCES/LANGUAGE.LPROJ (for Mac OS X)

- The HP Printer Selector (for Mac OS X V10.1.5 or later)
- Install notes

Driver Configuration for Windows

The HP LaserJet PCL 6 and PCL 5 traditional drivers for Windows and the HP PCL 6, PCL 5, and PS emulation unidrivers feature bidirectional communication technology which, in supported environments, provide automatic discovery and driver configuration for product accessories at the time of installation.

Some accessories that are automatically discovered and configured include the duplexing unit, optional paper trays, printer hard disk, and dual inline memory modules (DIMMs).

Driver Autoconfiguration

Automatic discovery and driver configuration through bidirectional communication occurs in the following circumstances:

- Upon installation of a print driver, when using Enterprise Autoconfiguration (EAC)
- When using the Update Now feature for a driver that is already installed

However, as shown in the following table, driver autoconfiguration and EAC are *not* available in Windows 2000, Windows XP, or Windows Server 2003 operating systems over a direct connection when the HP Color LaserJet 4700 printer is installed by using the Add Printer Wizard.

Table 2-2 Availability of automatic discovery and driver configuration through bidirectional communication in Windows 2000, Windows XP, or Windows Server 2003

Connection type	Add Printer Wizard install	Common installer
Network	Yes	Yes
Direct connection	No	Yes

Bidirectional communication

In environments that support bidirectional communication, the computer communicates with the product during installation, determines the physical configuration, and then configures the driver accordingly.

Bidirectional communication is the capability of the product to respond to data inquiries from the computer and report information back, such as what type of print media is available or what accessories are connected to the product. Bidirectional communication depends on your network operating system and on the type of connection you have between your computer and the HP Color LaserJet 4700. If the connection 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 to the host computer.

Enterprise AutoConfiguration

Enterprise AutoConfiguration (EAC) uses bidirectional communication to provide autoconfiguration functionality for installation of the print driver over a network, whether you use the installer on your printing-system software CD or the Add Printer wizard to install the driver. Driver installation that includes EAC is configured with the same settings as the physical configuration of the product. Configuration occurs without user interaction.

If bidirectional-communication software has been installed previously, EAC is not activated, and the pre-existing bidirectional-communication software is used to configure the print driver.

If bidirectional communication software has not been installed, EAC installs bidirectional-communication software that allows it to communicate with the product and automatically match the print driver with the

actual product configuration. EAC is activated during installation of the driver or whenever the Update Now feature is used.

If the configuration of the HP Color LaserJet 4700 changes after installation, the driver can be automatically updated with the new configuration in environments that support bidirectional communication by using the Update Now feature. For more information, see Update Now.

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

Table 2-3 EAC availability in Microsoft Windows and Microsoft Share

Method	Connection type			Microsoft Windows				Microsoft Share[1]
				98	Me	2000	XP	2000/XP host with 2000/XP client
Installer	Direct connect	Parallel		x	x			
		USB		x	x			
	Network	Jetdirect	TCP/IP	x	x	x	x	x
		Standard	TCP/IP (HP)			x	x	x
			TCP/IP (MS)			x	x	x
Add Printer	Direct connect	Parallel		x	x	x	x	x
		USB		x	x	x	x	x
	Network	Jetdirect	TCP/IP	x	x	x	x	x
		Standard	TCP/IP (HP)			x	x	x
			TCP/IP (MS)			x	x	x

1 This column represents the following Microsoft Share configurations: 1. Windows 2000, Windows XP, or Windows Server 2003 Server host with Windows NT 4.0, Windows 98, or Windows Me client. 2. Windows NT 4.0 host with Windows 2000, Windows XP, Windows Server 2003, Windows 98, or Windows Me client. 3. Windows 98 or Windows Me host with any client.

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

Table 2-4 EAC availability in Novell Netware environments

Method	Connection type			Novell		
				Netware 4.x		Netware 5.x
				Bindery queue	NDS queue	Bindery queue
	Network	Jetdirect	TCP/IP	x	x	x
		Standard	TCP/IP (HP)			
			TCP/IP (MS[1])			

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

Update Now

If you have modified the configuration of the HP Color LaserJet 4700 printer since installation, the driver can be automatically updated with the new configuration in environments that support bidirectional communication. Use the Update Now feature to automatically reflect the new configuration in the driver.

For example, if the HP Color LaserJet 4700 is installed and an optional paper-handling accessory is added later, you can use the Update Now feature to query the product and update the settings to match the new product configuration.

The feature automatically updates the registry and changes the configuration information that appears on the **Configure** tab if you are using an HP Traditional PCL 6 Driver or HP Traditional PCL 5 Driver, and on the **Device Settings** tab if you are using an HP PCL 6, PCL 5, or PS emulation unidriver.

If you are using an HP PCL 6, PCL 5, or PS emulation unidriver, you must select **Update Now** through the **Automatic Configuration** setting in **Device Settings** tab.

If you are using an HP traditional PCL 6 or PCL 5 driver, you must click the **Update Now** button on the **Configure** tab.

The Update Now feature is not available with the HP Traditional Postscript 3 Emulation Driver.

NOTE The Update Now feature is not supported in environments where shared Windows 2000 or Windows XP clients are connected to Windows 2000 or Windows XP hosts.

HP Driver Preconfiguration

HP Driver Preconfiguration is a software architecture and set of tools that permits HP printing-system software to be customized and distributed in managed corporate printing environments. Using HP Driver Preconfiguration, information technology (IT) administrators in corporate and enterprise environments can preconfigure the printing and device defaults for HP print drivers before installing the drivers in the network environment.

HP Driver Preconfiguration is most beneficial when configuring print drivers for multiple workstations or print servers for print queues that share the same configuration. Two types of features can be configured: device settings and printing-preferences settings. The driver is configured to match the product hardware so that gaining access to all of the product accessories through the driver is enabled correctly (for example, for duplexing units and additional input trays). Most driver feature settings can also be configured.

HP Driver Preconfiguration configures the driver to match the accessories installed on the product, or to match the settings that IT administrators make in the configuration (.CFG) file (for example, optional trays, total amount of memory, job-storage settings, or mopier settings).

The preconfiguration process consists of three basic steps: driver acquisition, driver preconfiguration, and driver installation and deployment. These steps can be accomplished in different ways, depending on the tool that is being used to define the configuration.

The configuration process for driver preconfiguration is supported through three distinct tools. All three are designed with the same basic user-interface (UI) controls for interacting with the .CFG file, but are packaged differently, either to support established product installation workflows or to leave the

deployment and installation of the driver entirely up to the user. The following tools support driver preconfiguration:

- **HP Driver Configuration Editor**. The HP Driver Configuration Editor is a small standalone Windows software program that the administrator can use to open the .CFG file that is associated with a particular driver and make modifications that are applied when that driver is installed on the target computer. It is intended for use in environments that have an established process for deploying drivers. This is the preconfiguration tool of choice to support any Novell or HP Print Server Appliance (PSA) Point and Print environments. It is used in the way that any ordinary Windows software program is used.

  The HP Driver Configuration Editor is available at the following Web site: www.hp.com/go/hpdpc_sw

- **The HP Web Jetadmin Driver Configuration Plugin**. HP Web Jetadmin provides a queue-creation program that can be used to create printer queues on any Windows 2000, Windows XP, or Windows Server 2003 or workstation. The HP Web Jetadmin Driver Configuration Plugin adds a number of screens to the existing queue-creation workflow from which the drivers that are being installed for the queues can be customized as part of the process. The plug-in is limited to Internet Explorer browsers. Netscape Navigator is not supported.

  The HP Web Jetadmin Driver Configuration Plugin is available at the following Web site:

  www.hp.com/sbso/tpm/web_jetadminplugin.html

- **HP Customization Utility/Silent Installer**. The Customization Utility features an install-time mode of HP Driver Preconfiguration. IT administrators can use the utility to preconfigure the drivers for a printing-system software driver installation that uses the silent installer.

Detailed information about gaining access to and installing these tools can be found in the *HP Driver Preconfiguration Support Guide*, which is available on the printing-system software CD.

For more information, see the *HP Driver Preconfiguration Support Guide* at the following Web site:

www.hp.com/go/hpdpc_sw

Lockable features

The following driver features can be locked to prevent end-users from changing settings:

- **Print on Both Sides** (duplex). The options are **True** or **False**.
- **Print in Grayscale**. The options are **Disable** or **Enabled**.
- **Media Type**. The options include all the media types that the HP Color LaserJet 4700 supports (see Media attributes in the Engineering Details chapter of this manual).
- **Paper Source**. The options are **Printer Auto Select**, **Manual Feed (Tray 1)**, **Tray 1**, or **Tray 2**.

When a feature is locked, the selected default option is the only option that is available to users. Generally, the feature is unavailable in the driver UI after it has been installed.

Continuous export

The term "continuous export" refers to the ability of the driver to copy the latest driver settings back to the working copy of the preconfiguration file. Using this feature, the exported values can be transferred when a compatible version of the driver is used to upgrade the print driver. For instance, if orientation is set to **Landscape** in a driver originally installed in Windows 2000, then the orientation setting

automatically remains **Landscape** when the operating system is upgraded to Windows XP or Windows Server 2003. The continuous export feature functions transparently from the user's perspective and works only between drivers of identical product models.

NOTE Not all of the driver parameters can be exported; however, the list is always the same for those that can be preconfigured.

The following table shows drivers and operating systems that support HP Driver Preconfiguration.

Table 2-5 Operating systems that support HP Driver Preconfiguration

Driver	Windows 98	Windows Me	Windows 2000	Windows XP	Windows Server 2003
HP Traditional PCL 6 Driver	Yes	Yes	N/A[1]	N/A	N/A
HP Traditional PCL 5 Driver	Yes	Yes	N/A	N/A	N/A
PS Emulation Driver	No	No	N/A	N/A	N/A
HP PCL 6 Unidriver	N/A	N/A	Yes	Yes	Yes
HP PCL 5 Unidriver	N/A	N/A	Yes	Yes	Yes
PS Emulation Unidriver	N/A	N/A	Yes	Yes	Yes

[1] N/A: Not applicable; the driver is not supported in this operating system.

HP Driver Diagnostic Printer Check Tool

The HP Driver Diagnostic Printer Check Tool is a Web-based diagnostic software that enables you to determine whether you are using the correct and most current print driver for your HP Color LaserJet 4700 printer. To gain access to the HP Driver Diagnostic Printer Check Tool, go to www.hp.com/go/drivercheck, or go to the HP Business Support Center (BSC) at www.hp.com/go/bsc, click the **self-help resources** link on the left navigation bar, and then click **automatic driver checker** to run the HP Driver Diagnostic Printer Check Tool.

When you run the HP Driver Diagnostic Printer Check Tool, the products that are currently installed on your computer appear in a list. When you select the HP product that you would like to check, the HP Driver Diagnostic Printer Check Tool gathers information about your product, drivers, and system setup in order to diagnose your software driver configuration and check your print driver. The tool then verifies whether you are using the latest driver, informs you if you are using an incorrect driver for your HP product, and lets you know if an updated driver version is available for your product. If an updated driver is available, you can download and install the latest driver version by clicking on it.

The data that the HP Driver Diagnostic Printer Check Tool gathers is stored anonymously so that HP can analyze and continuously improve its diagnostic tools. No private data is gathered from your computer.

International Color Consortium profiles

HP provides cyan-magenta-yellow-black (CMYK) (HP4700C.ICM) and standard red-green-blue (sRGB) (HP4700R.ICM) International Color Consortium (ICC) profiles with the HP Color LaserJet 4700 printer. The CMYK profile can only be used with a postscript driver; the sRGB profile can be used with any of the HP Color LaserJet 4700 drivers. The profiles are available at the following HP Web site:

www.hp.com/support/clj4700

The ICC profiles describe the way color will be interpreted in the default CMYK and RGB modes. These profiles can be used for color conversions in a color-managed workflow. The sRGB profile matches the default RGB mode (sRGB), which is enabled with the **Default (sRGB)** or **Color** setting in either a PCL or postscript driver. The printer interprets CMYK data according to the Specifications for Web Offset Publications (SWOP) simulation when **Default CMYK+**is the selected **CMYK Color** setting in the postscript driver, and a more accurate SWOP rendering can be produced by selecting the **SWOP** setting. This standard defines how a particular set of CMYK ink colors should behave. Emulation for Dainippon Press (DIC) and Euro-standard CMYK inks used in Asia and Europe are also available and can be selected from the printer driver.

PANTONE* color profiles

Most software programs that support the use of PANTONE* colors for graphic objects will include the PANTONE* name in the postscript output along with the color values that are assigned to the object. For best results, select an application that uses PANTONE* palette in a CMYK workspace and print with the Postscript driver with the SWOP inkset emulation selected.

- PS Emulation Unidriver in Windows 2000, Windows XP, and Windows Server 2003
- PS Emulation Driver in Windows 98 and Windows Me

When **SWOP** is selected as the **CMYK Color** setting, these CMYK values provides a good reproduction of the PANTONE* 4C spot-color simulations.

PANTONE* provides device- and software-specific palettes for some HP Color LaserJet products. Using the custom colors in these palettes can provide an alternative match to the 4C spot-color simulation. However, files that use these palettes are not portable to other devices.

PANTONE* Application Palettes are available at the following Web site:

www.hp.com/support/clj4700

Vector graphics, such as company logos that are created in PANTONE* Application Palettes, can be imported into Microsoft Word, PowerPoint, or other Microsoft Office software programs. For importation, the color program must create an encapsulated postscript (.EPS) file of the image. By using the **Insert file** function, you can then import the file into the Office document.

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

HP Embedded Web Server

The HP Embedded Web Server (HP EWS) is a standard feature on the following HP Color LaserJet 4700 models when they are connected through a network:

- HP Color LaserJet 4700n
- HP Color LaserJet 4700dn
- HP Color LaserJet 4700dtn
- HP Color LaserJet 4700ph+

The base model, HP Color LaserJet 4700 can use the HP EWS if an optional EIO Jetdirect card is installed.

The HP EWS provides a simple, easy-to-use solution for one-to-one product management. Instead of installing management software, such as HP Web Jetadmin, use HP EWS for remote management in offices that have a limited number of products. The only requirement is that the management console have a supported Web browser.

In environments that have a larger number of products, in which one-to-one management is impractical, the HP Embedded Web Server and HP Web Jetadmin work together to provide scalable remote product management. Use HP Web Jetadmin for consolidated management tasks when you want to perform operations on a selected set of products. For such environments, HP provides hooks between the HP EWS and HP Web Jetadmin so that you can configure HP EWS features on multiple products in one operation. For example, you can set the security password for the HP EWS simultaneously on a cluster of products.

For additional information and a copy of the *HP Embedded Web Server User Guide*, go to: www.hp.com/support/clj4700.

To use the HP EWS to view information about the product, open a supported Web browser and type the product transmission control protocol/internet protocol (TCP/IP) address or host name. To find the TCP/IP address, look for **IP Address** on the Embedded Jetdirect page, in the **TCP/IP** section. To find the host name of the product, look for **Host Name** in the **TCP/IP** section.

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

Use this procedure to print a copy of the Embedded Jetdirect page from the control-panel display:

1. Press ✓ (the select button; the one with the check mark) to open the menus.
2. Press ▲(the up button) and ▼(the down button) to scroll to **INFORMATION**, and then press ✓ .
3. Press ▲ and ▼to scroll to **PRINT CONFIGURATION**.
4. Press ✓ to print the configuration page.

The HP EWS frame

Each screen in the HP EWS has a frame that contains a top banner, three category tabs, a left-aligned navigation menu bar, and a main-content area. Selecting one of the category tabs causes the corresponding left-aligned navigation bar to appear. The left-aligned navigation menu includes links to content that is appropriate for that tab. The main-content area shows information and opens options in response to navigation tab selections and menu bar selections.

See the following sections for more information about each tab or area:

- Information tab
- Settings tab
- Networking tab

Information tab

The following information is available on the HP EWS **Information** tab. To view the information, click the menu items on the left side of the HP EWS **Information** tab.

NOTE If an HP EWS password has been set, the **Information** tab is the only visible tab until the user logs in. See Security for more information.

Not all of the screens on the tab are included in this document. For more information, see the *HP Embedded Web Server User Guide*.

- **Device Status screen**. This screen provides current status information about the product.
- **Configuration Page**. This screen provides information about the configuration of the product.
- **Supplies Status**. This screen provides information about the print cartridge and the total pages that have been printed, and the serial number of the product.
- **Event log**. This screen provides information about reported printer errors.
- **Usage page**. This screen provides a page count for each size of media that has passed through the device, as well as the number of duplexed pages that have been printed.
- **Device Information**. This screen shows device information, such as the product TCP/IP address and serial number.
- **Control Panel**. This screen shows the product control panel.
- **Print**. Use this screen to print documents that are print-ready, such as those generated by a "print to file" driver option, .PCL documents, .PS documents, .PDF files, and text (.TXT) files.

Links to off-product solutions

Links on the HP EWS screens provide an easy way to locate information or complete tasks.

- **hp instant support**. This link connects you to a set of dynamic Web resources that help you solve specific problems and determine additional services that might be available for your device. Specific status and configuration information about the 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**. This link connects you to an HP product supplies screen from which you can order genuine HP supplies for your product.
- **Product Support**. This link connects to an HP product-support screen from which you can search for information, contact the HP customer care home page, or find additional resources for your product.

Device Status screen

Status information, such as whether the product is online or the toner is low, is available through your Web browser on a computer that is linked directly to the product. You can view this information without going to the product to identify the status. The following figure shows how this information is presented on the product Web page.

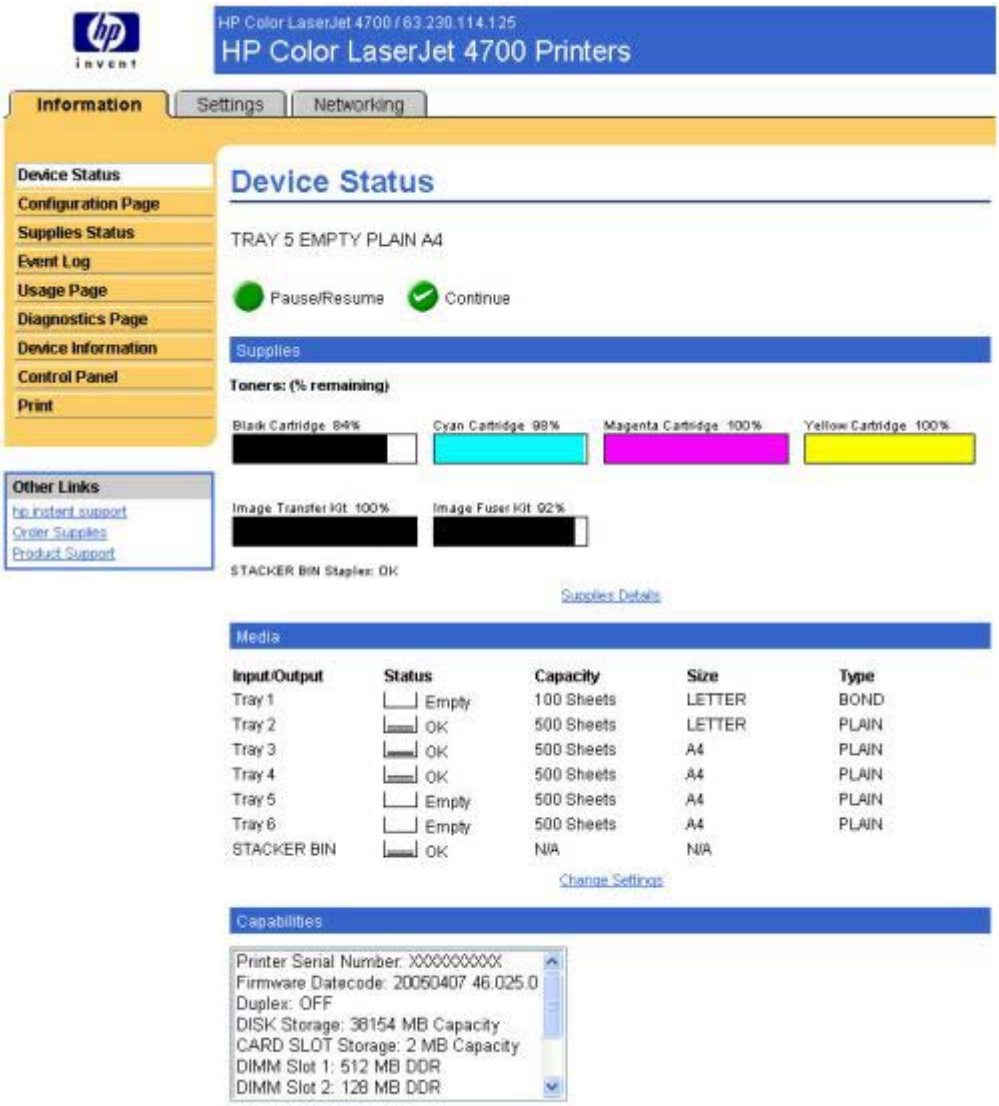


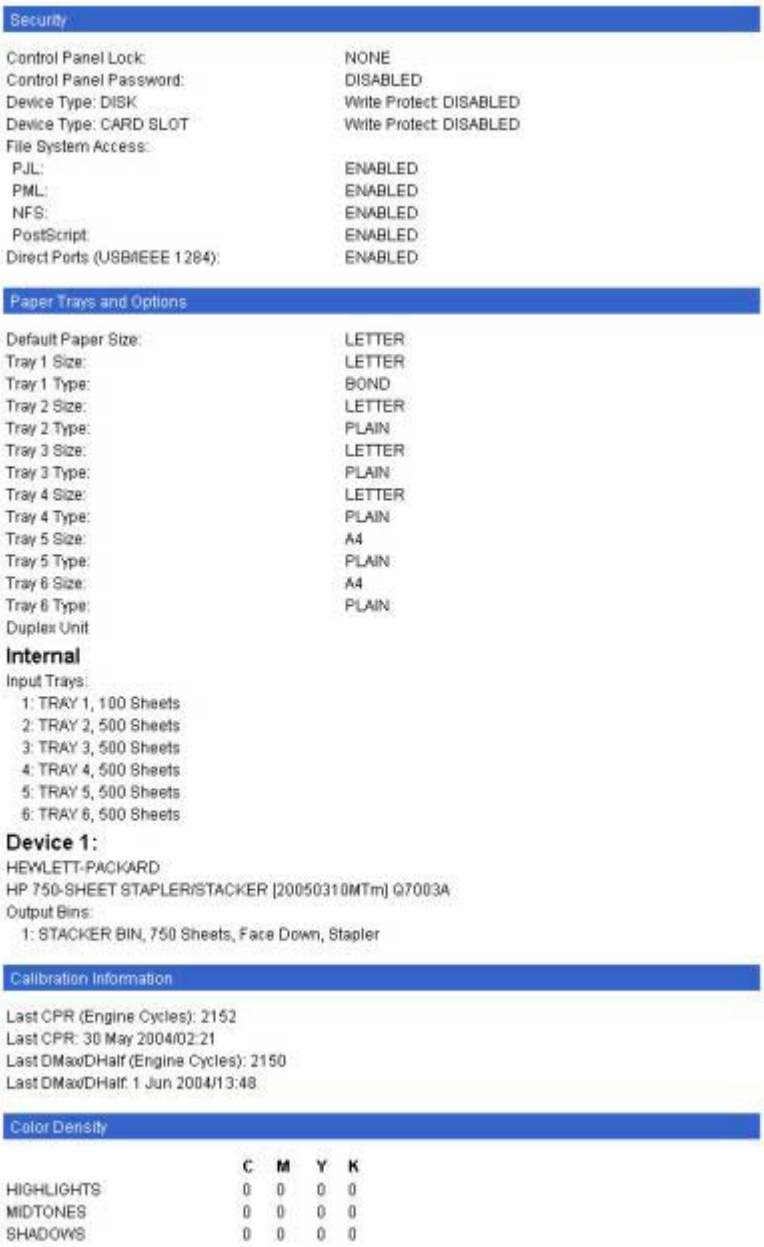
Figure 2-2 HP EWS **Information** tab – **Device Status** screen

Configuration Page

You can gain access to the HP Color LaserJet 4700 configuration page remotely through the HP EWS. The HP EWS Configuration Page screen provides configuration information about the product in the same way as the configuration page that is printed from the product. The following figures show an example of a configuration page viewed remotely through the HP EWS.

Figure 2-3 HP EWS **Information** tab – **Configuration Page** screen, 1 of 2

NOTE This figure is provided only as an example.



Security

Control Panel Lock:	NONE
Control Panel Password:	DISABLED
Device Type: DISK	Write Protect: DISABLED
Device Type: CARD SLOT	Write Protect: DISABLED
File System Access:	
PJL:	ENABLED
PML:	ENABLED
NFS:	ENABLED
PostScript:	ENABLED
Direct Ports (USB/IEEE 1284):	ENABLED

Paper Trays and Options

Default Paper Size:	LETTER
Tray 1 Size:	LETTER
Tray 1 Type:	BOND
Tray 2 Size:	LETTER
Tray 2 Type:	PLAIN
Tray 3 Size:	LETTER
Tray 3 Type:	PLAIN
Tray 4 Size:	LETTER
Tray 4 Type:	PLAIN
Tray 5 Size:	A4
Tray 5 Type:	PLAIN
Tray 6 Size:	A4
Tray 6 Type:	PLAIN
Duplex Unit	

Internal

Input Trays:
1: TRAY 1, 100 Sheets
2: TRAY 2, 500 Sheets
3: TRAY 3, 500 Sheets
4: TRAY 4, 500 Sheets
5: TRAY 5, 500 Sheets
6: TRAY 6, 500 Sheets

Device 1:

HEWLETT-PACKARD
HP 750-SHEET STAPLER/STACKER [20050310MTm] Q7003A
Output Bins:
1: STACKER BIN, 750 Sheets, Face Down, Stapler

Calibration Information

Last CPR (Engine Cycles): 2152
Last CPR: 30 May 2004/02:21
Last DMax/DHalf (Engine Cycles): 2150
Last DMax/DHalf: 1 Jun 2004/13:48

Color Density

	C	M	Y	K
HIGHLIGHTS	0	0	0	0
MIDTONES	0	0	0	0
SHADOWS	0	0	0	0

Figure 2-4 HP EWS **Information** tab – **Configure Page** screen, 2 of 2

NOTE This figure is provided only as an example.

Settings tab

The following information is available on the HP EWS **Settings** tab. To view the information, click the menu items on the left side of the HP EWS **Settings** tab. The **Settings** tab is shown in the Configure device section.

Not all of the screens on the tab are shown in this document. For more information, see the *HP Embedded Web Server User Guide*.

- **Configure Device**. Use the **Configure Device** screen to print product information pages and configure the product remotely.
- **E-mail Server**. Use the **E-mail Server** screen to configure e-mail settings for outgoing e-mail.
- **Alerts**. IT administrators can configure the product to send alerts in e-mail messages to anyone.
- **AutoSend**. Use the **AutoSend** screen to send product configuration and supplies-usage information periodically to your service provider.
- **Security**. Use the**Security** screen to manage security for the product.
- **Edit Other Links**. Use the **Edit Other Links** screen to add or customize up to five links to the Web sites of your choice.
- **Device Information**. Use the **Device Information** screen to provide a name of your choice for the product, assign an asset number, and configure the company name, the person to contact about the product, and the physical location of the product.
- **Language**. Use the **Language** screen to select the language in which the HP EWS screens appear.
- **Date & Time**. Use this page to set the correct date and time for the product.
- **Wake Time**. Wake time can be set to turn on the product at a certain time on a daily basis. Only one wake-time setting can be established per day; however, each day can have a different wake time. The sleep-mode delay can also be set on this page.

Configure device

You can obtain product configuration information through a Web browser by opening the HP EWS screen and changing the basic configuration information on the **Settings** tab. Security and password controls give MIS managers the level of control that they require within their network environments. The following figure shows an example of product options that can be configured remotely.

Figure 2-5 HP EWS **Settings** tab – **Configure Device** screen

Alerts

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

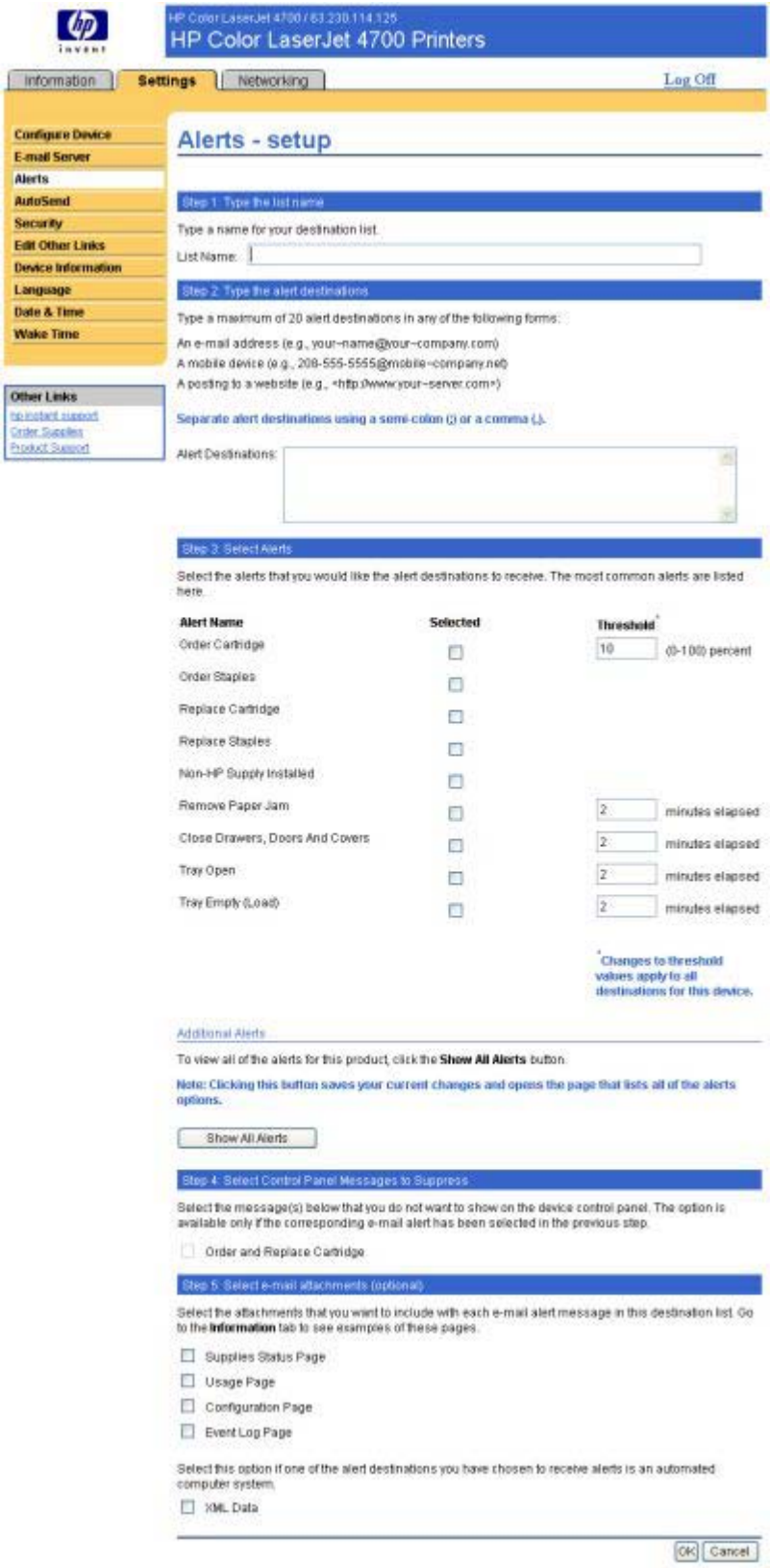


Figure 2-6 HP EWS **Settings** tab – **Alerts** screen

NOTE This figure is provided only as an example.

Security

The HP EWS screens that appear, and the settings on them, vary according to how you gain access to the HP EWS: as a general user, an IT administrator, or a service provider. To control access to the HP EWS screens, set a password on the **Security** page.

Figure 2-7 HP EWS **Settings** tab – **Security** screen

In a password-protected HP EWS, only the **Information** tab is available to users who do not log in by using the password. If no password is set (which is the default configuration), all of the tabs are visible.

If a password has been set, you must log on as an IT administrator or a service provider to gain access to the protected HP EWS tabs (**Settings** and **Networking**).

Networking tab

The following options are available on the HP EWS **Networking** tab.

Not all of the screens on the tab are shown in this document. For more information, see the *HP Embedded Web Server User Guide*.

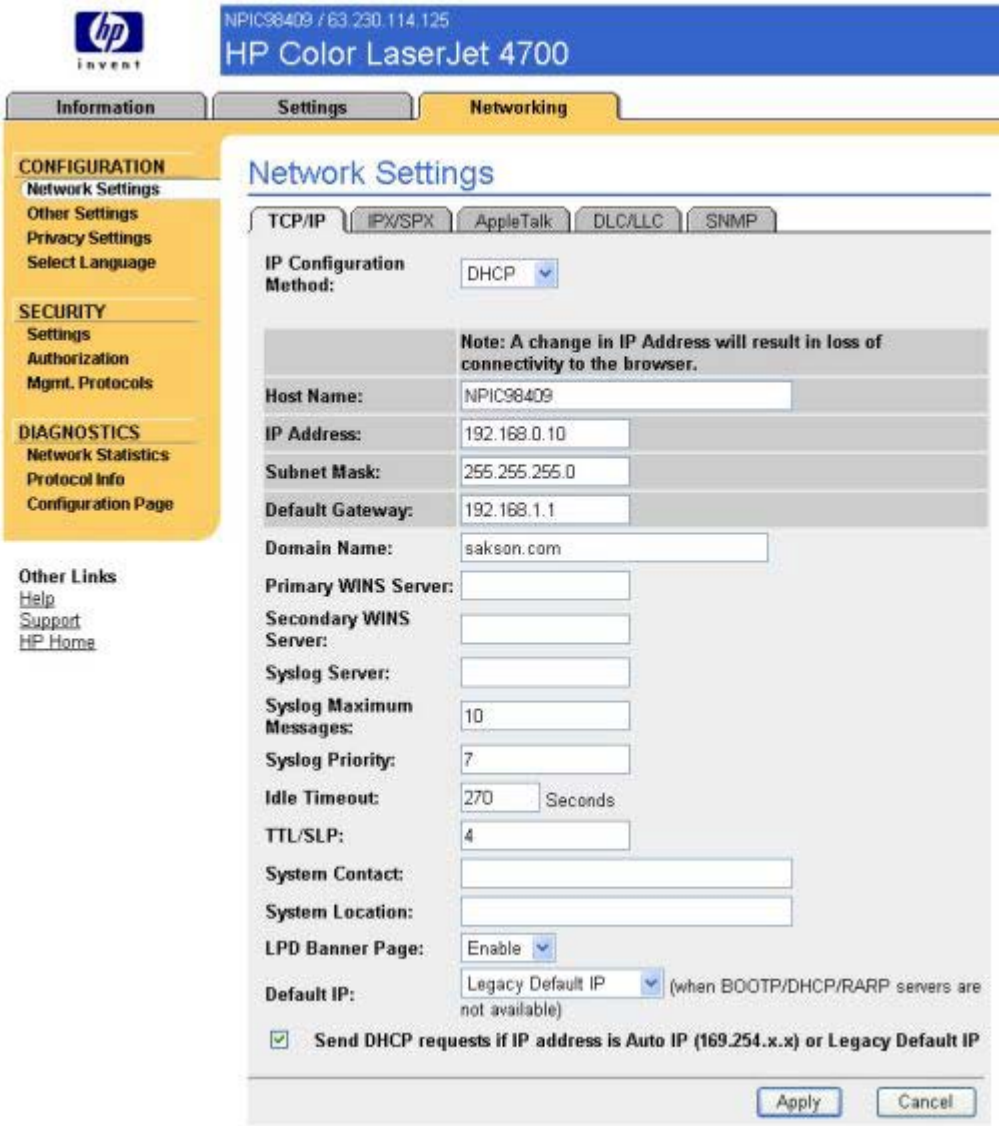


Figure 2-8 HP EWS **Networking** tab – **Network Settings** screen

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

Configuration section

- Network Settings
- Other Settings
- Privacy Settings
- Select Language

Security section

- Settings
- Authorization
- Mgmt. Protocols

Diagnostics section

- Network Statistics
- Protocol Info
- Configuration Page

Network settings

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

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

HP Printer Utility for Macintosh

The HP Printer Utility is a software program that gives you access to your printer in Mac OS X.

The HP Printer Utility is available only in Mac OS X V10.1.5 and later. The HP Printer Utility does not work when it is installed using the AppleTalk protocol; it requires IP, Bonjour or Rendezvous.

The following topics are discussed in this section:

- Access to the HP Printer Utility
- Supplies Status
- Device Information
- HP Support
- File Upload
- Update Firmware
- Duplex Mode
- Trays Configuration
- Lock Resources
- Stored Jobs
- E-mail Alerts
- Network Settings
- Rendezvous Setting
- Additional Settings

Access to the HP Printer Utility

Using the Finder, go to and double-click **Printers**. The **Select Printer** screen appears.

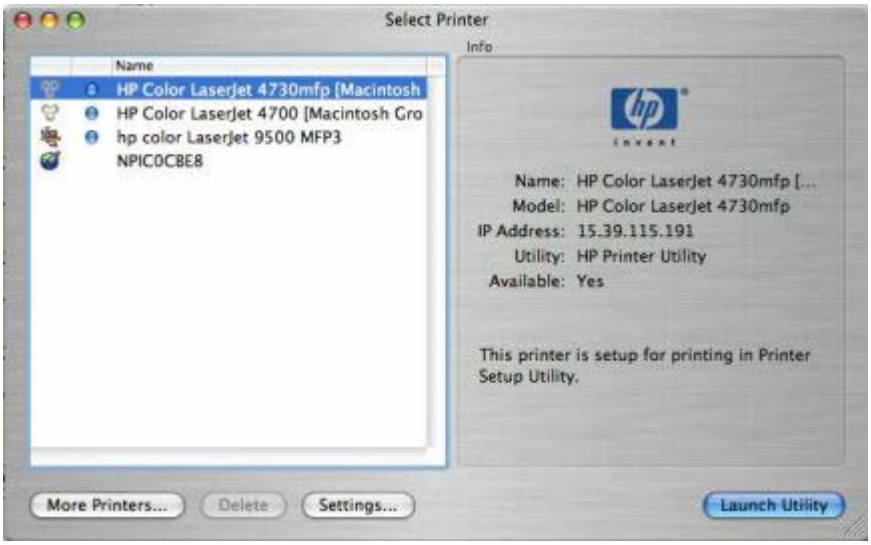


Figure 2-9 **Select Printer** screen

If your printer does not appear (as in the figure, click **More Printers...** . The **Connection Type** screen appears. Select your connection type (USB, TCP/IP, or AppleTalk). The product name appears under **Device Name**.

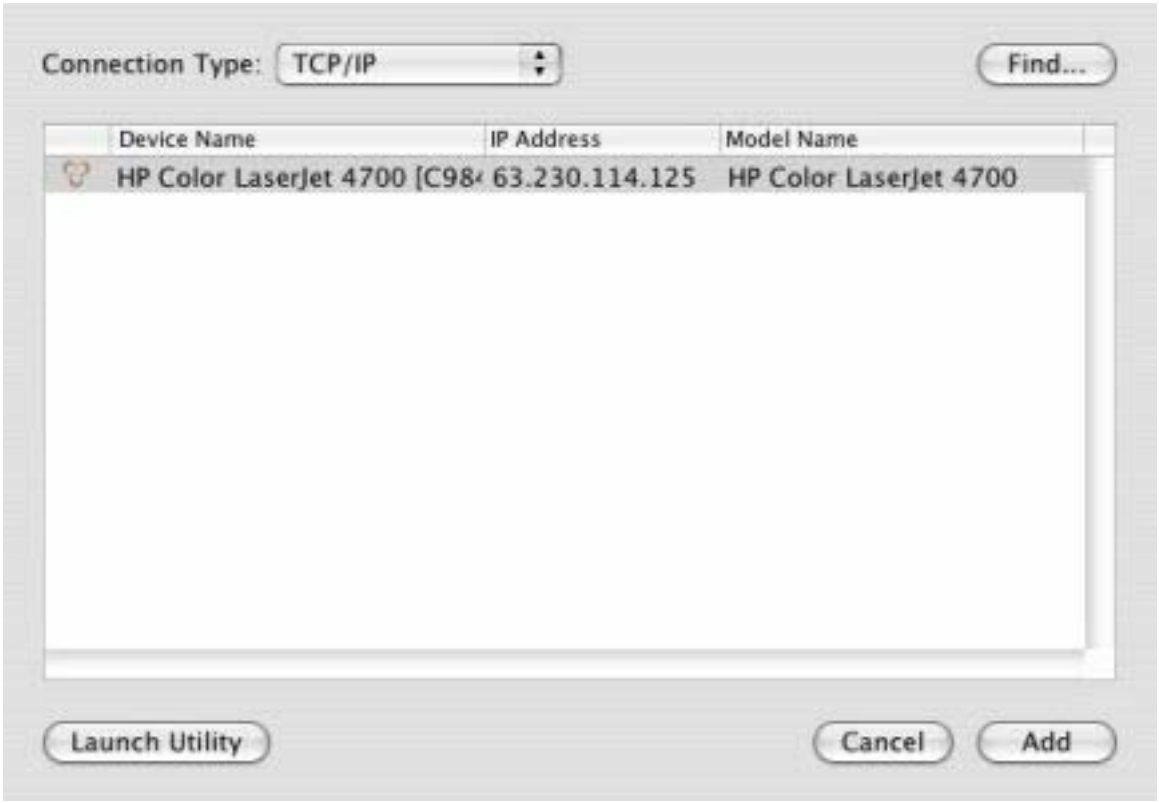


Figure 2-10 **Connection Type** screen

Select your product and click **Launch Utility**.

If the HP Printer Utility software detects a condition that might need attention, the Printer Status screen appears.

Figure 2-11 **Printer Status** screen

Address the condition and click **OK** to close the screen. The HP Printer Utility opens. The following sections describe the screens and features that are available in the HP Printer Utility

Supplies Status

The HP Printer Utility opens on the **Supplies Status** screen.

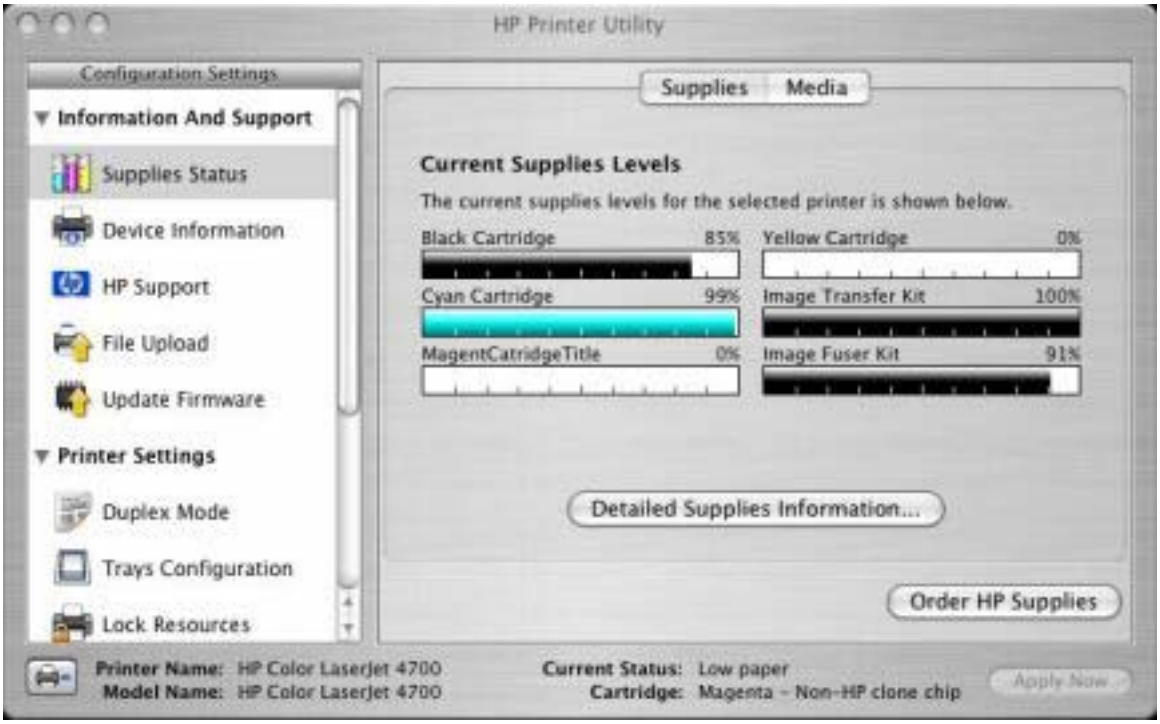


Figure 2-12 **Supplies Status** screen

Click **Detailed Supplies Information...** to open the **Supplies Information** screen. Use the scroll button to see information about the color print cartridges.

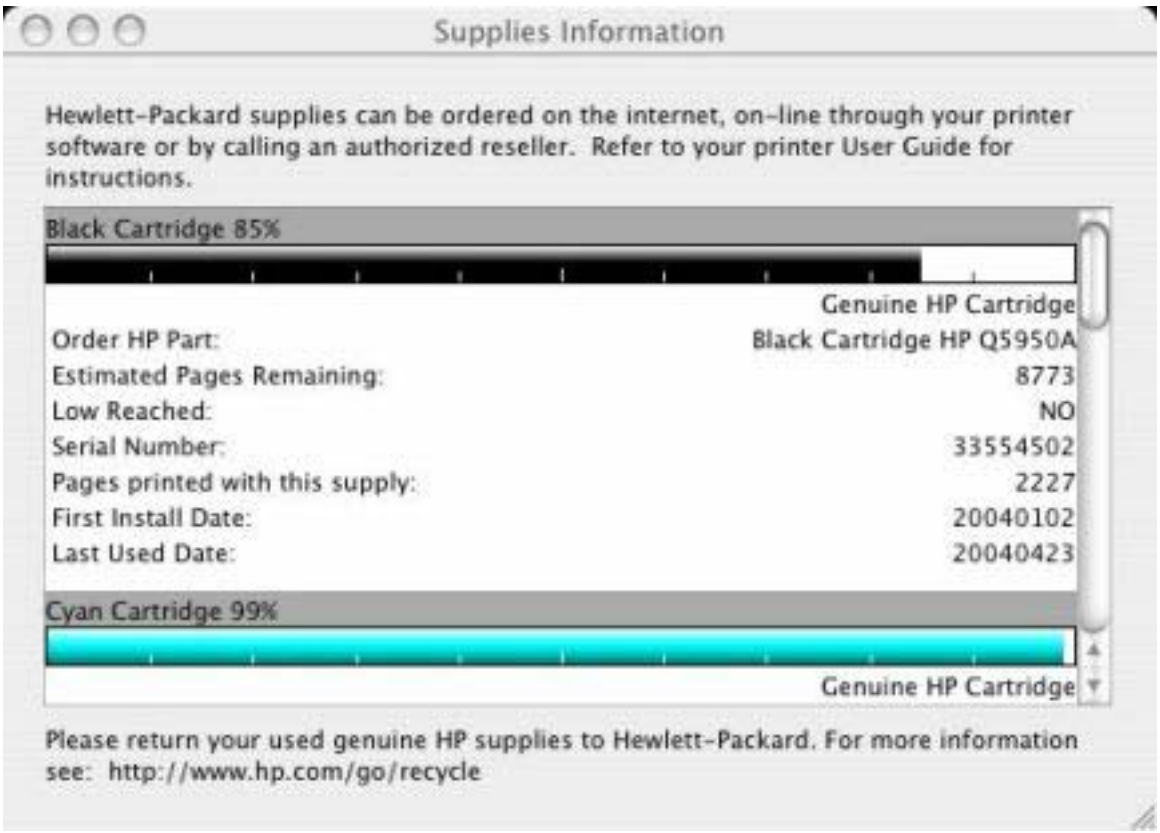


Figure 2-13 **Supplies Information** screen

If you have Internet access and click **Order HP Supplies**, a screen appears that explains the ordering process, describes the kind of information that can be sent about your product to facilitate the ordering of supplies, and provides a link to HP's privacy statement.

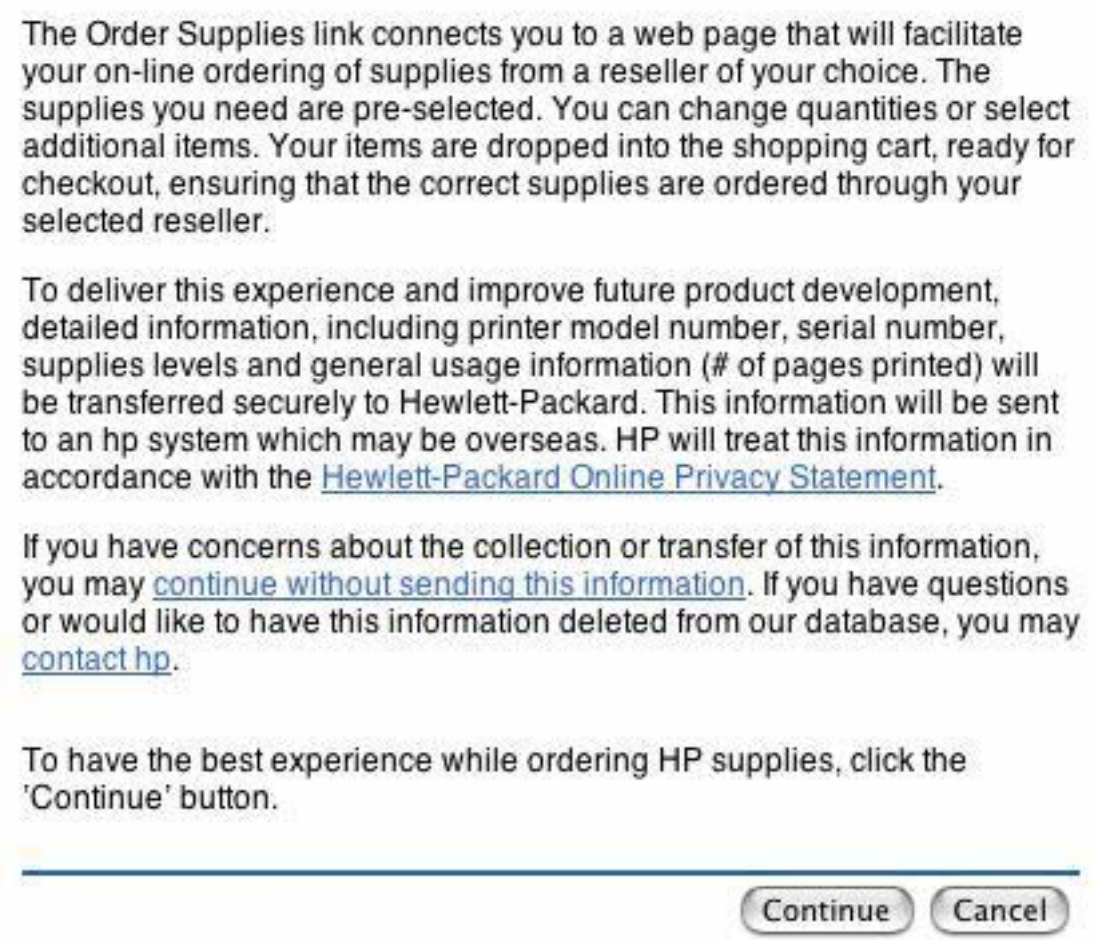


Figure 2-14 **Order Supplies** link

You can continue ordering supplies without sending product information by clicking the **continue without sending this information** link. You can send a message to HP by clicking the **contact HP** link.

On the **Supplies Status** screen, click **Media** to see the paper status in the trays.

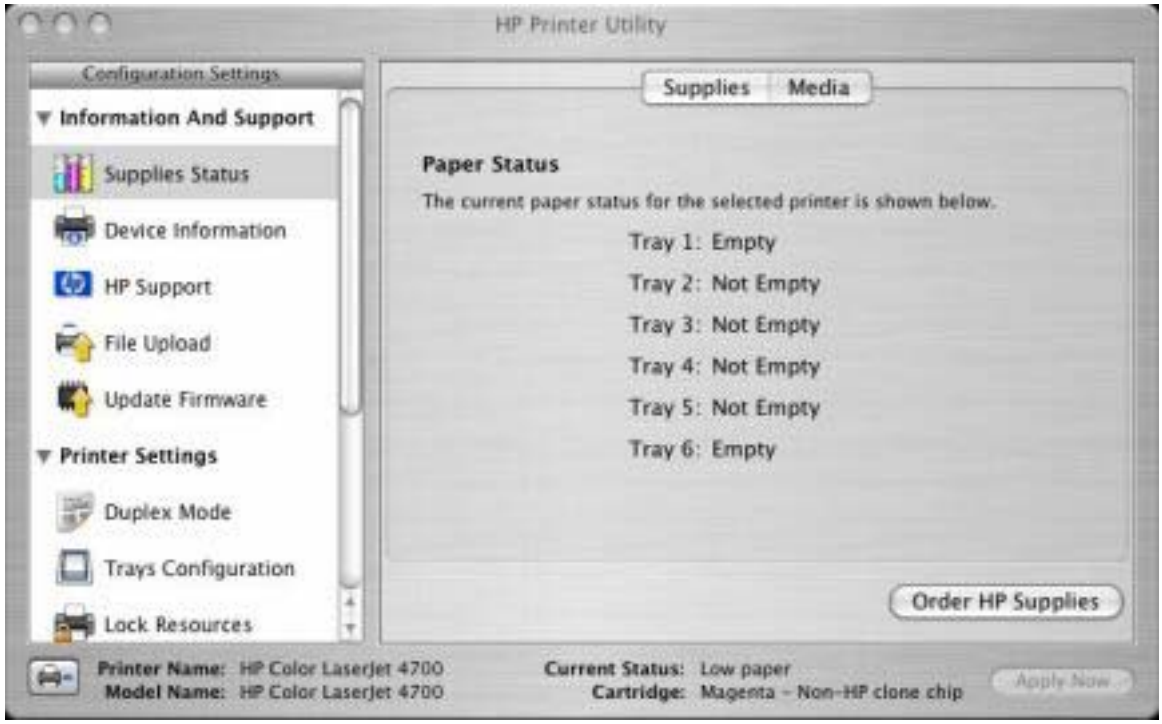


Figure 2-15 **Paper Status** screen

You can also order supplies from this screen by clicking **Order HP Supplies**.

Device Information

Click **Device Information** in the menu on the left to find the product service ID (if assigned), the firmware version, and the serial number.

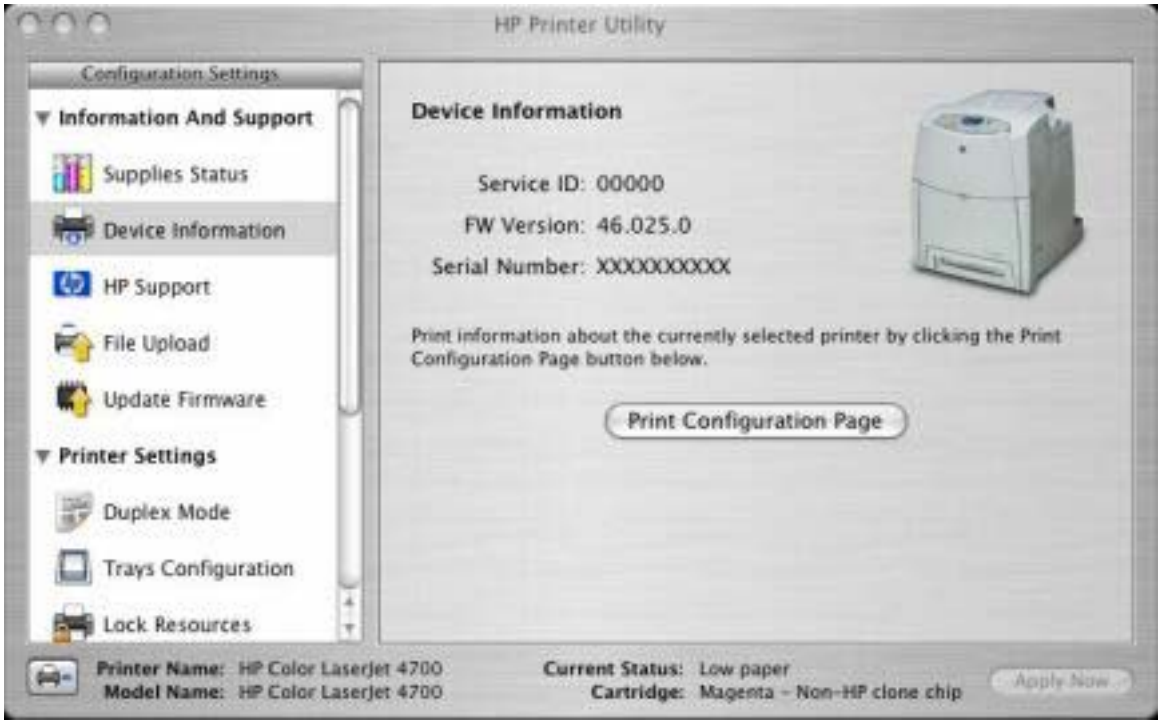


Figure 2-16 **Device Information** screen

The product configuration page has other settings; click **Print Configuration Page** to print it.

Click the printer icon in the lower left corner to see information about another installed printer. This action relaunches the HP Printer Utility so that you can select another printer.

HP Support

Click **HP Support** to open the **HP Online Support** screen.

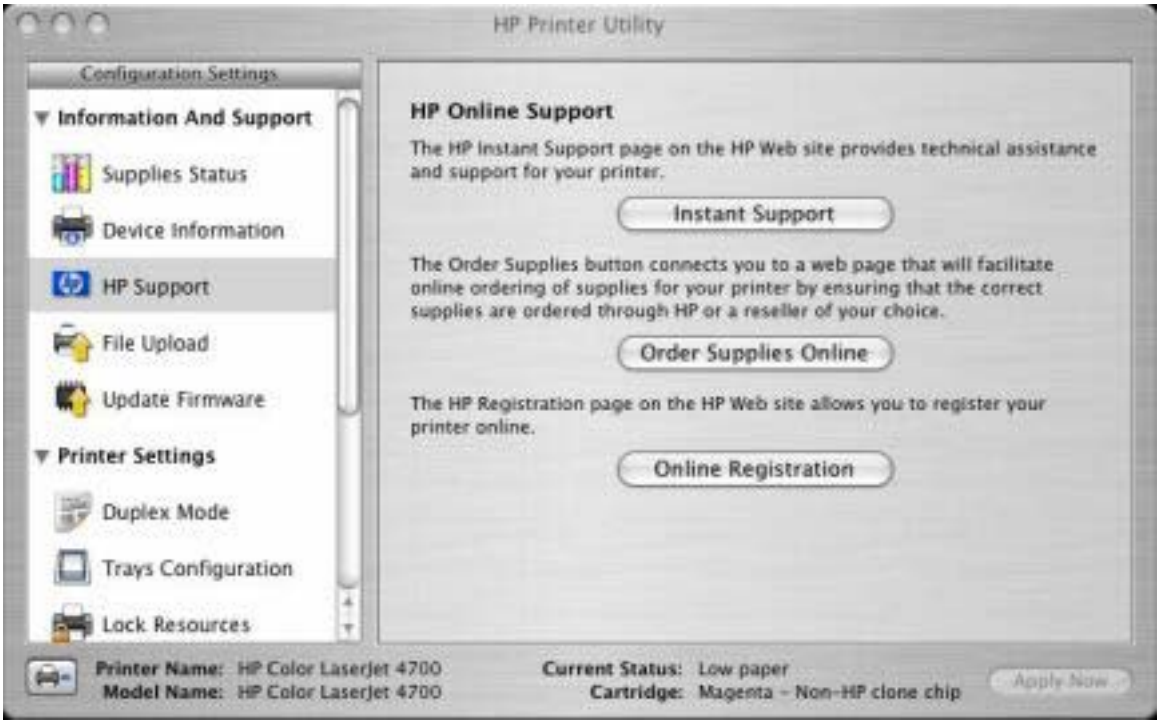


Figure 2-17 **HP Online Support** screen

If you have Internet access, you can connect to HP support pages over the Web from this screen.

File Upload

The **File Upload** command is supported for file types that can be sent directly to the printer without first opening them through a software program. Some files can be uploaded to the product, some cannot.

Documents in the following file formats can be printed by using a command line. That is, they do not need to be opened in a software program that supports the file format (such as the Adobe Acrobat or Acrobat Reader programs for .PDF files), but can be sent directly to the product by using the File Upload command.

- HP LaserJet Printer Control Language (.PCL)
- Portable Document Format (.PDF)
- Postscript (.PS)
- Text (.TXT)

When you select **File Upload**, the **File Upload** screen appears.

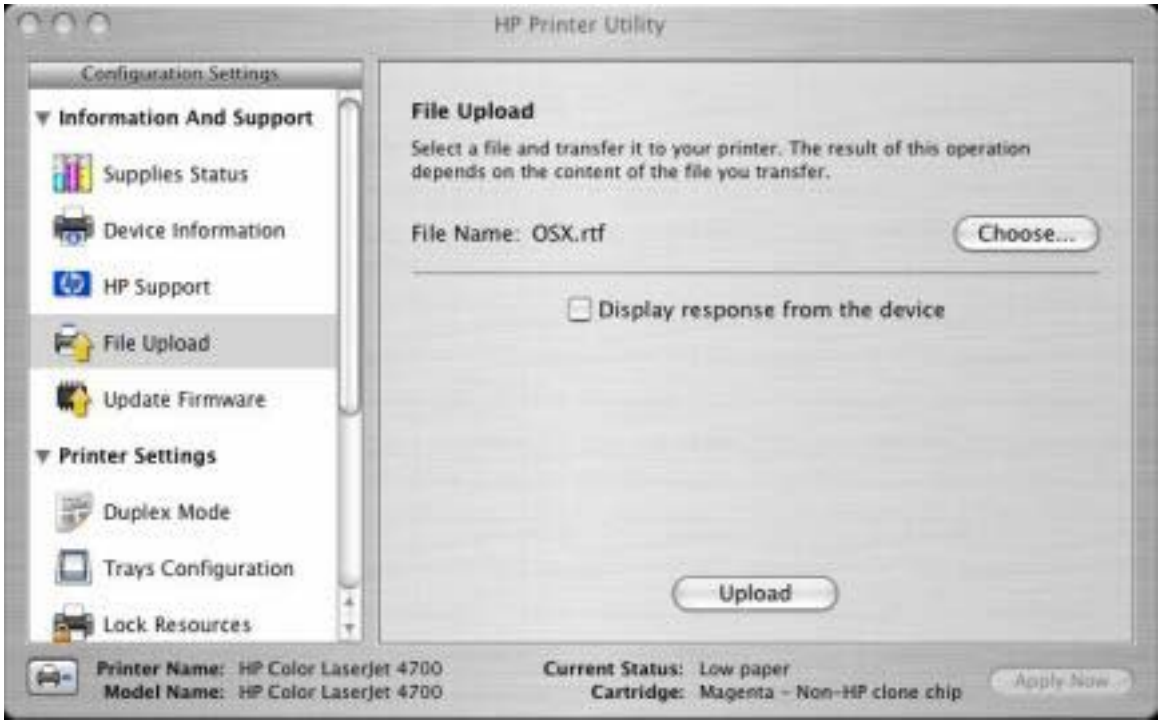


Figure 2-18 **File Upload** screen

Click the **Choose...** button to open a navigation screen. Locate the file you want to upload and click **Open**.

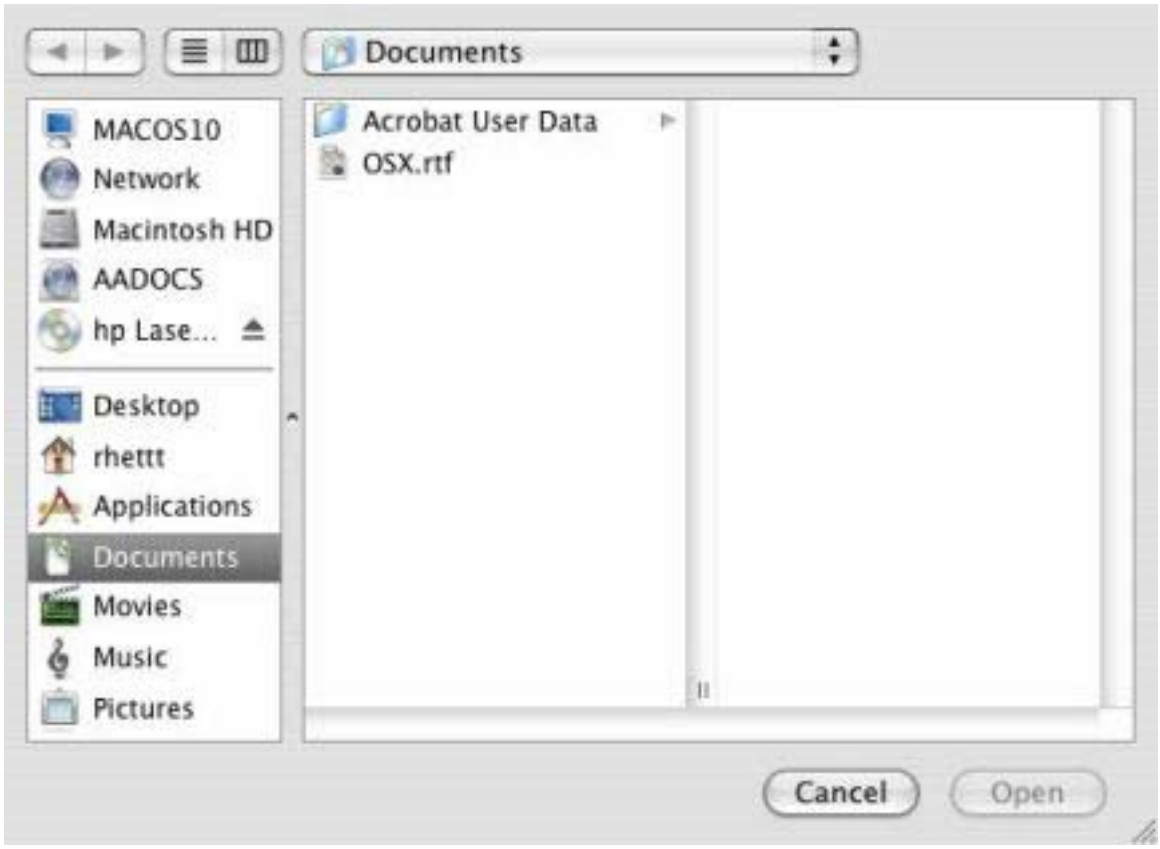


Figure 2-19 Locating a file

On the **File Upload** screen, click the **Display response from the device** to see whether the upload was successful.

Update Firmware

Select **Update Firmware** to locate a firmware upgrade file and install it on your product. Browse to the firmware file in the screen that appears (see Figure 2-19 Locating a file) and click **Open**. For information about firmware updates in Mac OS 9 operating systems, see Remote firmware update by using the HP LaserJet Utility (Mac OS 9.x only).

Duplex Mode

The **Duplex Mode** screen is shown in the following figure.

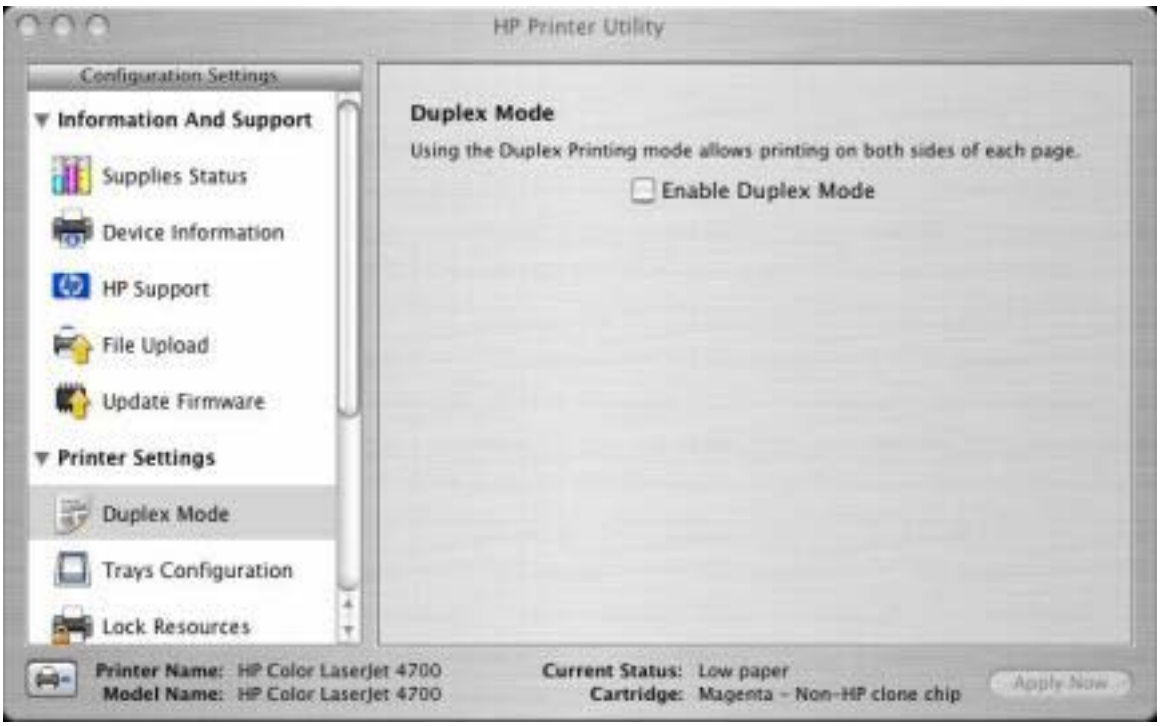


Figure 2-20 **Duplex Mode** screen

Use the **Enable Duplex Mode** command to print internal diagnostic and test pages on both sides of the page.

1. Select **Duplex Mode** to open the **Duplex Mode** screen.
2. Select the **Enable Duplex Mode** check box. This box is clear by default.
3. Click **Apply Now** to enable printing on both sides of the page.

Trays Configuration

The Trays Configuration screen is shown in the following figure.

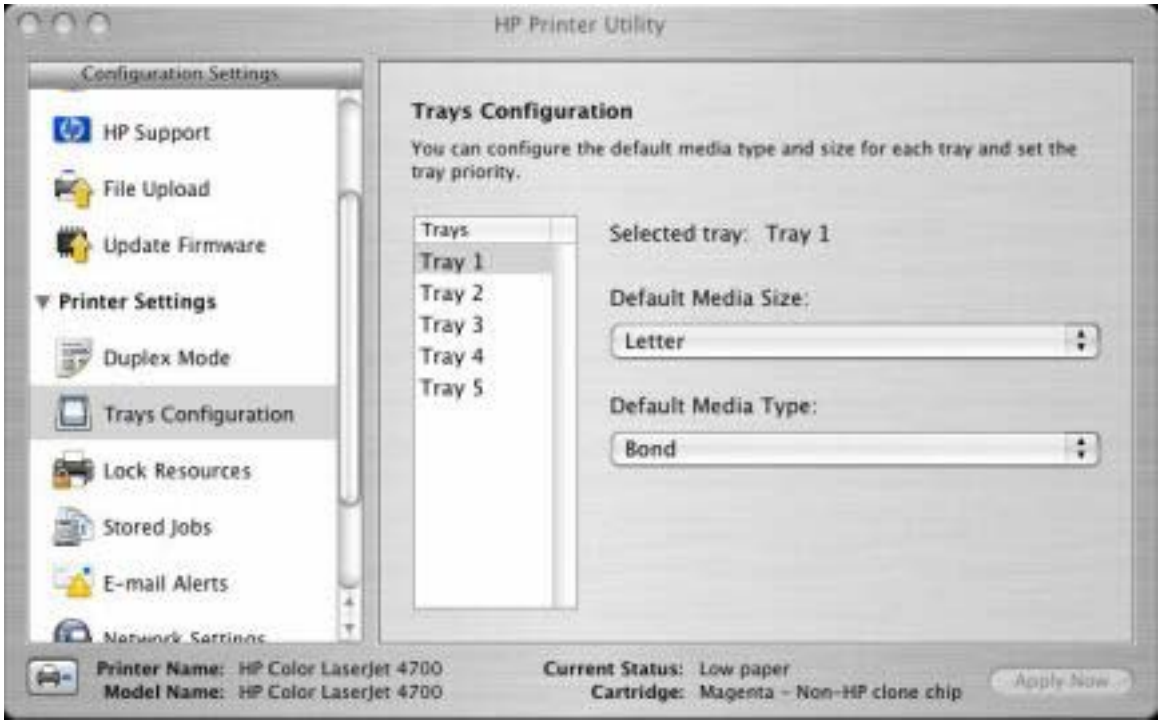


Figure 2-21 **Trays Configuration** screen

1. Select **Trays Configuration** to change media size and type for each of the trays installed on your product.
2. Select a tray, select a media size in the **Default Media Size** drop-down menu.
3. To change the media size or type, select a tray and then select a different media size in the **Default Media Size** drop-down menu, or select a different media type in the **Default Media Type** drop-down menu
4. Click **Apply Now** to save the settings.

Lock Resources

Select **Lock Resources** to lock certain features of the HP Color LaserJet 4700

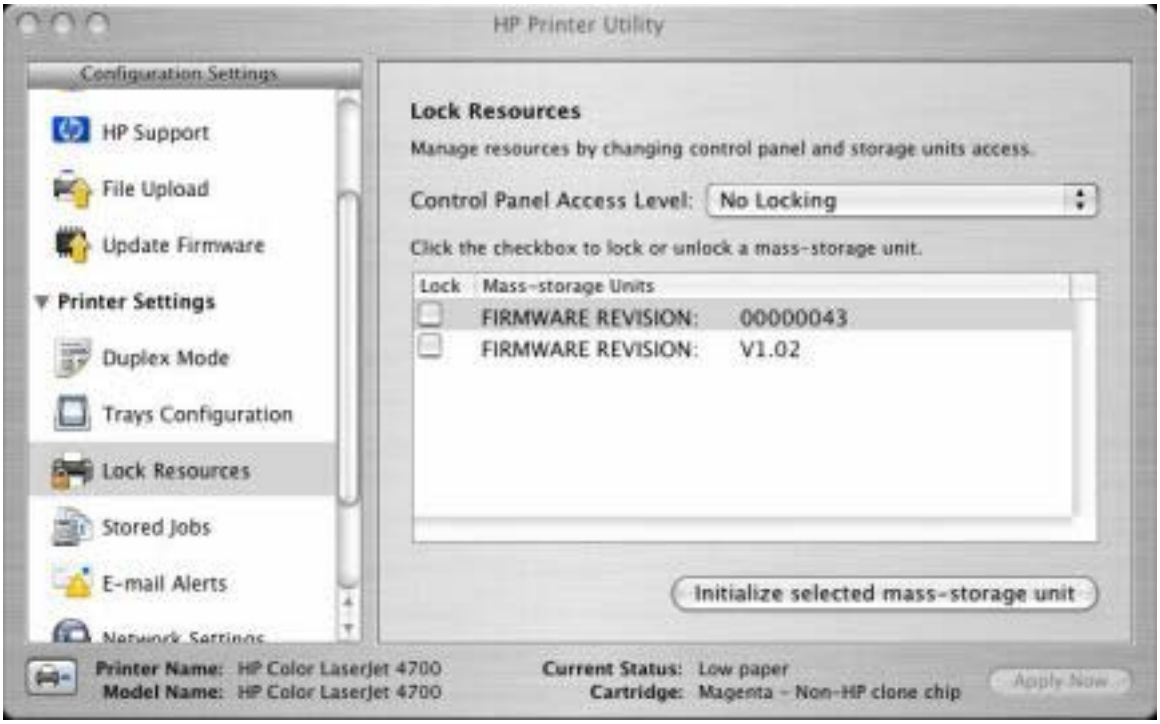


Figure 2-22 **Lock Resources** screen

In the **Control Panel Access Level**, select one of the following settings:

- **No Locking**. This provides full control of the product.
- **Minimal Locking**. This provides control over paper-handling features.
- **Moderate Locking**. This blocks changes in the product configuration.
- **Maximal Locking**. This prevents users from changing product control-panel settings.

In the lower pane, select the **Lock** check box for the mass-storage unit you want to lock.

WARNING! Click **Initialize selected mass-storage unit** *only* if you want to erase all data that are currently stored on the hard drive. *You cannot undo this action*.

Stored Jobs

Select **Stored Job** to change the **Enable Job Storing** setting.

Figure 2-23 **Enable Job Storing** screen

You can type a PIN for your job in the **Enter Secure Job PIN** field.

Select the number of copies in the **Copies to Print** field.

Click **Delete** to delete the stored job.

E-mail Alerts

Select E-mail Alerts to configure the HP Color LaserJet 4700 to send e-mail notifications to users.

If a user name and password have been set, you might need to obtain them from your IT administrator. For information about logging on through a password-protected system, see {Xref Error! Target does not exist.} or consult the *HP Embedded Web Server User Guide*.

The HP EWS opens to the **Setup** screen on the **Alerts** tab, where you can set notifications. For information about configuring notifications, see Alerts

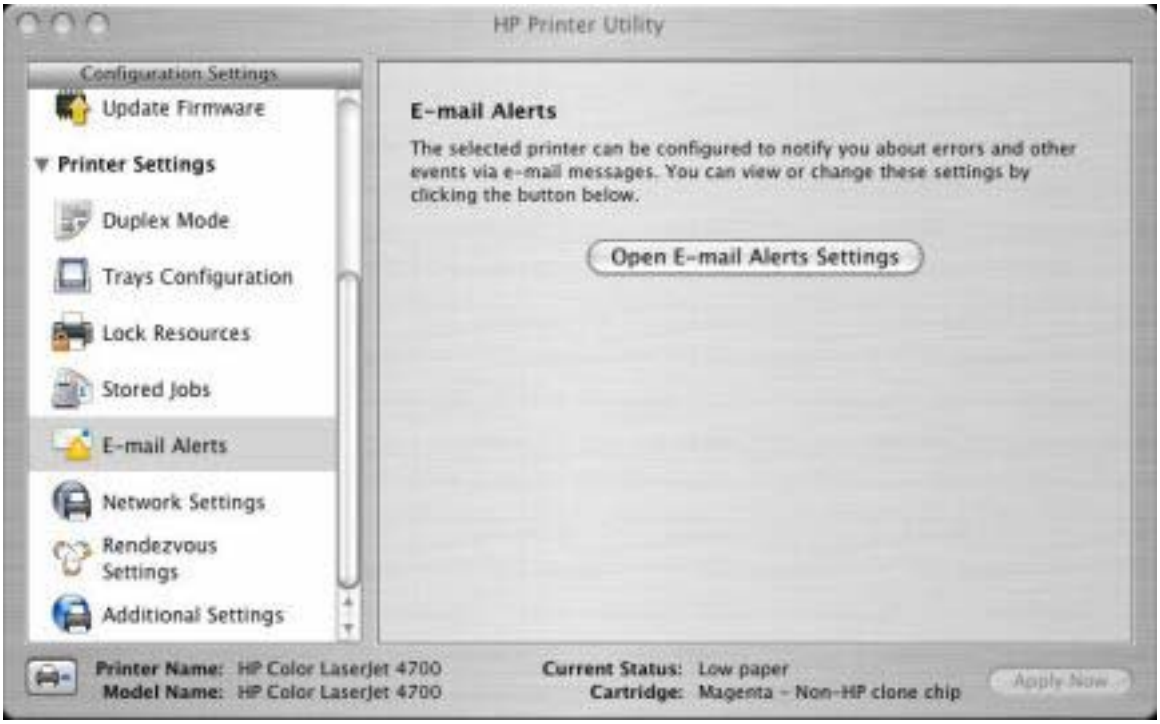


Figure 2-24 **E-mail Alerts** screen

Network Settings

Select **Network Settings** to open the **IP Settings** screen.

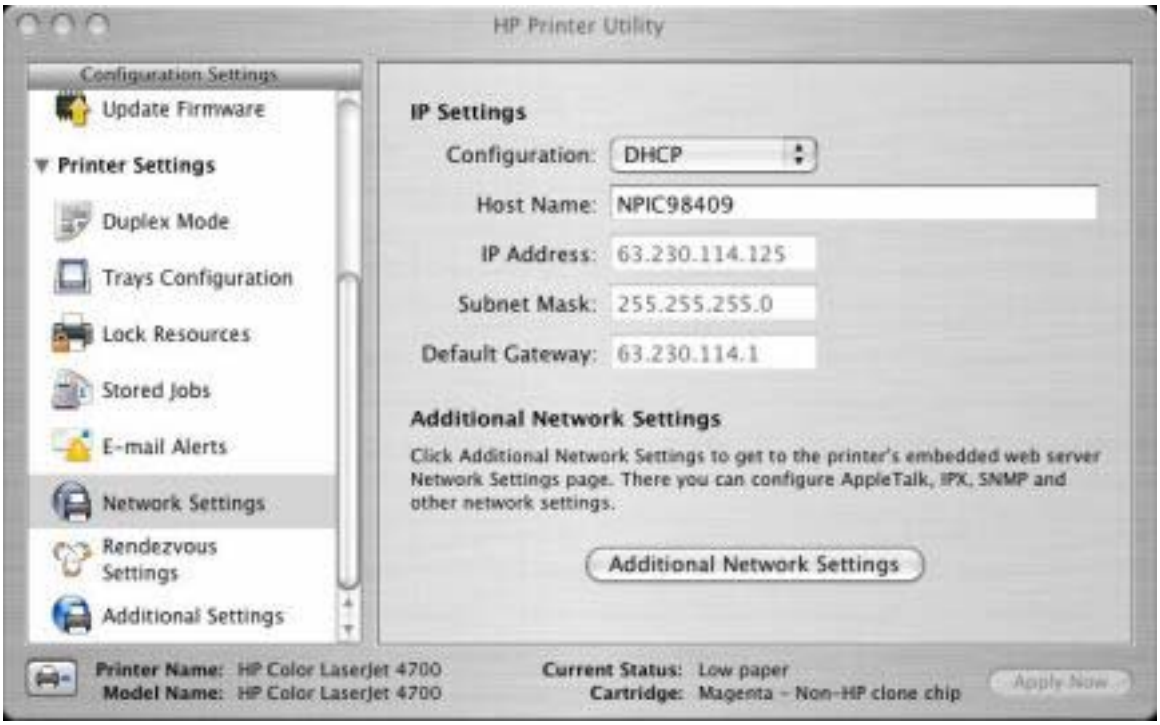


Figure 2-25 **IP Settings** screen

Select one of the following options in the **Configuration** drop-down menu:

- DHCP
- BootP
- Manual

You can also use this screen to modify the following settings:

- Host Name
- IP Address
- Subnet Mask
- Default Gateway

To view and change other network settings, click the **Additional Network Settings** button.

If a user name and password have been set, you might need to obtain them from your IT administrator. For information about logging on through a password-protected system, see {Xref Error! Target does not exist.} or consult the *HP Embedded Web Server User Guide*.

The HP EWS opens to the **Network Settings** screen. For information about this screen, see Networking tab.

Rendezvous Setting

Select **Rendezvous Setting** to open the **Rendezvous Setting** screen. Rendezvous is enabled by default.

To disable Rendezvous, clear the **Enable Rendezvous** check box and click **Apply Now**.

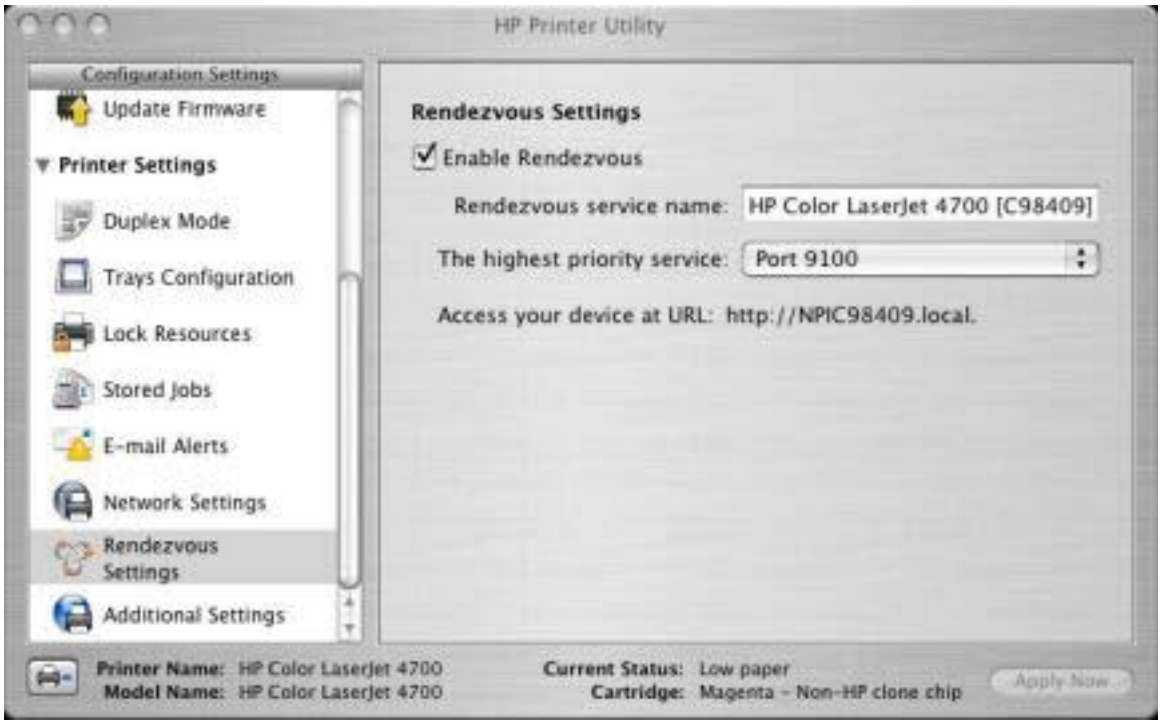


Figure 2-26 **Rendezvous** screen

The following options are available in the **The highest priority service** drop-down menu:

- Port 9100 (default)
- IPP
- LPD-RAW
- LPD-TEXT
- LPD-AUTO
- LPD-BINPS
- LPD-Queue5
- LPD-Queue6
- LPD-Queue7
- LPD-Queue8
- LPD-Queue9
- LPD-Queue10

Additional Settings

Select **Additional Settings** to gain access to the HP EWS. To open the HP EWS, click the **Open Embedded Web Server** button.

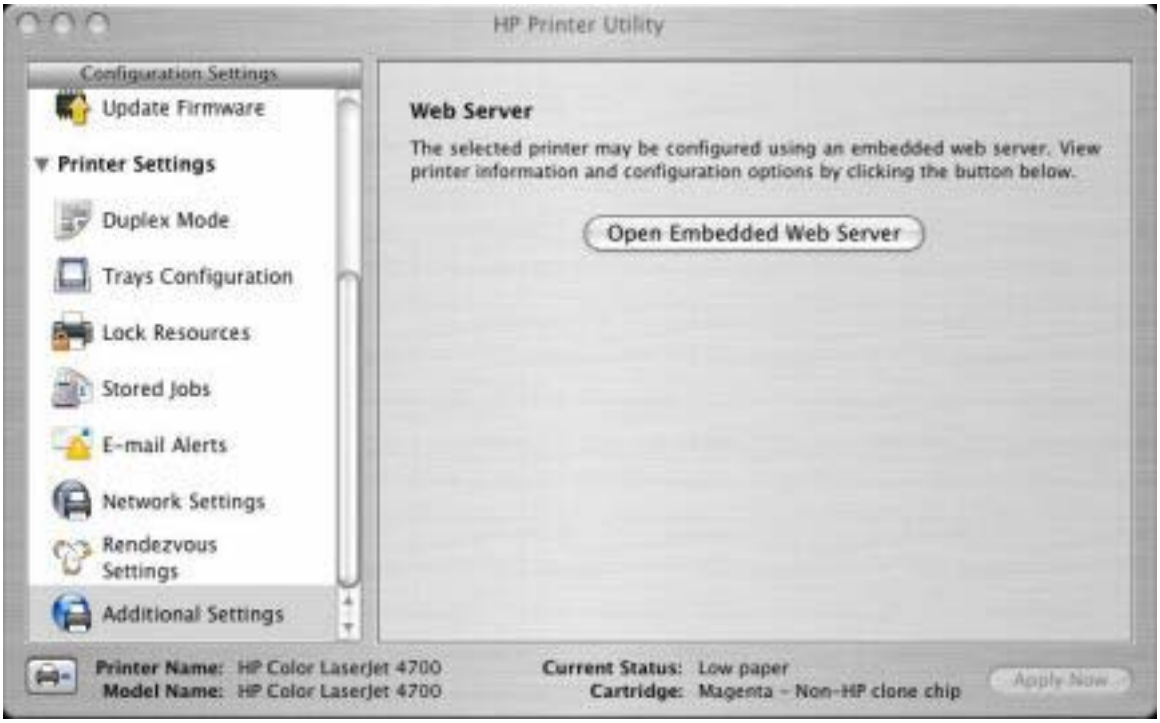


Figure 2-27 **Additional Settings** screen

For information about HP EWS settings see {Xref Error! Target does not exist.}HP Embedded Web Server or consult the *HP Embedded Web Server User Guide*.

HP Web Jetadmin

Us the HP Web Jetadmin and a browser to manage HP Jetdirect-connected products within your intranet. HP Web Jetadmin is a browser-based management tool, and should be installed only on a single network-administration server.

To download a current version of HP Web Jetadmin and for the latest list of supported host systems, go to: www.hp.com/go/webjetadmin

3 HP traditional print drivers for Windows

Introduction

This chapter describes the features of the traditional print drivers for the HP Color LaserJet 4700 in Windows 98 and Windows Me.

You can control print jobs from several places: the printer control panel, the software program, and the driver user interface. Generally, for features that are common to two or more of these places (for instance, you can select the media input tray from any of them), settings that are established in the software program take precedence over print-driver settings. Print-driver settings override printer control-panel settings.

The chapter contains the following sections:

- HP traditional PCL 6 and PCL 5 driver features
- HP Traditional Postscript 3 Emulation Driver features

HP traditional PCL 6 and PCL 5 driver features

When you install the print drivers by using the printing-system installer in Windows 98 or Windows Me, the HP Traditional PCL 6 Driver is installed by default. You can install the HP Traditional PCL 5 Driver by performing a Custom Installation.

NOTE Windows NT 4.0 does not support the HP Color LaserJet 4700 print drivers, but you can use print drivers for legacy HP products whose feature sets closely matches the feature set of the HP Color LaserJet 4700 printer. For instance, you can use the HP Color LaserJet 4650 drivers; however, color quality may be compromised. HP does not support the use of any print driver other than the driver supplied for the product. When you install the print drivers in Windows NT 4.0, you must use the Add Printer installation method to install the HP Traditional PCL 6 Driver and the HP Traditional PCL 5 Driver.

This section describes the options that are available on each tab of the HP Traditional PCL 6 Driver and HP Traditional PCL 5 Driver **Document Default** print-driver interface and on some of the tabs of the **Properties** print-driver interface.

This section also describes differences between the HP Traditional PCL 6 Driver and the HP Traditional PCL 5 Driver.

Access to print drivers

Depending on the operating system on which you are installing the print drivers, you can gain access to the print drivers and different print-driver interfaces in several ways.

To gain access to the print-driver settings from within most software programs, follow these steps:

1. Click **File**
2. Click **Print**.
3. Click **Properties**.

The appearance and names of the driver tabs can vary, depending on the operating system. These driver settings apply only while that software program is open.

Access to print drivers in Windows 98 and Windows Me

In Windows 98 and Windows Me, you have access to a single set of driver tabs. To gain access to the print drivers, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties** to gain access to all print-driver tabs.

The settings that you make on these driver tabs control print-job output and become the default settings for all applications. The following print-driver tabs are available in Windows 98 and Windows Me:

- **General** tab
- **Details** tab

- **Color Management** tab
- **Sharing** tab
- **Finishing** tab
- **Effects** tab
- **Paper** tab
- **Output** tab (appears only when accessories are installed and configured)
- **Job Storage** tab (appears only when hard disk is installed and configured)
- **Basics** tab
- **Color** tab
- **Configure** tab

NOTE Only the **Finishing**, **Effects**, **Paper**, **Output**, **Job Storage**, **Basics**, **Color** and **Configure** tabs are described in this manual. These are product-specific HP driver tabs; the other driver tabs are part of the operating system.

The **Output** tab is available only when an optional paper destination is selected on the **Configure** tab. The Job Storage tab is available only when the Job Storage Enable setting is selected on the **Configure** tab. The settings take effect only after you click **OK** on the **Configure** tab.

Help system

The HP Traditional PCL 6 Driver and the HP Traditional PCL 5 Driver include a full-featured Help system to provide assistance with printing and configuration options.

What's this? Help

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

- Right-click a control and then click **What's this?**. 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. When you use this special cursor to select a control, 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

When you click the **Help** button on a driver tab or in a dialog box, a context-sensitive Help message appears.

Incompatible Options messages

Incompatible Options settings (constraint) messages are unsolicited messages that appear in response to specific actions that you take. These messages alert you to selections that are illogical or impossible given the capabilities of the printer or the current settings of other controls. For example, if

you click **Print on Both Sides** and then change the media type to **Transparency**, a message appears asking you to resolve this conflict.

Figure 3-1 A typical constraint message with an OK button

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

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

Bubble Help

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

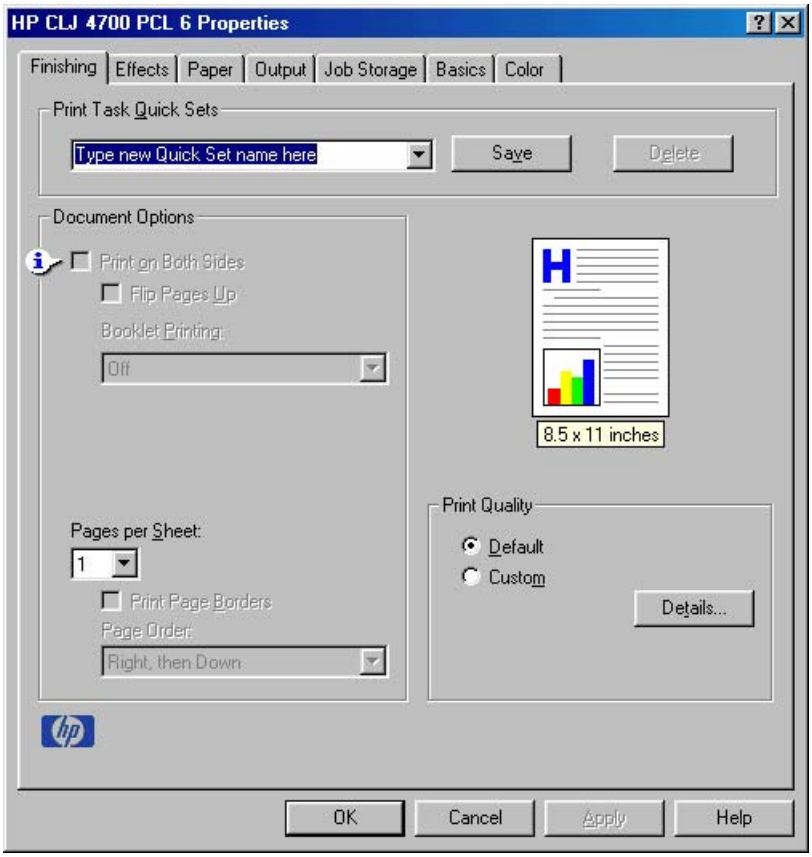


Figure 3-2 A typical page with a **Bubble Help** icon

The bubble typically appears next to a control that is unavailable, although it can also accompany an available control if an important note concerning its use is available within the Help. Moving the pointer

over the bubble changes the arrow to a gloved hand, which indicates that the area underneath the pointer is selectable. When the bubble is selected by using either the mouse or the keyboard, a message box appears that contains a brief explanation about why the control is disabled and what can be done to enable it. If the control is not disabled, the message is a tip or a precaution that you should be aware of when using that particular feature.

Finishing tab features

To gain access to the **Finishing** tab in Windows 98 or Windows Me, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Finishing** tab.

Use the **Finishing** tab to print on both sides of the page, to control the printed output on the page, and to print booklets. The following figure shows the **Finishing** tab.

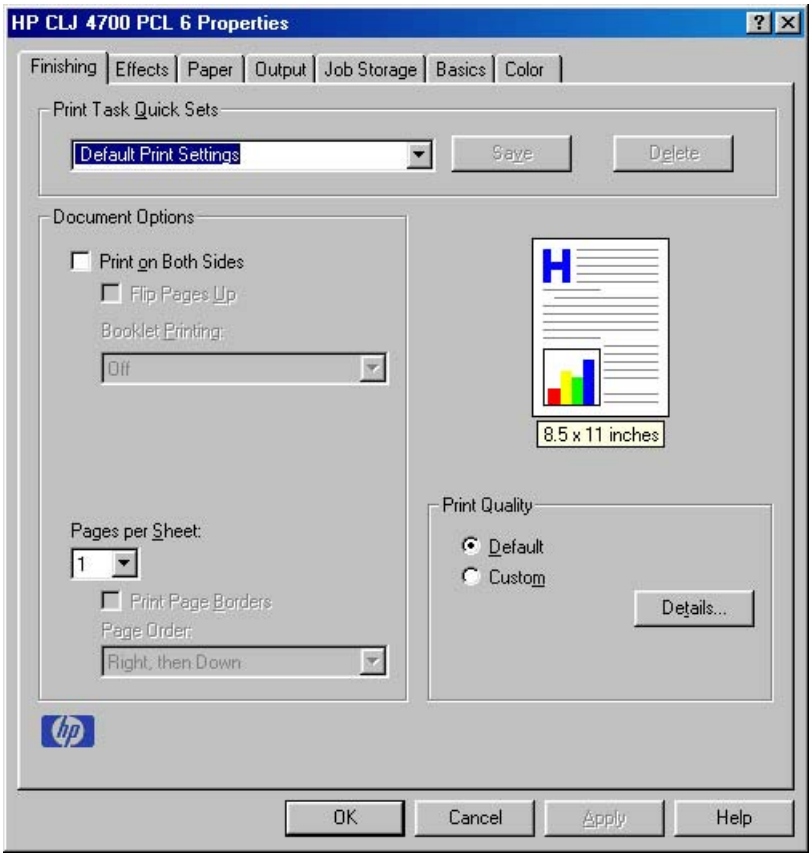


Figure 3-3 The default **Finishing** tab

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

- **Print Task Quick Sets** group box
- **Document Options** group box
- Document preview image
- **Print Quality** group box

Print Task Quick Sets

The first group box in the upper portion of the **Finishing** tab is **Print Task Quick Sets**. Any change to the **Print Task Quick Sets** group box that is made on the **Finishing** tab affects the **Print Task Quick Sets** group boxes on all of the **Document Defaults** driver tabs (**Effects Paper**, **Job Storage**, and **Basics**) because they are all the same control.

Use the **Print Task Quick Sets** setting to store the current combination of driver settings that appear on all of the other print driver tabs. **Print Task Quick Sets** are either preset by network-administrator settings or user-defined printing specifications (such as media size, pages per sheet, and so on). The **Print Task Quick Sets** control does *not* appear on the driver **Properties** tabs.

By default, the **Print Task Quick Sets** menu is set to **Type new Quick Set name here**. When you change any of the default settings on any of the **Document Defaults** driver tabs and you want to save the configuration as a Print Task Quick Set, highlight the words **Type new Quick Set name here**, type the name you want for your new Print Task Quick Set, and then click **Save**. The Print Task Quick Sets are saved in the system registry. To delete a Print Task Quick Set, select it in the drop-down menu and click **Delete**.

NOTE Administrators can predefine Print Task Quick Sets for their users. These administrator Print Task Quick Sets are defined on the server and are available to users, but usually cannot be modified by users. Users can also define Print Task Quick Sets for their own use. User-defined Print Task Quick Sets are described later in this section.

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

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

- **Default Print Settings**
- **User Guide Print Settings**

Default Print Settings

When you select **Default Print Settings**, nearly all of the settings are restored to the combination that existed after the driver was installed (the original settings). However, if the attribute combinations that are associated with watermark definitions, custom media sizes, or the other quick sets have been changed or deleted, the original settings for those items are not restored.

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

Table 3-1 Print Task Quick Set default values for the HP Color LaserJet 4700

Driver feature	Feature setting location	U.S. English Print Task Quick Sets for Default values	Preconfigurable[1]
Print on Both Sides	**Finishing** tab, **Document Options** group box	Available, not selected	Yes
Flip Pages Up	**Finishing** tab, **Document Options** group box	Unavailable, not selected	Yes
Booklet Printing	**Finishing** tab, **Document Options** group box	Unavailable, Off	Yes
Pages per Sheet	**Finishing** tab, **Document Options** group box	1	Yes
Print Page Borders	**Finishing** tab, **Document Options** group box	Unavailable	Yes
Page Order	**Finishing** tab, **Document Options** group box	Unavailable	Yes
Print Quality	**Finishing** tab, **Print Quality** group box	Default	Yes
Current Setting	**Finishing** tab, **Print Quality Details** dialog box (click **Details** on **Finishing** tab)	This is the “Default” setting	
Raster Compression (HP Traditional PCL 6 Driver only)	**Finishing** tab, **Print Quality Details** dialog box (click **Details** on **Finishing** tab)	Automatic	
Rendering Mode (HP Traditional PCL 5 Driver only)	**Finishing** tab, **Print Quality Details** dialog box (click **Details** on **Finishing** tab)	Automatic	
Send Truetype as Bitmaps	**Finishing** tab, **Print Quality Details** dialog box (click **Details** on **Finishing** tab)	Available, not selected	Yes
Output Settings	**Finishing** tab, **Print Quality Details** dialog box (click **Details** on **Finishing** tab)	Scale Patterns (WYSIWIG) selected	
Print Document On	**Effects** tab, **Fit to Page** group box	Off - print on the size that is specified on the **Paper** tab	Yes
Size to print on	**Effects** tab, **Fit to Page** group box	Actual size specified on the **Paper** tab	Yes[2]
Scale to Fit	**Effects** tab, **Fit to Page** group box	Unavailable, selected	Yes
Watermarks	**Effects** tab, **Watermarks** dialog box	(none)	Yes
First Page Only (watermark)	**Effects** tab, **Watermark** dialog box	Unavailable	Yes
Current Watermarks	**Effects** tab, **Watermark Details** dialog box (Click **Edit** for **Watermark Details**.)	(none)	Yes[2]
Watermark Message	**Effects** tab, **Watermark Details** dialog box (Click **Edit** for **Watermark Details**.)	(none)	Yes[2]
Message Angle (watermark)	**Effects** tab, **Watermark Details** dialog box (Click **Edit** for **Watermark Details**.)	Diagonal	Yes[2]
Watermark message angle (angle)	**Effects** tab, **Watermark Details** dialog box (Click **Edit** for **Watermark Details**.)	Unavailable unless **Angle** option is selected, 52	Yes

Table 3-1 Print Task Quick Set default values for the HP Color LaserJet 4700 (continued)

Driver feature	Feature setting location	U.S. English Print Task Quick Sets for Default values	Preconfigurable[1]
Name (watermark font)	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	Arial	Yes[2]
Color (watermark font)	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	Gray	Yes
Shading (watermark font)	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	Very Light	Yes[2]
Size (watermark font)	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	80	No
Style (watermark font)	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	Regular	Yes
Use Different Paper/ Covers	**Paper** tab, **Paper Options** group box	Off (all of the pages use the same media)	No
Size is:	**Paper** tab, **Paper Options** group box	Letter	Yes
Source is:	**Paper** tab, **Paper Options** group box	Automatically Select	Yes
Type is:	**Paper** tab, **Paper Options** group box	Unspecified	Yes
Unlabeled group box	**Job Storage** tab	Status message about the destination of the job	No
Job Storage Mode	**Job Storage** tab, **Job Storage Mode** group box	Off	No
Proof and Hold	**Job Storage** tab, **Job Storage Mode** group box	Available, not selected	No
Private Job	**Job Storage** tab, **Job Storage Mode** group box	Available, not selected	No
Quick Copy	**Job Storage** tab, **Job Storage Mode** group box	Available, not selected	No
Stored Job	**Job Storage** tab, **Job Storage Mode** group box	Available, not selected	No
Require PIN to print option	**Job Storage** tab, **Job Storage Mode** group box	Unavailable, not selected	No
PIN to Print	**Job Storage** tab, **Job Storage Mode** group box	Unavailable, blank	
Windows User Name	**Job Storage** tab, **User Name** group box	Unavailable, selected	No
Job Name	**Job Storage** tab, **Job Name** group box	Unavailable, **Automatic** selected	No
Display Job ID when printing	**Job Storage** tab, **Job Notification Options** group box	Unavailable	No
Copy	**Basics** tab, **Copies** group box	1	Yes
Orientation	**Basics** tab, **Orientation** group box	Portrait	Yes
Landscape	**Basics** tab, **Orientation** group box	Available, not selected	Yes
Rotate by 180 degrees	**Basics** tab, **Orientation** group box	Available, not selected	Yes

Table 3-1 Print Task Quick Set default values for the HP Color LaserJet 4700 (continued)

Driver feature	Feature setting location	U.S. English Print Task Quick Sets for Default values	Preconfigurable[1]
Automatic (color options)	**Color** tab, **Color Options** group box	Selected	Yes
Manual (color options)	**Color** tab, **Color Options** group box	Available, not selected	Yes
Current Setting (color)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	This is the "Automatic" Setting	Yes
Edge Control	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Normal	Yes
Neutral Grays (text)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab), **General** group box	Black Only	Yes
Halftone (text)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Detail	Yes
Neutral Grays (graphics)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Black Only	Yes
Halftone (graphics)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Detail	Yes
Neutral Grays (photographs)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	4-Color	Yes
Halftone (photographs)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Detail	Yes

[1] Preconfigurable by using one of the HP Preconfiguration tools. For more information, see HP Driver Preconfiguration, or go to: www.hp.com/go/hpdpc_sw.

[2] Not supported in Windows 98 and Windows Me.

User Guide Print Settings

The **User Guide Print Settings** option provides a Print Task Quick Set for optimal printing of the *HP Color LaserJet 4700 User Guide*.

When you select **User Guide Print Settings**, all of the settings are restored to the default settings, except for the following settings:

- **Print on Both Sides** is set to **ON**
  - **Flip Pages Up** is set to **ON**
- **Booklet Printing**is set to **OFF** and is unavailable
- **Pages per Sheet** is set to **2**
- **Page Order** is set to **Right then Down**

Document Options

The **Document Options** group box contains the following controls:

- **Print on Both Sides** check box
- **Flip Pages Up** check box

- **Booklet Printing** drop-down menu
- **Pages Per Sheet** spin box
- **Print Page Borders** check box
- **Page Order** drop-down menu

Print on Both Sides

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

- **Type is:** on the **Paper** tab is set to any type except **Labels**, **Transparency**, or **Envelope**.
- **Size is:** is set to any size except for **Statement**, **Envelope #10**, **Envelope DL**, **Envelope C5**, **Envelope B5**, **Envelope Monarch**, **Double Postcard (JIS)**, or **Double Japan Postcard Rotated**.

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

Automatically printing on both sides

The duplexing unit in the printer prints on two sides of a sheet of paper when the **Print on Both Sides** option is specified in the print job. The HP Color LaserJet 4700 printer comes with a duplexing unit installed in the following models:

- HP Color LaserJet 4700dn
- HP Color LaserJet 4700dtn
- HP Color LaserJet 4700ph+

The HP Color LaserJet 4700 printer supports smart duplexing. The smart duplexing feature increases printing performance by preventing one-page print jobs or single-sided pages of a duplexed print job from going through the duplexing unit even when the duplexing feature has been selected in the driver.

All media types support the smart duplexing feature, except for media types that cannot be printed on both sides, such as labels, and the following media types:

- Prepunched
- Preprinted
- Letterhead

When the media type is set to **Unspecified**, the smart duplexing feature is disabled.

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

Manually printing on both sides

- **Manually Print on 2nd Side** is *not* selected

  Select the **Print on Both Sides (Manually)** check box to print on the second side of the media for the HP Color LaserJet 4700 and HP Color LaserJet 4700n printer models, which do not have a

duplexing unit installed. Also select **Print on Both Sides (Manually)** on the other HP Color LaserJet 4700 printer models for media types that are not available when using the automatic duplexing unit, such as cardstock and thick media.

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

To make the **Print on Both Sides (Manually)** check box available in the document options, select the **Allow Manual Duplexing** check box on the **Configure** tab in the Properties print-driver tabs. See Paper Handling Optionsin the Configure tab featuressection of this chapter.

If you want to print on both sides manually while using media that is supported by automatic duplexing, you must clear the **Duplexing Unit**check box on the **Configure** tab.

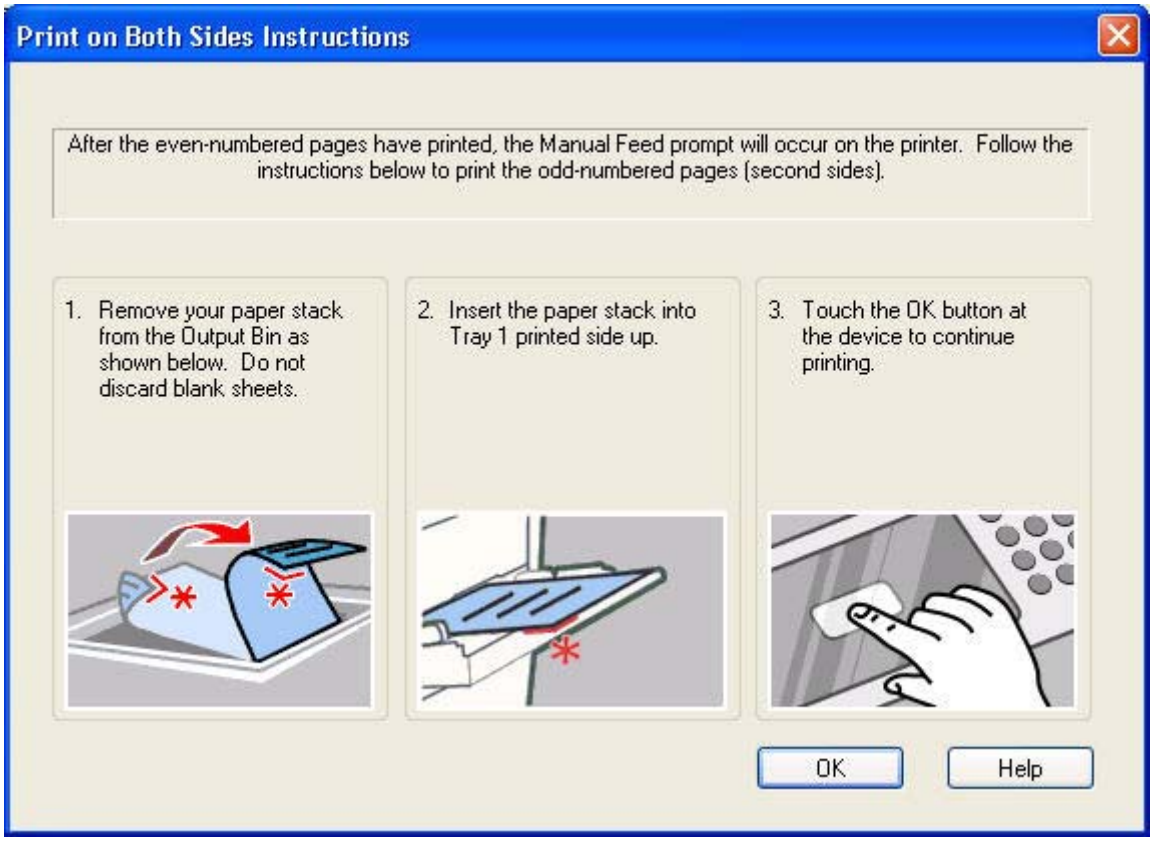
Select the media type that corresponds to the media you are using for the print job. The following media types have a different print modes when you manually print on the second side:

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

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

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

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



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

Flip Pages Up

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

Table 3-2 Page orientation

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

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

Short-side binding is for print jobs with pages that read by flipping over like the pages of a note pad. Long-side binding is for print jobs with pages that read by turning like the pages of a book.

Booklet Printing

The **Booklet Printing** drop-down menu is visible when **Print on Both Sides** is selected and a supported media size is selected in the **Size is:** drop-down menu on the **Paper** tab. The **Booklet Printing** drop-down menu offers choices that are based on the current media size. The default setting is **Off**. The other settings have the following format, where **[paper size]** depends on the media size that is set on the **Paper** tab.

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

When you select **[paper size] (Left Binding)** or **[paper size] (Right Binding)**, the document preview image changes to show the location of the binding. If you change the **Pages per Sheet** setting manually to 4, 6, 9, or 16 pages per sheet, the booklet setting is disabled. See the Pages per Sheet section of this document for more information.

Booklet printing is disabled when unsupported media sizes (such as envelopes) are selected as the media size, and an incompatibility error message appears when you click **OK** to close the driver.

The **Booklet Printing** drop-down menu appears only when the following conditions exist:

- **Print on Both Sides** (on the **Finishing** tab) is selected.
- **% of Normal Size** (on the **Effects** tab) is 100.
- **Pages per Sheet** (on the **Finishing** tab) is 1.
- **Size is:** (on the **Paper** tab) is set to Letter, Legal, or A4.

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

Book and Booklet Printing

The HP Color LaserJet 4700 printer supports both book and booklet printing.

A book is a print job that consists of at least two pages and that can have a different media type for the front cover, first page, other pages, last page, or back cover. Use the **Front Cover**, **First Page**, **Other Pages**, **Last Page**, or **Back Cover** settings on the **Paper** tab (available when you select the **Use Different Paper/Covers** check box) to select different printing options for the book. For more information, see Paper tab features of this chapter.

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

To print a booklet

Complete the following steps to print a booklet in most software programs.

1. In the software program, click **File**, click **Print**, and then click **Properties**.
2. Click the **Finishing** tab.
3. Select the **Print on Both Sides** check box.

4. In the **Booklet Printing** drop-down menu, select the type of booklet printing that you want. The booklet printing type consists of the media size and the location of the binding (for example, **Letter [Left binding]**).

5. Click **OK** in the print driver.

6. Click **OK** in the print dialog box to print.

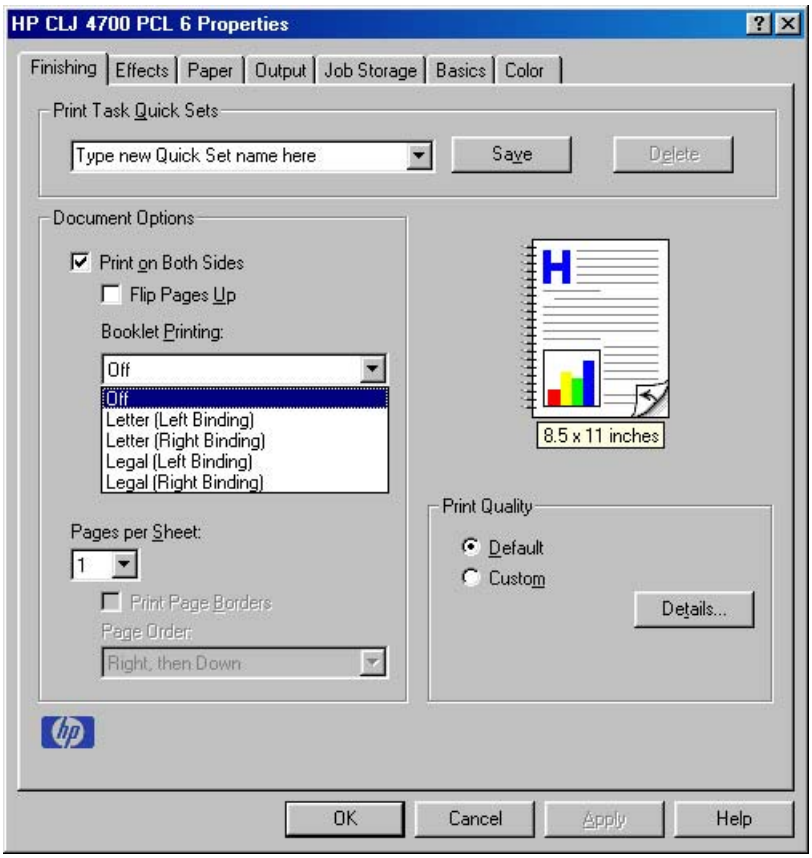


Figure 3-4 Printing a booklet

Pages per Sheet

Use the **Pages per Sheet** option to select the number of pages that you want to print on a single sheet of media. If you choose to print more than one page per sheet, the pages appear smaller and are arranged on the sheet in the order that they would otherwise be printed. The **Pages per Sheet** drop-down menu provides six settings:

- **1 page per sheet (this is the default)**
- **2 pages per sheet**
- **4 pages per sheet**
- **6 pages per sheet**
- **9 pages per sheet**
- **16 pages per sheet**

When you select an option other than **1 page per sheet**, booklet printing is unavailable.

Print Page Borders

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

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

Page Order

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

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

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

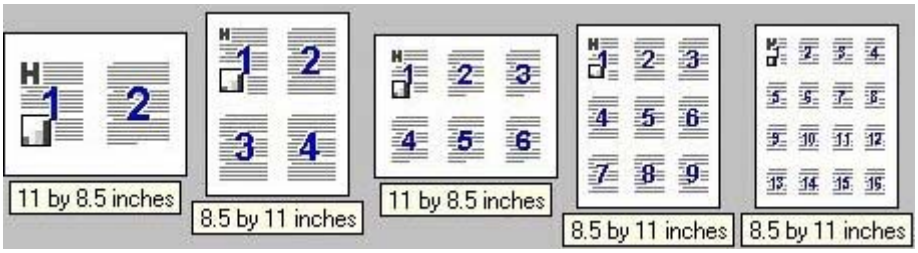


Figure 3-5 Page-order preview images

- **2 pages per sheet**
- **4 pages per sheet**
- **6 pages per sheet**
- **9 pages per sheet**
- **16 pages per sheet**

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image is always oriented so that the contents of the page are right-side up. The document preview image appears in the upper-right corner of the **Finishing**, **Effects**, **Paper**, **Output**, and **Basics** tabs.

Switching between tabs does not change the location or appearance of the document preview image. When you move the mouse over the document preview image, the mouse cursor changes from an arrow to a gloved hand. You can toggle between portrait and landscape page orientation by clicking on the image. The dimensions label that appears below the preview image reflects the selected page size. The horizontal dimension is always first, so the order of the numbers reverses when the orientation changes. Click the dimensions label to toggle between English and metric units.

Print Quality group box

The HP Color LaserJet 4700 print driver **Print Quality** group box provides options that control output settings and font settings.

The default setting for **Print Quality** is **Default**. To change the default print-quality settings, click the **Details** button. Clicking the **Details** button opens the **Print Quality Details** dialog box. The **Print Quality Details** dialog box has different options depending on the driver that you are using.

Print Quality Details for the HP Traditional PCL 6 Driver

The **Print Quality Details** dialog box provides the options for print-quality settings in the HP Traditional PCL 6 Driver as shown in the following figure.

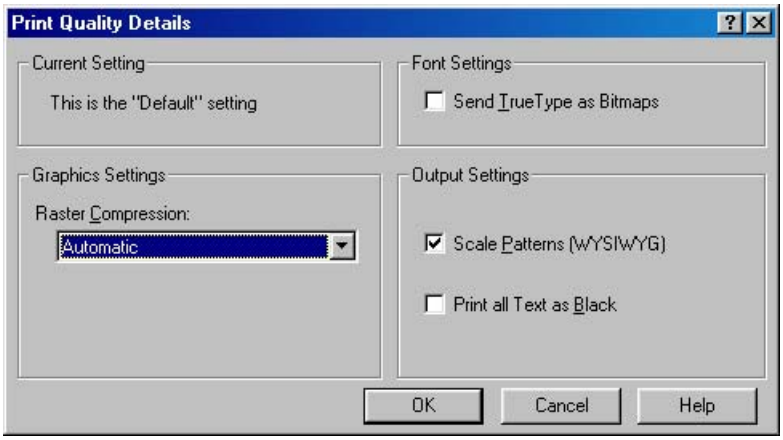


Figure 3-6 **Print Quality Details** dialog box for the HP Traditional PCL 6 Driver

The following options are available:

- **Current Setting** group box
- **Graphics Settings** group box
- **Font Settings** group box
- **Output Settings** group box

Current Setting

The **Current Setting** group box has two settings in the HP Traditional PCL 6 Driver. When you make a change in the **Print Quality Details** dialog box, the setting changes from **This is the "Default" setting** to **This is a "Custom" setting**.

Graphic Settings

The **Graphics Settings** group box contains the **Raster Compression** drop-down menu.

Use the **Raster Compression** feature to select the graphics-compression method. The **Raster Compression** drop-down menu provides the following settings:

- **Automatic**. The printer driver determines the best compression method to use. This is the default setting.
- **Best Quality**. Forces the driver to use a lossless compression method. (Lossless means that no data is lost during compression.)
- **Maximum Compression**. Where applicable, requires the printer driver to always use a lossy compression method (some data is lost).

Font Settings

In the **Font Settings** group box, the only available option is **Send TrueType as Bitmaps**, which provides an alternative for software programs that cannot easily use TrueType fonts for special graphic purposes, such as shading, rotation, or slanting. The **Send TrueType as Bitmaps** check box is not selected (clear) by default. If you select this option, the driver sends TrueType fonts to the printer as outlines, which retains the standard format (outlines) of the fonts.

Output Settings

The **Output Settings** group box contains the following controls and default settings:

- Use the **Scale Patterns (WYSIWYG)** feature to address the moiré effect that is created when certain programs encounter certain patterns. Use this feature to turn off the pattern scaling. What you lose is WYSIWYG with patterns, but the printed result might look better. The feature works only with programs that use vector hatch patterns. This option is selected by default.
- The **Print All Text as Black** feature is not selected by default. When the feature is selected, the driver prints all text as black regardless of the original document text color. Color text is printed as black, except for white text, which remains white. (White text is a reliable method of printing reverse typeface against a dark background.) This setting does not affect graphic images on the page, nor does it affect any text that is part of a graphic.

Print Quality Details for the HP Traditional PCL 5 Driver

The **Print Quality Details** dialog box provides the options for print-quality settings in the HP Traditional PCL 5 Driver as shown in the following figure.

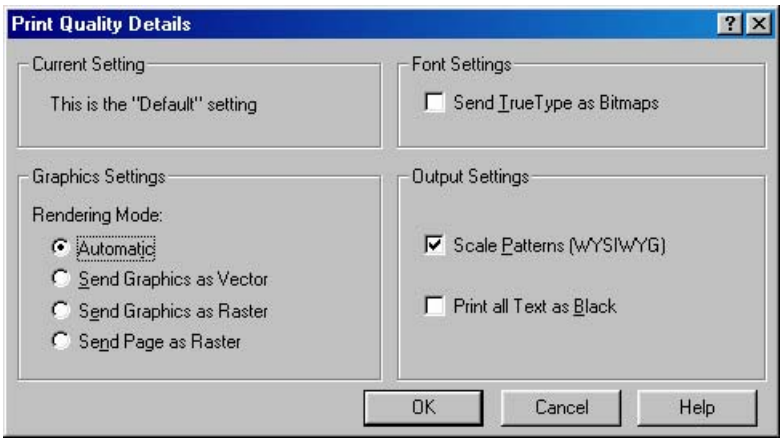


Figure 3-7 **Print Quality Details** dialog box for the HP Traditional PCL 5 Driver

The following options are available:

- **Current Setting** group box
- **Graphic Settings** group box
- **Font Settings** group box
- **Output Settings** group box

Current Setting

The **Current Setting** group box has two settings in the HP Traditional PCL 5 Driver. When you make a change in the **Print Quality Details** dialog box, the setting changes from **This is the "Default" setting** to **This is a "Custom" setting**.

Graphic Settings

The **Graphic Settings** group box in the HP Traditional PCL 5 Driver has settings for the graphics rendering mode. The following **Rendering Mode:** option buttons are available:

- **Automatic**. This is the default setting.
- **Send Graphics as Vector**. Select this setting to send graphics to the printer as a combination of HP Graphics Language, V2 (HP-GL/2) and raster images. This setting might produce higher-quality output.
- **Send Graphics as Raster**. Select this setting to send all graphics to the printer as images composed of individual dots. This setting might improve printing speed in some cases.
- **Send Page as Raster**. Select this setting to send all graphics and text (TrueType fonts) to the printer as images composed of individual dots. Use **Send Page as Raster** if you are experiencing problems with overlapping text and graphics. With this setting, the **Send TrueType as Bitmaps** option has no effect.

Output Settings

The **Output Settings** group box contains controls for pattern scaling, and to print all text as black.

The following are default values for the **Output Settings**:

- Use the **Scale Patterns (WYSIWYG)** feature to address the moiré effect that is created when certain programs encounter certain patterns. Use this feature to turn off the pattern scaling. What you lose is WYSIWYG with patterns, but the printed result might look better. The feature works only with programs that use vector hatch patterns. This option is selected by default.
- The **Print All Text as Black** feature is not selected by default. When the feature is selected, the driver prints all text as black regardless of the original document text color. Color text is printed as black, except for white text, which remains white. (White text is a reliable method of printing reverse typeface against a dark background.) This setting does not affect graphic images on the page, nor does it affect any text that is part of a graphic.

Font Settings

In the **Font Settings** group box, the only available option is **Send TrueType as Bitmaps**, which provides an alternative for software programs that cannot easily use TrueType fonts for special graphic purposes, such as shading, rotation, or slanting. The **Send TrueType as Bitmaps** check box is not selected (clear)

by default. If you select this option, the driver sends TrueType fonts to the printer as outlines, which retains the standard format (outlines) of the fonts.

Effects tab features

To gain access to the **Effects** tab in Windows 98 or Windows Me, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Effects** tab.

Use the **Effects** tab to create unique media effects such as scaling and watermarks. The following figure shows the **Effects** tab.

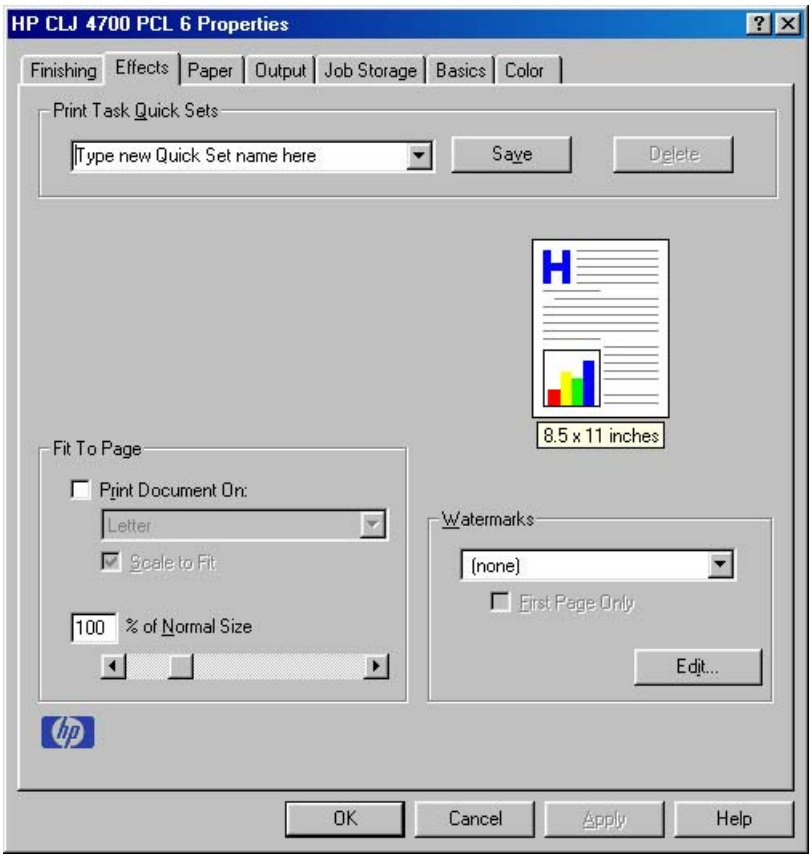


Figure 3-8 **Effects** tab

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

- **Print Task Quick Sets** group box
- **Fit to Page** group box

- Document preview image
- **Watermarks** group box

Print Task Quick Sets

The **Print Task Quick Sets** control is used to store the current combination of driver settings that appear on all other **Document Defaults** driver tabs. Print Task Quick Sets are either preset (by the administrator) or user-defined printing specifications, such as media size and pages per sheet. For more information, see Finishing tab features.

Fit To Page group box

The **Fit To Page** group box contains the following controls:

- **Print Document on** setting
- **Scale to Fit** check box
- **% of Normal Size** setting

Print Document On setting

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

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

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

When **Print Document On** is selected, the drop-down menu shows the media sizes on which you can print. The list contains all of the standard media sizes that are supported by the selected media source, and any custom size that you have created. When **Print Document On** is selected, **Scale to Fit** is automatically selected. Clear this check box if you do not want your document reduced or enlarged to fit on the selected media size.

Scale to Fit option

The **Scale to Fit** option specifies whether each formatted document page image is scaled to fit the target media 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 media. If the document size is larger than the target media size, then the document image is clipped. If the document size is smaller, then it is centered within the target media. The following figure shows preview images for a document formatted for Legal-size media with the **Print Document On** option selected, and the target size specified as **Letter**.

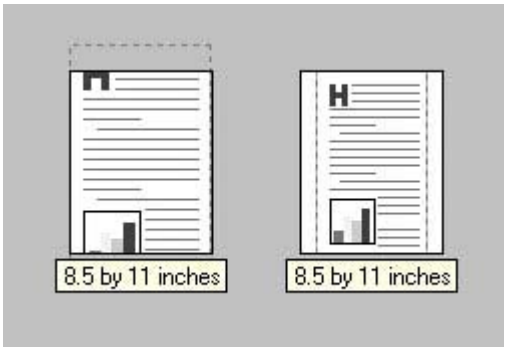


Figure 3-9 Preview images - Legal on Letter; Scale to Fit off (left) and on (right)

When the size for which the document is formatted (that is, the logical size) differs from the target size, the document 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% of the normal size. The normal size is defined as the media size that is selected within the driver or what the driver receives from the software program (if the software program does not negotiate the media size with the driver). The driver scales the page by the appropriate factor and sends it to the printer.

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

Any change to the scale also changes the document preview image, which increases or decreases from the upper-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 document preview image is updated to the new image scale. Each click on the scroll bar arrows increases or decreases the scale by 1%. Each click on the slider bar affects the scale by 10%.

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 value that you want, and then use the scroll bar arrows to refine the value. Or, type the value into the entry box.

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

- **Print Document On** (on the **Effects** tab) is selected.
- **Pages per Sheet** (on the **Finishing** tab) is not 1.

Watermarks group box

Use the **Watermarks** feature to select a watermark, create your own custom watermarks (text only), or edit an existing watermark.

The **Watermarks** group box contains the following controls:

- **Watermarks** drop-down menu
- **First Page Only** check box
- **Edit** button (opens the **Watermark Details** dialog box)

Watermarks drop-down menu

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 that is selected from this list appears in the document preview image.

First Page Only check box

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 not available 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).

Watermark Details dialog box

Click **Edit**, and the **Watermark Details** dialog box appears. The following figure shows the **Watermark Details** dialog box.

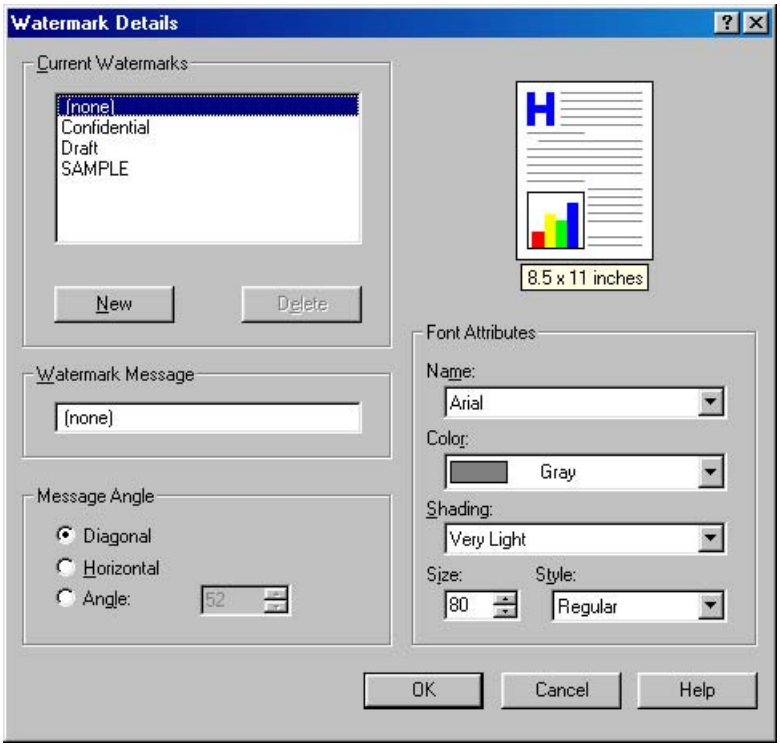


Figure 3-10 **Watermark Details** dialog box

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

The **Watermark Details** dialog box contains the following controls:

- **Current Watermarks**
- **Watermark Message**
- **Message Angle**
- Document preview image
- **Font Attributes**

Current Watermarks

The **Current Watermarks** group box contains a list of available watermarks, both predefined watermarks that are available in the driver and any new watermarks that 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 you reach the limit of 30 watermarks, the **New** button is disabled, and a Bubble Help message appears that explains why the button is disabled and how to make it available.

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 in 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 text on the page. 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.

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image appears in the upper-right corner of the **Watermark Details** dialog box. The document preview image changes to reflect the modifications that you make in the **Watermark Details** dialog box.

Font Attributes

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

The **Font Attributes** group box contains the following controls:

- **Name**

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

- **Color**

  The **Color** drop-down menu contains the following selections:

  - Gray
  - Red
  - Yellow
  - Green
  - Cyan
  - Blue
  - Magenta

- **Shading**

The default **Shading** setting for new and preset watermarks is **Very Light**. The following range of shades is available from the **Shading** drop-down menu:

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

- **Size**

  Font sizes from 1 to 999 points are available from the **Size** menu. The default point size is language-dependent. The default point size for preset watermarks is language-dependent.

- **Style**

  The choice of **Regular**, **Bold**, **Italic**, and **Bold Italic** is available from the **Style** drop-down menu. The default **Style** setting for new and current watermarks is **Regular**.

Default settings

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

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

Paper tab features

To gain access to the **Paper** tab in Windows 98 or Windows Me, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Paper** tab.

Use the **Paper** tab to specify the size, type, and source of the media. You can also use this tab to indicate different paper-selection choices for the front cover, first page, other pages, last page, and back cover of the document. The following figure shows the **Paper** tab.

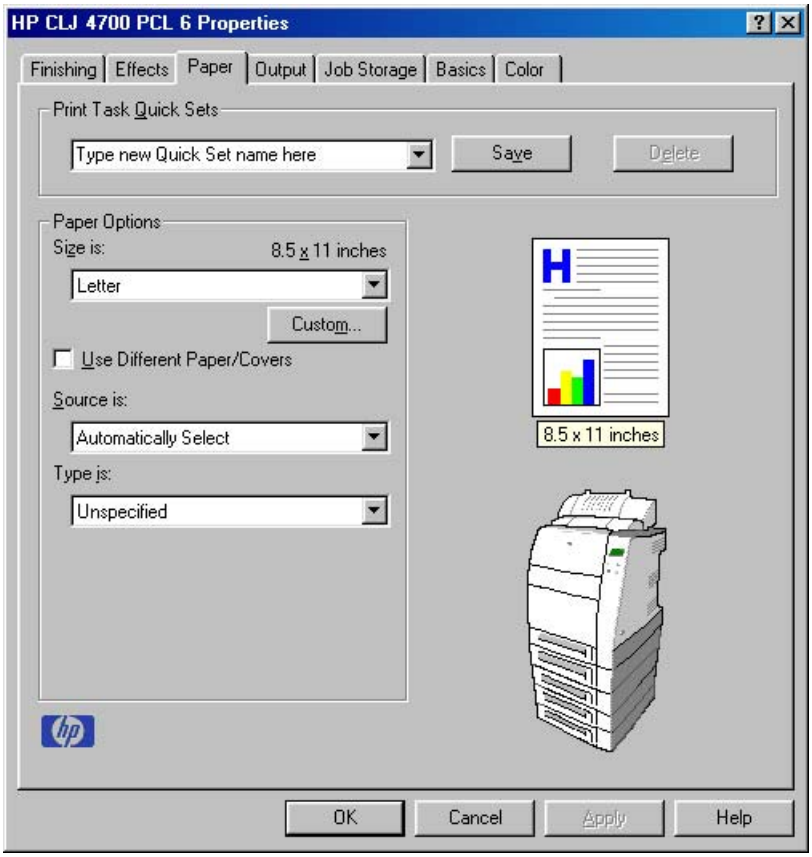


Figure 3-11 **Paper** tab

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

- **Print Task Quick Sets** group box
- **Paper Options** group box
- Document preview image
- Printer image

Print Task Quick Sets

The **Print Task Quick Sets** control is used to store the current combination of driver settings that appear on all of the other **Document Defaults** driver tabs. Print task quick sets are either preset (by the administrator) or user-defined printing specifications, such as media size and pages per sheet. For more information, see Finishing tab features.

Paper Options

The settings specified in the **Paper Options** group box on the **Paper** tab apply to all of the pages of the document. The following figure shows the **Paper Options** group box and the selections available by default.

Figure 3-12 **Paper Options** group box (default)

The appearance of the **Paper Options** group box changes when the **Use Different Paper/Covers** check box is selected. For convenience, the settings in the **Paper Options** group box are described in the following order:

- Size is
- Source Is
- Type is
- Use Different Paper/Covers
- Custom

Size is

The **Size is:** setting is a drop-down menu that lists all of the supported media sizes.

NOTE When you move the mouse over the dimensions label, the mouse cursor changes from an arrow to a gloved hand. Click the dimensions label to toggle between English and metric units.

You can specify size for all of the settings in the **Paper Options** group box. When you set the media size in the driver, the entire print-job output uses that media size. That is, if the print job uses Letter-size media, any option that you select from the available **Use Different Paper/Covers** options must also use Letter-size media.

Because driver settings are overridden by media-size settings in most software programs, it is generally best to use the driver to set media size only for software programs that lack a media-size setting, such as NotePad, or when you are producing a book or a booklet that does not require different media sizes.

NOTE Certain software programs can override the size command and specify different media sizes within a single document.

When you change the print-driver setting to a media size that is not currently loaded in the product, a control-panel message appears that prompts you to load the media size or choose another tray.

For information about media sizes, see the Media attributes section of this manual.

When the **Use Different Paper/Covers** check box is selected and different options are configured, the **Size is:**, **Source is:**, and **Type is:** menus change, offering a variety of options. For more information, see Use Different Paper/Covers.

Custom

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

NOTE The **Custom** button is not available when **Use Different Paper/Covers** is selected *and* any setting other than **First Page** is also selected.

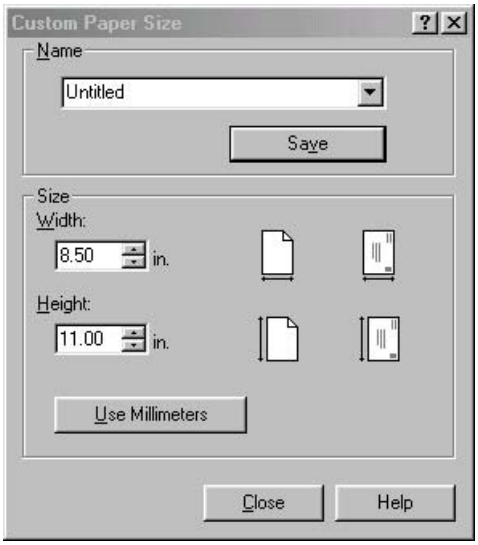


Figure 3-13 **Custom Paper Size** dialog box

When the **Custom Paper Size** dialog box appears, the drop-down menu in the **Name** group contains one of two things, depending on the current paper-size selection on 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 media size, then the drop-down menu shows the default name **Untitled** (plus a number sign "**#**" and a numerical value) for a custom media size.

NOTE In Windows 98 and Windows Me, two names for the same size media can coexist (for example, "big" and "BIG" can both be used as names for custom-size media measuring 8.4 inches by 11 inches).

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

The complete set of titles for this button and the specific characteristics that determine its title and capabilities are discussed in the Save, Delete, or Rename section.

Name

The **Name** drop-down menu shows the name of the custom media size that was selected most recently. Use the **Name** drop-down menu to select from the list of currently defined custom media sizes, or to type a new name for a custom media size.

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

- If a saved custom media size has been selected from the drop-down menu and the other controls in the dialog box have not been changed since, then the **Name** drop-down menu shows the name of the last selected custom media size.
- If the width or height controls have been changed since a custom size was selected or saved, or if a saved media size has just been deleted, then the **Name** drop-down menu shows the default name of "Untitled."
- If a new name has been typed into the **Name** drop-down menu for the purpose of saving a new size or renaming an existing size, then that new name will remain in the drop-down menu until a saved custom media 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 can change the width and height values without losing the name. However, if a saved media-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 media size.

Save, Delete, or Rename

The dynamic command button located under 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 most recent save action or since the selection of an existing custom media 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 media names, and not against the standard media-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 media 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 media 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 media size from the drop-down menu. If no duplicate is found, then the name of the stored custom media size changes to match the contents of the **Name** drop-down menu.

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 3-3 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

Table 3-3 Name drop-down menu text strings (continued)

State	Drop-down menu contents	Button label	Action	Next state
			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

Custom size (width and height controls)

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

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

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

Unit indicator labels change dynamically to indicate inches or millimeters, depending on the measurement units the driver is currently using. To change measurement units, click the dynamic Measurement Units button (either **Use Inches** or **Use Metric**).

Custom width and height control limits

The minimum media size for the HP Color LaserJet 4700 is 76.2 x 127 mm (3 x 5 inches) and the maximum is 215.9 x 355.6 mm (8.5 x 14 inches). The following table summarizes media size limits for each media-handling device.

Table 3-4 PCL 6 custom media sizes

Tray	Dimensions	Minimum	Maximum
Tray 1 (100-sheet multipurpose)	Width	76.2 mm (3.0 inches)	215 mm (8.5 inches)
	Height	127.0 mm (5.0 inches)	355.6 mm (14.0 inches)
Tray 2 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 3 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 4 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 5 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 6 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Duplexing unit	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)

Dynamic measurement units

Use the **Dynamic Measurement Units** button to toggle the unit of measurement between standard (inches) and metric (millimeters) units of measurement. The label on this button is dynamic, depending on the measurement units that are in use. If the custom size currently shows the measurements in inches, the button is labeled **Use Millimeters**. If the custom size currently shows the measurements in millimeters, the button is labeled **Use Inches**. Click the button to switch measurement-unit types.

Close

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

Table 3-5 Close dialog box text strings

If the drop-down menu contains	And the button says	Then this happens when the Close button is clicked
Untitled	Save	The dialog box closes, but you lose the changes that were not saved. The current media size remains the same as it was when the **Custom** button was clicked.
<user-typed text>	Save	The dialog box closes, but you lose the changes that were not saved.

Table 3-5 Close dialog box text strings (continued)

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

Source Is

The **Source is:** setting specifies the source tray to use for printing a document. The list of source trays depends on the printer accessories. Any optional source trays that are installed through the **Configure** tab also appear here.

The **Source is:** drop-down menu can contain the following options, depending on what has been installed on the product:

- **Automatically select**
- **Manual Feed in Tray 1**
- **Tray 1** (100-sheet multipurpose tray)
- **Tray 2** (500-sheet tray)
- **Tray 3** (500-sheet tray)
- **Tray 4** (500-sheet tray)
- **Tray 5** (500-sheet tray)
- **Tray 6** (500-sheet tray)

The default setting is **Automatically Select**. When this setting is selected, the HP Color LaserJet 4700 uses the source tray that supports the media size that you have selected. If you select a source tray other than **Automatically select**, make sure that the correct media size is loaded in the source tray. For more information about media sources, see the Media attributes section of this manual.

Type is

The **Type is:** drop-down menu shows all of the media types that the HP Color LaserJet 4700 supports. When you use the default setting, **Unspecified**, the printer uses the default media type, which is usually **Plain**.

The following standard types appear in the lists:

- Unspecified
- Plain

- Preprinted
- Letterhead
- Transparency
- Prepunched
- Labels
- Bond
- Recycled
- Color
- Cardstock
- Rough
- Heavy 105–120 g/m^2
- Envelope
- Light 60-75 g/m^2
- Intermediate 90-104 g/m^2
- Extra Heavy 120-163 g/m^2
- Glossy 75-120 g/m^2
- Heavy Glossy 120-160 g/m^2
- Tough Paper (Glossy Film)
- Extra Heavy Glossy 160-220 g/m^2

The default setting is **Unspecified**, and the program selects the media type. If you select a different setting, make sure that the correct media type is loaded in the tray that you selected in the **Source is:** setting.

When you change the print-driver setting to a media type that is not currently loaded in the product, a control-panel message appears that prompts you to load the media type or choose another tray.

For more information about media types, see the Media attributes section of this manual.

Use Different Paper/Covers

You can print books that are comprised of different media types using the **Use Different Paper/ Covers** options.

When you select the **Use Different Paper/Covers** check box, the following settings can appear in the group box, along with associated options:

- **Front Cover**
- **First Page**
- **Other Pages**

- **Last Page**
- **Back Cover**

NOTE You must use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the size that you selected in the **First Page** settings and the **Size is:** driver setting becomes unavailable for all of the other **Use Different Paper/Covers** options. Therefore, the **First Page** settings are described first in the following sections.

When you change the type and source of the media and covers, the settings you select remain configured until you close the software program.

Each option for the **Use Different Paper/Covers** setting is described in the following sections.

Front Cover

Use the **Front Cover** options to include a blank or preprinted front cover on a document, or to include a front cover from a source tray that is different from the one that is used for the remainder of the document.

The following figure shows the **Front Cover** setting and options.

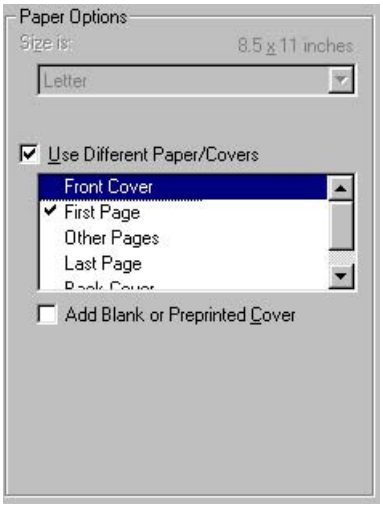


Figure 3-14 **Front Cover** options

The **Front Cover** options are as follows:

- **Add a Blank or Preprinted Cover** check box
- **Source is:** drop-down menu
- **Type is:** drop-down menu

When you select **Front Cover**, you must also select the **Add a Blank or Preprinted Cover** check box to enable the setting. When you select this check box, the **Source is:** and **Type is:** drop-down menus become available and a check mark appears next to the **Front Cover** option.

The **Source is:** setting specifies the source tray to use for adding a front cover to the document. The list of source trays depends on the printer accessories. Any optional media trays that are installed through the **Configure** tab also appear here. For more information about the **Source is:** setting, see the Source Is section of this chapter.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:**drop-down menu settings, see the **Type is:** in the Type is section of this chapter.

First Page

Use the **First Page** option to select an alternative media size, type, or source for the first page of a document. The following figure shows the appearance of the Paper Options group box when you select the Use Different Paper/Covers check box. The **First Page** setting is selected by default.

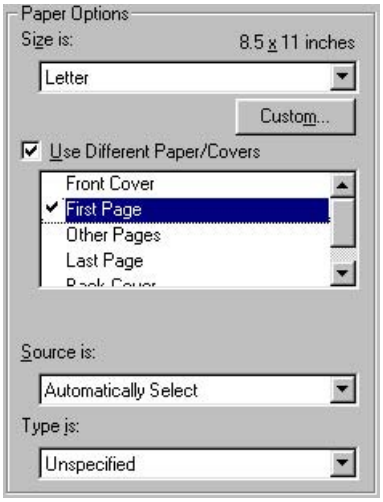


Figure 3-15 First Page options

The following are the **First Page** options:

- **Size is:** drop-down menu
- **Source is:** drop-down menu
- **Type is:** drop-down menu

The **Size is:** driver setting for the first page applies to the entire print job. When this is set, the setting becomes unavailable for all the other **Use Different Paper/Covers** options.

The **Source is:** setting specifies the source tray to use for printing a document. The list of source trays depends on the printer accessories. Any optional media trays that are installed through the **Configure** tab also appear here. For more information about the **Source is:** setting, see the Source Is section of this chapter.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:** drop-down menu settings, see the description for **Type is:** in the Type is section of this chapter.

Other Pages

Use the **Other Pages** options to select an alternative media source (or the same source as **First Page**) for the other pages of the document.

The **Other Pages** setting and options are shown in the following figure.

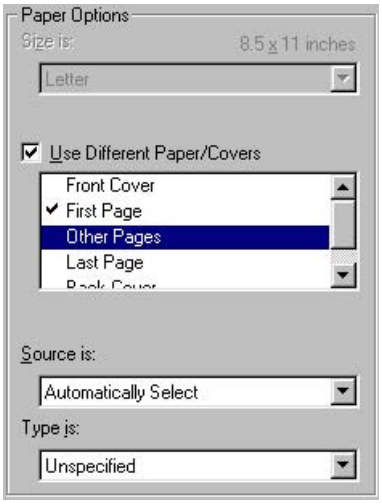


Figure 3-16 **Other Pages** options

The following are the **Other Pages** options:

- **Source is:** drop-down menu
- **Type is:** drop-down menu

The **Source is:** setting specifies the source tray to use for printing a document. The list of source trays depends on the printer accessories. Any optional media trays that are installed through the **Configure** tab also appear here. For more information about the **Source is:** setting, see the Source Is section of this chapter.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:** drop-down menu settings, see the description for **Type is:** in the Type is section of this chapter.

Last Page

Use the **Last Page** options to select an alternative media type or source for the last page of a document. The following figure shows the appearance of the Paper Options group box when you select the **Use Different Paper/Covers** check box.

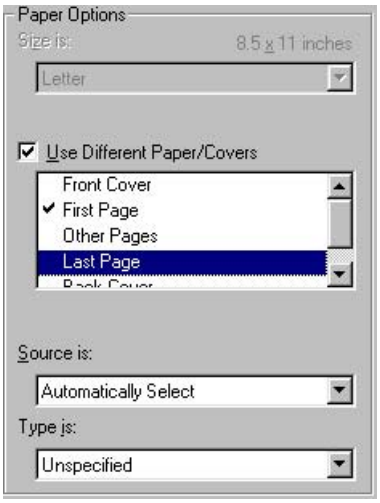


Figure 3-17 **Last Page** options

The following are the **Last Page** options:

- **Source is:** drop-down menu
- **Type is:** drop-down menu

The **Source is:** setting specifies the source tray to use for printing a document. The list of source trays depends on the printer accessories. Any optional media trays that are installed through the **Configure** tab also appear here. For more information about the **Source is:** setting, see the Source Is section of this chapter.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:** drop-down menu settings, see the description for **Type is:** in the Type is section of this chapter.

Back Cover

Use the **Back Cover** options to include a blank or preprinted back cover on a document.

The following figure shows the **Back Cover** setting and options.

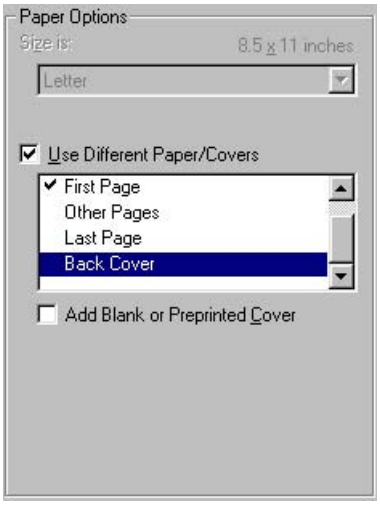


Figure 3-18 Back Cover setting

The following are the **Back Cover** options:

- **Add a Blank or Preprinted Cover** check box
- **Source is:** drop-down menu
- **Type is:** drop-down menu

When you select **Back Cover**, you must also select the **Add a Blank or Preprinted Cover** check box to enable the setting. When you select this check box, the **Source is:** and **Type is:** drop-down menus become available and a check mark appears next to the **Back Cover** option.

NOTE The **Back Cover** options are not available when the **Booklet Printing Layout** setting is enabled on the **Finishing** tab. The back cover setting is unavailable, because this page would otherwise be printed in the middle of a booklet.

The **Source is:** setting specifies the source tray to use for adding a back cover to the document. The list of source trays depends on the printer accessories. Any optional media trays that are installed

through the **Configure** tab also appear here. For more information about the **Source is:** setting, see the Source Is section of this chapter.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:** drop-down menu settings, see the **Type is:** in the Type is section of this chapter.

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image appears in the upper-right corner of all of the **Document Defaults** driver tabs except the **Job Storage** tab. For more information about the document preview image, see the Finishing tab features section of this chapter.

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. It should look the same as the image that appears in the same location on the **Configure** tab in the **Printer Properties**.

On the **Paper** tab, the printer image contains hot spots where you can select a media source. When you use the mouse to move the pointer over a hot spot, the arrow reverts to a gloved hand. The current media source tray, whether selected from the drop-down menu or from a printer image hot spot, is highlighted on the printer image. The following points are worth noting:

- The **Automatically Select** setting in the **Source is:** drop-down menu does not have a corresponding area to highlight in the printer image. Selecting other settings in this menu highlights the corresponding part in the printer image.
- Selecting the area that represents a tray in the image always selects the corresponding tray in the **Source is:** option. **Manual Feed in Tray 1**, which is available from the **Source is:** drop-down menu, cannot be selected by selecting the image.
- On the **Paper** tab, only source trays have printer image hot spots and can be highlighted.

Output tab features

To gain access to the **Output** tab in Windows 98 or Windows Me, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Output** tab.

NOTE The **Output** tab does not appear unless you have output accessories installed and configured on the printer.

Use the **Output** tab to select finishing and output options for a document. The following figure shows the **Output** tab.

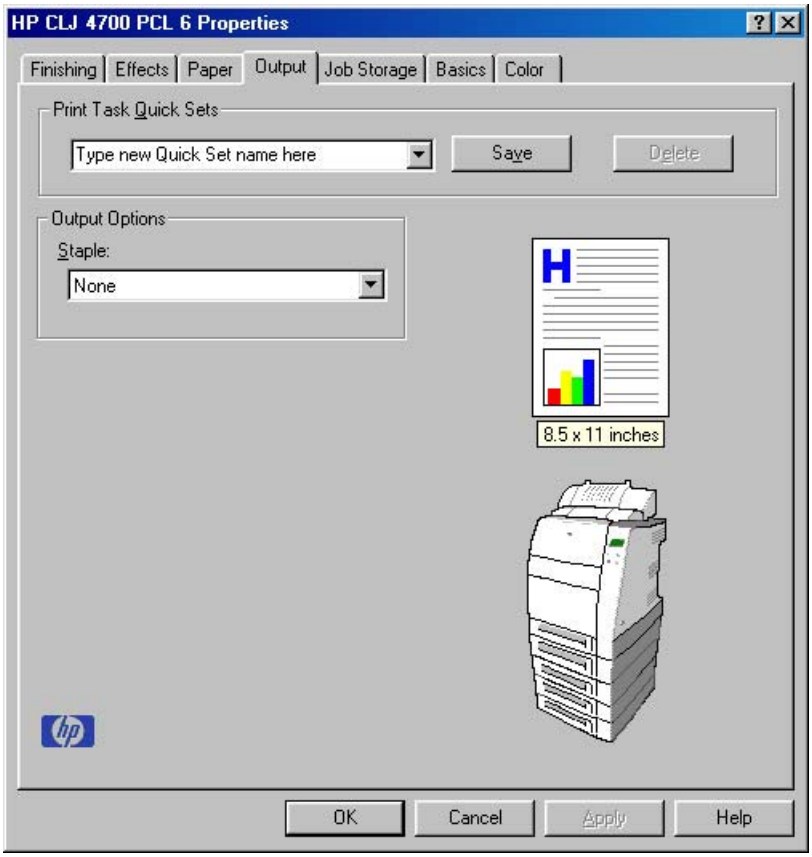


Figure 3-19 **Output** tab

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

- **Print Task Quick Sets** group box
- **Output Options** group box
- Document preview image
- Printer image

Print Task Quick Sets

The **Print Task Quick Sets** control is used to store the current combination of driver settings that appear on all other **Document Defaults** driver tabs. Print Task Quick Sets are either preset (by the administrator) or user-defined printing specifications, such as media size and pages per sheet. For more information, see Finishing tab features.

Output Options

The **Output Options** group box contains a drop-down menu to select staple options for a document.

Use the **Staple** drop-down menu to select how many staples to use and how the staples are placed on the document. The following settings are available:

- **None**
- **One staple**

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image is always oriented so that the contents of the page are right-side-up.

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

Printer image

The bitmap image in the lower-right portion of the **Output** tab represents the current physical configuration of the printer and corresponds to its configuration data. It should look the same as the image that appears in the same location on the **Configure** tab in the **Printer Properties**.

Job Storage tab features

To gain access to the **Job Storage** tab, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Job Storage** tab.

NOTE The **Job Storage** tab appears only when a hard disk is installed or at least 288 MB of total memory is installed and configured.

Use the Job Storage features to store print jobs in the HP Color LaserJet 4700 printer memory for printing at a later time. These job-storage features are described in the following sections.

The Job Storage tab appears among the driver tabs *only* if Job Storage is enabled. To support job-storage features for complex jobs, or if you often print complex graphics, print postscript (.PS) documents, or use many downloaded fonts, HP recommends that you install additional memory, install a hard disk, or both. Added memory also gives you more flexibility in supporting job storage features. A hard disk or a minimum total memory of 288 MB is required to use Job Storage features.

After a hard disk or additional memory is installed, the driver must be configured to reflect the changes in the product. If bidirectional communication is enabled in your environment, the Update Now feature can be used to update the drivers. For more information, see the Configure tab features in this chapter.

To configure the drivers manually after installing a hard disk or additional memory, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the product name.

5. Click **Properties**.
6. Click the **Configure** tab.
7. Under **Other Options**, click **More...**.
8. If additional memory has been installed, change the setting in the **Total Memory:** drop-down menu. If you select a minimum of 288 MB of total memory installed in the printer, this also selects the **Job Storage Enabled** check box.
9. If a hard disk has been installed, select the **Printer Hard Disk** check box in the **Storage** group box. This also selects the **Job Storage Enabled** check box.
10. Click **OK** to make the product hard disk and job-storage features available.

You can disable Job Storage while leaving the product hard disk enabled. To disable Job Storage, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Configure** tab.
7. Click **More...**.
8. Click to clear the **Job Storage Enabled** check box in the **More Configuration Options** box.

NOTE When **Job Storage** is disabled, the **Job Storage** tab is not visible.

If Job Storage is enabled (without installing a hard disk but with at least 288 MB of total memory), two **Job Storage Mode** settings are available on the Job Storage tab:

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

Two additional **Job Storage Mode** settings become available on the Job Storage tab if a hard disk is installed:

- **Quick Copy**
- **Stored Job**

The following illustration shows the **Job Storage** tab.

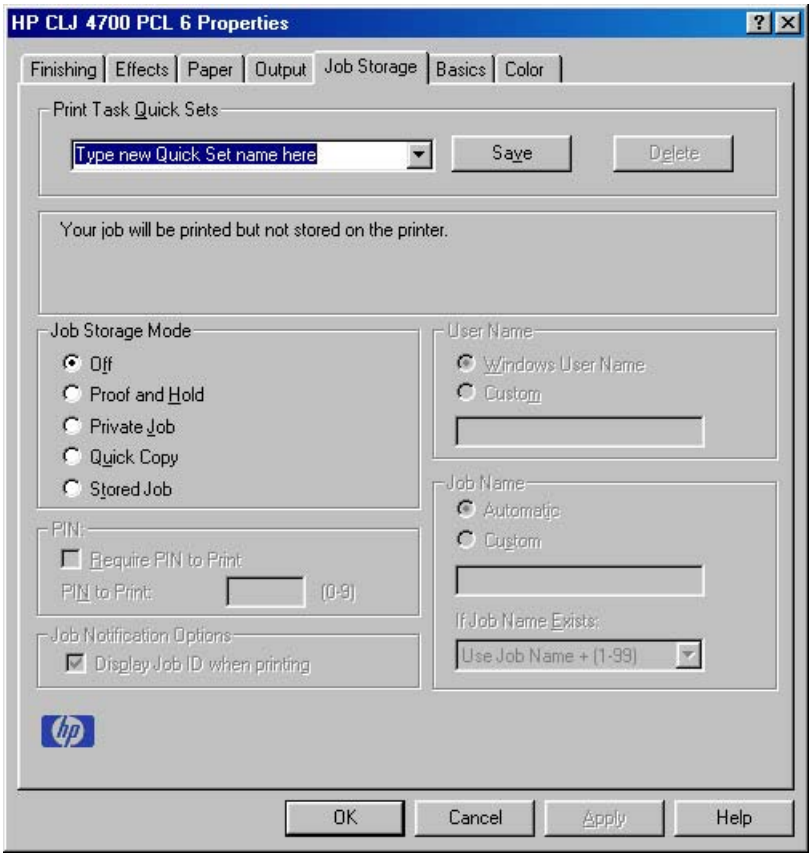


Figure 3-20 **Job Storage** tab

The **Job Storage** tab contains the following controls:

- **Print Task Quick Sets** group box
- Status group box (unlabeled)
- **Job Storage Mode** group box
- **PIN** group box
- **Job Notification Options** group box
- **User Name** group box
- **Job Name** group box

Print Task Quick Sets

Use the **Print Task Quick Sets** control is to store the current combination of driver settings that appear on all of the other **Document Defaults** driver tabs. Print task quick sets are either preset (by the administrator) or user-defined printing specifications, such as media size and pages per sheet. For more information, see Finishing tab features.

Status group box

The unlabeled group box on the **Job Storage** tab contains a status message about the destination of a print job. The status information changes depending on the selections that are made on the **Job Storage** tab.

Job Storage Mode

Use the **Job Storage Mode** options on the HP Color LaserJet 4700 printer to store documents at the product and then control their printing at the product control panel.

The HP Color LaserJet 4700 printer offers the following **Job Storage Mode** options:

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

These options and the settings that control them are described in the following sections.

Off

When selected, this option turns the **Job Storage** feature off (it is disabled), which means that the print job will not be stored in the product.

Proof and Hold

To use the **Proof and Hold** option, Job Storage must be enabled, and the product must have a minimum total memory of 288 MB.

When selected, this option stores the print job in memory and prints only the first copy of the job, allowing you to check the first copy. If the document prints correctly, you can print the remaining copies of the print job at the product control panel. You can set the number of proof-and-hold print jobs that can be stored in the product at the control panel.

After it is released for printing, the proof-and-hold job is immediately deleted from the product. If more copies are needed, you must reprint the job from the software program. Proof-and-hold jobs are deleted if you turn off the product.

NOTE The product configuration can be set to hold a maximum of 50 quick-copy or proof-and-hold jobs. The number is set at the product control panel in the **CONFIGURATION** menu, and the default is 32. When this preset limit is reached, the new document overwrites the oldest held document.

Private Job

To use the **Private Job** option, Job Storage must be enabled, and the product must have a minimum total memory of 288 MB.

When you select **Private Job**, the print job is sent to the product, but is not printed until you request the job at the product control panel. Selecting **Private Job** activates the **PIN** group box. The print job can be printed only after you type the correct PIN at the control panel. After the job is printed, the job is deleted from the product. This feature is useful when you are printing sensitive or confidential documents that you do not want to leave in an output bin after printing.

The Private Job/PIN coupling has a PIN restriction of four ASCII numeric characters (0 though 9). If you type non-numeric characters, they are removed immediately. The text field does not allow you to type more than four characters. The field temporarily accepts fewer than four digits in the string, but when

the edit field loses focus, the zeroes pad the left end until the PIN contains exactly four digits. The default initialized value for the PIN is 0000 for **Private Job**.

After it is released for printing, the private job is immediately deleted from the product. If more copies are needed, you must reprint the job from the software program. Private jobs are deleted if you turn off the product.

Quick Copy

To use the **Quick Copy** option, a hard disk must be installed and Job Storage must be enabled.

When you select **Quick Copy**, the entire print job prints and a copy of the print job is stored on the product, after which you can print additional copies of the print job at the product control panel. The number of quick-copy print jobs that can be stored in the product is set by using the product control panel.

NOTE The product configuration can be set to hold a maximum of 50 quick-copy or proof-and-hold jobs. The number is set at the product control panel in the **CONFIGURATION** menu, and the default is 32. When this preset limit is reached, the new document overwrites the oldest held document. **Quick Copy** jobs are deleted if you turn off the product.

Stored Job

To use the **Stored Job** option, a hard disk must be installed and Job Storage must be enabled

Use the **Stored Job** option to send a print job directly to the product hard disk without printing it. The print job is stored in the product as if it is an electronic file cabinet. After the print job is stored on the product hard disk, you can print the job at the product control panel.

The job remains stored in the product until it is deleted. Stored jobs remain on the product hard disk when the product is turned off. Use this feature for forms and other common or shared documents.

A stored job can be managed in two ways: as either a private or a public job. Use a private stored job to send a print job directly to the product, which can then be printed only after you type a PIN at the product control panel. (You can set the PIN in the **PIN** group box.) After the job is printed, the job remains in the product and can be printed again at the product control panel. The private mode is initiated by selecting the **Require PIN to Print** check box. In this mode, a PIN that is typed at the product control panel is required in order to release the job.

The box labeled **PIN** is usually inactive. The **Require PIN to Print** option becomes available when you select **Stored Job**. If you select the **Require PIN to Print** box, you must type 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 product after they are printed. *Private stored* jobs are retained in the product after printing, but require that a PIN be typed each time they are printed.

PIN

The **PIN** group box is usually inactive. The option within the PIN group box, **PIN to Print**, is activated if you select either of the following options:

- Select **Private Job**. If selected, you must type the PIN number at the product control panel in order to print the job. For more information, see Private Job.
- Select **Stored Job**, and then select the **Require PIN to Print** check box. If the **Require PIN to Print** check box is selected, you must type a PIN in order to make the stored job private. For more information, see the Stored Job.

Job notification

Clicking a job storage mode selection causes the **Job Notification Options** group box to become available. The **Display Job ID when printing** check box is selected by default. The **Display Job ID when printing** option causes a pop-up dialog box to appear when the job-storage print job is printed. The dialog box shows the user name and job name that are associated with the stored print job, as well as the product name, port, and location.

User Name

Use the **User Name** settings to help identify the job at the product control panel. The following are the **User Name** settings:

- **Windows User Name.** This option associates your Windows user name with the stored print job. The Windows user name automatically appears in the text field below the **User Name** options.
- **Custom.** Use this option to type a custom name for the stored print job. When you click the **Custom** radio button, the text field below the option becomes available. The **User Name** field can contain no more than 16 characters.

Job Name

Use the text box in the **Job Name** group box to specify a name to identify the job at the product control panel. The **Automatic** option is the default selection. It uses a default job name for the stored print job. The file name of the print job is used if it is available to the print driver. Otherwise, the software program name or a time stamp is used for the job name. If you would like to enter a custom name, select **Custom** and type the custom job name in the text box. The **Job Name** text box can contain no more than 16 characters.

If **Custom** is selected but no job name is specified, as soon as the focus is removed from the control (that is, when the Tab key is pressed or another control is selected), the empty string is replaced with **<Automatic>**. In those languages for which **<Automatic>** 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 of a length and type that can appear on the product control-panel display.

Use the **If Job Name Exists** drop-down box to choose whether a duplicate job name should have a number appended to it, or whether it should overwrite an existing job with the same name that has already been sent to the printer.

Using Job Storage features when printing

To use Job Storage features when printing, follow these steps:

1. Click **File** and then click **Print** from the software program. The **Print** dialog box appears.

   NOTE Clicking the print icon in the software program toolbar prints the job without using Job Storage features.

2. Click **Properties**. The **Properties** dialog box appears.
3. Click the **Job Storage** tab.
4. Select the Job Storage options (described previously) by clicking the appropriate option button, and then complete any required fields.
5. Click **OK**.

Releasing a Job Storage print job

After you send a print job that uses the **Job Storage** feature, you can release the job to print from the product control panel.

1. Press ✓ (the Select button; the one with the check mark) to open the menus.
2. Press ▲ (the up button) and ▼ (the down button) until **RETRIEVE JOB** is highlighted on the product control panel, and then press ✓ .
3. Press ▲ (the up button) and ▼ (the down button) to scroll to your User Name, and then press ✓ .
4. Press ▲ and ▼ to scroll to the Job Name, and then press ✓ .
5. Press ▲ (the up button) and ▼ (the down button) until **PRINT** is highlighted on the product control panel, and then press ✓ .
6. Press ✓ .
7. If a PIN number is assigned to the job, press ▲ and ▼ to select the first digit of the PIN, and then press ✓ . The number in the product control-panel display changes to an asterisk. Repeat this step for each of the remaining three digits of the PIN number.

   If no PIN number is assigned to the job, continue with step 7.
8. Press ▲ and ▼ to select the number of copies to print.
9. Press ✓ to print the job.

Deleting a Job Storage print job

Sometimes it is necessary to delete a print job from the product hard disk. You can do this from the product control panel.

1. Press ✓ (the Select button; the one with the check mark) to open the menus.
2. Press ▲ (the up button) and ▼ (the down button) until **RETRIEVE JOB** is highlighted on the product control panel, and then press ✓ .
3. Press ✓

4. Press the up and down buttons to scroll to your User Name, and then press ✓ .
5. Press ▲ and ▼ to scroll to the Job Name, and then press ✓ .
6. Press ▲ (the up button) and ▼ (the down button) until **DELETE** is highlighted on the product control panel, and then press ✓ .
7. Press ✓ .
8. If a PIN number is assigned to the job, press ▲ and ▼ to select the first digit of the PIN, and then press ✓ . The number in the product control-panel display changes to an asterisk. Repeat this step for each of the remaining three digits of the PIN number.

   If no PIN number is assigned to the job, continue with step 7.
9. Press ✓ to delete the job.

The stored print job is deleted and the product returns to the **READY** state.

Basics tab features

To gain access to the **Basics** tab in Windows 98 or Windows Me, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Basics** tab.

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

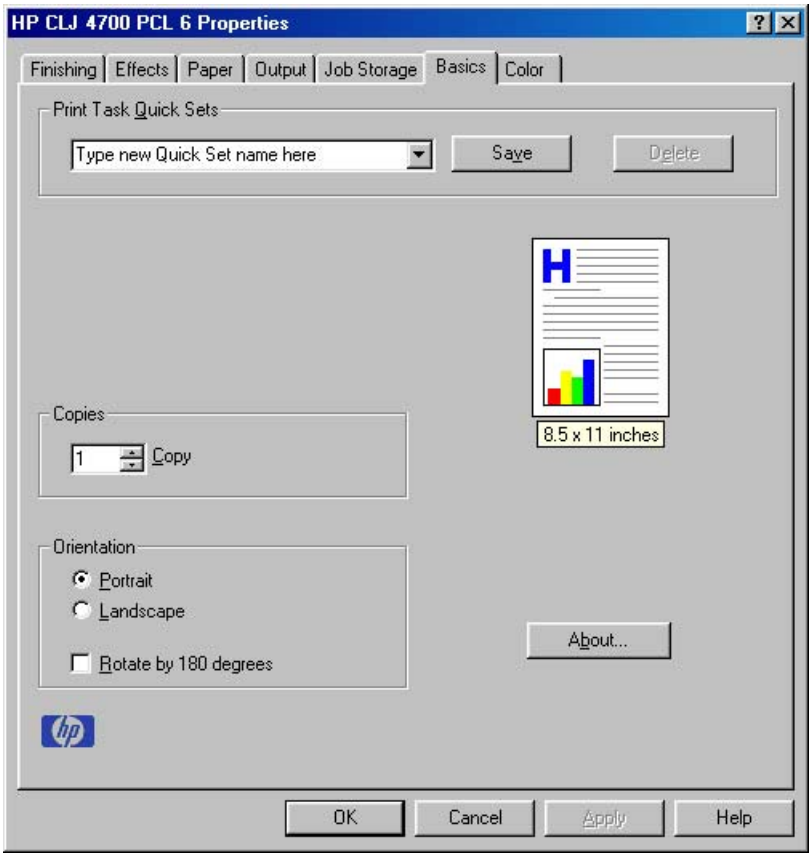


Figure 3-21 **Basics** tab

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

- **Print Task Quick Sets** group box
- **Copies** group box
- **Orientation** group box
- Document preview image
- **About** button

Print Task Quick Sets

The **Print Task Quick Sets** control is available on all of the **Properties** driver tabs (**Finishing**, **Output**, **Effects**, **Paper**, **Job Storage**, and **Basics**). The feature is used to store the current combination of driver settings that appear on all of the other tabs. Print Task Quick Sets are either preset (by the administrator) or user-defined printing specifications, such as media size and pages per sheet. For more information, see the Finishing tab features section of this chapter.

Copies

Use the **Copies** option to specify the number of copies to print.

The number of copies that you request appears in the **Copies** group box. You can select the number by typing in the box or by using the up and down arrows to the right of the text box. Valid entries are numbers from 1 to 9999 for the HP Color LaserJet 4700 printer. The copies value will not advance from

the maximum number (9999) to 1 when the up arrow is used, or change from 1 to the maximum number (9999) when the down arrow is used. When you click another group box or leave the **Basics** tab, invalid entries into the edit box (such as non-numerical input, numbers less than 1, or numbers greater than the maximum allowed) are changed to the last valid value that appeared in the box. The default number of copies is 1.

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

Orientation

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

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

The **Orientation** group box contains three options:

- **Portrait**. The top edge of the document is the shorter edge of the media.
- **Landscape**. The top edge of the document is the longer edge of the media.
- **Rotate by 180 degrees**. This creates a landscape or portrait orientation in which the image is rotated 180° degrees. This setting is useful for printing prepunched media.

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

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image appears in the upper-right corner of all of the **Properties** driver tabs (the **Finishing**, **Output**, **Effects**, **Paper**, **Job Storage**, and **Basics** tabs). For more information about the document preview image, see Finishing tab features.

About

When you click the **About** button on the **Basics** tab, or you click the HP logo on any of the driver **Properties** tabs, the **About This Driver** dialog box appears. To close the **About** box, click **OK**, press Esc, press **Alt** + F4, or press Enter. The following figure shows the **About This Driver** dialog box. The information it contains varies according to driver, date, and version.

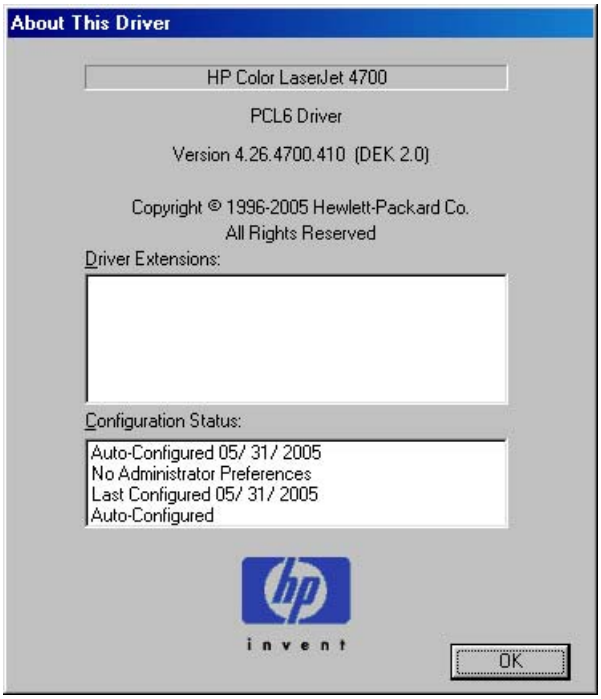


Figure 3-22 **About This Driver** dialog box

The **About This Driver** dialog box provides the following information:

- Printer name
- Driver name
- Print driver version number
- Copyright information
- Driver Extensions (if any)
- Configuration Status

The printer name, the driver name, the print driver version number, and the copyright information appear at the top of the **About This Driver** dialog box.

The **Driver Extensions** group box lists the driver extensions, if any.

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

Color tab features

To gain access to the **Color** tab in Windows 98 or Windows Me, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.

5. Click **Properties**.

6. Click the **Color** tab.

Use the **Color** tab to specify predefined color-option settings or to fine-tune the color treatments and halftoning. Color output can also be converted to grayscale. The **Color** tab is shown in the following figure.

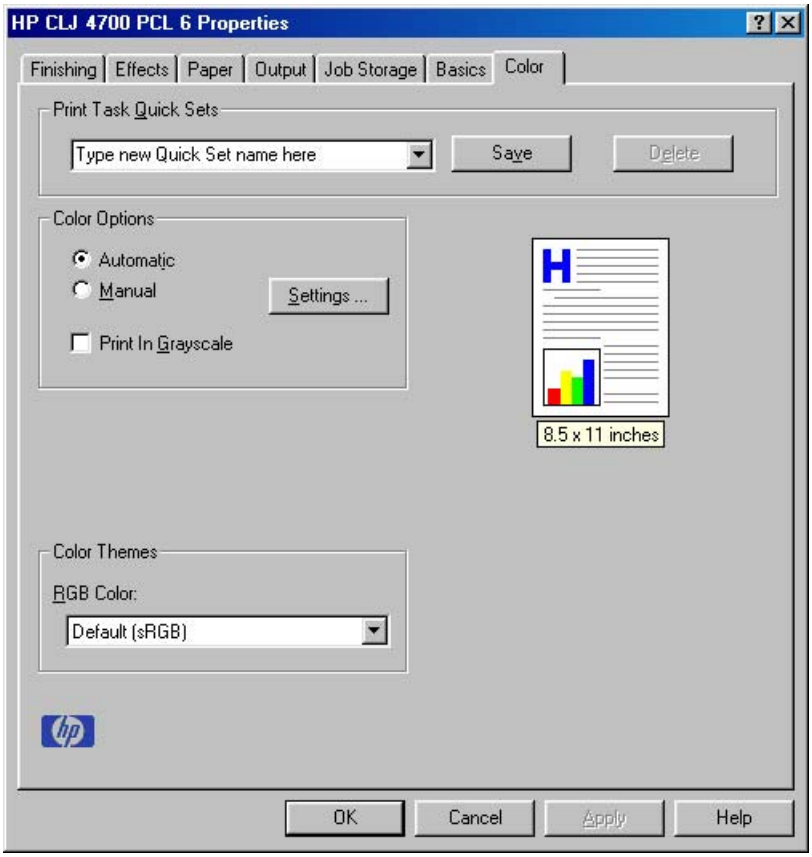


Figure 3-23 **Color** tab

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

- **Print Task Quick Sets** group box
- **Color Options** group box
- **Color Themes** group box
- Document preview image

Print Task Quick Sets

The **Print Task Quick Sets** control is available on each Printing Preference tab, and is used to store the current combination of driver settings found on all of the other tabs. **Print Task Quick Sets** are either preset or user-defined printing specifications, such as media size and pages per sheet. For more information, see Paper tab features.

Color Options

Use the **Color Options** group box to adjust the independent color controls. The settings affect the print job color rendering and print quality. The **Color Options** group box contains the following controls:

- **Automatic** option (default)
- **Manual** option
- **Settings** button (that opens the **Color Settings** dialog box)
- **Print in Grayscale** check box

Automatic

Use the **Automatic** option for default color settings that automatically fine-tune the printed output. The **Automatic** default color settings provide high-quality output for most color-printing needs.

Manual

To change the default color settings, select the **Manual** option, and then click the **Settings** button. The **Color Settings** dialog box appears.

To change the settings, make your selections by using the drop-down menus in the **Color Settings** dialog box, and then click **OK**. The following figure shows the **Color Settings** dialog box with "Automatic" settings.

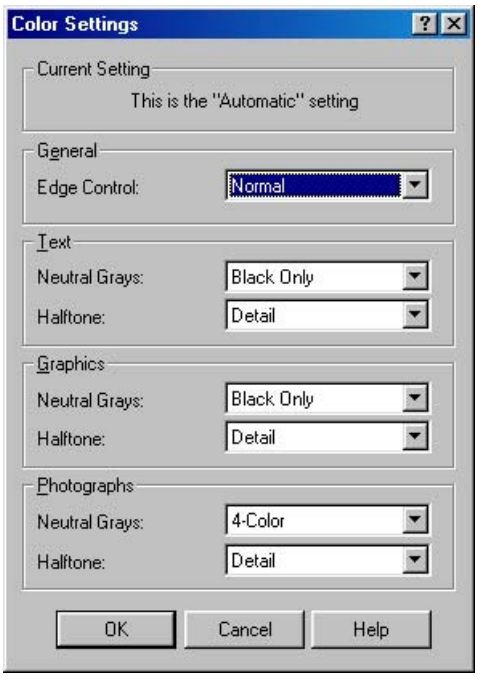


Figure 3-24 **Color Settings** dialog box

The **Color Settings** dialog box contains the following controls for each of the following components:

- **General**
  - **Edge Control**
- **Text**
  - **Neutral Grays**
  - **Halftone**
- **Graphics**
  - **Neutral Grays**
  - **Halftone**
- **Photographs**
  - **Neutral Grays**
  - **Halftone**

General

Use the **General** setting group to control **Edge Control** settings for all color printing.

Edge Control determines how edges are rendered. **Edge Control** consists of three components: Adaptive Halftoning, Trapping, and C-REt. Adaptive Halftoning increases the edge sharpness. Trapping reduces the effect of color plane misregistration by slightly overlapping the edges of adjacent objects. C-REt increases the apparent resolution by placing each dot for the smoothest edges.

The **Edge Control** option offers four settings:

- **Normal.** The **Normal** setting provides the default trapping settings. Adaptive Halftoning is set to On, and C-REt is set to On.
- **Light.** The **Light** setting provides minimal trapping. Adaptive Halftoning is set to On and C-REt is set to On.
- **Maximum.** The **Maximum** setting provides the most trapping. Adaptive Halftoning is set to On, and C-REt is set to On.
- **Off.** The **Off** setting turns Trapping, Adaptive Halftoning, and C-REt to Off.

Neutral Grays

The **Neutral Grays** drop-down menu controls the selection of a device-dependent color table that is embedded in the printer firmware. The options are **Black Only** or **4-Color**. You can adjust the **Neutral Grays** setting independently for text, graphics, or photographs.

- **Black Only.** This option generates neutral colors (grays and black) by using only black toner. This option guarantees that neutral colors do not have a color cast. **Black Only** is the default setting for the **Text** and **Graphics** components.
- **4-Color.** This option generates neutral colors by combining all four colors of toner, which produces smoother gradients and transitions to non-neutral colors. It also produces the darkest possible black. **4-Color** is the default setting for **Photographs**.

Halftone

The **Halftone** setting controls the selection of a printer-dependent halftone algorithm that is embedded in the printer firmware. Halftoning is a method by which the printer mixes the four primary colors (cyan, magenta, yellow, and black) in varying proportions to create millions of colors. The **Halftone** options affect the resolution and clarity of the color on the printed page. You can select **Halftone** settings for text, graphics, and photographs independently. The following Halftone settings are available:

- **Detail.** This is the default option; it is useful for text and graphics that require sharp distinctions among lines or colors, or for images that contain a pattern or a high level of detail. Choose this option for sharp edges and detail.
- **Smooth.** This option provides better results for large, solid-filled print areas. It also enhances photographs by smoothing out fine color gradations. Choose this option for uniform and smooth area fills.

Print in Grayscale

Select **Print in Grayscale** to print a document in black and white. This option is useful for previewing preliminary copies of slides and hardcopy output quickly or for printing color documents that will be photocopied or faxed.

Color Themes

The **Color Themes** group box contains the following settings:

- **Default (sRGB)**
- **Image Optimization (sRGB)**
- **Adobe RGB (1998)**
- **None**
- **Custom Profile**

Default (sRGB)

Select **Default (sRGB)** for most printing needs. This setting instructs the printer to interpret RGB color as sRGB, which is the accepted standard of Microsoft and the World Wide Web Consortium (W3C). Colors are matched to optimize the RGB colors on the screen and to provide vivid images and graphics.

Image Optimization (sRGB)

Select **Image optimization (sRGB)** to enhance documents in which the content is mainly bitmap images, such as .GIF or .JPG files. This setting instructs the printer to use the best color matching for rendering sRGB bitmap images. This setting affects only raster data; it has no effect on text or vector-based graphics. Using glossy media in combination with this setting provides the maximum enhancement.

Adobe RGB (1998)

Select **AdobeRGB (1998)** for documents that use the Adobe RGB color space rather than sRGB. For example, some digital cameras capture images in Adobe RBG, and documents that are produced with Adobe Photoshop® use the Adobe RGB color space. When printing from a professional software program that uses Adobe RGB , turn off the color management in the software program and allow the printer software to manage the color space.

None

Select **None** to instruct the printer to print RGB data in raw device mode. To render documents correctly when this option is selected, you must manage color within the software program or the operating system.

NOTE To prevent poor image quality, use this option only if you are familiar with the procedures for managing color in the software program or the operating system.

Custom Profile

Select **Custom Profile** when you want to simulate the printed output from other printers or for using special effects, such as sepia tones. This setting instructs the printer to use a custom input profile to more accurately predict and control color output.

The default Custom Profile is the color table used on the HP Color LaserJet 4650. The printer holds only one custom profile at a time, so when you download and install another color table, it erases the default color table and installs the new one. You can download custom profiles from the following Web site: www.hp.com/support/clj4700

Configure tab features

To gain access to the **Configure** tab in Windows 98 or Windows Me, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Configure** tab.

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

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

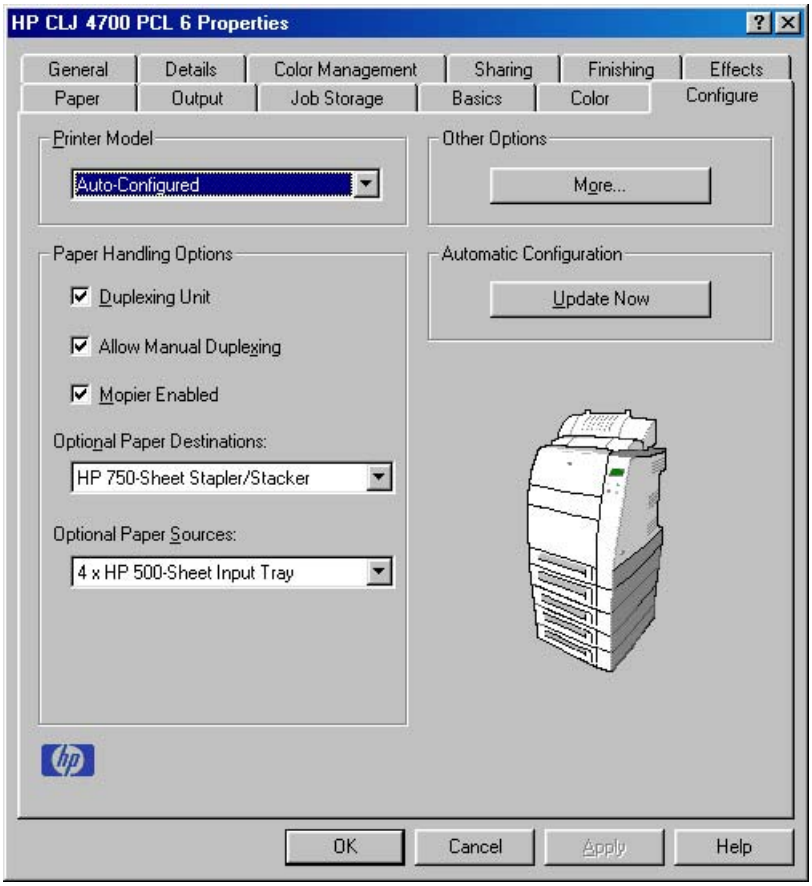


Figure 3-25 **Configure** tab

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

- Printer Model
- Paper Handling Options
- Other Options
- Automatic configuration
- Printer image

Printer Model

In the **Printer Model** group box, the driver title depends on the printer model being used. Selection of any model in the drop-down menu makes the appropriate changes to other configuration options on the tab.

The **Printer Model** setting automatically changes to **User Configured** whenever you change any of the device configuration settings on the tab.

The list of models and the changes they produce are described in the table below. The models are as follows:

- 4700: HP Color LaserJet 4700
- 4700n: HP Color LaserJet 4700n

- 4700dn: HP Color LaserJet 4700dn
- 4700dtn: HP Color LaserJet 4700dtn
- 4700ph+: HP Color LaserJet 4700ph+

Table 3-6 Printer-model configuration settings

Driver location	Setting	4700	4700n	4700dn	4700dtn	4700ph+
Configuration tab	Duplexing Unit	Available, not selected	Available, not selected	Selected	Selected	Selected
	Allow Manual Duplex	Selected	Selected	Selected	Selected	Selected
	Mopier Enabled	Unavailable, not selected	Unavailable, not selected	Selected	Selected	Selected
	Optional Paper Destination	(None)	(None)	(None)	(None)	HP 750-Sheet Stapler/ Stacker
	Optional Paper Source	(None)	(None)	(None)	2 x HP 500-Sheet Input Tray	4 x HP 500-Sheet Input Tray
More Configuration Options dialog box	Printer Hard Disk	Available, not selected	Available, not selected	Available, not selected	Available, not selected	Selected
	Job Storage Enabled	Unavailable, not selected	Unavailable, not selected	Selected	Selected	Selected
	Font Card	Available, not selected	Available, not selected	Available, not selected	Available, not selected	Available, not selected
	Allow Scaling from Large Paper	Available, not selected	Available, not selected	Available, not selected	Available, not selected	Available, not selected
	Alternative Letterhead Mode	Unavailable, not selected	Unavailable, not selected	Available, not selected	Available, not selected	Available, not selected
	Ignore Application Collation	Unavailable, not selected	Unavailable, not selected	Selected	Selected	Selected
	Printer Memory	160 MB	160 MB	288 MB	544 MB	544 MB
	DWS	6.0 MB	6.0 MB	70.0 MB	198.0 MB	198.0 MB
	Include Types in Applications Source List	Selected	Selected	Selected	Selected	Selected

If it is installed and working, the bidirectional mechanism will detect the correct model and update the configuration accordingly, either during installation or when you select **Update Now** on the **Configure** tab. However, the printer model name shown in the **Printer Model** text box is set to **Autoconfigured**.

Paper Handling Options

The **Paper Handling Options** group box contains the following controls:

- Duplexing unit

- Allow Manual Duplexing
- Mopier Enabled
- Optional Paper Destinations
- Optional Paper Sources

Duplexing unit

The HP Color LaserJet 4700dn, HP Color LaserJet 4700dtn, and HP Color LaserJet 4700ph+ printer models are equipped with automatic 2-sided printing (duplexing), which allows you to print on both sides of supported media. Automatic 2-sided printing is not supported for certain media types, including transparencies, labels, envelopes, and cardstock.

NOTE The HP Color LaserJet 4700 printer supports smart duplexing. The product uses the smart duplexing feature to detect information on both sides of the print job pages and only runs the pages through the duplexing unit if printable information appears on the second side of the page.

Allow Manual Duplexing

Select **Allow Manual Duplexing** to print on both sides of any size and most types of media (except transparencies, envelopes, and labels). To use this feature, you must reinsert the media stack into the input tray to print the second side. The product pauses while you make this adjustment.

Mopier Enabled

The multiple-original print (mopy) function is an HP-designed feature that produces multiple, collated copies from a single print job. Multiple-original printing (mopying) increases performance and reduces network traffic by transmitting the job to the product once, and then temporarily stores it on the hard disk. The remainder of the copies are printed at the fastest speed.

The HP Color LaserJet 4700 supports the transmit-once mopying feature when the product has an installed hard disk or a minimum total memory of 288 MB, and the **Mopier Enabled** setting on the **Configure** tab is on.

Mopier mode and collation

Mopying and collating print jobs are independent but closely related functions. The print driver performs mopying, which is the ability to send multiple original print jobs to the product. Collating is controlled by using either the print driver or the document software program. The mopying mode can be disabled by clearing the **Mopier Enabled** selection on the **Configure** tab to disable the feature.

You can control collation through the print driver by selecting or clearing the **Ignore Application Collation** check box in the **More Configuration Options** dialog box that appears when you click the **More...** button on the **Configure** tab. You can clear the check box, which is available only when the **Mopier Enabled** setting on the **Configure** tab is selected, to allow the software program to control collation.

To receive uncollated multiple copies of a print job with the mopier enabled, you must clear the **Ignore Application Collation** check box *and* make sure that the software program collation feature is not selected.

The following table shows the relation between **Mopier Enabled** settings and collation settings in the software program and the driver. The first three columns show the settings; the last column, "Expected result," shows how a three-page print job would appear.

Table 3-7 Driver Mopier mode and collation settings

Mopier Enabled	Application collation	Ignore Application Collation	Expected result
Not selected	Not selected	Not available	3 copies uncollated
Not selected	Selected	Not available	3 copies collated
Selected	Not selected	Not selected	3 copies uncollated
Selected	Not selected	Selected	3 copies uncollated
Selected	Selected	Not selected	3 copies collated by printer
Selected	Selected	Selected	3 copies collated by printer

Optional Paper Destinations

The **Optional Paper Destinations** drop-down menu lists optional output devices for the HP Color LaserJet 4700 printer. The list of available destinations varies depending on your printer , its output accessories, and the printer configuration settings on the **Configure** tab.

For the HP Color LaserJet 4700 printer, the following settings are available in the **Optional Paper Sources** drop-down menu:

- **(None)** This is the default setting for the HP Color LaserJet 4700 printer.
- **HP 750-Sheet Stacker**

Optional Paper Sources

The **Optional Paper Sources** drop-down menu lists optional media source trays for the HP Color LaserJet 4700 printer. The list of available source trays varies depending on your printer , its input accessories, and the printer configuration settings on the **Configure** tab.

For the HP Color LaserJet 4700 printer, the following settings are available in the **Optional Paper Sources** drop-down menu:

- **(None)** This is the default setting for the HP Color LaserJet 4700 printer.
- 4 x HP 500-Sheet Input Tray
- 3 x HP 500-Sheet Input Tray
- 2 x HP 500-Sheet Input Tray
- HP 500-Sheet Input Tray

Other Options

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

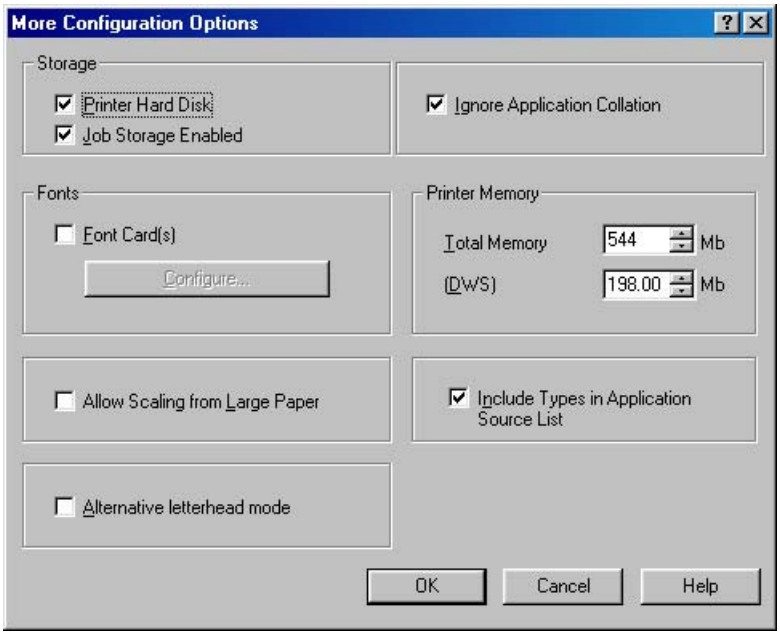


Figure 3-26 **More Configuration Options** dialog box

The **More Configuration Options** dialog box contains the following controls:

- **Storage** group box
- **Fonts** group box
- **Allow Scaling from Large Paper** check box
- **Alternative Letterhead Mode**
- **Ignore Application Collation** check box
- **Printer Memory** group box
- **Include Types in Application Source List** check box

Storage

The **Storage** group box contains the **Printer Hard Disk** and **Job Storage Enabled** check boxes. If your product is equipped with a hard disk drive, the **Printer Hard Disk** check box should be selected and all job storage options are available. If your HP Color LaserJet 4700 printer is *not* equipped with a hard disk drive but has a minimum of 288 MB of memory, limited job storage options are available. When job storage is enabled, the product can store print jobs so that you can gain access to those print jobs later at the product control panel.

Fonts

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

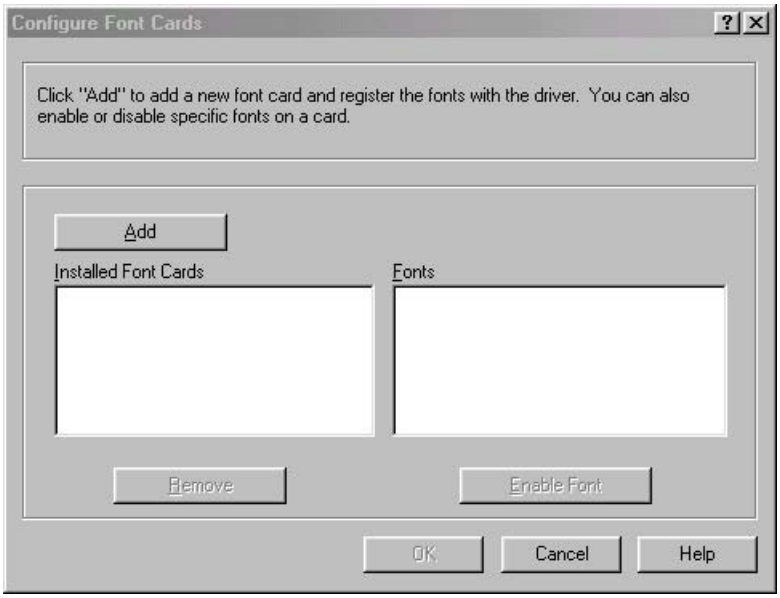


Figure 3-27 **Configure Font Cards** dialog box

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

- Add up to four font cards by clicking the **Add** button.
- Specify a unique font-card name.
- Select specific font card data files that contain lists of fonts on specified cards.
- Select one or more installed cards in the **Installed Font Cards** list. The list to the right (**Fonts**) shows all of the fonts that are available on the selected card(s).
- Enable or disable one or more of the selected font(s).

Complete the following steps to configure a font card:

1. Make sure that the font card is installed correctly.
2. Click **Add**. The **Add Font Card** dialog box appears.
3. Click **Browse**. The **Font Card Files** dialog box appears.
4. Find and select the appropriate Printer Cartridge Metrics (PCM) file that came with the font card.
5. Click **OK**.
6. You can specify a font card name in the **Add Font Card** dialog box.
7. Click **OK**. The selected .PCM file appears in the **Installed Font Cards** list. Select the .PCM file to see a list of available fonts in the **Fonts** list.
8. Click **OK** to close the **Add Font Card** dialog box. The fonts on the card should now be available on the system.

NOTE When using font cards with the HP Traditional PCL 6 Driver and HP Traditional PCL 5 Driver: To install screen fonts that match the font card, use the .HPB file that is specifically designed to work with that card. If no screen fonts exist for the card, use the .PCM file that is specifically designed to work with that card.

Allow Scaling from Large Paper

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

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

Alternative Letterhead Mode

When selected, this option eliminates the need to flip or reload letterhead or preprinted paper in a paper tray, whether you are printing on one side of the sheet or both sides of the sheet. Load the paper as you would for printing on both sides. If the printer tray has an icon that indicates to load paper either face-up or face-down, load the paper opposite of the orientation shown.

When this option is selected, you must select one of the following options in the **Type is** setting:

- Letterhead
- Preprinted

Ignore Application Collation

This setting overrides collation options that are selected in the print options of a software program. When **Ignore Application Collation** is selected, the print driver collates in the most appropriate way for the print job. The performance of this feature depends on the software program that you are using.

Printer memory

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

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

The HP traditional PCL 6 and PCL 5 drivers automatically configure the **(DWS)** value in Windows 98 and Windows Me environments that support bidirectional communication. Use the **(DWS)** option to specify the amount of work-space memory that is available to the printer. To manually set the **(DWS)** value, print a Configuration page and find the DWS value in the Memory section of the page. Then, click the **More...** button on the **Configuration** tab, and type the DWS value in the **(DWS)** field of the **More Configuration Options** dialog box.

Include types in application source list

NOTE The **Include types in application source list** check box is available only when using a computer that is running Windows NT 4.0.

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

Automatic configuration

If you have modified the configuration of the HP Color LaserJet 4700 since installation, click the **Update Now** button to automatically reflect the new configuration in the driver. For more information about the print driver's automatic configuration feature, see the Driver Configuration for Windows section of this manual.

If the **Update Now** button is not available, select the appropriate configuration options on the **Configure** tab.

If you have more than one driver installed on your product (for example, the default HP Traditional PCL 6 Driver and the HP Traditional PCL 5 Driver), the Update Now feature works automatically only on the driver on which it is activated. The other driver will not be updated, and might show the default setting for your product model.

Printer image

The bitmap image in the lower-right portion of the **Configure** tab represents the current physical configuration of the printer according to the driver configuration data. It should have the same appearance as the image in the same location on the **Paper** tab.

NOTE The printer image shown on the **Configure** tab might differ from your HP Color LaserJet 4700 printer, depending on the accessories that are installed.

HP Traditional Postscript 3 Emulation Driver features

When you install the printing-system software in Windows 98 or Windows Me, the HP Traditional PCL 6 Driver is installed by default. The HP Traditional PCL 5 Driver and the HP Traditional Postscript 3 Emulation Driver (PS Emulation Driver) can be installed by performing a Custom Installation.

NOTE Windows NT 4.0 does not support the HP Color LaserJet 4700 print drivers, but you can use print drivers for legacy HP products whose feature sets closely matches the feature set of the HP Color LaserJet 4700 printer. For instance, you can use the HP Color LaserJet 4650 drivers; however, color quality may be compromised. HP does not support the use of any print driver other than the driver supplied for the product. When you install the print drivers in Windows NT 4.0, you must use the Add Printer installation method to install the driver.

Depending on the operating system that you are using when you install the print drivers, different methods are available to gain access to the print drivers and different print-driver interfaces.

This section describes the options that are available on each tab of the PS Emulation Driver **Document Default** interface and on one of the tabs of the PS Emulation Driver **Properties** interface. It also shows the tabs that are available on the PS Emulation Driver interface for Windows 98 and Windows Me.

Access to print-driver settings in Windows 98 and Windows Me

In Windows 98 and Windows Me, you have access to a single set of driver tabs. To gain access to the print drivers, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties** to gain access to all print-driver tabs.

The settings that you make on these driver tabs control print-job output and become the default settings for all applications. The following print-driver tabs are available in Windows 98 and Windows Me:

- **General**
- **Details**
- **Sharing**
- **Paper**
- **Graphics**
- **Fonts**
- **Device Options**
- **PostScript**

PS 3 emulation support for the HP Color LaserJet 4700

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

emulation maintains full compatibility with Adobe PostScript when PostScript fonts are purchased from Adobe.

Users of Adobe-licensed programs might also have the right to use the Adobe PostScript print drivers from Adobe with the HP LaserJet PostScript 3 emulation PPD, which is available on the HP Color LaserJet 4700 printing-system software CD or from the HP Web site. When using the Adobe PostScript print driver, users must comply with all Adobe licensing agreements, as stated on the Adobe Web site at: www.adobe.com/support/downloads/license.html.

See the Font support section of this manual for a list of the additional fonts.

Help system

The PS Emulation Driver includes the following Help systems to provide assistance with printing and configuration options.

NOTE Bubble Help, a feature of HP traditional PCL drivers, is not available in the PS Emulation Driver.

What's this Help

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

- Right-click a control and then click **What's this?**. 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. When you use this special cursor to select a control, 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

When you press the **Help** button on a driver tab or in a dialog box, a context-sensitive Help message appears.

Paper tab features

To gain access to the **Paper** tab, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Paper** tab.

The **Paper** tab controls media and finishing options for the HP PS Emulation Driver. The following figure shows the **Paper** tab.

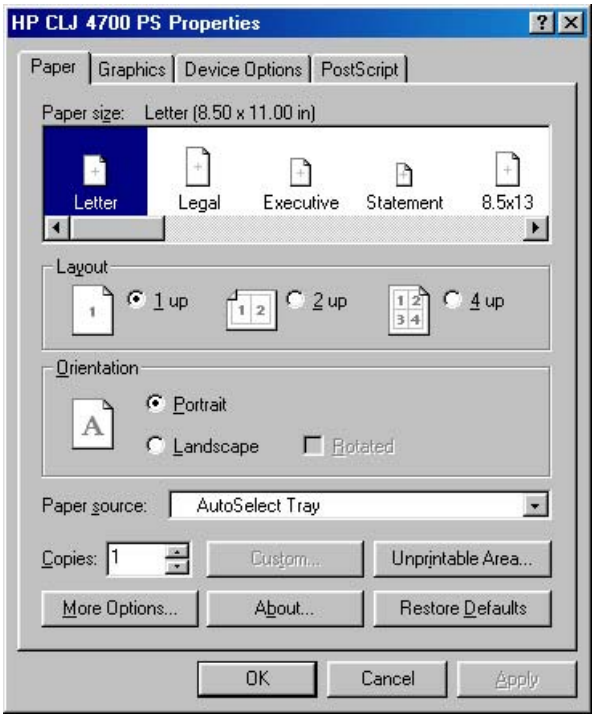


Figure 3-28 **Paper** tab

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

- Paper size
- Layout
- Orientation
- Paper source
- Copies
- Unprintable Area
- More Options
- About
- Restore Defaults

Paper size

The **Paper size** selection area lists the paper or envelope sizes that the HP Color LaserJet 4700 printer supports. Use the scroll bar to scroll through the list of supported media sizes (forms), and then click the icon to specify the media you want.

A red circle with a line through any of the paper icons means that paper size is available, but you must change a driver setting before you can print on that media size. The setting might be on the **Paper** tab, such as the **Paper source** setting, or it might be a setting on the product control panel.

Clicking **Custom page 1**, **Custom page 2**, or **Custom page 3** enables the **Custom** button at the bottom of the **Paper** tab. Clicking **Custom** opens the **Custom-defined size** dialog box that you can use to define a custom paper size.

The following figure shows the **Custom-defined size** dialog box.

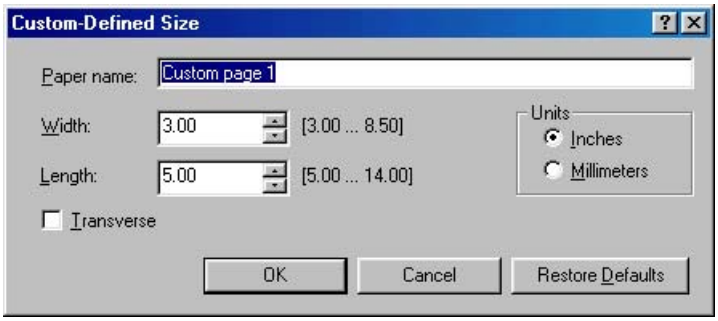


Figure 3-29 Custom-designed size dialog box

The following controls appear on the **Custom-defined size** dialog box:

- **Paper name** text box. Use this option to type a name for this custom paper size. You can define up to three custom sizes at one time.
- **Width** spin box. Use this control to specify the width for this custom paper size.
- **Length** spin box. Use this control to specify the length for this custom paper size.
- **Units** group box. Click **Inches** or **Millimeters** to specify the measurement unit for this custom paper size.
- **Transverse** check box. Clicking this check box rotates the document 90° when printing on a roll-fed device. Depending on the size of the printed page, you might save paper if you rotate the page when printing.
- **Restore defaults** button. Click this button to restore the settings in the **Custom-defined size** dialog box to their original values.

Layout

Use the settings in this group box to specify how many pages of the document print on a single piece of paper. For example, clicking **1 up** prints one page of the document on each sheet of paper. Clicking **2 up** prints two pages on each sheet of paper, dividing the paper in half. The **Layout** group box values are ignored if you print an EPS file.

The following options are available in the **Layout** group box:

- **1 up**
- **2 up**
- **4 up**

Orientation

The settings in this group box specify how the document is positioned on the page. The following options are available:

- **Portrait** option button. Use this button to print your document in portrait mode. The page icon shows an example of the portrait orientation when you click this button.
- **Landscape** option button. Use this button to print your document in landscape mode. The page icon shows an example of the landscape orientation when you click this button.
- **Rotate** check box. The **Rotate** check box becomes available when you click the **Landscape** option button. Click to select the **Rotate** check box to rotate the image on the page.

To see the current dimensions of the page, such as the paper size and the unprintable margins, point to the page icon, and then press and hold down the mouse button. The **Orientation** group box is replaced by the **Page dimensions in inches** group box as seen in the following figure. Releasing the mouse button restores the **Orientation** group box.

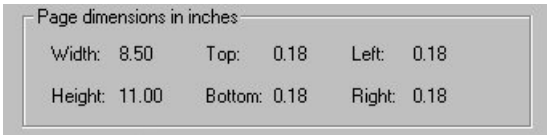


Figure 3-30 Page dimensions in inches

Paper source

This setting specifies where the media you want to use is located in the printer. The default setting is **Auto Select Tray**, which causes the printer to use the tray that supports the paper size you have chosen.

The following options are available:

- **Auto Select Tray**
- **Manual Feed in Tray 1**
- **Tray 1** through **Tray 6**, if installed on the product. If any of these trays are not installed, a red circle with a slash through it appears next to the tray name.
- Each of the paper types that the HP Color LaserJet 4700 printer supports, such as **Plain**, **Preprinted**, and **Letterhead**. For a full list of supported paper types see Media types and sizes.

Copies

Use this box to specify the number of copies to print. You can print from 1 to 999 copies. This option is ignored when printing an EPS file. Some software programs override this setting.

Unprintable Area

Clicking the **Unprintable Area . . .** button opens the **Unprintable Area** dialog box, which is shown in the following figure.

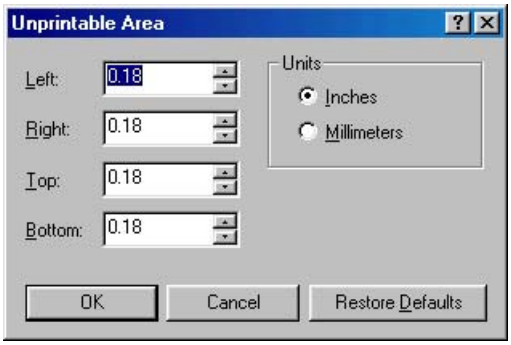


Figure 3-31 **Unprintable Area** dialog box

The **Unprintable Area** dialog box displays the area of the page that cannot be printed. Changing these settings to exceed the built-in page margins of the printer can cause the text in your document to be cut off when printed.

More Options

Clicking the **More Options . . .** button opens the **More Paper Options** dialog box, shown in the following figure.

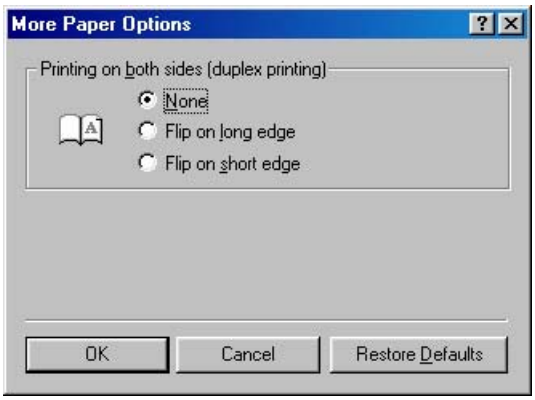


Figure 3-32 **More Paper Options** dialog box

The single control on this dialog box is the **Printing on both sides (duplex printing)** group box.

Use the settings in this group box to specify how you want to turn the page if you print on both sides. When you print on two sides of the page, your document can be read differently depending on the way it is printed. For example, you could have the pages of your document turn like a book or like a calendar.

Clicking **Flip On Long Edge** or **Flip On Short Edge** causes the page icon to change to illustrate how the printed document will look.

About

Clicking **About** opens a dialog box that contains copyright and version information about the printer driver. The following figure shows the **About** dialog box.

Figure 3-33 **About** dialog box

Restore Defaults

Clicking **Restore Defaults** resets the values on the **Paper** tab to their original values.

Graphics tab features

To gain access to the **Graphics** tab, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Graphics** tab.

The **Graphics** tab specifies the resolution, color controls, and halftoning settings for the printer. The following figure shows the **Graphics** tab.

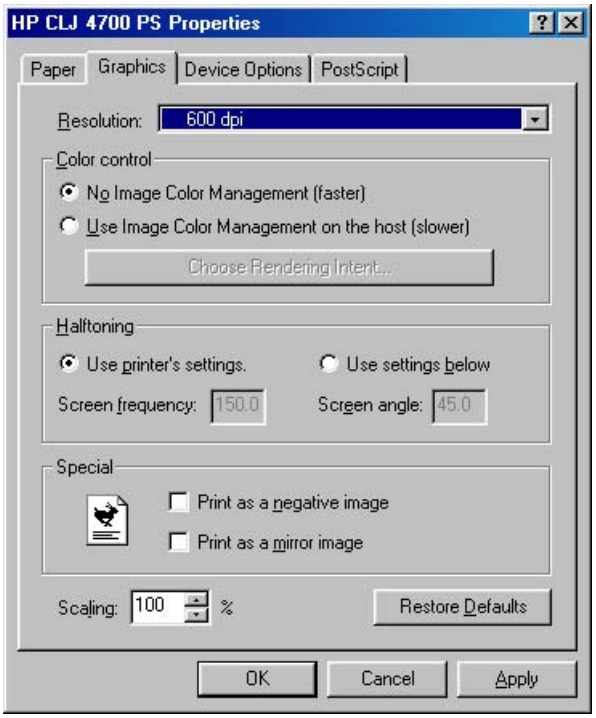


Figure 3-34 **Graphics** tab

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

- Resolution
- Color Control
- Halftoning
- Special
- Scaling

Resolution

Use the **Resolution** drop-down menu to specify the resolution for printing. Resolution is measured in dots per inch (dpi). The dpi setting for the HP Color LaserJet 4700 printer is 600 dpi.

Color Control

The **Color Control** option specifies whether you want the colors in your document to be adjusted before printing so that the printed page more closely matches the colors you see on your screen. **No Image Color Management** is selected by default, which results in a faster print job.

If you click **Use Image Color Management on the host**, the **Choose Rendering Intent** button becomes active. Click this button to open the **Image Color Management** dialog box to specify exactly how you want the colors adjusted.

The following figure shows the **Image Color Management** dialog box.

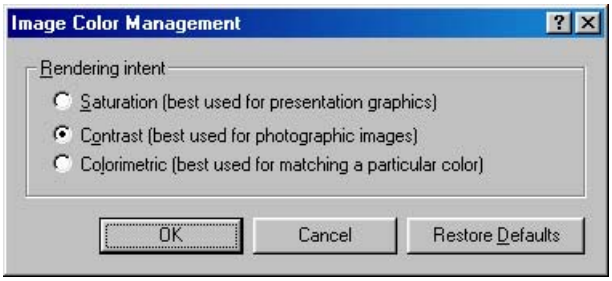


Figure 3-35 Image Color Management dialog box

The **Image Color Management** dialog box allows you to specify how color images are created to produce the best-looking image on the printed page.

The following controls are available:

- **Saturation**. Use this option if you are printing a chart or using fully saturated, bright colors.
- **Contrast**. Use this option for photographs or pictures in which the colors blend together.
- **Colorimetric**. Use this option if your document has a color for which you need an exact match, and you are sending the document to a printer that has that specific color of ink.

Halftoning

The **Halftoning** options specify values for the number of lines per inch (frequency) and angle of the pattern that you want to use for halftone screens.

If your print jobs have a moiré pattern when you print graphics such as photographs or detailed images, you might want to adjust these settings. However, the default printer settings should work in most cases. Do not change these settings unless you have experience using halftones. To return to the default settings after you have made changes, click **Use printer's settings**.

Special

The **Special** group box contains the following options:

- **Print as a negative image**. Selecting this option prints a negative of the image by complementing the RGB values or reversing the black and white values. Click this option to see the page icon change to reflect this setting.
- **Print as a mirror image**. Selecting this option prints a mirror image of your document by reversing the horizontal coordinates. Click this option to see the page icon change to reflect this setting.

Scaling

Use the **Scaling** control to specify the size of the image to print. You can specify from 25% to 400% of the original size. A setting of 400% prints an image four times larger than the original.

When you enlarge a document, only the portion of the document that fits on the page will print. The default setting is **100%**.

Fonts tab features

The **Fonts** tab controls the fonts for the HP PS Emulation Driver. The following figure shows the **Fonts** tab.

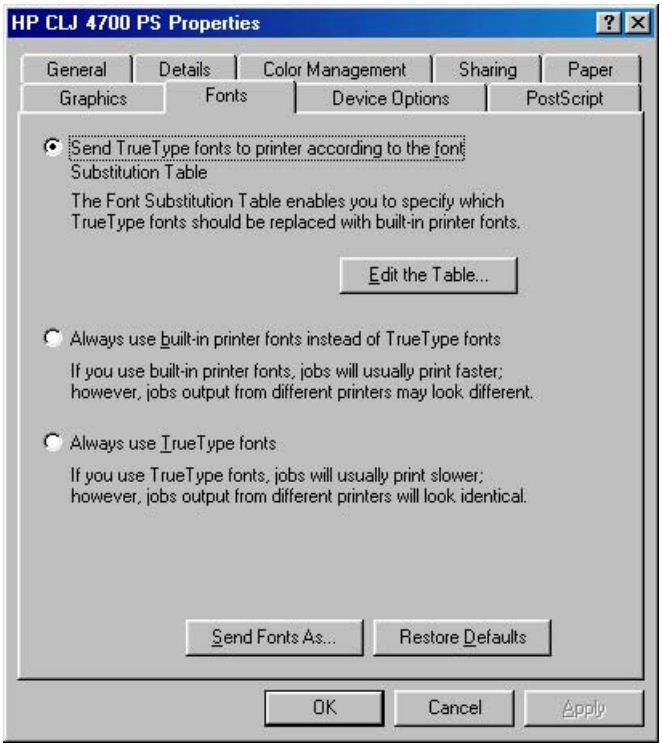


Figure 3-36 **Fonts** tab

The following options are available:

- Send TrueType fonts to printer according to the Font Substitution Table
- Always use built-in printer fonts instead of TrueType fonts
- Always use TrueType fonts

Send TrueType fonts to printer according to the Font Substitution Table

Use this option to substitute a PostScript printer font for the common TrueType fonts in your document. This can speed up printing because the TrueType fonts do not have to be downloaded. By default, common TrueType fonts are substituted when printing, but uncommon ones are downloaded to the printer. If you substitute a printer font for a TrueType font, the printed document might not match the look of the document on the screen.

Click **Edit the Table** to customize which TrueType fonts are downloaded and which printer fonts should be substituted for TrueType fonts.

Font Substitution Table

Clicking this option opens the font substitution table and makes available the options for changing the TrueType-to-PostScript font mapping. The following figure shows the Font Substitution table.

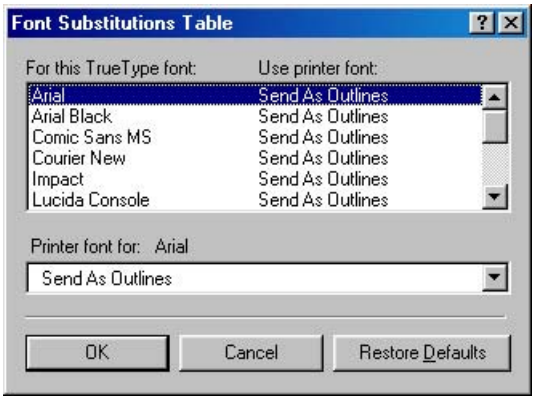


Figure 3-37 Font Substitution Table

Always use built-in printer fonts instead of TrueType fonts

Click this option to use font-matching rules to find the best PostScript font to substitute for TrueType fonts in your document. TrueType fonts are not downloaded when your document is printed. This can speed up printing, but the printed fonts might not exactly match the fonts on your screen.

Always use TrueType fonts

Click this option to download TrueType fonts to the printer when your document is printed. This ensures that your printed document looks the same as it does on your screen, but printing might take longer. Click **Send Fonts As** to specify the format in which the TrueType fonts are sent to the printer.

Send Fonts As

Use this option to specify how TrueType fonts are downloaded.

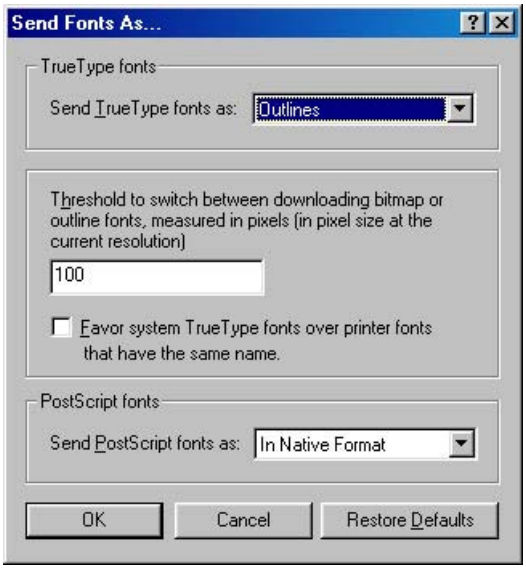


Figure 3-38 Send Fonts As dialog box

The following options are available:

- **Sent TrueType fonts as:**. This control offers the following settings:
  - **Outlines**. Use this setting for scalable outlines.
  - **Bitmaps**. Use this setting for bitmaps.
  - **Type 42**
  - **Don't Send**. Use this setting if you do not want any TrueType fonts to be downloaded.
- **Threshold to switch between downloading bitmap or outline fonts, measured in pixels (in pixel size at the current resolution)**. Use this control to specify the size of the font (in pixels) at which the PostScript driver should switch from downloading TrueType fonts as bitmap (Type 3) fonts to downloading them as outline (Type 1) fonts.

  The most efficient threshold value varies depending on the printing resolution. For example, at 300 dpi, downloading TrueType fonts as outlines becomes efficient when fonts are about 25 points or larger. If this value is 0, outline (Type 1) fonts are always sent.
- **Favor system TrueType fonts over printer fonts that have the same name**. Use this option to specify whether to use system TrueType fonts instead of printer fonts when the same font is found on both the computer and the printer. Printer fonts are the default.

  Using printer fonts can speed up printing because the TrueType fonts do not have to be downloaded. However, the fonts in the printed document might not exactly match the fonts on your screen.
- **Send PostScript fonts as:**. Use this option to specify whether to download PostScript fonts to the printer. The following options are available:
  - **In Native Format**. Clicking this option downloads the PostScript font files to the printer before your document prints.
  - **Don't Send**. If you click this option, no fonts are downloaded. This does not affect downloading of TrueType fonts.

Device Options tab features

To gain access to the **Device Options** tab, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **Device Options** tab.

The **Device Options** tab communicates information about the hardware configuration to the print driver.

When the driver is opened from within a software program, the **Device Options** tab includes only the **Printer features** controls. When opened from the **Printers** folder, the **Device Options** tab appears as shown in the following figure.

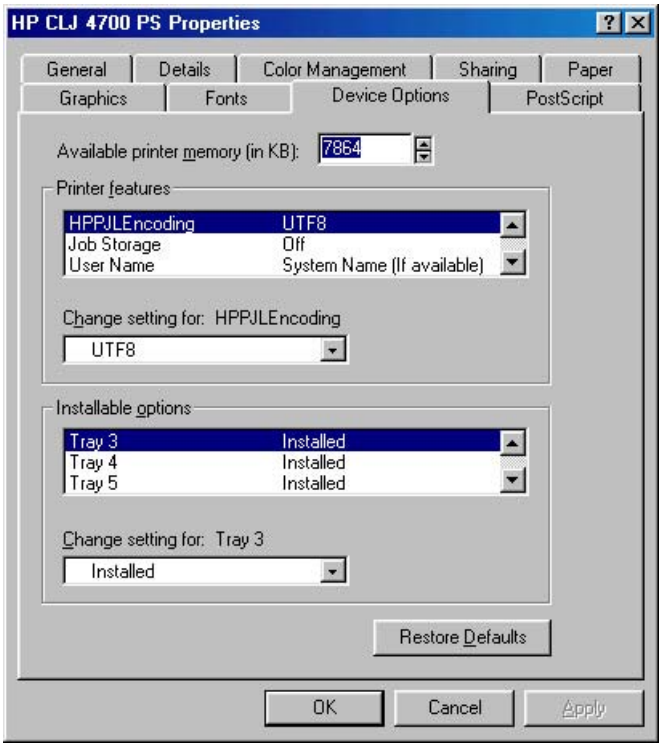


Figure 3-39 **Device Options** tab

NOTE Changes that you make to the **Device Options** tab are not reflected in the **Properties** settings until the modified device settings have been applied. For example, the duplexing unit will not appear until you modify the **Device Options** tab, apply the settings, and then re-open **Properties**.

The **Device Options** tab contains the following options:

- Available printer memory
- Printer features
- Installable Options

Available printer memory

The **Available printer memory** control specifies the amount of memory in your printer. If the value in this control does not match the amount of memory in your printer model, use the spin box to specify the correct amount of memory.

Printer features

The **Printer features** group box displays settings specific to your printer. You can change the settings by selecting the setting you want to change and then specifying a new value in the **Change setting for** list.

The printer feature settings available on this tab include the following:

- HPPJLEncoding
- Job Storage

- User Name
- PIN digit 1 (for Private Job)
- Print Color as Gray
- Collate
- Fit to Page
- Stapling Options
- Color Options
- Color Themes for RGB Color
- Color Themes for CMYK Color
- Edge Control
- Text Neutral Grays
- Text Halftone
- Graphic Neutral Grays
- Graphic Halftone
- Photographs Neutral Grays
- Photographs Halftone
- Watermark (Pages per Sheet)
- Print Watermark
- Watermark
- Watermark Font
- Watermark Size
- Watermark Angle
- Watermark Style
- Watermark Color
- Watermark Intensity

HPPJLEncoding

The **HPPJLEncoding** feature contains the control for the **UTF8** feature.

Job Storage

The default value for this setting is **Off**, which means that the print job will not be stored in the printer.

NOTE The Job Storage feature requires at least 288 MB of total memory or the installation of a printer hard disk, which comes standard on the HP Color LaserJet 4700ph+ printer. The printer hard disk is available as an optional accessory for all other models.

If Job Storage is enabled (without installing a hard disk but with at least 288 MB of total memory), two **Job Storage Mode** settings are available on the Job Storage tab:

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

Two additional **Job Storage Mode** settings become available on the Job Storage tab if a hard disk is installed:

- **Quick Copy**
- **Stored Job**
- **Quick Copy**. When you select **Quick Copy**, the entire print job prints and a copy of the print job is stored on the printer, after which you can print additional copies of the print job at the printer control panel. The number of quick-copy print jobs that can be stored in the printer is set by using 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 at the printer control panel in the **CONFIGURATION** menu, and the default is 32. When this preset limit is reached, the new document overwrites the oldest held document. Also, a document that has the same user and job name as one that is already stored on the hard disk will overwrite the existing document. **Quick Copy** jobs are deleted if you turn off the printer.

- **Proof and Hold**.

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

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

NOTE The printer configuration can be set to hold a maximum of 50 quick-copy or proof-and-hold jobs. The number is set at the printer control panel in the **CONFIGURATION** menu, and the default is 32. When this preset limit is reached, the new document overwrites the oldest held document. Also, a document that has the same user and job name as one that is already stored on the hard disk will overwrite the existing document.

- **Private Job**.

  When you select **Private Job**, the print job is sent to the printer, but is not printed until you request the job at the printer control panel. The print job can be printed only after you type the correct PIN at the control panel.

  After selecting **Private Job** from the **Device Options** tab, scroll to the **PIN digit 1 (for Private Job)** control, click to select it, and then select a number from the **Change setting for: PIN digit 1**

(for Private Job) list. Repeat this process to select a number for each of the remaining three PIN digits. If you do not select a PIN, the default PIN of 0000 is used.

After it is released for printing, the private job is immediately deleted from the printer. This feature is useful when you are printing sensitive or confidential documents that you do not want to leave in an output bin after printing. If more copies are needed, you must reprint the job from the software program. If you send a second private job that has the same user name and job name as an existing private job (and you have not released the original job for printing), the job will overwrite the existing job, regardless of the PIN. Private jobs are deleted if you turn off the printer.

- **Stored Job**. To use the **Stored Job** option, a printer hard disk must be installed and Job Storage must be enabled.

  Use the **Stored Job** option to send a print job directly to the printer hard disk without printing it. The print job is stored in the printer as if it is an electronic file cabinet. After the print job is stored on the printer hard disk, you can print the job at the printer control panel.

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

  You can disable Job Storage while leaving the printer hard disk enabled. To disable Job Storage, click **Start**, select **Settings**, and then click **Printers**. Right-click the printer name, click **Properties**, click the **Device Options** tab, select **Job Storage:** from the **Printer features** list, and then select **Disabled** in the **Change setting for: Job Storage** list.

  To gain access to the **Job Storage** tab in Windows 98 or Windows Me, click **Start** on the Windows task bar, click **Settings**, and then click **Printers**. Right-click the printer name, and then click **Properties**.

User Name

User Name. The default value for this setting is **System Name (if available)**. Additional values for this setting include numbers 1 through 20.

PIN digit 1 (for Private Job)

PIN digit 1 (for Private Job). Settings for PIN digits 2 through 4 follow this setting in the **Printer features** list. The default value for each of these settings is **0**. For more information about using this setting, see Private Job.

Print Color as Gray

The **Print Color as Gray** feature contains the following options:

- **Off** (default)
- **On**

Collate

The **Collate** feature contains the following options:

- **On (turn off in application)**
- **Off**

Fit to Page

The **Fit to Page** feature contains the following options:

- **Prompt User for correct size** (default)
- **Nearest Size and Scale**
- **Nearest Size and Crop**
- **Letter**
- **A4**

Stapling Options

The **Stapling Options** feature contains the following options:

- **One Staple Angled (Maximum 30 Sheets) Portrait**
- **One Staple Angled (Maximum 30 Sheets) Landscape**

Color Options

The **Color Options** feature contains the following options:

- **Automatic** (default)
- **Manual**

Color Themes for RGB Color

The **Color Themes for RGB Color** feature contains the following options:

- **Default (sRGB)**. Select **Default (sRGB)** for most printing needs. This setting instructs the printer to interpret RGB color as sRGB, which is the accepted standard of Microsoft and the World Wide Web Organization (www). Colors are matched to optimize the RGB colors on the screen and to provide vivid images and graphics.
- **Image Optimization (sRGB)**. Select **Image optimization (sRGB)** to enhance documents in which the content is mainly bitmap images, such as .GIF or .JPG files. This setting instructs the printer to use the best color matching for rendering sRGB bitmap images. This setting affects only raster data; it has no effect on text or vector-based graphics. Using glossy media in combination with this setting provides the maximum enhancement.
- **Adobe RGB (1998)**. Select **AdobeRGB (1998)** for documents that use the AdobeRGB color space rather than sRGB. For example, some digital cameras capture images in Adobe RBG, and documents that are produced with Adobe PhotoShop use the Adobe RGB color space. When printing from a professional software program that uses Adobe RGB, it is important that you turn off the color management in the software program and allow the printer software to manage the color space.
- **None**. Select **None** to instruct the printer to print RGB data in raw device mode. To render documents properly when this option is selected, you must manage color in the program in which you are working or in the operating system.

NOTE To prevent poor image quality, use this option only if you are familiar with the procedures for managing color in the software program or the operating system.

- **Custom Profile**. Select **Custom Profile** when you want to simulate the printed output from other printers or for using special effects, such as sepia tones. This setting instructs the printer to use a custom input profile to more accurately predict and control color output.

  The default Custom Profile is the color table used on the HP Color LaserJet 4650. The printer holds only one custom profile at a time, so when you download and install another color table, it erases the default color table and installs the new one.

  You can download custom profiles from the following Web site:

  www.hp.com/support/clj4700

Color Themes for CMYK Color

The **Color Themes for CMYK Color** feature contains the following options:

- **Default CMYK+**. HP CMYK+ technology enables a high-quality default CMYK print path. Select this option for most digital commercial print jobs to produce optimal prints.
- **SWOP**. This option is a common ink standard in the U.S. and other countries/regions.
- **Euroscale**. This option is a common ink standard in Europe and other countries/regions (also known as Euro Standard).
- **DIC**. DIC stands for Dainippon Ink and Chemical, a common ink standard in Japan and other countries/regions.
- **Custom Profile**. Select this option to use a custom input profile to accurately control color output (for example, to emulate a specific HP Color LaserJet printer). Download color profiles from the following Web site:

  www.hp.com/go

Edge Control

The **Edge Control** feature contains the following options:

- **Maximum**
- **Normal** (default)
- **Light**
- **Off**

Text Neutral Grays

The **Text Neutral Grays** feature contains the following options:

- **Black Only** (default)
- **4-Color**

Text Halftone

The **Text Halftone** feature contains the following options:

- **Smooth**
- **Detail**

Graphic Neutral Grays

The **Graphic Neutral Grays** feature contains the following options:

- **Black Only** (default)
- **4-Color**

Graphic Halftone

The **Graphic Halftone** feature contains the following options:

- **Smooth**
- **Detail**

Photographs Neutral Grays

The **Photographs Neutral Grays** feature contains the following options:

- **Black Only**
- **4-Color** (default)

Photographs Halftone

The **Photographs Halftone** feature contains the following options:

- **Smooth**
- **Detail**

Watermark (Pages per Sheet)

The **Watermark (Pages per Sheet)** feature contains the following options:

- **1** (default)
- **>= 2**

Print Watermark

The **Print Watermark** feature contains the following options:

- **No** (default)
- **All Pages**
- **First Page Only**

Watermark

The **Watermark** feature contains the following options:

- **None** (default)
- **Draft**
- **Company Confidential**
- **Company Proprietary**
- **Company Private**
- **Confidential**
- **Copy**
- **Copyright**
- **File Copy**
- **Final**
- **For Internal Use Only**
- **Preliminary**
- **Proof**
- **Review Copy**
- **Sample**
- **Top Secret**
- **Urgent**
- **Custom**

Watermark Font

The **Watermark Font** feature contains the following options:

- **Courier Bold**
- **Helvetica Bold** (default)
- **Times Bold**

Watermark Size

Watermark Size. Settings for the watermark size range from 24 points to 90 points. 48 points is the default.

Watermark Angle

Watermark Angle. Settings for the watermark angle range from 90° to -90° in 15° intervals. A 45° angle is the default.

Watermark Style

The **Watermark Style** feature contains the following options:

- **Narrow Outline**
- **Medium Outline** (default)
- **Wide Outline**
- **Wide Halo Outline**
- **Filled**

Watermark Color

The **Watermark Color** feature contains the following options:

- **Gray**
- **Red**
- **Orange**
- **Yellow**
- **Green**
- **Blue**
- **Violet**

Watermark Intensity

Watermark Intensity

- **Darkest**
- **Darker**
- **Dark**
- **Medium Dark**
- **Medium**
- **Medium Light**
- **Light**
- **Lighter**
- **Lightest**

Installable Options

This section provides information to configure the printing options that you can install for the HP Color LaserJet 4700 printer. The following controls are available:

- **Tray 3**
- **Tray 4**
- **Tray 5**
- **Tray 6**
- **Accessory Output Bin**
- **Mopier Mode**
- **Printer Hard Disk**
- **Job Storage**
- **Duplex Unit (for 2-sided Printing)**
- **VMOption**

Tray 3, Tray 4, Tray 5, and Tray 6

This control specifies whether you have additional 500-sheet feeder trays (**Tray 3** through **Tray 6**) installed on your printer. The default setting is **Uninstalled**.

Accessory Output Bin

This control specifies whether you have an **HP 750-Sheet Stapler/Stacker** accessory output device installed on your printer. The default setting is **Uninstalled**.

Mopier Mode

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

The HP Color LaserJet 4700 supports the transmit-once mopying feature when the **Mopier Mode:** setting on the **Device Options** tab is **Enabled**.

Printer Hard Disk

When this option is enabled, the **Job Storage** option and the **Mopier Mode** are enabled in the print driver. The **Job Storage** option allows you to store print jobs, and then print them later from the control panel. The multiple-original print (mopy) function is an HP-designed feature that produces multiple, collated copies from a single print job.

Job Storage

When job storage is enabled, the printer can store print jobs so that you can gain access to those print jobs later at the control panel.

Duplex Unit (for 2-sided Printing)

The HP Color LaserJet 4700 printer is equipped with automatic 2-sided printing (duplexing), which allows you to print on both sides of supported media. Automatic 2-sided printing is not supported for certain media types, including transparencies, labels, envelopes, heavy, extra heavy, cardstock, and glossy film.

NOTE The HP Color LaserJet 4700 printer supports smart duplexing. The printer detects information on both sides of the print job pages and runs the pages through the duplexing unit only if printable information appears on the second side of the page.

PostScript tab features

To gain access to the **PostScript** tab, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers**.
4. Right-click the printer name.
5. Click **Properties**.
6. Click the **PostScript** tab.

The **PostScript** tab controls the PostScript functions for the PS Emulation Driver. The following figure shows the **PostScript** tab.

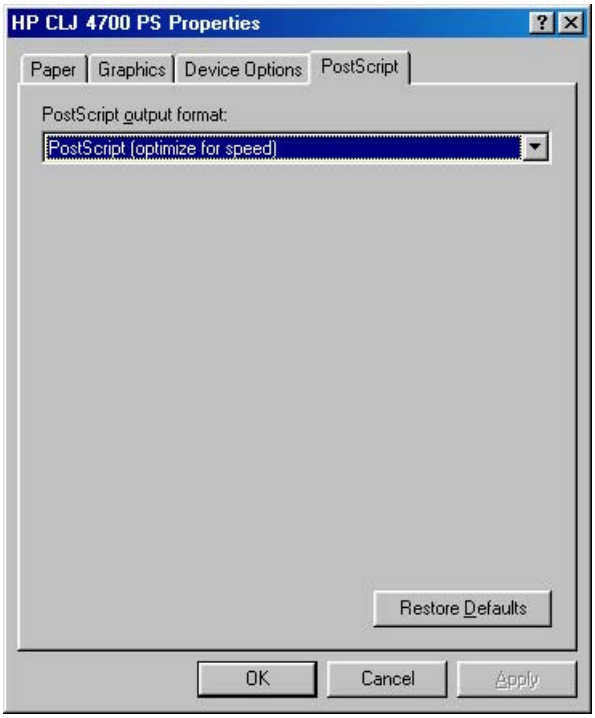


Figure 3-40 PostScript tab

The **PostScript** tab contains the following elements:

- PostScript output format
- PostScript header
- Print PostScript error information
- PostScript timeout values
- Advanced

PostScript output format

The **PostScript output format** list allows you to specify the format for PostScript files. The following options are available:

- **PostScript (optimize for speed)**. Use this setting for printing most documents.
- **Optimize for Portability**. Use this setting to create a file that conforms to the Adobe Document Structuring Conventions (ADSC). Each page of the document will be a self-contained object. This is useful, for instance, if you want to create a PostScript file and print it on a different printer.
- **Encapsulated PostScript (EPS)**. Use this setting to include the file as an image in another document that is to be printed from a different program.
- **Archive Format**. Use this setting to create a PostScript file that you can use later.
- **PJL archive format**. This setting notifies the printer that the document is being printed in a different printer language.

PostScript header

Use the **PostScript header** options to specify whether to send header information to the printer each time you print a document. The following options are available:

- **Download header with each print job**. This is the default setting and is sufficient or most types of printing. Use this setting if you print to a shared network printer or to a file on a disk.
- **Assume header is downloaded and retained**. If you print to a local printer, you can save printing time by sending the header information to your printer only once.
- **Send Header Now**. Click this button to send header information to the printer. This option is unavailable when you specify **EPS**, **Archive**, or **PJL Archive** formats.

Print PostScript error information

Use the **Send PostScript error information** option to print PostScript error messages after your document has been printed. The PostScript printer driver can detect certain errors that Microsoft Windows cannot. If you are having printing problems, click this option. This information can help you, a system administrator, or a printer-support representative determine what caused the problem. The error message information is not included in EPS format.

PostScript timeout values

Use the following options to specify the PostScript timeout values for your printer.

- **Job timeout**. This control specifies how long the document can take to get from the computer to the printer before the printer stops trying to print the document. If you specify **0 seconds**, the printer continues trying to print indefinitely. The default setting is **0 seconds**. You can use the spin box to change this value to a maximum of **32,767 seconds**.
- **Wait timeout**. This control specifies how long the printer waits to get more postscript information from the computer. After the specified time passes, the printer stops trying to print the document and prints an error message. If you are trying to print a very complicated document, you might want to increase this value. If you specify **0 seconds**, the printer waits indefinitely. The default setting is **300 seconds**. You can use the spin box to change this value to a maximum of **32,767 seconds**.

Advanced

Click the **Advanced . . .** button to open the **Advanced PostScript Options** dialog box, which appears in the following figure.

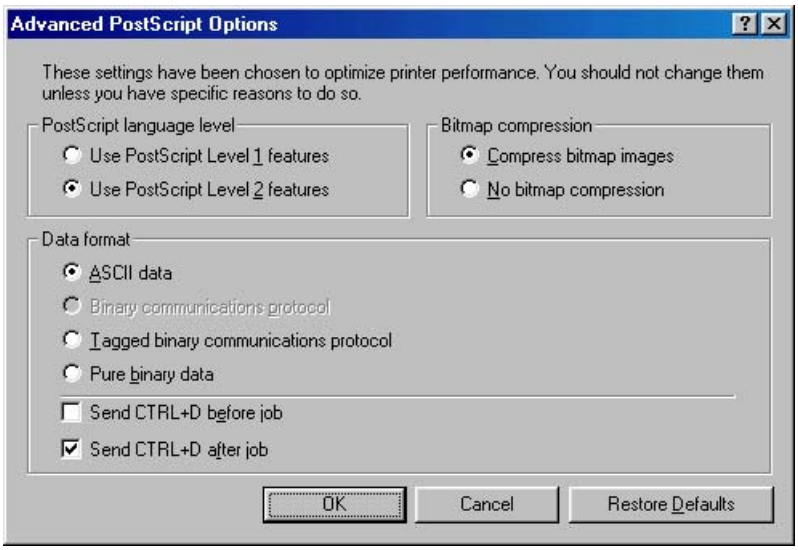


Figure 3-41 Advanced PostScript Options dialog box

The following options are available on the **Advanced PostScript Options** dialog box.

- PostScript Language Level
- Bitmap compression
- Data format
- Send CTRL+D before job
- Send CTRL+D after job

PostScript Language Level

The **PostScript Language Level** specifies which PostScript language level to use, from 1 to the highest level that your printer supports. Some printers support multiple levels. It is usually best to select the highest level that is available, because a higher language-level provides more features. In some

instances, however, you would still use level 1. For example, if you are printing a file to disk and that file will be printed by someone who has a level-1 printer, you would need to select level 1.

You can choose between PostScript Level 1 and PostScript Level 2 features for the HP Color LaserJet 4700.

Bitmap compression

Use this control to specify whether to compress graphics before sending your document to the printer. If you are using PostScript level 2, or if you are using PostScript level 1 and a printer connected to a serial port, click **Compress bitmap images**. If you are using PostScript level 1 and a printer connected to a parallel port or if you are using a network printer, click **No bitmap compression**.

Data format

This control specifies the protocol that the printer uses for print jobs. The following options are available:

- **ASCII data**. This is the default setting. When you click **ASCII data**, data is sent in ASCII format (7-bit), which might take longer to print but can be sent through any I/O channel, such as a serial, parallel, or network port.
- **Binary communications protocol**. When you click **Binary communications protocol**, the printer sends all data except special control characters in binary (8-bit) format. This format can be sent over parallel or serial communications ports and is faster than sending data in ASCII format. If you select this option, click **Send Mode** to switch your printer to Binary Communications Protocol (BCP) for future print jobs.

  NOTE This option is available only if the computer is connected to the printer through a direct connection (via USB or parallel cable).

- **Tagged binary communications protocol**. When you click **Tagged Binary Communications Protocol**, all data except special control characters is sent in binary (8-bit) format. The binary formats can be sent over parallel or serial communications ports and are faster than sending data in ASCII format.
- **Pure binary data**. When you click **Pure binary data**, all data except special control characters is sent in binary (8-bit) format. The binary formats can be sent over parallel or serial communications ports and are faster than sending data in ASCII format.

Send CTRL+D before job

This control specifies whether the printer is reset at the beginning of every postscript document. The default setting is off (unselected). Ctrl-D resets the printer to its default setting to ensure that previous print jobs do not affect the current print job. Ctrl-D might cause a print job to fail if the printer is connected through a network. If your document fails to print when sent to a printer connected through parallel or serial ports, click to select the **Send CTRL+D before job** check box.

Send CTRL+D after job

This control specifies whether the printer will be reset at the end of every postscript document. The default setting is off (unselected). Ctrl-D resets the printer to its default setting to ensure that future print jobs are not affected by the current print job. Ctrl-D might cause a print job to fail if the printer is connected through a network. If your document fails to print when sent to a network printer, click to select the **Send CTRL+D before job** check box.

4 HP PCL 6, PCL 5, and PS emulation unidrivers for Windows

Introduction

This chapter describes the features of the HP Color LaserJet 4700 unidrivers. The unidrivers are the HP PCL 6 Unidriver, the HP PCL 5 Unidriver, and the HP Postscript 3 Emulation Unidriver (PS Emulation Unidriver) for Windows 2000, Windows XP (32-bit and 64-bit), and Windows Server 2003 (32-bit and 64-bit).

You can control print jobs from several places: the product control panel, the software program print dialog box, and the driver user interface. Generally, for features that are duplicated in more than one location (for instance, you can select the media input tray from any of them), settings that are established in the software program take precedence over print-driver settings. Print-driver settings, in turn, override product control-panel settings.

NOTE For a comparison of features between the HP unidrivers and HP traditional print drivers in various operating systems, see the Driver-feature comparison in various operating systems section of this manual.

When you install the print-system software in Windows 2000, Windows XP, and Windows Server 2003, the HP PCL 6 Unidriver is installed by default. The HP PCL 5 Unidriver and the PS Emulation Unidriver can be installed by performing a Custom Installation.

The following sections describe the options that are available on each tab of the HP PCL 6 Unidriver, the HP PCL 5 Unidriver, and the PS Emulation Unidriver

This chapter also describes differences between the HP PCL 6 Unidriver, the HP PCL 5 Unidriver, and the PS Emulation Unidriver. Unless otherwise noted, features described here apply to all three.

This chapter contains the following sections:

- Access to print drivers
- Help system
- Advanced tab features
- Paper/Quality tab features
- Effects tab features
- Finishing tab features
- Output tab features

- Job Storage tab features
- Color tab features
- Services tab
- Device Settings
- About tab

Access to print drivers

Depending on the operating system on which you are installing the print drivers, you can gain access to the print drivers and different print-driver interfaces in several ways.

To gain access to the print-driver settings from within most software programs, follow these steps:

1. Click **File**
2. Click **Print**.
3. Click **Properties**.

The appearance and names of the driver tabs can vary, depending on the operating system. These driver settings apply only while that software program is open.

You can also control the drivers directly from the Printers folder. Here you have access to two sets of driver tabs: the **Printing Preferences** tabs and the **Properties** tabs. The settings that you make on the **Printing Preferences** driver tabs control the driver default settings for each user's profile. Installable options can be configured in **Properties** driver tabs.

Printing Preferences driver tabs

The **Printing Preferences** driver tabs change the default settings that are used across all software programs. To gain access to these tabs, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.

The following **Printing Preferences** print-driver tabs are available:

- **Advanced**
- **Paper/Quality**
- **Effects**
- **Finishing**
- **Output**
- **Job Storage**
- **Color**
- Services

Properties driver tabs

This set of tabs controls the driver behavior and driver connections. To gain access to the **Properties** tabs, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Properties**.

The following **Properties** print-driver tabs are available:

- **General**
- **Sharing**
- **Ports**
- **Advanced**
- **Color Management**
- **Security**
- **Device Settings**
- **About**

Help system

The HP PCL 6 Unidriver, the HP PCL 5 Unidriver, and the PS Emulation Unidriver include a full-featured Help system to provide assistance with printing and configuration options.

NOTE Bubble Help, a feature of HP traditional PCL 6 and PCL 5 drivers, is not available in the HP PCL 6 Unidriver, HP PCL 5 Unidriver, and PS Emulation Unidriver.

What's this? Help

Windows 2000, Windows XP, and Windows Server 2003 support "What's this?" Help. You can gain access to "What's this?" Help messages in any of the following ways:

- Right-click a control and then click **What's this?**. A pop-up Help window appears.
- Click the **?** button in the upper-right corner of the frame, next to the **X**, to change the cursor to an arrow with a question mark. When you use this special cursor to select a control, 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

When you click the **Help** button on a driver tab or in a dialog box, a context-sensitive Help message appears.

Incompatible Print Settings messages

Incompatible print settings might produce unsolicited messages that appear in response to specific selections. These messages alert you that the selections are illogical or impossible given the capabilities of the printer or the current settings of other controls.

NOTE Constraint messages are limited, and the underlying software architecture might accept some settings that are illogical or impossible for the printer to perform. Sending a job with incompatible settings can lead to unexpected results. If print jobs do not print as expected, check the product documentation for the product capabilities.

In Windows 2000, Windows XP, and Windows Server 2003 operating environments, some technically invalid print-driver configurations result in warning messages. Duplexing, for instance, is not possible when the Transparency media type is selected. The following figure shows an **Incompatible Print Settings** message.

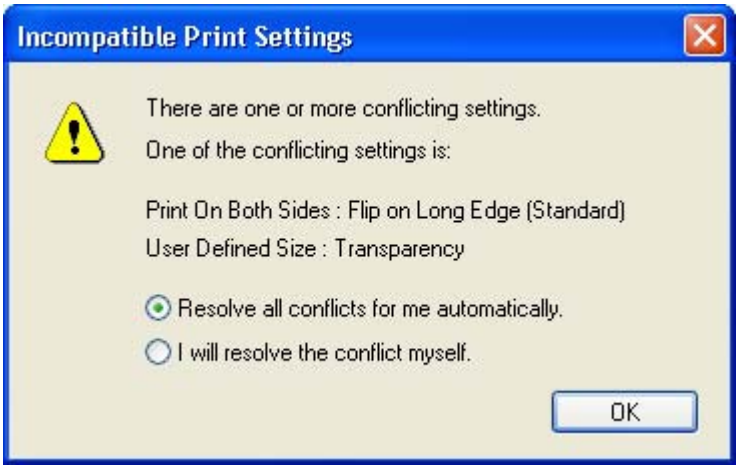


Figure 4-1 An Incompatible Print Settings message

Clicking the **Resolve all conflicts for me automatically** option button and then clicking **OK** accepts the change that was just made, and the driver then resets the conflicting control to a setting that is compatible with the new value. If you want to keep the conflicting setting, click **I will resolve the conflict myself** and then click **OK**.

NOTE In this example, the conflict can be resolved manually. If the conflict is not resolved when the driver is closed, then the same dialog appears again when a print job is sent to the product.

Advanced tab features

To gain access to the **Advanced** tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.
6. Click the **Advanced** tab.

You can use the **Advanced** tab to change the layout of printed pages. Use this tab to configure special controls that are not commonly used, as well as to control features such as media size and copies in the driver (although most current software programs support these features in the print dialog box or through the page settings in the software program). The following figure shows the **Advanced** tab.

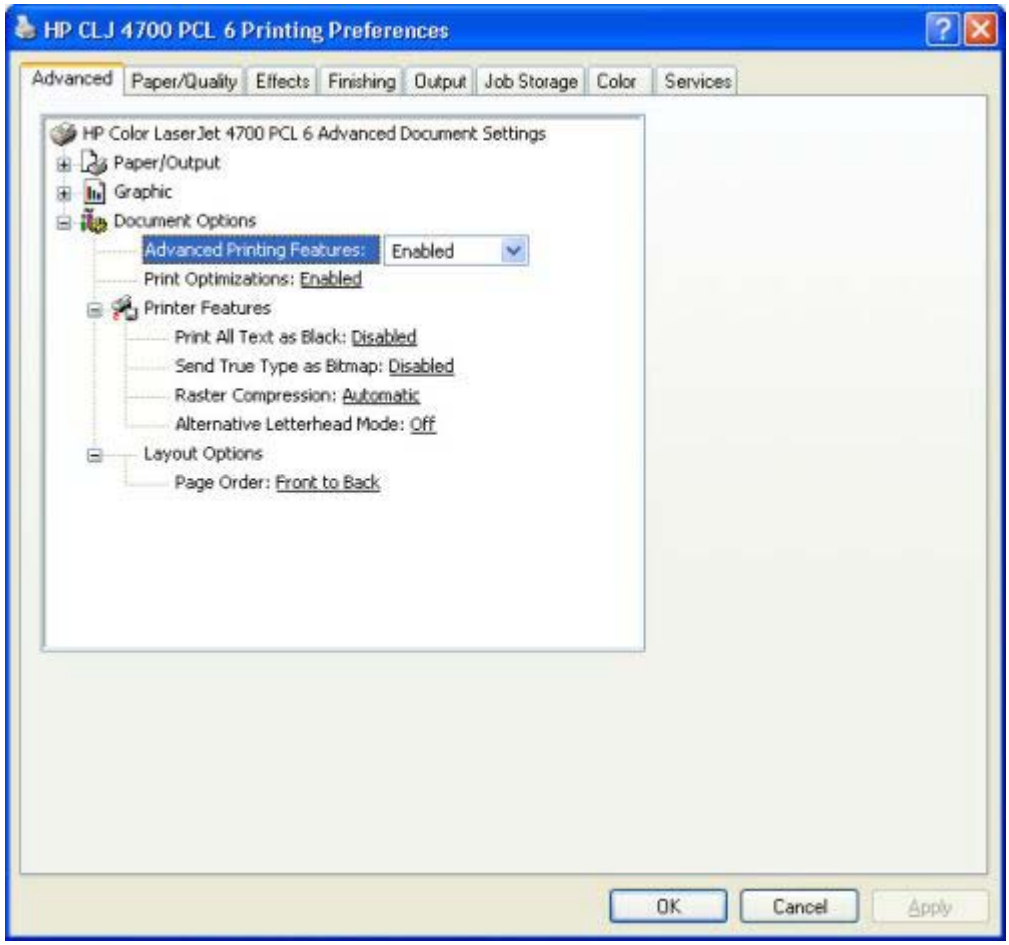


Figure 4-2 The default appearance of the **Advanced** tab

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

- Paper/Output

- Graphic
- Document Options

Paper/Output

The **Paper/Output** settings contain the following controls:

- **Copy Count** setting
- **Collated** check box (appears when you select **Copy Count**)

Copy Count

Copy Count specifies the number of copies to print. This driver setting is useful for software programs that do not provide a copy count. If a copy count is available in the software program, set the copy count in the software program.

The number of copies that you request appears in the **Copy Count** option. You can select the number by typing in the box or by using the up and down arrows to the right of the text box. Valid entries are numbers from 1 to 9999 for the HP Color LaserJet 4700. The copies value will not advance from the maximum number (9999) to 1 when the up arrow is used, or change from 1 to the maximum number (9999) when the down arrow is used. When you click another group box or leave the **Advanced** tab, invalid entries into the edit box (such as non-numerical input, numbers less than 1, or numbers greater than the maximum allowed) are changed to the last valid value that appeared in the box. The default number of copies is 1.

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

Collated

The **Collated** check box is visible when the **Copy Count** setting is selected. The check box becomes available and can be changed when the **Copy Count** setting is greater than 1.

When collated, pages print consecutively for each copy of the document. When not collated, copies of each page print together.

This setting is not synchronized with the collate setting in the software program **Print** dialog box. Settings in the software program override settings in the print driver. For instance, when using Microsoft Word, the **Collate** check box in the **Print** dialog box is selected by default. However, in the print driver, the **Collated** check box in the **Advanced** tab is not selected by default. The software program setting takes precedence over the driver setting, and the printed output is collated by default. To obtain uncollated printed output, clear the **Collate** setting in both the driver and the software program. Similarly, if the **Collated** check box is selected in the driver, but the **Collate** setting is not enabled in the software program, the printed output is uncollated.

Graphic

The **Graphic** setting contains the following controls:

- **Image Color Management** settings
- **True Type Font**settings

Image Color Management

This control lists the available Image Color Management (ICM) options used for printing color graphics. ICM, a set of calculations for color matching, makes it possible for programs to adjust colors before printing so that the color of images on the screen more closely match the color of those images when they are printed. The following options are available:

- **ICM Method**. The ICM Method setting specifies how to print your color graphics.
  - To enable Image Color Management, click the option and then select **ICM Enabled**.
  - If you want the host computer to perform calculations for color matching before it sends the document to the product, click **ICM Handled by Host System**.
  - If you want the HP Color LaserJet 4700 printer to perform calculations for color matching, click **ICM Handled by Printer**. In this case, a set of rules for mapping the colors is created and downloaded to the product. The product uses these rules to adjust colors in the document.
  - If you want the printer to perform calculations for color matching, click **ICM Handled by Printer** by using printer calibration. Because the set of rules for mapping the colors has already been downloaded to the product (which must be postscript language level 2 or higher), they will not be created or downloaded again.
- **ICM Intent**. The ICM Intent setting specifies how color images are created to produce the image that looks best on the printed page.
  - If you are printing a chart or using fully saturated, bright colors, click **Graphics**.
  - For photographs or pictures where the colors blend together, click **Pictures** to maximize the contrast.
  - If your document uses a color that you need to match exactly, and you are sending the document to a product that has that specific color of ink, click **Proof**.
  - If you want to preview the color settings from another product, click **Match**.

True Type Font

Use **Substitute with Device Font** (the default setting) to print documents that contain TrueType fonts by using equivalent printer fonts. This permits faster printing; however, you might lose special characters that the equivalent printer font does not support. Select **Download as Softfont** to download TrueType fonts for printing instead of using printer fonts.

Document Options

The **Document Options** setting contains the following controls:

- **Advanced Printing Features**
- **Print Optimizations**

Advanced Printing Features

When the **Advanced Printing Features** setting is **Enabled**, metafile spooling is turned on and **Finishing** tab options such as **Page Order**, **Booklet Layout**, and **Pages per Sheet** are available, depending on your product. For normal printing, leave the **Advanced Printing Features** setting at the default (**Enabled**). If compatibility problems occur, you can disable the feature. However, some advanced printing features might still be available in the print driver, even though they have been disabled. If you select an advanced printing feature in the print driver that has been disabled on the **Advanced** tab, the feature is automatically re-enabled.

Print Optimizations

NOTE Print Optimization settings are available only in the HP PCL 6 Unidriver and HP PCL 5 Unidriver. They are not available in the PS Emulation Unidriver.

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

PostScript Options

NOTE Print Optimization settings are available only in the HP PCL 6 Unidriver and HP PCL 5 Unidriver. They are not available in the PS Emulation Unidriver.

Select one of the following settings in the **PostScript Output Options** drop-down menu:

- Optimize for Speed (default)
- Optimize for Portability
- Optimize for Encapsulated PostScript (EPS)

Select one of the following settings in the **TrueType Font Download** drop-down menu:

- Automatic (default)
- Outline
- Bitmap
- Native TrueType

Select one of the following settings in the **PostScript Output Options** drop-down menu:

- Optimize for Speed (default)
- Optimize for Portability
- Optimize for Encapsulated PostScript (EPS)

Select one of the following settings in the **PostScript Language Level** drop-down menu:

- 3 (default)
- 2
- 1

Select one of the following settings in the **Send PostScript Error Handler** drop-down menu:

- Yes (default)
- No

Printer Features

The **Printer Features** setting contains the following controls:

- **Print All Text as Black**

  The **Print All Text as Black** feature is **Disabled** by default. When **Enabled** is selected, the driver prints all text as black regardless of the original document text color. Color text is printed as black, except for white text, which remains white. (White text is a reliable method of printing reverse typeface against a dark background.) This setting does not affect graphic images on the page, nor does it affect any text that is part of a graphic.

- **Send True Type as Bitmap**

  NOTE The **Send TrueType as Bitmap** option is available only in the HP PCL 6 and HP PCL 5 unidrivers. It is not available in the PS Emulation Unidriver.

  Send True Type as Bitmap provides an alternative for software programs that have trouble using TrueType fonts for special graphic aspects such as shading, rotation, or slanting. The setting is **Disabled** (off) by default. The TrueType fonts are converted to bitmap soft fonts before downloading. The **Enabled** setting causes the driver to send TrueType fonts to the printer as outlines, which retains the standard format (outline) of the fonts.

- **Raster Compression**

  NOTE The **Raster Compression** option is available only in the HP PCL 6 Unidriver. It is not available in the HP PCL 5 Unidriver or the PS Emulation Unidriver.

  Use the **Raster Compression** feature to select the graphics-compression method:

  - **Automatic**. The software determines the best compression method to use.
  - **Best Quality**. This option forces the software to use a lossless compression method. (Lossless means that no data is lost during compression.)
  - **Maximum Compression**. Where applicable, this option requires the software to always use a lossy compression method (some data is lost).

- **Graphics Mode**

  NOTE The **Graphics Mode** option is available only in the HP PCL 5 Unidriver. It is not available in the HP PCL 6 Unidriver or the PS Emulation Unidriver.

Use the Graphics Mode feature to select one of the following settings:

- **Send Graphics as Vector**. Select this setting to send graphics to the product as a combination of HP Graphics Language, version 2 (HP-GL/2) and raster images. This setting might produce higher-quality output. It is the default setting.
- Send Graphics as Raster. Select this setting to send all graphics to the product as images composed of individual dots. This setting might improve printing speed in some cases.

- **Alternative Letterhead Mode**

  When selected, this option eliminates the need to flip or reload letterhead or preprinted paper in a paper tray, whether you are printing on one side of the sheet or both sides of the sheet. Load the paper as you would for printing on both sides. If the printer tray has an icon that indicates to load paper either face-up or face-down, load the paper opposite of the orientation shown.

  When this option is selected, you must use one of the following options in the **Type is** setting:

  - Letterhead
  - Preprinted

  NOTE Alternative Letterhead Mode is available only if the printer is equipped with an automatic duplexing unit.

Layout Options

The **Layout Options** setting contains the **Page Order** setting.

Page Order specifies the order in which the pages of your document are printed. **Front to Back** prints the document so that page 1 prints first. **Back to Front** prints the document so that page 1 prints last.

NOTE The page-ordering operation works on whole sheets of media rather than on individual logical pages. Accordingly, if you set **Pages per Sheet** (on the **Finishing** tab) to be greater than one, the ordering of logical pages on a physical sheet of media does not change.

Paper/Quality tab features

To gain access to the **Paper/Quality** tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.
6. Click the **Paper/Quality** tab.

Use the **Paper/Quality** tab to specify the size, type, and source of the media. You can also use this tab to indicate different media-selection choices for the front cover, first page, other pages, last page, and back cover of the document. The following figure shows the **Paper/Quality** tab.

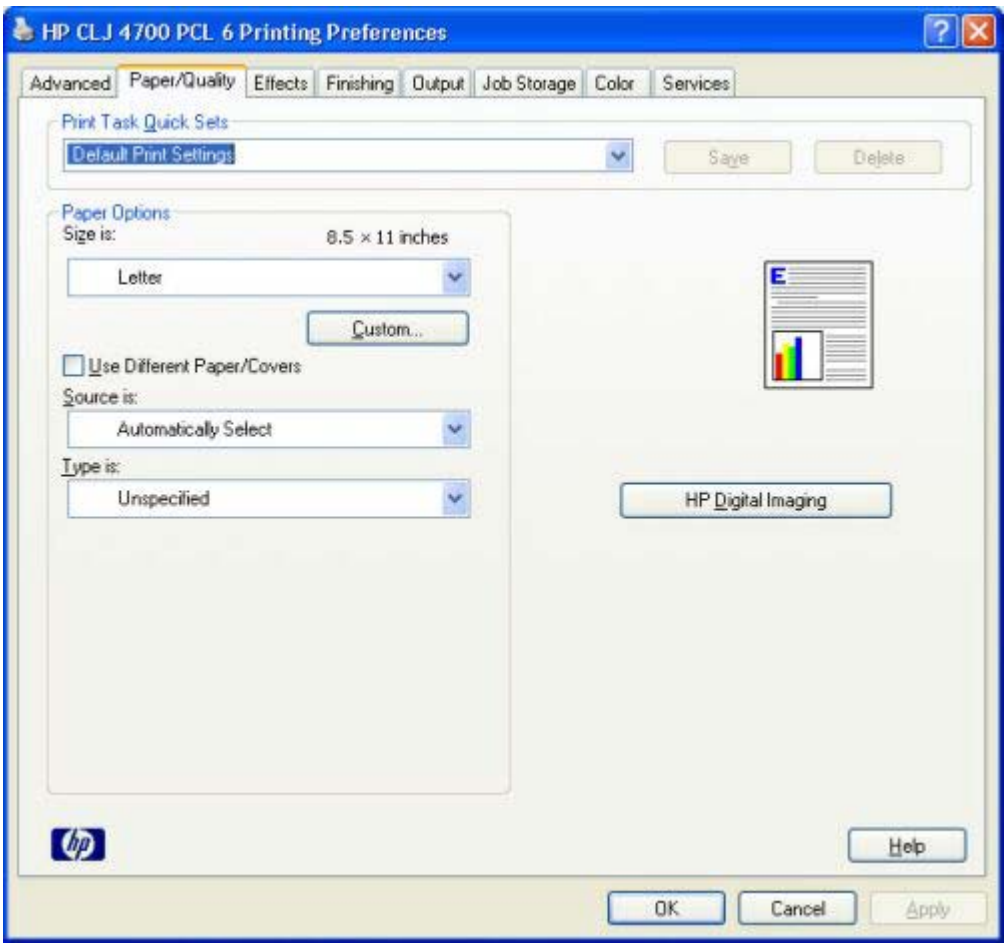


Figure 4-3 **Paper/Quality** tab

The **Paper/Quality** tab contains the following controls:

- **Print Task Quick Sets**
- **Paper Options**
- Document preview image
- **HP Digital Imaging**group box

Print Task Quick Sets

The first group box in the upper portion of the **Paper/Quality** tab is **Print Task Quick Sets**. Any change to the **Print Task Quick Sets** group box that is made on the **Paper/Quality** tab affects most of the **Printing Preferences** driver tabs (the **Paper/Quality**, **Effects**, **Finishing**, and **Job Storage** tabs) because they are all the same control.

Use the **Print Task Quick Sets** setting to store the current combination of driver settings that appear on all of the other print driver tabs (except the **Advanced** tab, where the setting is not available). **Print Task Quick Sets** are either preset by network-administrator settings or user-defined printing specifications (such as media size, pages per sheet, and so on). The **Print Task Quick Sets** control does *not* appear on the driver **Properties** tabs.

NOTE Administrators can predefine Print Task Quick Sets for their users. These administrator Print Task Quick Sets are defined on the server and are available to users, but usually cannot be modified by users. Users can also define Print Task Quick Sets for their own use. User-defined Print Task Quick Sets are described later in this section.

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

- **Default Print Settings**
- **User Guide Print Settings**

Default Print Settings

When you select **Default Print Settings**, nearly all of the settings are restored to the combination that existed after the driver was installed (the original settings). However, if the attribute combinations that are associated with watermark definitions, custom media sizes, or the other quick sets have been changed or deleted, the original settings for those items are not restored.

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

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

Table 4-1 Print Task Quick Set default values for the HP Color LaserJet 4700

Driver feature	Feature setting location	Default values for U.S. English Print Task Quick Sets	Preconfigurable[1] [1]
Print on Both Sides	**Finishing** tab, **Document Options** group box	Available, not selected	Yes

Table 4-1 Print Task Quick Set default values for the HP Color LaserJet 4700 (continued)

Driver feature	Feature setting location	Default values for U.S. English Print Task Quick Sets [1]	Preconfigurable [1]
Flip Pages Up	**Finishing** tab, **Document Options** group box	Unavailable, not selected	Yes
Booklet Layout	**Finishing** tab, **Document Options** group box	Unavailable, Off	Yes
Pages per Sheet	**Finishing** tab, **Document Options** group box	1 page per sheet	Yes
Print Page Borders	**Finishing** tab, **Document Options** group box	Unavailable	Yes
Page Order	**Finishing** tab, **Document Options** group box	Unavailable	Yes
Orientation	**Finishing** tab, **Orientation** group box	Portrait	Yes
Rotate by 180 degrees	**Finishing** tab, **Orientation** group box	Available, not selected	Yes
Resizing Options	**Effects** tab, **Resizing Options** group box	Actual Size	Yes
Print document on	**Effects** tab, **Resizing Options** group box	Available, not selected	Yes
Size to print on	**Effects** tab, **Resizing Options** group box	Actual Size	Yes
Scale to Fit	**Effects** tab, **Resizing Options** group box	Unavailable, selected	Yes
% of Normal Size	**Effects** tab, **Resizing Options** group box	Available, not selected	Yes
Watermarks	**Effects** tab	(none)	Yes
Watermarks First Page Only	**Effects** tab, **Watermark Details** dialog box	Unavailable, not selected	Yes
Current watermarks	**Effects** tab, **Watermark Details** dialog box (Click **Edit** for **Watermark Details**.)	(none)	Yes
Watermark Message	**Effects** tab, **Watermark Details** dialog box (Click **Edit** for **Watermark Details**.)	(none)	Yes [2]
Watermark Message Angle	**Effects** tab, **Watermark Details** dialog box (Click **Edit** for **Watermark Details**.)	Diagonal	Yes [2]
Watermark Message Angle (angle)	**Effects** tab, **Watermark Details** dialog box (Click **Edit** for **Watermark Details**.)	Unavailable unless the **Angle** option is selected, 52	Yes
Watermark Font Name	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	Arial	Yes [2]
Watermark Font Color	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	Gray	Yes [2]
Watermark Font Shading	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	Very Light	Yes [2]
Watermark Font Size	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	80	No
Watermark Font Style	**Effects** tab, **Watermark Details** dialog box, **Font Attributes** group box	Regular	Yes [2]

Table 4-1 Print Task Quick Set default values for the HP Color LaserJet 4700 (continued)

Driver feature	Feature setting location	Default values for U.S. English Print Task Quick Sets [1]	Preconfigurable [1]
Size is:	**Paper/Quality** tab, **Paper Options** group box	Letter	Yes
Use Different Paper	**Paper/Quality** tab, **Paper Options** group box	Available, not selected	No
Source is:	**Paper/Quality** tab, **Paper Options** group box	Automatically Select	Yes
Type is:	**Paper/Quality** tab, **Paper Options** group box	Unspecified	Yes
Contrast Enhancement	**Paper/Quality** tab, **HP Digital Imaging Options** dialog box	Available, Off	No
Digital Flash	**Paper/Quality** tab, **HP Digital Imaging Options** dialog box	Available, Off	No
SmartFocus	**Paper/Quality** tab, **HP Digital Imaging Options** dialog box	Available, Off	No
Sharpness	**Paper/Quality** tab, **HP Digital Imaging Options** dialog box	Available, Off	No
Smoothing	**Paper/Quality** tab, **HP Digital Imaging Options** dialog box	Available, Off	No
Unlabeled group box	**Job Storage** tab	Status message: for example, **Your job will be printed but not stored on the printer**	No
Job Storage Mode	**Job Storage** tab, **Job Storage Mode** group box	Off is selected	No
Proof and Hold	**Job Storage** tab, **Job Storage Mode** group box	Available, not selected	No
Private Job	**Job Storage** tab, **Job Storage Mode** group box	Available, not selected	No
Quick Copy	**Job Storage** tab, **Job Storage Mode** group box	Available, not selected	No
Stored Job	**Job Storage** tab, **Job Storage Mode** group box	Available, not selected	No
Require PIN to Print	**Job Storage** tab, **Job Storage Mode** group box	Unavailable, not selected	No
Windows User Name	**Job Storage** tab, **User Name** group box	Unavailable, selected (Windows User Name appears in field)	No
PIN to Print	**Job Storage** tab, **Require PIN** group box	Unavailable, not selected	No
Display Job ID when printing	**Job Storage** tab, **Job Notification Options** group box	Unavailable, selected	No

Table 4-1 Print Task Quick Set default values for the HP Color LaserJet 4700 (continued)

Driver feature	Feature setting location	Default values for U.S. English Print Task Quick Sets [1]	Preconfigurable[1] [1]
Job Name	**Job Storage** tab, **Job Name** group box	Unavailable, Automatically selected	No
Automatic (color options)	**Color** tab, **Color Options** group box	Selected	Yes
Manual (color options)	**Color** tab, **Color Options** group box	Available, not selected	Yes
Print in Grayscale	**Color** tab, **Color Options** group box	Available, not selected	Yes
Edge Control	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Normal	Yes
Neutral Grays (text)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Black Only	Yes
Halftone (text)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Detail	Yes
Neutral Grays (graphics)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Black Only	Yes
Halftone (graphics)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Detail	Yes
Neutral Grays (photographs)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	4–Color	Yes
Halftone (photographs)	**Color** tab, **Color Settings** dialog box (Click **Settings** on **Color** tab)	Detail	Yes
RGB Color	**Color** tab, **Color Themes** group box	Default (sRGB)	Yes

[1] These features can be preconfigured by using one of the HP driver preconfiguration tools. For more information, See HP Driver Preconfiguration, or go to: www.hp.com/go/hpdpc_sw.

[2] Not supported in Windows 98 and Windows Me.

User Guide Print Settings

The **User Guide Print Settings** option provides a Print Task Quick Set for optimal printing of the *HP Color LaserJet 4700 User Guide*.

When you select **User Guide Print Settings**, all of the settings are restored to the default settings, except for the following settings:

- On the **Paper/Quality** tab, **Type Is:** is set to **Unspecified**.
- On the **Finishing** tab, **Print on Both Sides** is set to **ON**.
- On the **Finishing** tab, **Flip Pages Up** is set to **ON**.
- On the **Finishing** tab, **Pages per Sheet** is set to **2 pages per sheet**.
- On the **Finishing** tab, **Page Order** is set to **Right then Down**.

Type new Quick Set name here

By default, the **Print Task Quick Sets** menu is set to **Type new Quick Set name here**. When you change any of the default settings on any of the **Printing Preferences** driver tabs and you want to save the configuration as a Print Task Quick Set, highlight the words **Type new Quick Set name here**, type the name you want for your new Print Task Quick Set, and then click **Save**. Print Task Quick Sets are saved in the system registry. To delete a Print Task Quick Set, select it from the drop-down menu and click **Delete**.

NOTE Administrators can predefine Print Task Quick Sets for their users. These administrator Print Task Quick Sets are defined on the server and are available to users, but usually cannot be modified by users. Users can also define Print Task Quick Sets for their own use. User-defined Print Task Quick Sets are described later in this section.

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

Paper Options

The settings specified in the **Paper Options** group box on the **Paper/Quality** tab apply to all of the pages of the document. The following figure shows the **Paper Options** group box and the selections that are available by default.

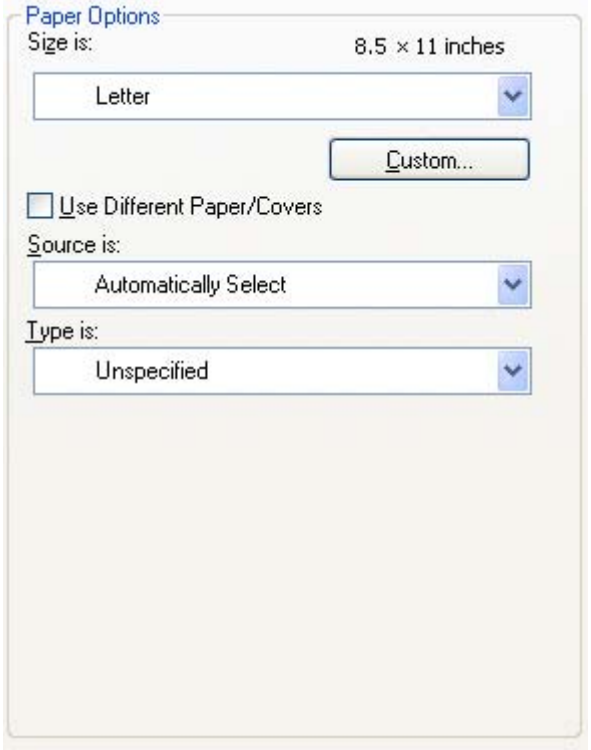


Figure 4-4 **Paper Options** group box

The appearance of the **Paper Options** group box changes when the **Use Different Paper/Covers** check box is selected. The settings in the **Paper Options** group box are described in the following order:

- Size is
- Custom Paper Size
- Source Is
- Type is
- Use Different Paper/Covers

Size is

The **Size is:** setting is a drop-down menu that lists all of the supported media sizes.

When you move the mouse over the dimensions label, the mouse cursor changes from an arrow to a gloved hand. Click the dimensions label to toggle between English and metric units.

Because media-size settings in most software programs override driver settings, it is generally best to use the driver to set media size only when you are printing from software programs that do not include a media-size setting, such as NotePad, or when you are producing a book or a booklet that does not require different media sizes.

NOTE Certain software programs can override the size command and specify different media sizes within a single document.

When you change the print-driver setting to a media size that is not currently loaded in the product, a control-panel message appears that prompts you to load the media size or choose another tray.

For information about media sizes, see the Media attributes section of this manual.

When the **Use Different Paper/Covers** check box is selected and different options are configured, the **Size is:**, **Source is:**, and **Type is:** menus change, offering a variety of options. For more information, see the Use Different Paper/Covers section in this chapter of the manual.

Custom Paper Size

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

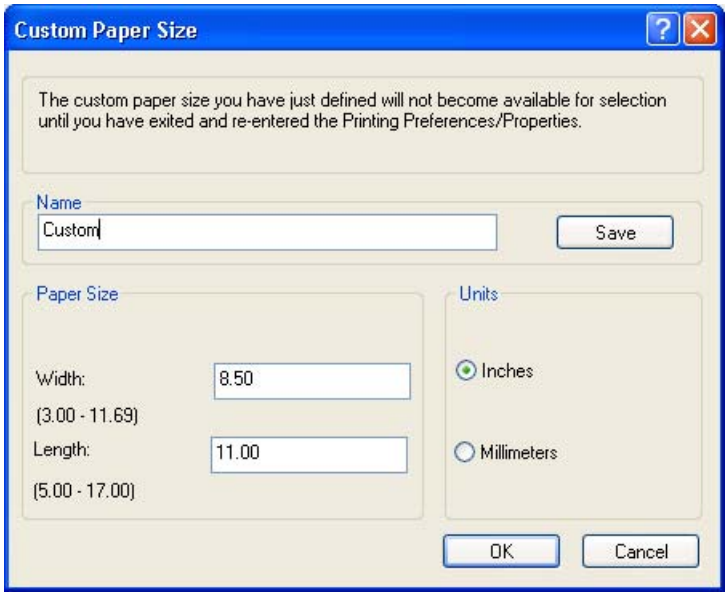


Figure 4-5 **Custom Paper Size** dialog box

Name

Use the **Name** text box to type a new name for a custom media size.

The name that appears in the **Name** text box depends on the following conditions:

- If a saved custom media size has been selected from the drop-down menu on the **Paper/ Quality** tab, then the **Name** text box shows the name of the selected custom media size.
- If a standard media size has been selected on the **Paper/Quality** tab, then the **Name** text box shows the default name of "Custom."
- If a new name has been typed into the **Name** text box for the purpose of saving a new size or renaming an existing size, then that new name will remain in the text box until the new size is saved or the dialog box is closed.

If you type a new name into the **Name** text box, but then do not click the **Save** button, you can change the width and height values without losing the name. However, if you close the dialog box without clicking the **Save** button, any unsaved name or size values are lost without warning.

Paper size

The width and height values can be changed by typing numeric strings into the edit boxes in the **Paper Size** group box.

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.

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

The resolution of each control is one millimeter or one-tenth of an inch, depending on the current measurement units.

Units

To change measurement units, select one of the radio buttons in the **Units** group box (either **Inches** or **Millimeters**).

Custom width and height control limits

The minimum media size for the HP Color LaserJet 4700 is 76.2 x 127 mm (3 x 5 inches) and the maximum is 215.9 x 355.6 mm (8.5 x 14 inches). The following table summarizes media size limits for each media-handling device.

Table 4-2 PCL 6 custom media sizes

Tray	Dimensions	Minimum	Maximum
Tray 1 (100-sheet multipurpose)	Width	76.2 mm (3.0 inches)	215 mm (8.5 inches)
	Height	127.0 mm (5.0 inches)	355.6 mm (14.0 inches)
Tray 2 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 3 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 4 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 5 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 6 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Duplexing unit	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)

Source Is

The **Source is:** setting specifies the source tray to use for printing a document. The list of source trays depends on the printer accessories. Any optional source trays that are installed through the **Device Settings** tab also appear here.

The **Source is:** drop-down menu can contain the following options, depending on what has been installed on the product:

- **Automatically select**
- **Printer Auto Select**
- **Manual Feed in Tray 1**
- **Tray 1** (500-sheet multipurpose tray)
- **Tray 2** (500-sheet tray)

- **Tray 3** (500-sheet tray)
- **Tray 4** (500-sheet tray)
- **Tray 5** (500-sheet tray)
- **Tray 6** (500-sheet tray)

The default setting is **Automatically Select**. When this setting is selected, the HP Color LaserJet 4700 uses the source tray that supports the media size that you have selected. If you select a source tray other than **Automatically select**, make sure that the correct media size is loaded in the source tray. For information about media sources, see the Media attributes section of this manual.

Type is

The **Type is:** drop-down menu shows all of the media types that the HP Color LaserJet 4700 supports. When you use the default setting, **Unspecified**, the printer uses the default media type, which is usually **Plain**.

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

The following standard types appear in the lists:

- Unspecified
- Plain
- Preprinted
- Letterhead
- Transparency
- Prepunched
- Labels
- Bond
- Recycled
- Color
- Light (60–75 g/m^2, or 16.4 - 20.5 lb.)
- Intermediate (90 - 104 g/m^2, or 24.7 - 28.5 lb.)
- Heavy (105 - 120 g/m^2, or 28.8 - 32.9 lb.)
- Extra Heavy (120 - 163 g/m^2, or 32.9 - 44.7 lb.)
- Glossy (75 - 120 g/m^2, or 20.5 - 32.9 lb.)
- Cardstock (164 - 220 g/m^2, or 45 - 60.3 lb.)

- Rough (90 - 105 g/m^2, or 24.7 - 28.8 lb.)
- Heavy Glossy (120 - 160 g/m^2, or 32.9 - 43.9 lb.)
- Extra Heavy Glossy (160 - 220 g/m^2, or 43.9 - 58 lb.)
- Tough Paper (Glossy Film)
- Envelope

The default setting is **Unspecified**, and the program selects the media type. If you select a different setting, make sure that the correct media type is loaded in the tray that you selected in the **Source is:** setting. For more information about media types, see the Media attributes section of this manual.

When you change the print-driver setting to a media type that is not currently loaded in the product, a control-panel message appears that prompts you to load the media type or choose another tray.

Use Different Paper/Covers

You can print books that include different media types by using the **Use Different Paper/Covers** options.

When you select the **Use Different Paper/Covers** check box, the following settings can appear in the group box, along with the associated options:

- **Front Cover**
- **First Page**
- **Other Pages**
- **Last Page**
- **Back Cover**

NOTE You must use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting that you select in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings that you select remain configured until you close the software program.

Each option for the **Use Different Paper/Covers** setting is described in the following sections.

Front Cover

Use the **Front Cover** options to include a blank or preprinted front cover on a document, or to include a front cover from a source tray that is different from the one used for the remainder of the document.

The following figure shows the **Front Cover** setting and options.

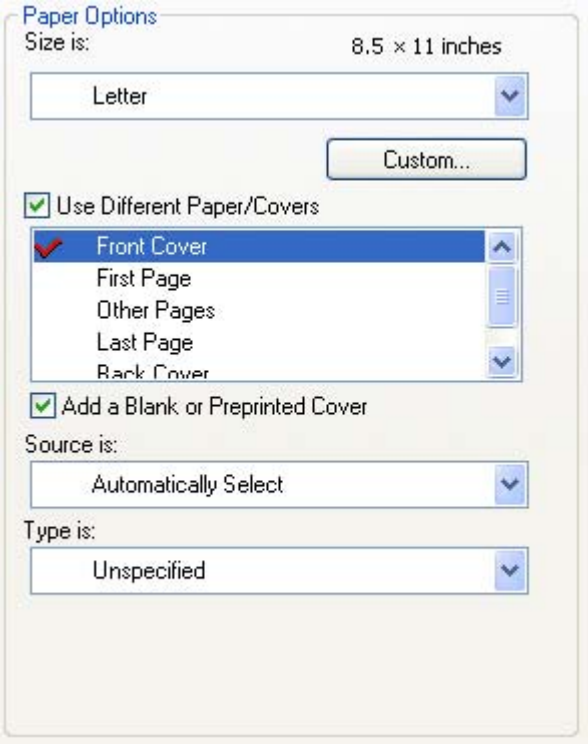


Figure 4-6 **Front Cover** options

The following are the **Front Cover** options:

- **Size is:** drop-down menu
- **Add a Blank or Preprinted Cover** check box
- **Source is:** drop-down menu
- **Type is:** drop-down menu

The **Size is:** setting specifies the media size to use for the entire print job. Changes made to the **Size is:** setting here override any previous **Size is:** settings in other **Use Different Paper/Covers** options.

When you select **Front Cover**, you must also select the **Add a Blank or Preprinted Cover** check box to enable the setting. When you select this check box, the **Source is:** and **Type is:** drop-down menus become available and a check mark appears next to the **Front Cover** option.

The **Source is:** setting specifies the source tray to use for adding a front cover to the document. The list of source trays depends on the printer accessories. Any optional media trays that are installed through the **Device Settings** tab also appear here. For more information about the **Source is:** setting, see the Source Is section of this chapter.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:** drop-down menu settings, see the **Type is:** in the Type is section of this chapter.

NOTE You must use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting that you select in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings you select remain configured until you close the software program.

First Page

Use the **First Page** options to select an alternative media type or source for the first page of a document. The following figure shows the appearance of the Paper Options group box when you select the **Use Different Paper/Covers** check box.

Figure 4-7 First Page options

The following are the **First Page** options:

- **Size is:** drop-down menu
- **Source is:** drop-down menu
- **Type is:** drop-down menu

The **Size is:** setting specifies the media size to use for the entire print job. Changes made to the **Size is:** setting here override any previous **Size is:** settings in other **Use Different Paper/Covers** options.

The **Source is:** setting specifies the source tray to use for printing a document. The list of source trays depends on the printer accessories. Any optional media trays that are installed through the **Device Settings** tab also appear here. For more information about the **Source is:** setting, see the Source Is section of this chapter.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:** drop-down menu settings, see the description for **Type is:** in the Type is section of this chapter.

NOTE You must use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting that you select in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings that you select remain configured until you close the software program.

Other Pages

Use the **Other Pages** options to select an alternative media type or source for the other pages of the document. The following figure shows the appearance of the Paper Options group box when you select the **Use Different Paper/Covers** check box.

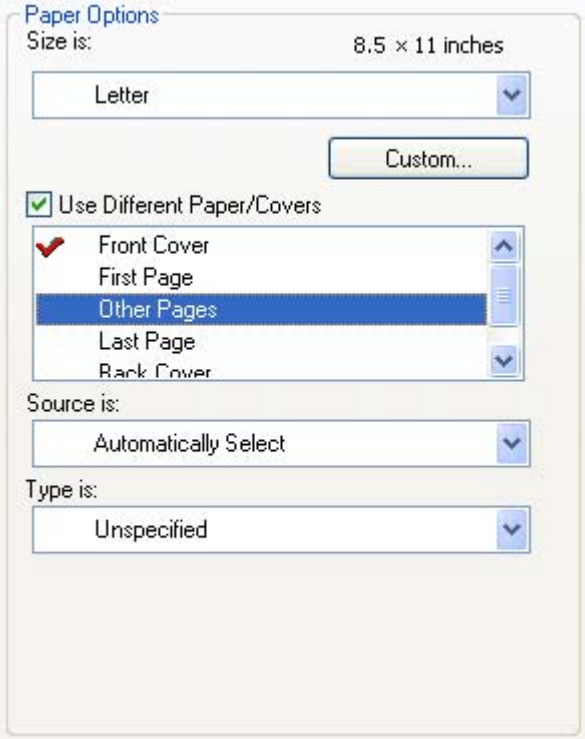


Figure 4-8 Other Pages options

The following are the **Other Pages** options:

- **Size is:** drop-down menu
- **Source is:** drop-down menu
- **Type is:** drop-down menu

The **Size is:** setting specifies the media size to use for the entire print job. Changes made to the **Size is:** setting here override any previous **Size is:** settings made in other **Use Different Paper/Covers** options.

The **Source is:** setting specifies the source tray to use for printing a document. The list of source trays depends on the printer accessories. Any optional media trays that are installed through the **Device Settings** tab also appear here. For more information about the **Source is:** setting, see the Source Is section of this chapter.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:** drop-down menu settings, see the description for **Type is:** in the Type is section of this chapter.

NOTE You must use the same size of media for the entire print job. All **Use Different Paper/ Covers** options use the last **Size is:** setting that you select in *any one* of the **Use Different Paper/ Covers** options.

When you change the type and source of the media and covers, the settings that you select remain configured until you close the software program.

Last Page

Use the **Last Page** options to select an alternative media size, type, or source for the last page of a document. The following figure shows the appearance of the **Paper Options** group box when you select the **Use Different Paper/Covers** check box.

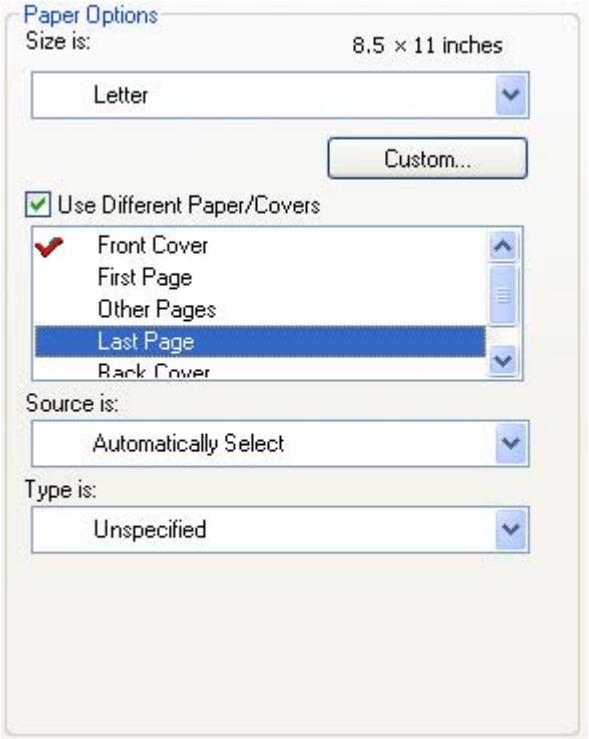


Figure 4-9 Last Page options

The following are the **Last Page** options:

- **Size is:** drop-down menu
- **Source is:** drop-down menu
- **Type is:** drop-down menu

The **Size is:** setting specifies the media size to use for the entire print job. Changes made to the **Size is:** setting here override any previous **Size is:** settings in other **Use Different Paper/Covers** options.

The **Type is:** drop-down menu shows all of the media types that the printer supports. For more information about the **Type is:** drop-down menu settings, see the description for **Type is:** in the Type is section of this chapter.

NOTE You must use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting that you select in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings that you select remain configured until you close the software program.

Back Cover

Use the **Back Cover** options to include a blank or preprinted back cover on a document, or to include a back cover from a source tray that is different from the one used for the remainder of the document.

The following figure shows the **Back Cover** setting and options.

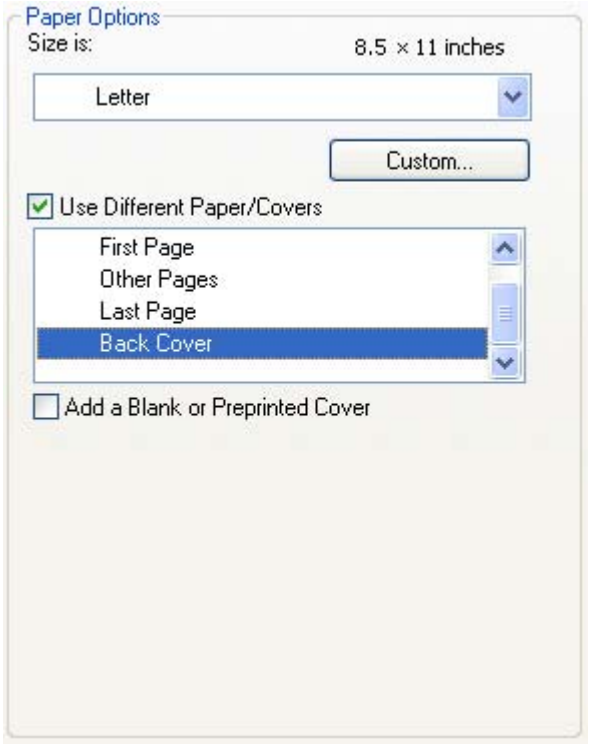


Figure 4-10 Back Cover setting

The following are the **Back Cover** options:

- **Size is:** drop-down menu
- **Add a Blank or Preprinted Cover** check box
- **Source is:** drop-down menu
- **Type is:** drop-down menu

The **Size is:** setting specifies the media size to use for the entire print job. Changes made to the **Size is:** setting here override any previous **Size is:** settings in other **Use Different Paper/Covers** options.

When you select **Back Cover**, you must also select the **Add a Blank or Preprinted Cover** check box to enable the setting. When you select this check box, the **Source is:** and **Type is:** drop-down menus become available and a check mark appears next to the **Back Cover** option.

NOTE The **Back Cover** options are not available when the **Booklet Printing Layout** setting is enabled on the **Finishing** tab. The back cover setting is unavailable, because this page would otherwise be printed in the middle of a booklet.

The **Source is:** setting specifies the source tray to use for adding a back cover to the document. The list of source trays depends on the printer accessories. Any optional media trays that are installed through the **Device Settings** tab also appear here.

The **Type is:** drop-down menu shows all of the media types that the printer supports.

NOTE You must use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting that you select in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings that you select remain configured until you close the software program.

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image is always oriented so that the contents of the page are right-side-up. The document preview image appears in the upper-right corner of the **Paper/Quality**, **Effects**, **Finishing**, **Output**, and **Color** tabs.

Switching between tabs does not change the location or appearance of the document preview image. When you move the mouse over the document preview image, the mouse cursor changes from an arrow to a gloved hand. You can toggle between portrait and landscape page orientation by clicking on the image.

HP Digital Imaging

Click the HP Digital Imaging button to open the **HP Digital Imaging Options** dialog box, which is shown in the following figure.

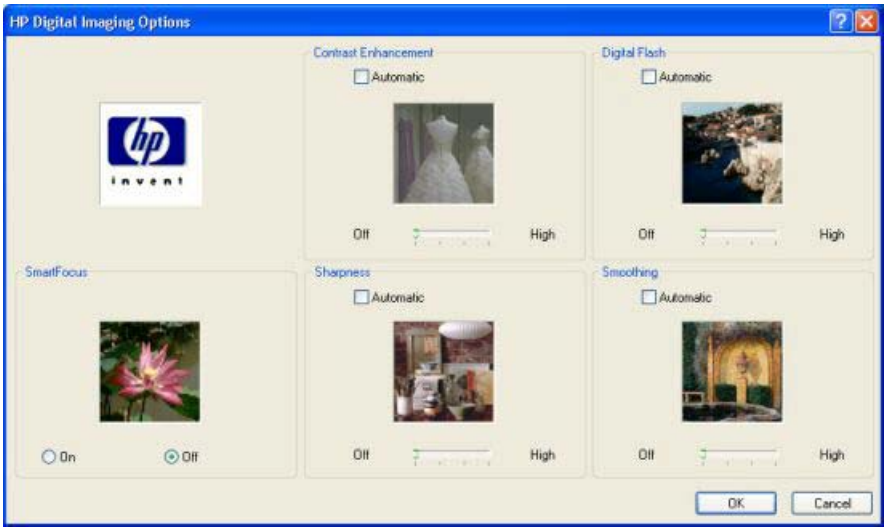


Figure 4-11 **HP Digital Imaging Options** dialog box

The following settings can be adjusted on the **HP Digital Imaging Options** dialog box:

- Contrast Enhancement
- Digital Flash
- SmartFocus
- Sharpness
- Smoothing

The **HP Digital Imaging** settings should be used only on high-resolution images (600 dpi or higher) that are printed on photograph-quality paper. These settings are not recommended for text.

For the **Contrast Enhancement**, **Digital Flash**, **SmartFocus**, and **Smoothing** settings, the following controls are available:

- **Automatic** check box
- slide bar ranging from **Off** to **High**

The SharpFocus settings are **Off** and **On**.

Contrast Enhancement. Use the **Contrast Enhancement** setting to increase image contrast for a more visually pleasing result. This filter is useful with flat images (images in which much of the image content is compressed into a small dynamic range of pixel values). Flat images may result from low lighting, environmental haze, or camera or scanner limitations.

Digital Flash. Use the **Digital Flash**setting to adjust lighting levels to reveal areas in shadow. The filter locates dark areas in an image and brings out detail without degrading other features in the image.

Sharpness. Many images are improved by increasing their sharpness. Use the **Sharpness** feature locates edge detail and makes it more prominent. The filter detects regions that contain significant variations in pixel value along a number of different vectors (which denotes edges) and then applies a filter to enhance detail.

SmartFocus. Use the **SmartFocus** setting to increase the apparent resolution of lower resolution images. Many images that are downloaded from the Internet or from digital cameras can be compressed

because of size restrictions, and might exhibit pixilation artifacts when printed. SmartFocus upscales the image to the printer resolution without accentuating these artifacts.

Smoothing. Just as many images benefit increased sharpness, many images are improved by smoothing, which decreases noise artifacts that are often created by digital cameras or scanners. When you select **Smoothing**, the filter locates areas that contain abrupt changes in pixel value by comparison with surrounding pixels (which denotes noise) and then applies a filter to smooth the output.

Effects tab features

To gain access to the **Effects** tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.
6. Click the **Effects** tab.

Use the **Effects** tab to create unique media effects such as scaling and watermarks. The following figure shows the **Effects** tab.

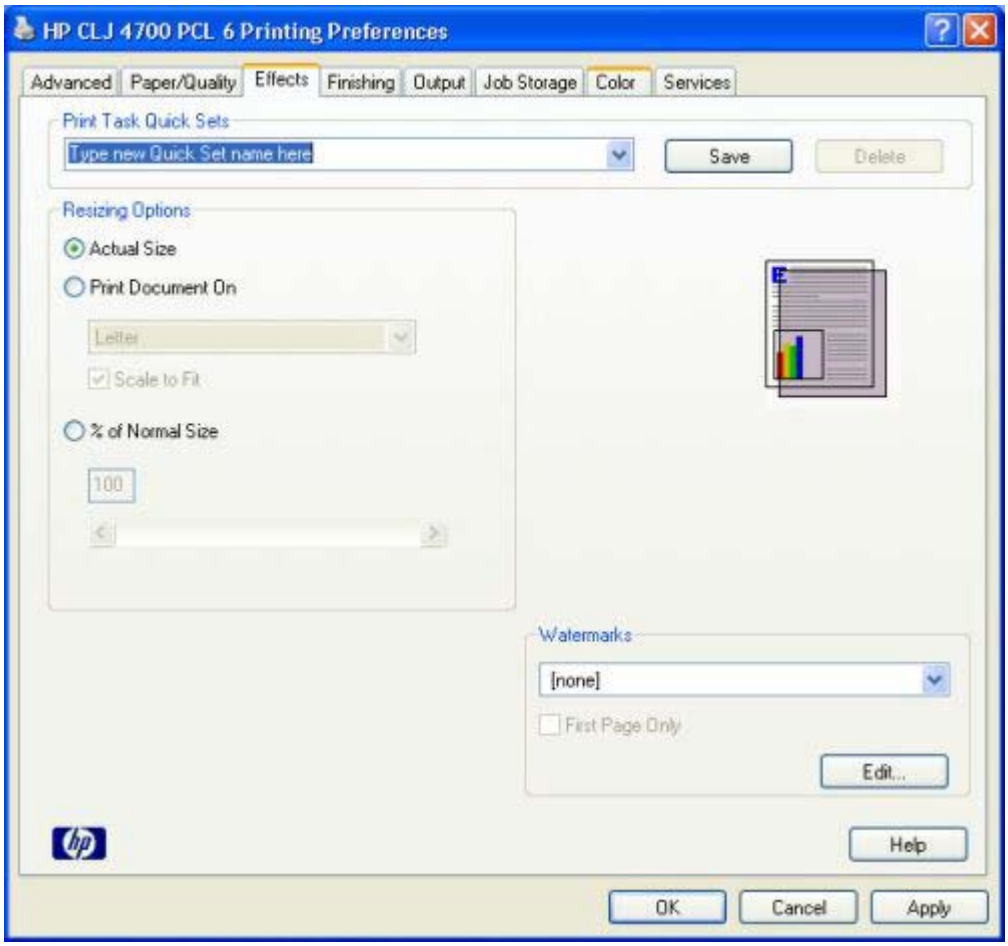


Figure 4-12 **Effects** tab

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

- **Print Task Quick Sets** group box
- **Resizing Options** group box

- Document preview image
- **Watermarks** group box

Print Task Quick Sets

Use the **Print Task Quick Sets** control to store the current combination of driver settings that appear on all other **Printing Preferences** driver tabs. Print task quick sets are either preset or user-defined printing specifications, such as media size and pages per sheet. For more information, see the Paper/ Quality tab features section of this manual.

Resizing options

The **Resizing Options** group box consists of the following controls:

- **Actual Size** (default)
- **Print Document On** setting
- **Scale to Fit** option
- **% of Normal Size** setting

Actual Size

Actual Size is the default setting. It prints the document without changing the document size.

Print Document On

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

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

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

When **Print Document On** is selected, the drop-down menu shows the media sizes on which you can print. The list contains all of the standard media sizes that are supported by the selected media source and any custom sizes that you have created. When **Print Document On** is selected, **Scale to Fit** is automatically selected. Clear this check box if you do not want your document reduced or enlarged to fit on the selected media.

Scale to Fit

The **Scale to Fit** option box specifies whether each formatted document page image is scaled to fit the target media 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 media. If the document size is larger than the target media size, then the document image is clipped. If it is smaller, then it is centered within the target media. The following figure shows preview images for a document formatted for Legal-size media with the **Print Document On** check box selected, and the target size specified as **Letter**.

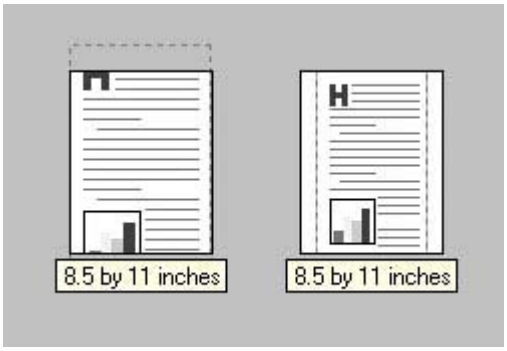


Figure 4-13 Preview images - Legal on Letter; Scale to Fit off (left) and on (right)

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

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

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

Any change to the scale also changes the page preview, which increases or decreases from the upper-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 1%. Each click on the slider bar affects the scale by 10%.

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 value you want, and then use the scroll bar arrows to refine the value.

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

- **Print Document On** (on the **Effects** tab) is selected
- **Pages per Sheet** (on the **Finishing** tab) is not 1

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image is always oriented so that the contents of the page are right-side-up. The document preview image appears in the upper-right corner of the **Paper/Quality**, **Effects**, **Finishing**, **Output**, and **Color** tabs.

Switching between tabs does not change the location or appearance of the document preview image. When you move the mouse over the document preview image, the mouse cursor changes from an arrow to a gloved hand. You can toggle between portrait and landscape page orientation by clicking on the image.

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 that is selected from this list appears in the preview image.

When the **First Page Only** check box 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.

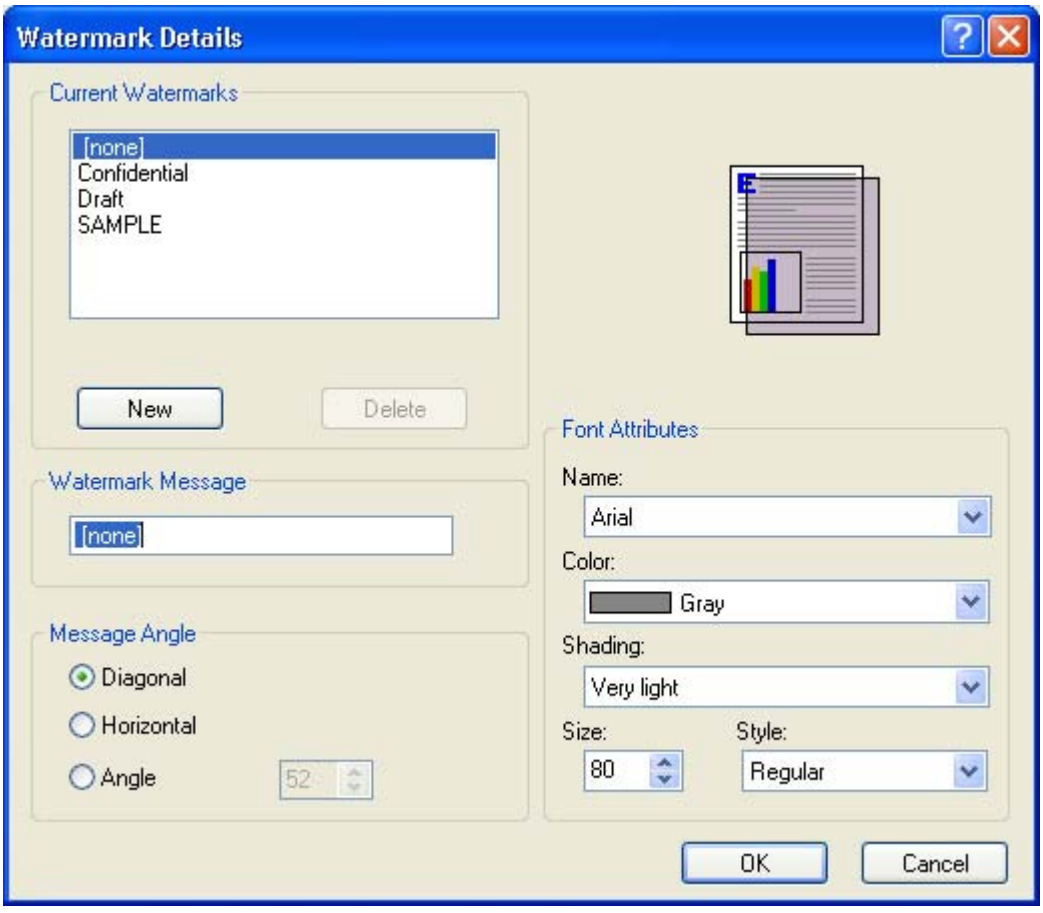


Figure 4-14 **Watermark Details** dialog box

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

Click **OK** to accept all of the changes that are made in the **Watermark Details** dialog box. However, clicking **Cancel** does not cancel all of the changes. If you make changes to a watermark and then select a different watermark or click **New**, all of the changes 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 that are available in the driver and any new watermarks that 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. The name that you type in the **Watermark Message** field appears in the **Current Watermarks** group box in the **Watermark Details** dialog box and in the **Watermarks** group box on the **Effects** tab.

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**. A warning appears asking whether you are sure you want to delete the selected item. Click **Cancel** if you want to keep the watermark. Click **OK** to delete the selected watermark.

NOTE You can have no more that 30 watermarks in the **Current Watermarks** list at one time. When you reach the limit of 30 watermarks, the **New** button is disabled.

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 typeface or font 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 (**Draft #3**, **Draft #4**, and so on).

Message Angle

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

Font Attributes

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

The **Font Attributes** group box contains the following controls:

- **Name** drop-down menu lists fonts that are currently installed on the system. The default is language-dependent.
- **Color** drop-down menu contains the following selections:
  - Gray
  - Red
  - Yellow
  - Green
  - Cyan
  - Blue
  - Magenta
- The default **Shading** setting for new and preset watermarks is **Very Light**. The following range of shades is available from the **Shading** drop-down menu:
  - **Lightest**
  - **Very Light** (default)
  - **Light**
  - **Medium Light**
  - **Medium**
  - **Medium Dark**
  - **Dark**
  - **Very Dark**
  - **Darkest**

  These values represent the intensity of the gray that is used. A choice of **Light** produces a lightly saturated gray watermark. A choice of **Lightest** produces the lightest shade of watermark; **Darkest** produces a black watermark.
- 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.
- The choice of **Regular**, **Bold**, **Italic**, and **Bold Italic** is available from the **Style** drop-down menu. The default **Style** setting for new and preset watermarks is **Regular**.

Default settings

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

Finishing tab features

To gain access to the **Finishing** tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.
6. Click the **Finishing** tab.

Use the **Finishing** tab to print booklets and control the media output. The following figure shows the **Finishing** tab.

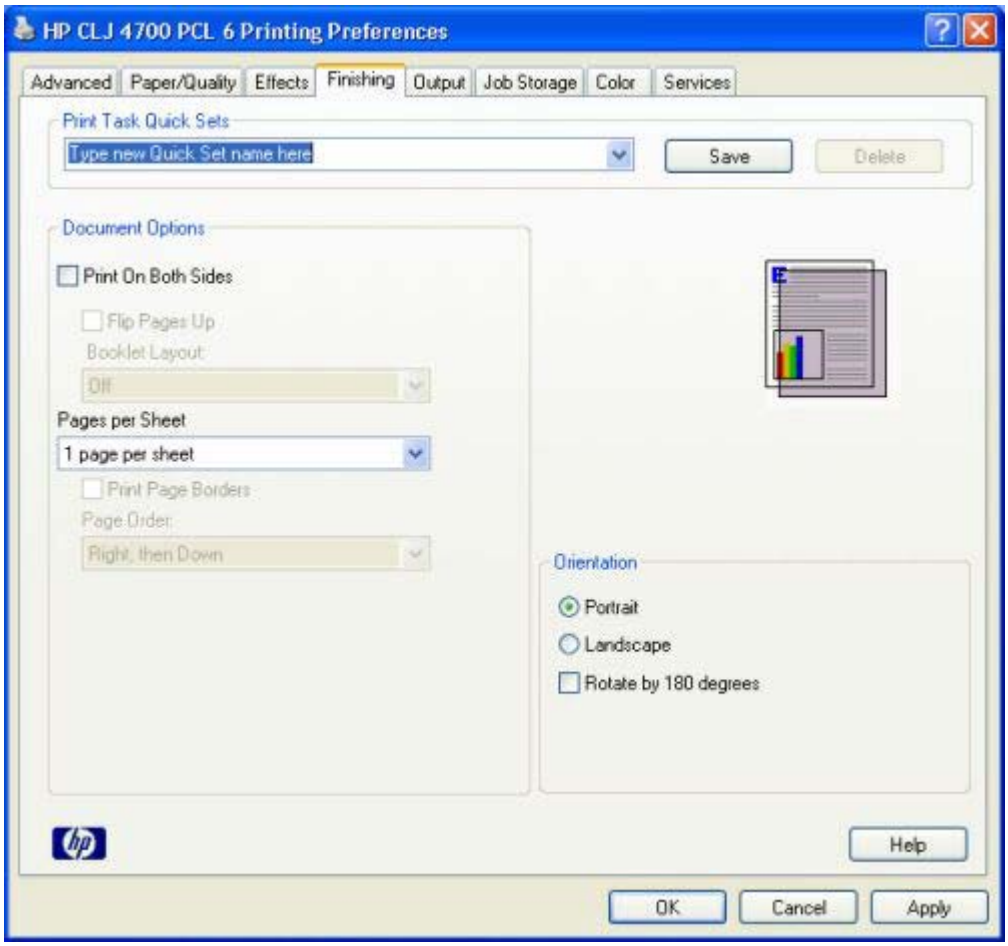


Figure 4-15 **Finishing** tab

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

- **Print Task Quick Sets** group box
- **Document Options** group box

- Document preview image
- **Orientation** group box

Print Task Quick Sets

Use the **Print Task Quick Sets** control to store the current combination of driver settings that appear on all other **Printing Preferences** driver tabs. Print task quick sets are either preset or user-defined printing specifications, such as media size and pages per sheet. For more information, see the Paper/ Quality tab features section of this manual.

Document Options

The **Document Options** group box contains the following controls:

- **Print on Both Sides** check box
- **Flip Pages Up** option
- **Booklet Layout** drop-down menu
- **Pages per Sheet** drop-down menu
- **Print Page Borders** check box
- **Page Order** drop-down menu

Print on Both Sides

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

- **Type is:** on the **Paper** tab is set to any type *except* **Transparency**, **Labels**, or **Envelope**.
- **Size is:** is set to any size *except* **Double Japan Postcard Rotated**, **Envelope #10**, **Envelope B5**, **Envelope C5**, **Envelope DL**, **Envelope Monarch**, or **Statement**.

Automatically printing on both sides

The duplexing unit in the printer prints on two sides of a sheet of paper when the **Print on Both Sides** option is specified in the print job. The HP Color LaserJet 4700 printer comes with a duplexing unit installed in the following models:

- HP Color LaserJet 4700dn
- HP Color LaserJet 4700dtn
- HP Color LaserJet 4700ph+

These printer models support smart duplexing. The smart duplexing feature increases printing performance by preventing one-page print jobs or single-sided pages of a duplexed print job from going through the duplexing unit even when the duplexing feature has been selected in the driver.

All media types support the smart duplexing feature, except for media types that cannot be printed on both sides, such as labels and transparencies, and the following media types:

- Prepunched
- Preprinted
- Letterhead

When the media type is set to **Unspecified**, the smart duplexing feature is disabled.

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

Manually printing on both sides

- **Manually Print on 2nd Side** is *not* selected

  Select the **Print on Both Sides (Manually)** check box to print on the second side of the media for the HP Color LaserJet 4700 and HP Color LaserJet 4700n printer models, which do not have a duplexing unit installed. Also select Print on Both Sides (Manually) on the other HP Color LaserJet 4700 printer models for media types that are not available when using the automatic duplexing unit, such as cardstock and thick media.

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

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

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

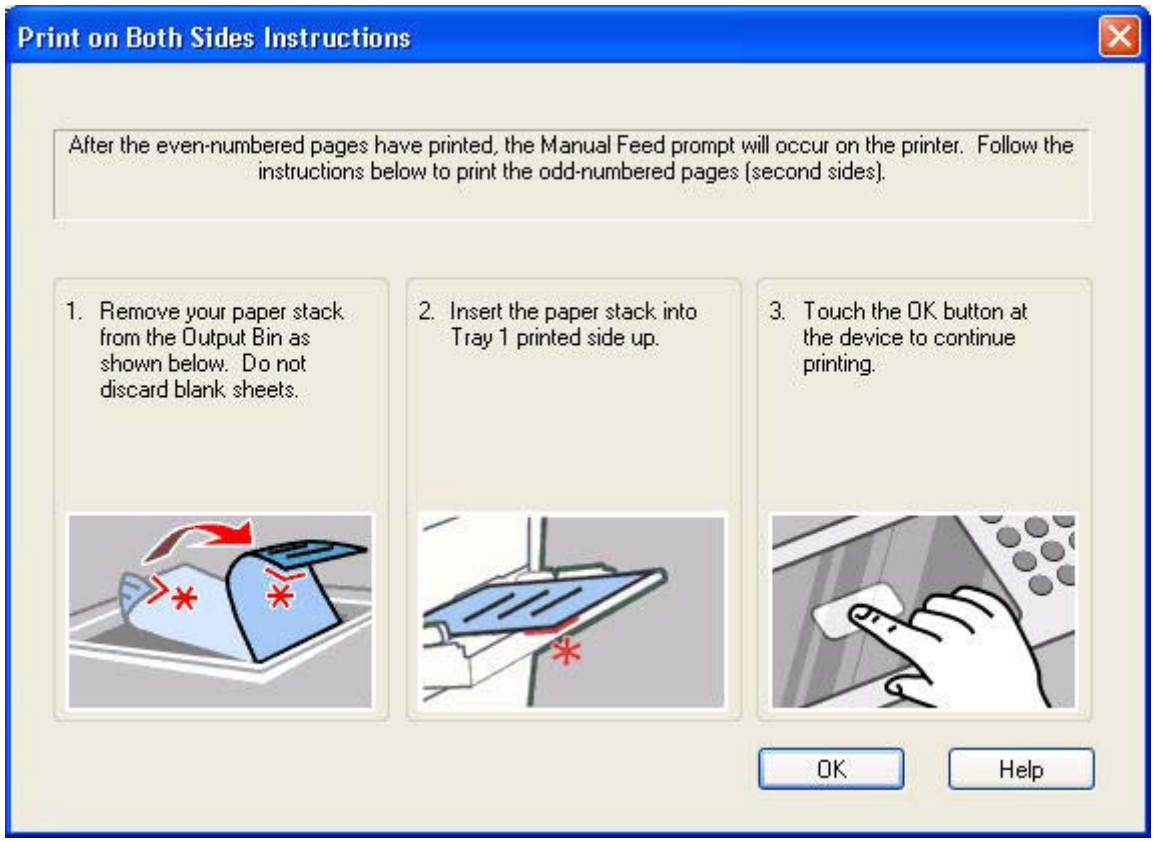
NOTE To make the **Print on Both Sides (Manually)** check box available in the document options, select the **Allow Manual Duplexing** option on the **Device Settings** tab in the Properties print-driver tabs. See Installable Options in the Device Settings section of this chapter.

If you want to print on both sides manually while using media that is supported by automatic duplexing, you must select and apply the **Not Installed** setting on the **Duplex Unit (for 2-Sided Printing)** option on the **Device Settings** tab.

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

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

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



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

Flip Pages Up

The **Flip Pages Up** check box is used to specify the duplex-binding option. By default, the **Flip Pages Up** check box is not available. It is available only when **Print on Both Sides** is selected, The following

table demonstrates the results of selecting this box, depending on the media orientation selected on the **Finishing** tab.

Table 4-3 Page orientation

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

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

Short-side binding is for print jobs with pages that read by flipping over like the pages of a note pad. Long-side binding is for print jobs with pages that read by turning like the pages of a book.

Booklet layout

The **Booklet Layout** drop-down menu, visible when **Print on Both Sides** is selected, offers choices that are based on the current media size. The default setting for the **Booklet Printing** drop-down menu is **Off**. The other settings have the following format, where **[paper size]** depends on the media size that is set on the **Paper/Quality** tab.

- **Left Edge Binding**
- **Right Edge Binding**

When you select **Left Edge Binding** or **Right Edge Binding**, the document preview image changes to show the location of the binding. If the **Pages per Sheet** setting is on the default setting of 1, it automatically changes to **2 pages per sheet**. If you change the **Pages per Sheet** setting manually to 4, 6, 9, or 16 pages per sheet, the booklet setting is disabled. See the Pages per Sheet section of this chapter for more information.

Book and Booklet Printing

The HP Color LaserJet 4700 supports book and booklet printing.

A book is a print job consisting of at least two pages that can have a different media type for the front cover, first page, other pages, last page, or back cover. Use the **Front Cover**, **First Page**, **Other Pages**, **Last Page**, and **Back Cover** settings on the **Paper/Quality** tab (available when you select the **Use Different Paper** check box) to select different media for the front cover, first page, other pages, and back cover. For more information, see Paper/Quality tab features of this chapter.

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

To print a booklet

Complete the following steps to print a booklet in most software programs.

1. Click **File**.
2. Click **Print**.

3. Click **Properties**.
4. Click the **Finishing** tab.
5. Select the **Print on Both Sides** check box.
6. In the **Booklet Layout** drop-down menu, select the type of booklet printing that you want (for example, **Right Edge Binding**).
7. Click **OK** in the print driver.
8. Click **OK** in the print dialog box to print.

Pages per Sheet

Use the **Pages per Sheet** option to select the number of pages that you want to print on a single sheet of media. If you choose to print more than one page per sheet, the pages appear smaller and are arranged on the sheet in the order that they would otherwise be printed. The **Pages per Sheet** drop-down menu provides six settings:

- **1 page per sheet** (this is the default)
- **2 pages per sheet**
- **4 pages per sheet**
- **6 pages per sheet**
- **9 pages per sheet**
- **16 pages per sheet**

NOTE When you select an option other than **2 pages per sheet**, booklet printing is unavailable.

Print Page Borders

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

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

Page Order

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

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

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

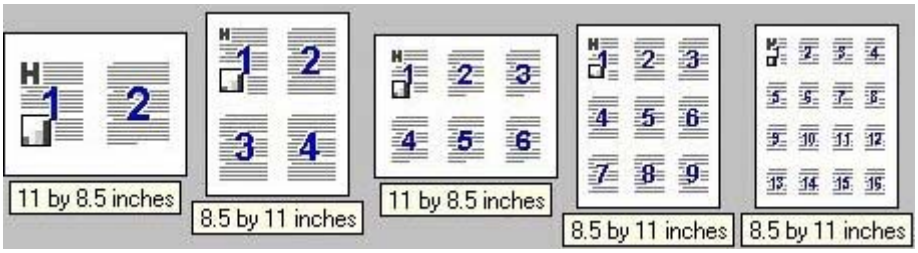


Figure 4-16 Page-order preview images

- **2 pages per sheet**
- **4 pages per sheet**
- **6 pages per sheet**
- **9 pages per sheet**
- **16 pages per sheet**

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image is always oriented so that the contents of the page are right-side-up. The document preview image appears in the upper-right corner of the **Paper/Quality**, **Effects**, **Finishing**, **Output**, and **Color** tabs.

Switching between tabs does not change the location or appearance of the document preview image. When you move the mouse over the document preview image, the mouse cursor changes from an arrow to a gloved hand. You can toggle between portrait and landscape page orientation by clicking on the image.

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**.

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

The **Orientation** group box contains three options:

- **Portrait**. The top edge of the document is the shorter edge of the media.
- **Landscape**. The top edge of the document is the longer edge of the media.
- **Rotate by 180 degrees**. This creates a landscape or portrait orientation in which the image is rotated 180° degrees. This setting is useful for printing prepunched media.

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

Output tab features

To gain access to the **Output** tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.
6. Click the **Output** tab.

NOTE The **Output** tab does not appear unless you have output accessories installed and configured on the printer.

Use the **Output** tab to select finishing and output options for a document. The following figure shows the **Output** tab.

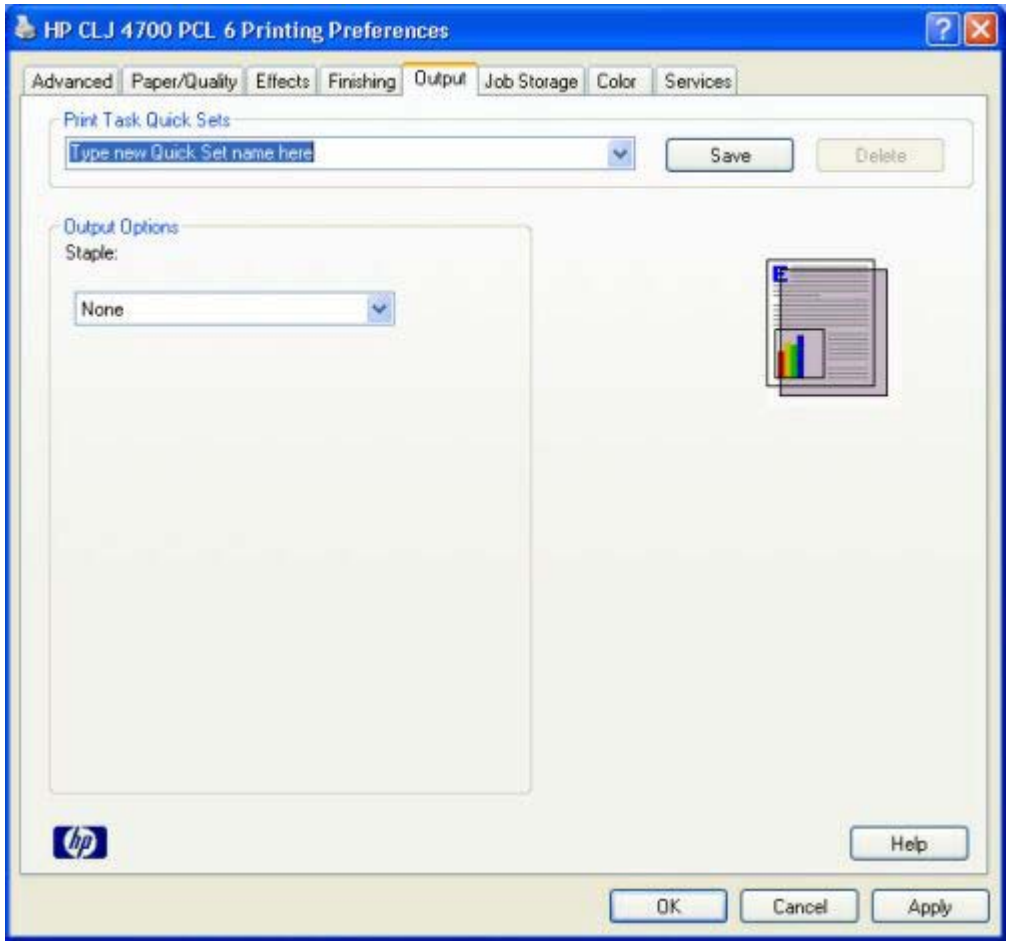


Figure 4-17 **Output** tab

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

- **Print Task Quick Sets** group box
- **Output Options** group box
- Document preview image

Print Task Quick Sets

Use the **Print Task Quick Sets** control to store the current combination of driver settings that appear on all other **Printing Preferences** driver tabs. Print task quick sets are either preset or user-defined printing specifications, such as media size and pages per sheet. For more information, see the Paper/Quality tab features section of this manual.

Output Options

The available **Output Options** for the HP Color LaserJet 4700 printer depend on which accessory output device is installed on the product. The options for accessories, which must be installed and configured on the **Device Settings** tab, are:

- None
- One Staple

When no optional accessory output bin is installed on the product, the **Output** tab is not available.

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image is always oriented so that the contents of the page are right-side-up. The document preview image appears in the upper-right corner of the **Paper/Quality**, **Effects**, **Finishing**, **Output**, and **Color** tabs.

Switching between tabs does not change the location or appearance of the document preview image. When you move the mouse over the document preview image, the mouse cursor changes from an arrow to a gloved hand. You can toggle between portrait and landscape page orientation by clicking on the image.

Job Storage tab features

To gain access to the **Job Storage** tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.
6. Click the **Job Storage** tab.

NOTE The **Job Storage** tab appears only when a hard disk is installed or at least 288 MB of total memory is installed and configured.

Use the Job Storage feature to store print jobs in the HP Color LaserJet 4700 printer memory for printing at a later time. These job-storage features are described in the following sections.

The **Job Storage** tab appears among the driver tabs only if Job Storage is enabled. To support job storage features for complex jobs, or if you often print complex graphics, print postscript (.PS) documents, or use many downloaded fonts, HP recommends that you install additional memory, install a hard disk, or both. Added memory also gives you more flexibility in supporting job storage features. A hard disk or a minimum total memory of 288 MB is required to use Job Storage features.

After a hard disk or additional memory is installed, the driver must be configured to reflect the changes in the product. If bidirectional communication is enabled in your environment, the Update Now feature can be used to update the drivers. For more information, see the Automatic Configuration section in this chapter.

To configure the drivers manually after installing a hard disk or additional memory, follow these steps:

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Properties**.
6. Click the **Device Settings** tab.
7. If additional memory has been installed, select **Printer Memory:** under **Installable Options**, and then select either **160 MB**, **256 MB**, **416 MB**, or **544 MB**, depending on the total amount of memory currently installed.
8. If a hard disk has been installed, select **Installed** for the **Printer Hard Disk** under **Installable Options**, and then select **Installed** in the drop-down menu.
9. Click **OK** to make the printer hard disk and job-storage features available.

NOTE The **Job Storage** tab appears among the driver tabs *only* if Job Storage is enabled.

You can disable Job Storage while leaving the printer hard disk enabled. To disable Job Storage, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. click **Properties**.
6. click the **Device Settings** tab.
7. select **Job Storage:**.
8. and then select **Disabled** in the **Change 'Job Storage' Setting** dialog box that appears.

NOTE When **Job Storage** is disabled, the **Job Storage** driver tab is not visible.

If Job Storage is enabled (without installing a hard disk but with at least 288 MB of total memory), two **Job Storage Mode** settings are available on the Job Storage tab:

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

Two additional **Job Storage Mode** settings become available on the Job Storage tab if a hard disk is installed:

- **Quick Copy**
- **Stored Job**

The following figure shows the **Job Storage** tab.

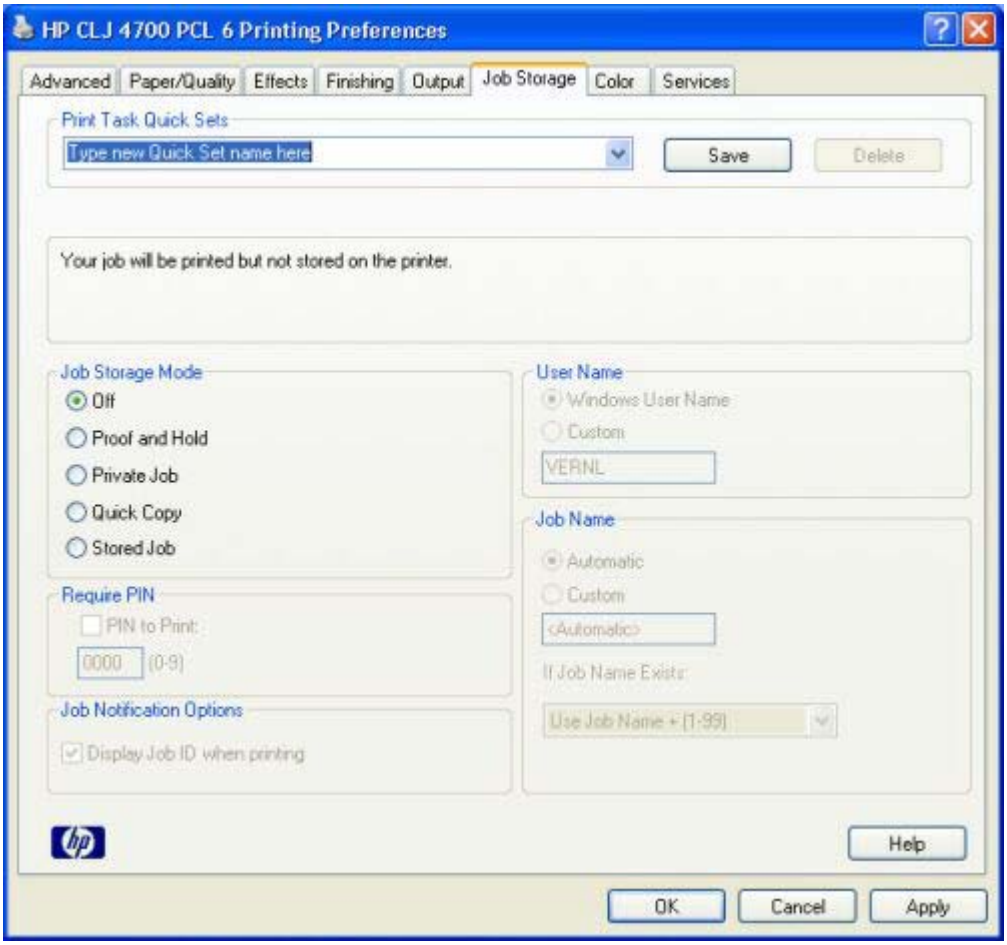


Figure 4-18 **Job Storage** tab

The **Job Storage** tab contains the following controls:

- **Print Task Quick Sets** group box
- Status group box (unlabeled)
- **Job Storage Mode** group box
- **Require PIN** group box
- **Job Notification Options** group box
- **User Name** group box
- **Job Name** group box

Print Task Quick Sets

Use the **Print Task Quick Sets** control to store the current combination of driver settings that appear on all other **Printing Preferences** driver tabs. Print task quick sets are either preset or user-defined printing specifications, such as media size and pages per sheet. For more information, see the Paper/ Quality tab features section of this manual.

Status group box

The unlabeled group box on the **Job Storage** tab contains a status message about the destination of a print job. The status information changes depending on the selections that are made on the **Job Storage** tab.

Job Storage Mode

Use the **Job Storage Mode** options on the HP Color LaserJet 4700 to store documents at the product and then control their printing at the product control panel. This feature is intended to provide greater flexibility, convenience, security, and cost savings.

The HP Color LaserJet 4700 offers the following **Job Storage Mode** options:

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

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

Off

When selected, this option turns the **Job Storage** feature off (it is disabled), which means that the print job will not be stored in the product.

Proof and Hold

To use the **Proof and Hold** option, Job Storage must be enabled.

When selected, this option stores the print job in memory and prints only the first copy of the job, allowing you to check the first copy. If the document prints correctly, you can print the remaining copies of the print job at the control panel. You can set the number of proof-and-hold print jobs that can be stored in the product at the control panel.

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

NOTE The product configuration can be set to hold a maximum of 50 quick-copy or proof-and-hold jobs. The number is set at the product control panel in the **CONFIGURATION** menu, and the default is 32. When this preset limit is reached, the new document overwrites the oldest held document. Also, a document that has the same user and job name as one that is already stored on the printer hard disk will overwrite the existing document.

Private Job

To use the **Private Job** option, Job Storage must be enabled.

When you select **Private Job**, the print job is sent to the product, but is not printed until you request the job at the product control panel. Selecting **Private Job** activates the **PIN** group box. The print job can be printed only after you type the correct PIN at the control panel. After the job is printed, the job is deleted from the product. This feature is useful when you are printing sensitive or confidential documents that you do not want to leave in an output bin after printing.

The Private Job/PIN coupling has a PIN restriction of four ASCII numeric characters (0 though 9). If you type non-numeric characters, they are removed immediately. If you type more than four characters, the characters past the fourth are truncated. The field temporarily accepts fewer than four digits in the string, but when the edit field loses focus, the zeroes pad the left end until the PIN contains exactly four digits. The default initialized value for the PIN is 0000 for **Private Job**.

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

Quick Copy

To use the **Quick Copy** option, a printer hard disk must be installed, and **Job Storage** must be enabled.

When you select **Quick Copy**, the entire print job prints and a copy of the print job is stored on the product, after which you can print additional copies of the print job at the product control panel. The number of quick-copy print jobs that can be stored in the product is set by using the product control panel.

NOTE The product configuration can be set to hold a maximum of 50 quick-copy or proof-and-hold jobs. The number is set at the product control panel in the **CONFIGURATION** menu, and the default is 32. When this preset limit is reached, the new document overwrites the oldest held document. Also, a document that has the same user and job name as one that is already stored on the printer hard disk will overwrite the existing document. **Quick Copy** jobs are deleted if you turn off the product.

Stored Job

To use the **Stored Job** option, a printer hard disk must be installed and Job Storage must be enabled.

Use the **Stored Job** option to send a print job directly to the printer hard disk without printing it. The print job is stored in the product as if it is an electronic file cabinet. After the print job is stored on the printer hard disk, you can print the job at the product control panel.

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

A stored job can be managed in two ways: as either a private or a public job. Use a private stored job to send a print job directly to the product, which can then be printed only after you type a PIN at the product control panel. (You can set the PIN in the **PIN** group box.) After the job is printed, the job remains in the product and can be printed again at the product control panel. The private mode is initiated by selecting the **Require PIN to Print** check box. In this mode, a PIN that is typed at the product control panel is required in order to release the job.

The box labeled **PIN** is usually inactive. The **Require PIN to Print** option becomes available when you select **Stored Job**. If you select the **Require PIN to Print** box, you must type a PIN to make the stored job private.

NOTE A private stored job is not the same as a private job the previous section. *Private* jobs are deleted from the product after they are printed. *Private stored* jobs are retained in the product after printing, but require that a PIN be typed each time they are printed. A printer hard disk is required for *Private stored* jobs.

Require PIN

Require PIN is available when **Stored Job** is selected. Select the **PIN to Print** box, then type a 4-digit PIN number in the box provided. The stored job is sent to the product, where you must enter the 4-digit PIN on the control panel to retrieve the stored job.

The **PIN to Print** box is selected, but not available, when **Private Job** is selected. Type a 4-digit PIN number in the box provided. The stored job is sent to the product, where you must type the 4-digit PIN on the control panel to retrieve the stored job.

Job notification

Clicking a job storage mode selection causes the **User Name** and **Job Name** options to become available. The **Display Job ID when printing** check box is selected by default. The **Display Job ID when printing** option causes a pop-up dialog box to appear when the job-storage print job is printed. The dialog box shows the user name and job name that are associated with the stored print job, as well as the product name, port, and location.

User Name

Use the **User Name** settings to help identify the job at the product control panel. The following are the **User Name** settings:

- **Windows User Name.** This option associates your Windows user name with the stored print job. The Windows user name automatically appears in the text field below the **Windows User Name** options.
- **Custom.** Use this option to type a custom name for the stored print job. When you click the **Custom** option button, the text field below the option becomes available. The **User Name** field can contain no more than 16 characters, and is limited to A through Z and 0 through 9 because the name appears on the product control-panel display. If you try to type a lowercase character, it automatically shifts to uppercase. If you try to type a character in an ASCII code of fewer than 32 or more than 126 characters, the character is removed from the edit field, along with all of the characters that follow it. If you try to type more than 16 characters, any character beyond 16 is truncated.

Job Name

Use the **Job Name** options to specify a name to identify the job at the control panel. The following are the **Job Name** settings:

- **Automatic**. This option automatically generates the job name that is associated with the stored print job. The file name of the print job is used if it is available to the print driver. Otherwise, the software program name or a time stamp is used for the job name.
- **Custom**. Use this to type a custom job name for the stored print job. When you click the **Custom** option button, the text field below the option becomes available.

The **Job Name** field can contain no more than 16 characters, and is limited to A through Z and 0 through 9 because the name appears on the product control-panel display. If you try to type a lowercase

character, it automatically shifts to uppercase. If you try to type a character in an ASCII code of fewer than 32 or more than 126 characters, the character is removed from the edit field, along with all of the characters that follow it. If you try to type more than 16 characters, any character beyond 16 is truncated.

When the dialog box is closed, or as soon as the focus is removed from the control (that is, when the Tab key is pressed or another control is selected), an empty string is replaced with **Automatic**. The acceptable characters for job name and user name vary for each operating system. The string must be of a length and type that can appear on the product control-panel display.

If Job Name Exists

When you store a print job, you can create a print job name or the printer software can assign one automatically. If a print job with the same name already exists, the new print job will overwrite the existing print job. To eliminate the chances of a new print job overwriting an old print job because both have the same name, select **Use Job Name + (1-999)**. After you create the print job name, or when one is created automatically, the printer software assigns a number between 1 and 999 to the end of the print job name to make the name unique. You can select **Replace Existing File** if you always want the printer software to overwrite an existing print job with the same print job name.

Using Job Storage features when printing

To use Job Storage features when printing, follow these steps:

1. Click **File** and then click **Print** from the software program. The **Print** dialog box appears.

   NOTE Clicking the print icon in the software program toolbar prints the job without using Job Storage features.

2. Click **Properties**. The **Properties** dialog box appears.
3. Click the **Job Storage** tab.
4. Select the Job Storage options by clicking the appropriate option button, and then complete any required fields.
5. Click **OK**.

Releasing a Job Storage print job

After you send a print job that uses the **Job Storage** feature, you can release the job to print from the product control panel.

1. Press ✓ (the Select button; the one with the check mark) to open the menus.
2. Press ▲ (the up button) and ▼ (the down button) until **RETRIEVE JOB** is highlighted on the product control panel, and then press ✓ .
3. Press ▲ (the up button) and ▼ (the down button) to scroll to your User Name, and then press ✓ .
4. Press ▲ and ▼ to scroll to the Job Name, and then press ✓ .
5. Press ▲ (the up button) and ▼ (the down button) until **PRINT** is highlighted on the product control panel, and then press ✓ .
6. Press ✓ .

7. If a PIN number is assigned to the job, press ▲ and ▼ to select the first digit of the PIN, and then press ✓ . The number in the product control-panel display changes to an asterisk. Repeat this step for each of the remaining three digits of the PIN number.

   If no PIN number is assigned to the job, continue with step 7.

8. Press ▲ and ▼ to select the number of copies to print.

9. Press ✓ to print the job.

Deleting a Job Storage print job

Sometimes it is necessary to delete a print job from the product hard disk. You can do this from the product control panel.

1. Press ✓ (the Select button; the one with the check mark) to open the menus.

2. Press ▲ (the up button) and ▼ (the down button) until **RETRIEVE JOB** is highlighted on the product control panel, and then press ✓ .

3. Press ✓

4. Press the up and down buttons to scroll to your User Name, and then press ✓ .

5. Press ▲ and ▼ to scroll to the Job Name, and then press ✓ .

6. Press ▲ (the up button) and ▼ (the down button) until **DELETE** is highlighted on the product control panel, and then press ✓ .

7. Press ✓ .

8. If a PIN number is assigned to the job, press ▲ and ▼ to select the first digit of the PIN, and then press ✓ . The number in the product control-panel display changes to an asterisk. Repeat this step for each of the remaining three digits of the PIN number.

   If no PIN number is assigned to the job, continue with step 7.

9. Press ✓ to delete the job.

The stored print job is deleted and the product returns to the **READY** state.

Color tab features

To gain access to the **Color** tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.
6. Click the **Color** tab.

Use the **Color** tab to specify predefined color-option settings or to fine-tune the color treatments and halftoning. Color output can also be converted to grayscale. The **Color** tab is shown in the following figure.

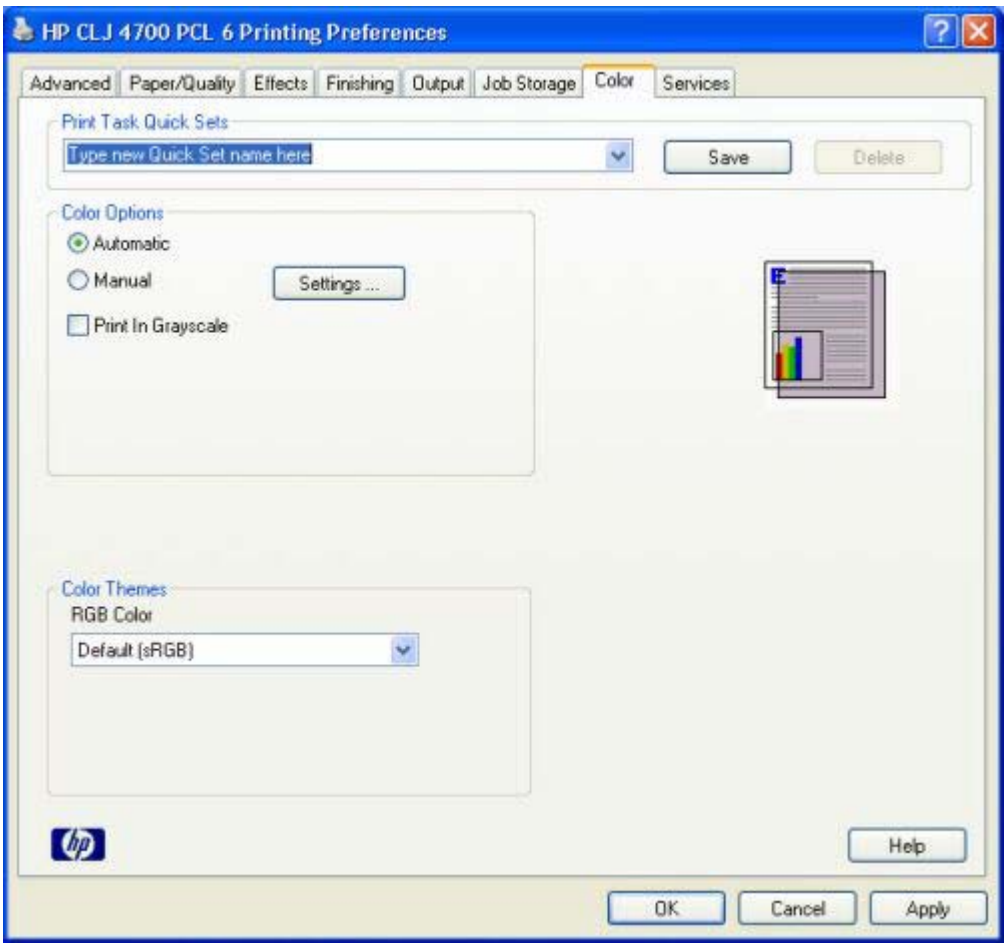


Figure 4-19 Color tab

The **Color** tab contains the following sets of controls:

- **Print Task Quick Sets** group box
- **Color Options** group box
- Color Themes group box
- Document preview image

Print Task Quick Sets

The **Print Task Quick Sets** control is available on each Printing Preference tab, and is used to store the current combination of driver settings found on all of the other tabs. **Print Task Quick Sets** are either preset or user-defined printing specifications, such as media size and pages per sheet. For more information, see Paper tab features.

Color Options

Use the **Color Options** group box to adjust the independent color controls. The settings affect the print job color rendering and print quality. The **Color Options** group box contains the following controls:

- **Automatic** option (default)
- **Manual** option
- **Settings** button (that opens the **Color Settings** dialog box)
- **Print in Grayscale** check box

Automatic

Use the **Automatic** option for default color settings that automatically fine-tune the printed output. The **Automatic** default color settings provide high-quality output for most color printing needs.

Manual

To change the default color settings, select the **Manual** option, and then click the **Settings** button. The **Color Settings** dialog box appears.

To change the settings, make your selections by using the drop-down menus in the **Color Settings** dialog box, and then click **OK**. The following figure shows the **Color Settings** dialog box with "Custom" settings.

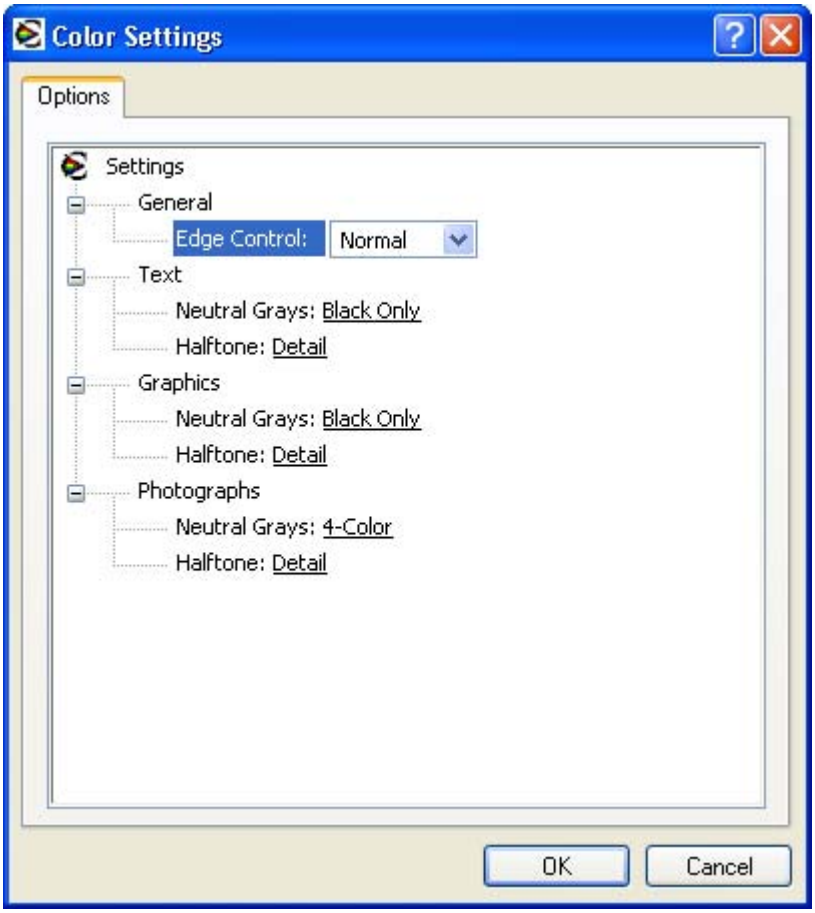


Figure 4-20 Color Settings dialog box

The **Color Settings** dialog box contains the following controls:

- **General**
  - **Edge Control**
- **Text**
  - **Neutral Grays**
  - **Halftone**
- **Graphics**
  - **Neutral Grays**
  - **Halftone**
- **Photographs**
  - **Neutral Grays**
  - **Halftone**

General

Use the **General** setting group to control **Edge Control** settings for all color printing.

Edge Control determines how edges are rendered. **Edge Control** consists of three components: Adaptive Halftoning, Trapping, and Color Resolution Enhancement technology (C-REt). Adaptive Halftoning increases the edge sharpness. Trapping reduces the effect of color plane misregistration by slightly overlapping the edges of adjacent objects. C-REt increases the apparent resolution by placing each dot for the smoothest edges.

The **Edge Control** option offers four settings:

- **Off.** The **Off** setting turns Trapping, Adaptive Halftoning, and C-REt to **Off**.
- **Light.** The **Light** setting provides minimal trapping. Adaptive Halftoning is set to **On** and C-REt is set to **On**.
- **Normal.** The **Normal** setting provides the default trapping settings. Adaptive Halftoning is set to **On**, and C-REt is set to **On**.
- **Maximum.** The **Maximum** setting provides the most trapping. Adaptive Halftoning is set to **On**, and C-REt is set to **On**.

Neutral Grays

The **Neutral Grays** drop-down menu controls the selection of a device-dependent color table that is embedded in the product firmware. The options are **Black Only** or **4-Color**. You can adjust the **Neutral Grays** setting independently for text, graphics, or photographs.

- **Black Only.** This option generates neutral colors (grays and black) by using only black toner. This option guarantees that neutral colors do not have a color cast. **Black Only** is the default setting for the **Text** and **Graphics** components.
- **4-Color.** This option generates neutral colors by combining all four colors of toner, which produces smoother gradients and transitions to non-neutral colors. It also produces the darkest possible black. **4-Color** is the default setting for **Photographs**.

Halftone

The **Halftone** setting controls the selection of a product-dependent halftone algorithm that is embedded in the product firmware. Halftoning is a method by which the printer mixes the four primary colors (cyan, magenta, yellow, and black) in varying proportions to create millions of colors. The **Halftone** options affect the resolution and clarity of the color on the printed page. You can select **Halftone** settings for text, graphics, and photographs independently.

The following Halftone options are available:

- **Detail**. This is the default option; it is useful for text and graphics that require sharp distinctions among lines or colors, or for images that contain a pattern or a high level of detail. Choose this option for sharp edges and detail.
- **Smooth**. This option provides better results for large, solid-filled print areas. It also enhances photographs by smoothing out fine color gradations. Choose this option for uniform and smooth area fills.

Color Themes

The Color Themes group box contains the following settings:

- Default (sRGB)
- Image Optimization (sRGB)

- Adobe RGB (1998)
- None
- Custom Profile

Default (sRGB)

Select **Default (sRGB)** for most printing needs. This setting instructs the printer to interpret RGB color as sRGB, which is the accepted standard of Microsoft and the World Wide Web Consortium (W3C). Colors are matched to optimize the RGB colors on the screen and to provide vivid images and graphics.

Image Optimization (sRGB)

Select **Image optimization (sRGB)** to enhance documents in which the content is mainly bitmap images, such as .GIF or .JPG files. This setting instructs the printer to use the best color matching for rendering sRGB bitmap images. This setting affects only raster data; it has no effect on text or vector-based graphics. Using glossy media in combination with this setting provides the maximum enhancement.

Adobe RGB (1998)

Select **AdobeRGB (1998)** for documents that use the Adobe RGB color space rather than sRGB. For example, some digital cameras capture images in Adobe RBG, and documents that are produced with Adobe Photoshop® use the Adobe RGB color space. When printing from a professional software program that uses Adobe RGB , turn off the color management in the software program and allow the printer software to manage the color space.

None

Select **None** to instruct the printer to print RGB data in raw device mode. To render documents correctly when this option is selected, you must manage color within the software program or the operating system.

CAUTION Use this option only if you are familiar with the procedures for managing color in the software program or the operating system; otherwise, color quality can be compromised.

Custom Profile

Custom Profile. Select **Custom Profile** when you want to duplicate the printed output from other printers or for using special effects, such as sepia tones. This setting instructs the printer to use a custom input profile to more accurately predict and control color output.

The default Custom Profile is an emulation of the color table used on the HP Color LaserJet 4650. The printer holds only one custom profile at a time, so when you download and install another color table, it erases the default color table and installs the new one.

You can download custom profiles from the following Web site:

www.hp.com/support/clj4700

Document preview image

The document preview image is a line-drawn image of a page that represents graphics and text. The document preview image is always oriented so that the contents of the page are right-side-up. The

document preview image appears in the upper-right corner of the **Paper/Quality**, **Effects**, **Finishing**, **Output**, and **Color** tabs.

Switching between tabs does not change the location or appearance of the document preview image. When you move the mouse over the document preview image, the mouse cursor changes from an arrow to a gloved hand. You can toggle between portrait and landscape page orientation by clicking on the image.

Services tab

To gain access to the **Services** tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Printing Preferences**.
6. Click the **Services** tab.

The **Services** tab is shown in the following figure.

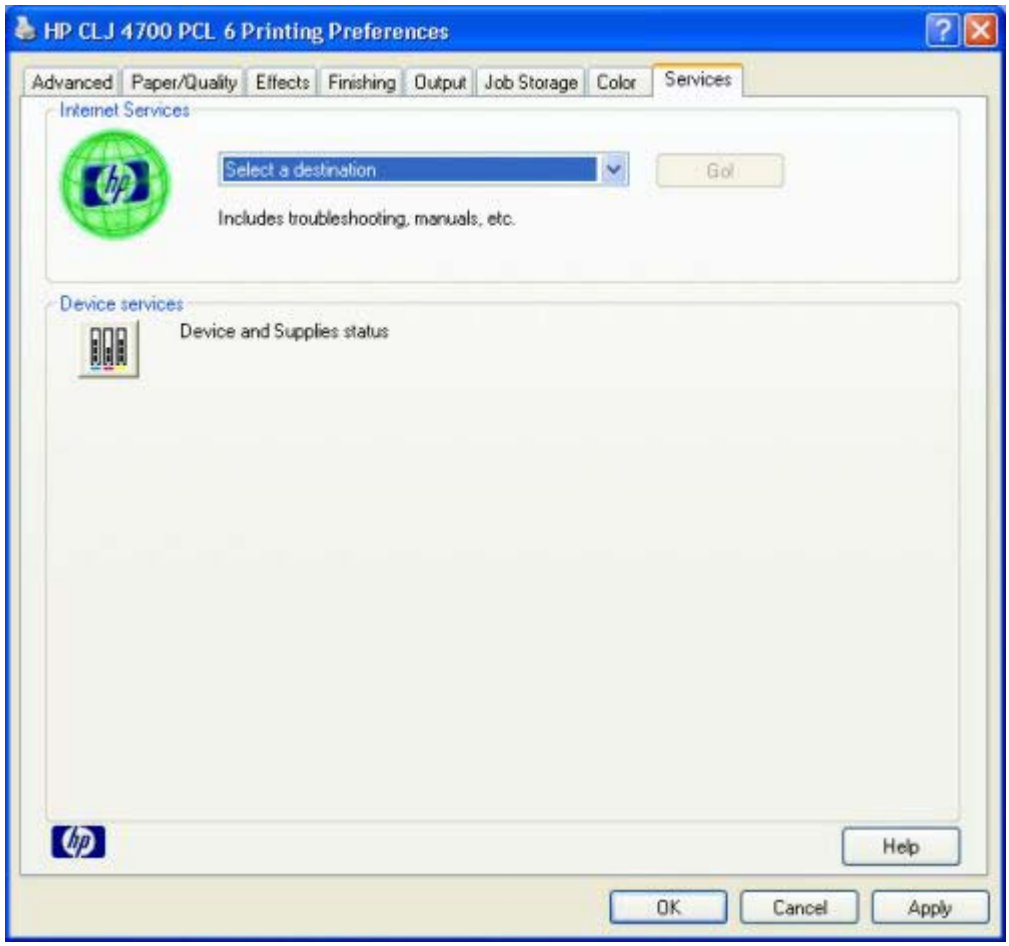


Figure 4-21 **Services** tab

The Internet Services group box contains the **Select a destination** drop-down menu with the following selections:

- Online diagnostic tools
- Support and troubleshooting

- Product manuals
- Check for Driver Updates
- Order supplies

If you have Internet access, select any of these items and click **Go!** to open the corresponding HP Web page.

Click the **Device and Supplies** status icon to open the **Device Status** screen of the HP EWS. For more information, see HP Embedded Web Server.

Device Settings

The **Device Settings** tab is in the Properties window for the print driver. To gain access to the Device Settings tab, follow these steps:

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Properties**.
6. Click the **Device Settings** tab.

Available options depend on the feature. The following figure shows the **Device Settings** tab.

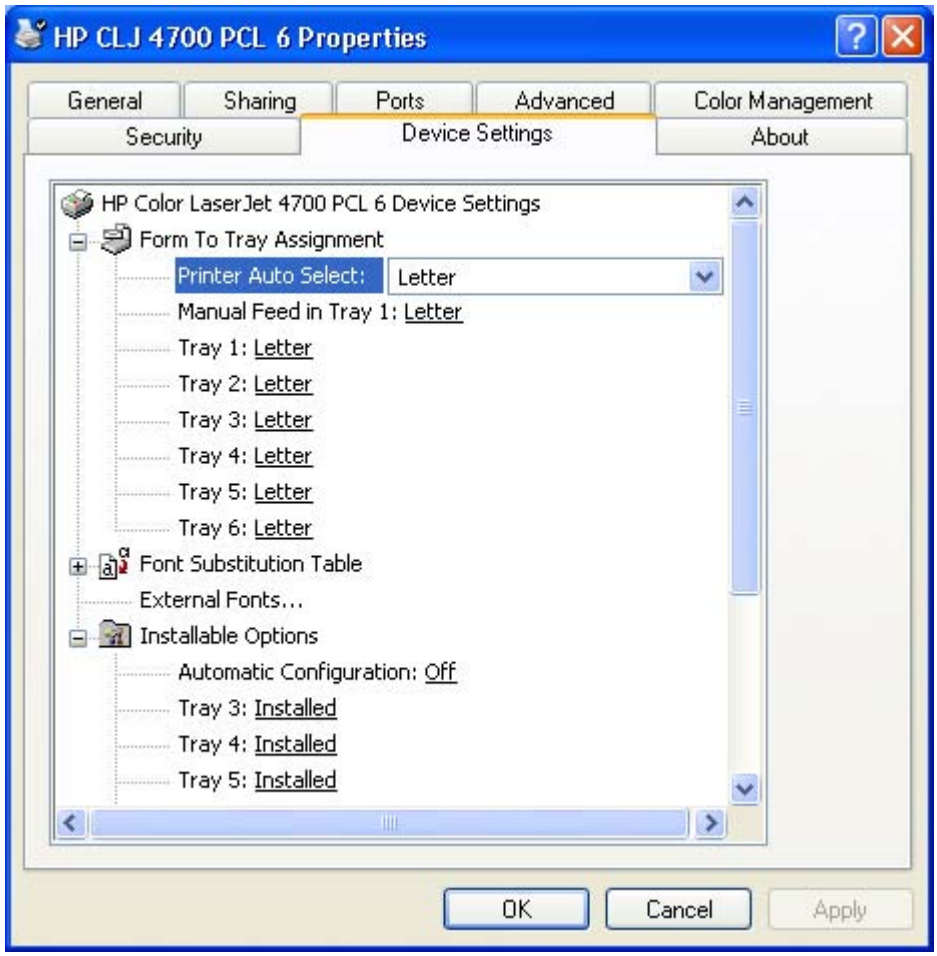


Figure 4-22 Device Settings tab

The **Device Settings** tab contains controls for media-handling devices and controls for managing the HP Color LaserJet 4700.

The **Device Settings** tab contains the following controls:

- **Form to Tray Assignment** options
- **Font Substitution Table** option
  - **External Fonts** option
- **Installable Options** options

Form to Tray Assignment

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

The HP Color LaserJet 4700 supports more than one source of media. You can assign a form (which defines the media size and margins) to each media source. When a form is matched to a source, you can select the form when you print. The product prints from the tray to which that form is assigned.

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

The trays listed in the **Form to Tray Assignment** setting include standard trays and optional accessory trays. Generally, items that are installed separately have a separate **Installable Options** setting.

The input trays listed here are also listed as media sources on the **Paper/Quality** tab.

Configuring the trays

1. Select the appropriate tray in the **Form to Tray Assignment** list.
2. Use the drop-down menu to select the media size (or form) that is loaded in that tray.
3. Repeat steps 1 and 2 for the remaining trays.
4. Click **OK** to enable your settings, or, if necessary, click the **Cancel** button to reconfigure all the trays, and remove the size and type constraints that have been imposed on the **Paper/Quality** tab.

External Fonts

NOTE The External Fonts option is available only in the HP PCL 6 and PCL unidrivers. It is not available in the PS Emulation Unidriver.

Use the **External Fonts** option to install and remove external fonts for the product. External fonts can be soft fonts or DIMM fonts.

Clicking the **External Fonts** option causes the **Properties** button to appear. Clicking the **Properties** button opens the **HP Font Installer** dialog box, which is shown in the following figure.

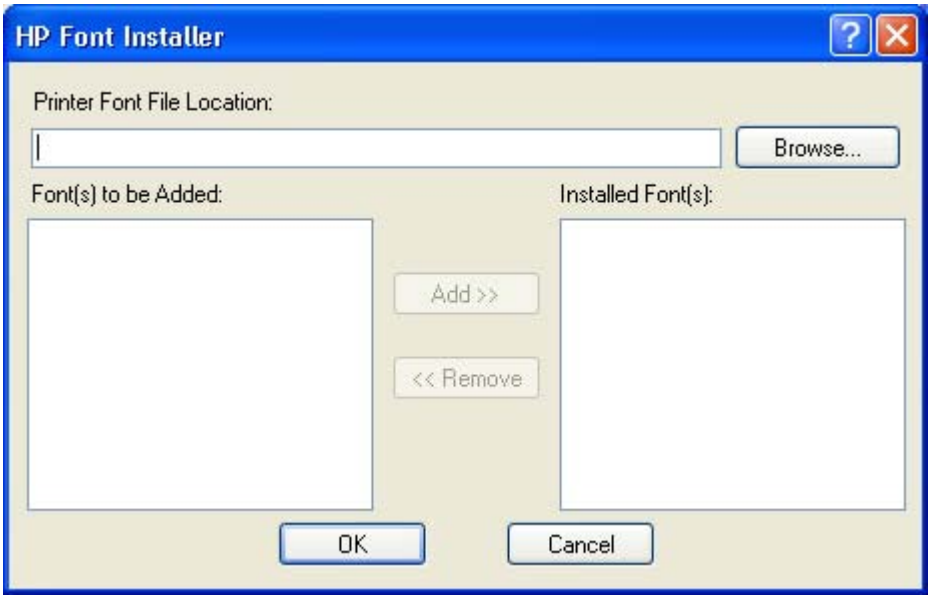


Figure 4-23 **HP Font Installer** dialog box

Installing external fonts

Follow these steps to install external fonts.

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the name of the product.
5. Click **Properties**.
6. Click the **Device Settings** tab.
7. Click the **External Fonts** option. The **Properties** button appears.
8. Click the **Properties** button. The **HP Font Installer** dialog box appears.
9. Type the name and path of the font metric file in the **Printer Font File Location** text box, or click **Browse** to locate the file on your computer. The font file names appear in the **Font(s) to be Added** window.
10. Select the fonts that you want to add, and then click **Add**. The fonts are installed and the file names appear in the **Installed Font(s)** window.
11. Click **OK** to close the **HP Font Installer** dialog box.

Removing external fonts

1. Click **Start**.
2. Select **Settings**.

3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the name of the product.
5. Click **Properties**.
6. Click the **Device Settings** tab.
7. Click the **External Fonts** option. The **Properties** button appears.
8. Click the **Properties** button. The **HP Font Installer** dialog box appears. The external fonts that are installed appear in the **Installed Fonts** window.
9. Select the fonts that you want to remove, and then click **Remove**. The fonts are removed.
10. Click **OK** to close the **HP Font Installer** dialog box.

Font Substitution Table

Use the **Font Substitution Table** settings to install and remove external fonts for the product. External fonts can be soft fonts or DIMM fonts.

Clicking the **Font Substitution Table** option causes a list of fonts to appear, as show in the following figure. Use the settings to change the TrueType-to-printer font mappings.

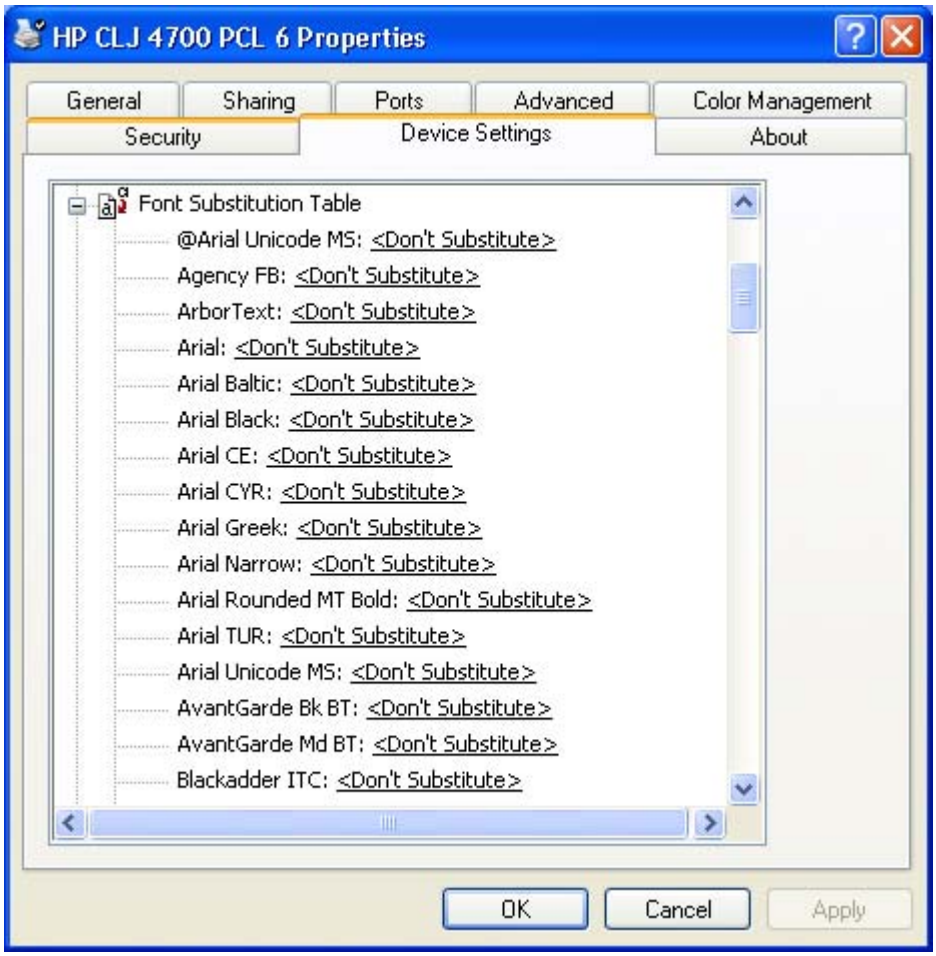


Figure 4-24 Font Substitution Table

PS Emulation Unidriver Device Settings

The following controls are available and appear only in the PS Emulation Unidriver **Device Settings** tab.

Available PostScript Memory

This control specifies the amount of available postscript memory and provides a spin box for changing this value. The available postscript memory is a subset of the product total physical memory. It is usually best to set the postscript memory to match what is shown on the configuration page. To print a configuration page from the control panel, press the Select button (the one with the check mark) to open the menus. Next, press the up and down buttons to scroll to **INFORMATION**, and then press the select button. Next, press the up and down buttons to scroll to **PRINT CONFIGURATION**, and then press the select button.

Output Protocol

This control specifies the protocol that the product uses for print jobs. The following options are available:

- **ASCII** (default)
- **TBCP**
- **Binary**

When you click **ASCII**, data is sent in ASCII format (7-bit), which might take longer to print but can be sent through any I/O channel, such as a serial, parallel, or network port.

When you click **TBCP** (Tagged Binary Communications Protocol), all data except special control characters is sent in binary (8-bit) format. The binary formats can be sent over parallel or serial communications ports and are faster than sending data in ASCII format.

When you click **Binary**, all data except special control characters is sent in binary (8-bit) format. The binary formats can be sent over parallel or serial communications ports and are faster than sending data in ASCII format.

Send Ctrl-D Before Each Job

This control specifies whether the product will be reset at the beginning of every postscript document. The default setting is **No**. Pressing Ctrl-D resets the product to its default setting to ensure that previous print jobs do not affect the current print job. Using Ctrl-D might cause a print job to fail if the product is connected through a network. If your document fails to print when sent to a product connected through parallel or serial ports, change **No** to **Yes**.

Send Ctrl-D After Each Job

This control specifies whether the product will be reset at the end of every postscript document. The default setting is **Yes**. Pressing Ctrl-D resets the product to its default setting to ensure that future print jobs are not affected by the current print job. Using Ctrl-D might cause a print job to fail if the product is connected through a network. If your document fails to print when sent to a network printer, change **Yes** to **No**.

Job Timeout

This control specifies how long the document can take to get from the computer to the product before the product stops trying to print the document. If you specify **0 seconds**, the product continues trying to print indefinitely. The default setting is **0 seconds**. You can use the spin box to change this value to a maximum of **32,767 seconds**.

Wait Timeout

This control specifies how long the product waits to get more postscript information from the computer. After the specified time passes, the product stops trying to print the document and prints an error message. If you are trying to print a very complicated document, you might want to increase this value. If you specify **0 seconds**, the product waits indefinitely. The default setting is **300 seconds**. You can use the spin box to change this value to a maximum of **32,767 seconds**.

Minimum Font Size to Download as Outline

This control specifies the minimum font size (in pixels) for which the driver downloads TrueType fonts as outline (Type 1) fonts. A font smaller than the minimum setting is downloaded as a bitmap (Type 3) font. Use this option to fine-tune the **Automatic** setting for the **TrueType Font Download** option on the **Advanced** tab in **Document Defaults**. The default setting is **100** pixels. You can use the spin box to change this value to a maximum of **32,767** pixels.

Maximum Font Size to Download as Outline

This control specifies the maximum font size (in pixels) for which the driver will download TrueType fonts as bitmap (Type 3) fonts. A font larger than the maximum setting will be downloaded as an outline (Type 1) font. Use this option to fine-tune the **Automatic** setting or override the **Send TrueType as Bitmap** setting for the **TrueType Font Download** option on the **Advanced** tab in **Document Defaults**. The default setting is **600** pixels. You can use the spin box to change this value to a maximum of **32,767** pixels.

Installable Options

This section provides information to configure the printing options that you can install for the HP Color LaserJet 4700. The following controls are available:

- **Automatic Configuration (Off by default)**
- **Tray 3**
- **Tray 4**
- **Tray 5**
- **Tray 6**
- **Accessory Output Bin**
- **Duplex Unit (for 2-Sided Printing)**
- **Allow Manual Duplexing**
- **Accessory Output Bin**
- **Printer Memory**
- **Printer Hard Disk**

- **Job Storage**
- **Mopier Mode**
- **Postscript Passthrough (PS Emulation Unidriver only)**

Automatic Configuration

Use the **Device Settings** tab to tell the driver about the hardware configuration of the product. If bidirectional communication is enabled in a supported environment, set up this tab by selecting the **Update Now** setting in the **Automatic Configuration** setting. The default setting is **Off**. After an automatic configuration, the setting returns to **Off** after the changes are made.

If your environment does not support bidirectional communication, the **Update Now** setting is unavailable, so you must manually configure the options on this tab.

If you have more than one driver installed on your product (for example, the default HP PCL 6 Unidriver and the HP PCL 5 Unidriver), the Update Now feature works automatically only on the driver on which it is activated. The other driver will not be updated, and might show the default setting for your product model.

Tray 3, 4, 5, and 6

This control specifies whether you have trays 3 through 6, additional 500-sheet trays, installed on your product. The default setting is **Not Installed**.

Accessory Output Bin

This control specifies whether you have any accessory output devices installed on your product. The following are available accessory output devices:

- **HP 750-Sheet Stapler/Stacker**

Duplex Unit (for 2-Sided Printing)

The HP Color LaserJet 4700dn, the HP Color LaserJet 4700dtn, and the HP Color LaserJet 4700ph+ come with a duplex unit installed. This setting is enabled (**Installed**) by default.

NOTE These printer models support smart duplexing. The product uses the smart duplexing feature to detect information on both sides of the print job pages and only runs the pages through the duplexing unit if there is printable information on the second side of the page.

Allow Manual Duplexing

Select **Allow Manual Duplexing** to print on both sides of any size and most types of media (except transparencies, envelopes, and labels). To use this feature, you must reinsert the media stack into the input tray to print the second side. The product pauses while you make this adjustment.

This setting is enabled by default.

Printer Memory

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

Printer Hard Disk

When this option is enabled, the **Job Storage** option and the **Mopier Mode** are enabled in the print driver. Use the **Job Storage** option to store print jobs and then print them later from the control panel. The multiple-original print (mopy) function is an HP-designed feature that produces multiple, collated copies from a single print job.

Job Storage

When **Job Storage** is enabled, the product can store print jobs so that you can gain access to those print jobs later at the control panel.

Mopier Mode

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

The HP Color LaserJet 4700 supports the transmit-once mopying feature when the **Mopier Mode:** setting on the **Device Settings** tab is **Enabled**.

When you use the HP PCL 6 Unidriver, HP PCL 5 Unidriver, or PS Emulation Unidriver, mopying is performed in one of two ways: either through the software or through the product hardware. When the mopier is enabled, mopying takes place through the product hardware by default. One copy of a multiple-page print job is transmitted once through the network to the product, together with a printer job language (PJL) command directing the product to make the specified number of copies.

When you disable the mopier, you are not necessarily disabling mopying, which the driver can still perform through the software rather than the product hardware (the mopying path that is disabled when you change the **Mopy Mode** setting to **Disabled**). However, a multiple-copy print job that is sent when the mopier is disabled loses the advantage of transmitting the print job once, because the job is sent through the network for each copy.

Mopier mode and collation

Mopying and collating print jobs are independent but closely related functions. Mopying, the ability to send original print jobs to the product, is performed by the print driver. Collating can be controlled by either the print driver or the document software program. The mopying mode is selected by default in the driver, and can be disabled by changing the **Mopier Mode** setting on the **Device Settings** tab to **Disabled**.

You can control collation through the print driver by selecting or clearing the **Collated** check box on the **Advanced** tab. You can clear the check box, which is available only when the **Copy Count** option is set to more than 1 copy, to allow the software program to control collation.

To receive uncollated multiple copies of a print job, you must clear the **Collated** check box *and* make sure that the software program collation feature is not selected.

The following table shows the relation between mopier mode settings and collation settings in the software program and the driver. The first three columns show the settings; the last column, "Expected result", shows how a 3-page print job would appear.

Table 4-4 Driver Mopier mode and collation settings

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

Postscript Passthrough (PS Emulation Unidriver only)

Postscript Passthrough is enabled by default, and must be enabled for most print jobs. Postscript passthough provides additional capabilities for some software programs when printing to a postscript driver. Options such as **Watermarks**, **n-up** and **Booklet Printing** might not print correctly from some applications with **Postscript Passthrough** enabled, because such programs send postscript information to the printer that cannot be controlled by the driver. Other programs might print using these options without problems. Select **Disabled** and print your document again if you encounter problems.

NOTE In some cases, disabling **Postscript Passthrough** can cause unexpected results within a software program.

About tab

The **About** tab is in the **Properties** for the print driver. To gain access to the print driver **Properties**, click **Start** on the Window task bar, select **Settings**, and then click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home). Right-click the product name, and then click **Properties**.

1. click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows 2000) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the product name.
5. Click **Properties**.
6. Click the **About** tab.

The **About** tab provides detailed information about the driver. It contains an overall build number (in parentheses after the model name) together with specific information about each of the components. The information varies according to the HP Color LaserJet 4700 model number, driver, date, and versions. The **About** tab is shown in the following figure.

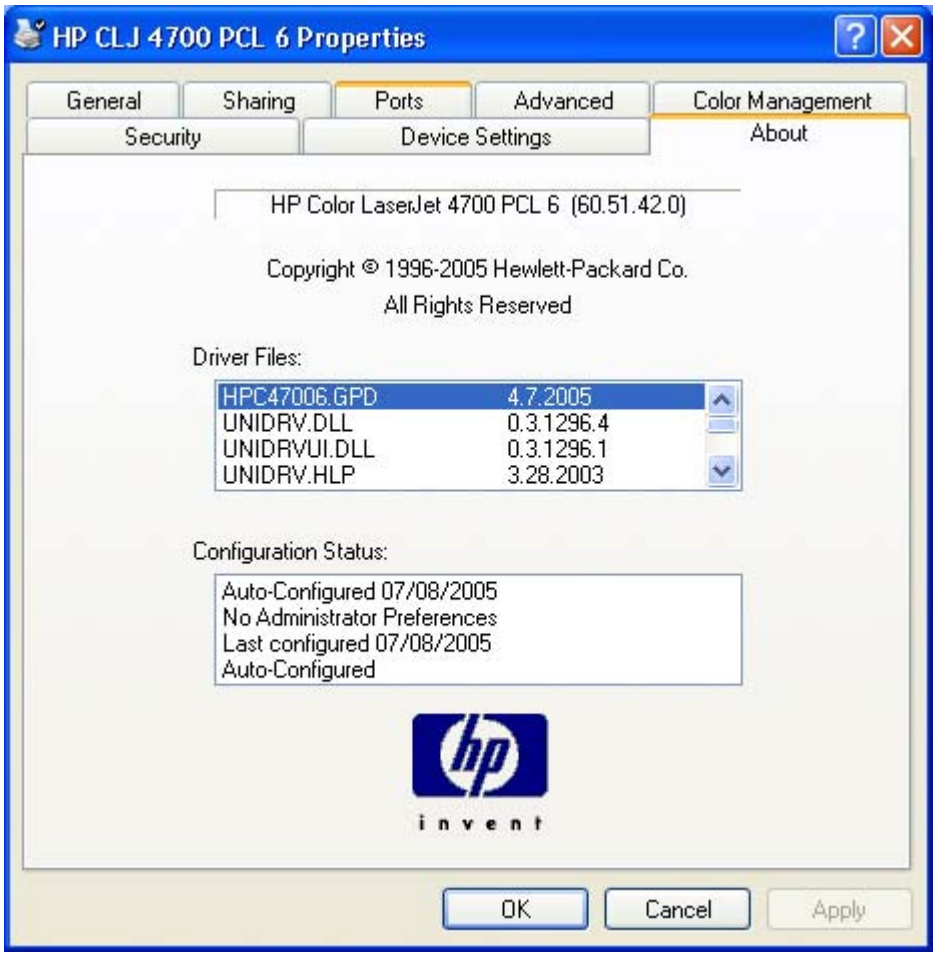


Figure 4-25 **About** tab

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

5 Installing Windows printing-system components

Introduction

The HP Color LaserJet 4700 comes with software and installers for Microsoft Windows and Apple Computer, Inc. Linux and UNIX systems are supported, and software is available on the Web. For detailed information about operating systems that support printing-system software installation for the HP Color LaserJet 4700 printer, see Supported operating systems

This chapter provides procedures for installing and removing the HP Color LaserJet 4700 printing-system software for Windows operating systems. The chapter provides information about these topics:

- Windows
- Font support
- General installation for Windows 98, Me, 2000, and XP operating systems
  - Installing from the printing-system CD
  - Installing from a network or from downloaded files
- Detailed Windows installation
  - Typical Installation dialog box sequence
  - Custom Installation
  - Installing print drivers by using Add Printer
  - Installer Customization Wizard for Windows
  - Point and Print installation for Windows 98, Me, 2000, XP, and Server 2003
- Setting a default printer

NOTE If your computer is running a 64-bit Windows operating system, you must install the corresponding 64-bit print driver. For instructions, see Installing print drivers by using Add Printer.

Font support

The following sections list the fonts that are included with Microsoft Windows software, and the fonts that are available on the CD that came with the product.

Basic fonts

Microsoft Windows software includes these basic fonts, which can be used with any HP printing product:

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

Default fonts

The following default fonts are installed through a Typical Installation of the HP Color LaserJet 4700 printing-system software.

Table 5-1 Default fonts

Font name	Font style	File name
Albertus Extra Bold	Regular	ALBR85W.TTF
Albertus Medium	Regular	ALBR55W.TTF
Antique Olive	Regular	OLVR55W.TTF
Antique Olive	Bold	OLVR75W.TTF
Antique Olive	Italic	OLVR56W.TTF
CG Omega	Regular	CGOR45W.TTF
CG Omega	Bold	CGOR65W.TTF

Table 5-1 Default fonts (continued)

Font name	Font style	File name
CG Omega	Bold Italic	CGOR66W.TTF
CG Omega	Italic	CGOR46W.TTF
CG Times	Regular	CGTR45W.TTF
CG Times	Bold	CGTR65W.TTF
CG Times	Bold Italic	CGTR66W.TTF
CG Times	Italic	CGTR46W.TTF
Clarendon Condensed	Bold	CLAR67W.TTF
Coronet	Regular	CORONET.TTF
CourierPS	Regular	CPSR45W.TTF
CourierPS	Bold	CPSR65W.TTF
CourierPS	Bold Oblique	CPSR66W.TTF
CourierPS	Oblique	CPSR46W.TTF
Garamond	Antiqua	GARR45W.TTF
Garamond	Halbfett	GARR65W.TTF
Garamond	Kursiv	GARR46W.TTF
Garamond	Kursiv Halbfett	GARR66W.TTF
Helvetica®	Regular	HELR45W.TTF
Helvetica	Bold	HELR65W.TTF
Helvetica	Bold Oblique	HELR66W.TTF
Helvetica Narrow	Regular	HELR47W.TTF
Helvetica Narrow	Bold	HELR67W.TTF
Helvetica Narrow	Bold Oblique	HELR68W.TTF
Helvetica Narrow	Oblique	HELR48W.TTF
Helvetica	Oblique	HELR46W.TTF
ITC Avant Garde Gothic	Book	AVGR45W.TTF
ITC Avant Garde Gothic	Book Oblique	AVGR46W.TTF
ITC Avant Garde Gothic Demi	Regular	AVGR65W.TTF
ITC Avant Garde Gothic Demi	Oblique	AVGR66W.TTF
ITC Bookman Light	Regular	BOKR35W.TTF
ITC Bookman Light	Italic	BOKR36W.TTF
ITC Bookman Demi	Regular	BOKR75W.TTF
ITC Bookman Demi	Italic	BOKR76W.TTF
ITC Zapf Chancery	Medium Italic	CHANC___.TTF
ITC Zapf Dingbats	Regular	DINGS___.TTF

Table 5-1 Default fonts (continued)

Font name	Font style	File name
Letter Gothic	Regular	LETR45W.TTF
Letter Gothic	Bold	LETR65W.TTF
Letter Gothic	Italic	LETR46W.TTF
Marigold	Regular	MARIGOLD.TTF
New Century Schoolbook	Bold	NCSR75W.TTF
New Century Schoolbook	Bold Italic	NCSR76W.TTF
New Century Schoolbook	Italic	NCSR56W.TTF
New Century Schoolbook	Roman	NCSR55W.TTF
Palatino	Bold	PALR65W.TTF
Palatino	Bold Italic	PALR66W.TTF
Palatino	Italic	PALR46W.TTF
Palatino	Roman	PALR45W.TTF
SymbolPS	Regular	SYMPS__.TTF
Times*	Bold	TIMR65W.TTF
Times	Bold Italic	TIMR66W.TTF
Times	Italic	TIMR46W.TTF
Times	Roman	TIMR45W.TTF
Univers	Bold	UNVR65W.TTF
Univers	Bold Italic	UNVR66W.TTF
Univers Condensed	Bold	UNVR67W.TTF
Univers Condensed	Bold Italic	UNVR68W.TTF
Univers Condensed	Medium	UNVR57W.TTF
Univers Condensed	Medium Italic	UNVR58W.TTF
Univers	Medium	UNVR55W.TTF
Univers	Medium Italic	UNVR56W.TTF

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

Table 5-2 Additional PS emulation fonts

Font name	Font style	File name
Albertus MT	Regular	PS_12639.TTF
Albertus MT	Italic	PS_12640.TTF
Albertus MT Lt	Regular	PS_14530.TTF
Antique Olive CompactPS	Regular	PS_11120.TTF

Table 5-2 Additional PS emulation fonts (continued)

Font name	Font style	File name
Antique Olive Roman	Regular	PS_11119.TTF
Antique Olive Roman	Bold	PS_11118.TTF
Antique Olive Roman	Italic	PS_11846.TTF
Apple Chancery	Italic	PS_24516.TTF
Bodoni Poster	Regular	PS_12704.TTF
Bodoni PosterCompressed	Regular	PS_14508.TTF
BodoniPS	Regular	PS_12581.TTF
BodoniPS	Bold	PS_12585.TTF
BodoniPS	Bold Italic	PS_12586.TTF
BodoniPS	Italic	PS_12582.TTF
Candid	Regular	PS_24517.TTF
Chicago	Regular	PS_24518.TTF
Clarendon Light	Regular	PS_14513.TTF
ClarendonPS	Regular	PS_10269.TTF
ClarendonPS	Bold	PS_12968.TTF
Cooper Black	Regular	PS_10369.TTF
Cooper Black	Italic	PS_10370.TTF
Copperplate32bc	Regular	PS_14514.TTF
Copperplate33bc	Regular	PS_14515.TTF
CoronetPS	Italic	PS_10249.TTF
Eurostile	Regular	PS_10267.TTF
Eurostile Bold	Regular	PS_10268.TTF
Eurostile ExtendedTwo	Bold	PS_14512.TTF
Eurostile ExtendedTwo	Regular	PS_14511.TTF
Geneva	Regular	PS_24509.TTF
GillSans	Regular	PS_13872.TTF
GillSans	Bold	PS_13874.TTF
GillSans	Bold Italic	PS_13875.TTF
GillSans Condensed	Regular	PS_14053.TTF
GillSans Condensed	Bold	PS_14054.TTF
GillSans ExtraBold	Regular	PS_14051.TTF
GillSans	Italic	PS_13873.TTF
GillSans Light	Italic	PS_13871.TTF
GillSans Light	Regular	PS_13870.TTF

Table 5-2 Additional PS emulation fonts (continued)

Font name	Font style	File name
Goudy	Bold	PS_12544.TTF
Goudy	Bold Italic	PS_10695.TTF
Goudy	Regular	PS_12542.TTF
Goudy ExtraBold	Regular	PS_12545.TTF
Goudy	Italic	PS_12543.TTF
Helvetica Condensed	Regular	PS_14526.TTF
Helvetica Condensed	Bold	PS_14528.TTF
Helvetica Condensed	Bold Italic	PS_14529.TTF
Helvetica Condensed	Italic	PS_14527.TTF
Hoefler Text	Regular	PS_24519.TTF
Hoefler Text Black	Regular	PS_24521.TTF
Hoefler Text Black	Italic	PS_24522.TTF
Hoefler Text	Italic	PS_24520.TTF
Hoefler Text Ornaments	Regular	PS_24523.TTF
Joanna MT	Regular	PS_14503.TTF
Joanna MT	Bold	PS_14505.TTF
Joanna MT	Bold Italic	PS_14506.TTF
Joanna MT	Italic	PS_14504.TTF
Letter Gothic	Italic	PS_13778.TTF
Letter GothicPS	Regular	PS_13777.TTF
Letter GothicPS	Bold	PS_13779.TTF
Letter GothicPS	Bold Italic	PS_13780.TTF
Lubalin Graph	Regular	PS_12675.TTF
Lubalin Graph	Bold	PS_12677.TTF
Lubalin Graph	Bold Italic	PS_12625.TTF
Lubalin Graph	Italic	PS_12623.TTF
MarigoldPS	Regular	PS_94073.TTF
Mona Lisa Recut	Regular	PS_14525.TTF
Monaco	Regular	PS_24524.TTF
New York	Regular	PS_24510.TTF
Optima	Regular	PS_12506.TTF
Optima	Bold	PS_12510.TTF
Optima	Bold Italic	PS_12511.TTF
Optima	Italic	PS_12507.TTF

Table 5-2 Additional PS emulation fonts (continued)

Font name	Font style	File name
Oxford	Italic	PS_14072.TTF
StempelGaramond Roman	Italic	PS_11546.TTF
StempelGaramond Roman	Regular	PS_11545.TTF
StempelGaramond Roman	Bold	PS_11547.TTF
StempelGaramond Roman	Bold Italic	PS_11548.TTF
Taffy	Regular	PS_14507.TTF
Univers 45 Light	Regular	PS_13501.TTF
Univers 45 Light	Bold	PS_14023.TTF
Univers 45 Light	Bold Italic	PS_14024.TTF
Univers 45 Light	Italic	PS_13502.TTF
Univers 47 CondensedLight	Bold	PS_14030.TTF
Univers 47 CondensedLight	Bold Italic	PS_14040.TTF
Univers 55	Regular	PS_14021.TTF
Univers 55	Italic	PS_14022.TTF
Univers 57 Condensed	Regular	PS_14029.TTF
Univers 57 Condensed	Italic	PS_14039.TTF
Univers ExtendedPS	Bold	PS_13548.TTF
Univers ExtendedPS	Regular	PS_13547.TTF
Univers ExtendedPS	Bold Italic	PS_14481.TTF
Univers ExtendedPS	Italic	PS_14480.TTF

Installation instructions

The following sections provide instructions for installing the printer drivers on various Windows operating systems.

General installation for Windows 98, Me, 2000, and XP operating systems

Installation is similar for the Windows 98, Windows Me, Windows 2000, and Windows XP operating systems. The Windows NT 4.0 operating system does not support the HP Color LaserJet 4700 printer.

NOTE The HP Traditional PCL 6 Driver, the HP Traditional PCL 5 Driver, and the PS Emulation Driver are available on the printing-system software CD. For more information, see the Installing print drivers by using Add Printer section in this chapter.

If the HP Color LaserJet 4700 is connected through a file or print server, the printing-system software must first be installed on the server before being installed on any client systems. If the HP LaserJet printing-system software is not first installed on the server, then bidirectional communication and some driver autoconfiguration methods are not available to the client systems.

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

When the HP Color LaserJet 4700 printing-system installer runs, the HP LaserJet uninstaller is always added to the system.

Installing from the printing-system CD

Follow these instructions to install the HP Color LaserJet 4700 printing system from the CD that came with your product.

1. Close all programs that are open on your computer.
2. Insert the CD in the CD-ROM drive.

   NOTE If your CD does not start automatically, click **Start**, click **Run**, and then browse to and double-click the SETUP.EXE file in the root directory of the CD.

3. Click **Install Printer** and follow the onscreen prompts.

Installing from a network or from downloaded files

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

1. Browse to the location of the SETUP.EXE file.
2. Double-click the SETUP.EXE file.
3. Click **Install Printer** and continue to follow the instructions until the 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 Color LaserJet 4700 printing-system software in Microsoft Windows environments. You can choose to install the software by using either a Typical Installation or a Custom Installation.

Using the Help, Back, Next, and Cancel buttons

Click the **Help** button on any screen where it appears to find suggestions and explanations about the installation process.

Click the **Back** button on any installation dialog box to return to the previous dialog box. The specific dialog box depends on your previous selections.

After you select any options on a given screen, click the **Next** button to proceed to the next step in the installation sequence.

To exit the installation sequence without installing the product, click the **Cancel** button in any installation dialog box.

1. When you click the **Cancel** button, a dialog box opens that prompts you with this question: “Are you sure you want to cancel the installation?”

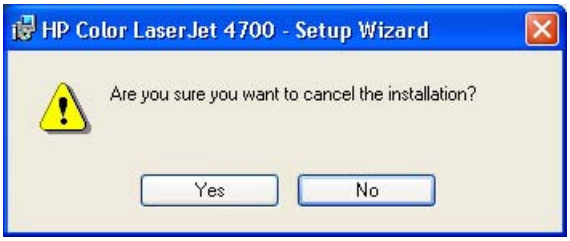


Figure 5-1 **Are you sure you want to cancel the installation?** dialog box

2. When you click **Yes**, the **Cancel** dialog box opens, stating that the setup was interrupted.

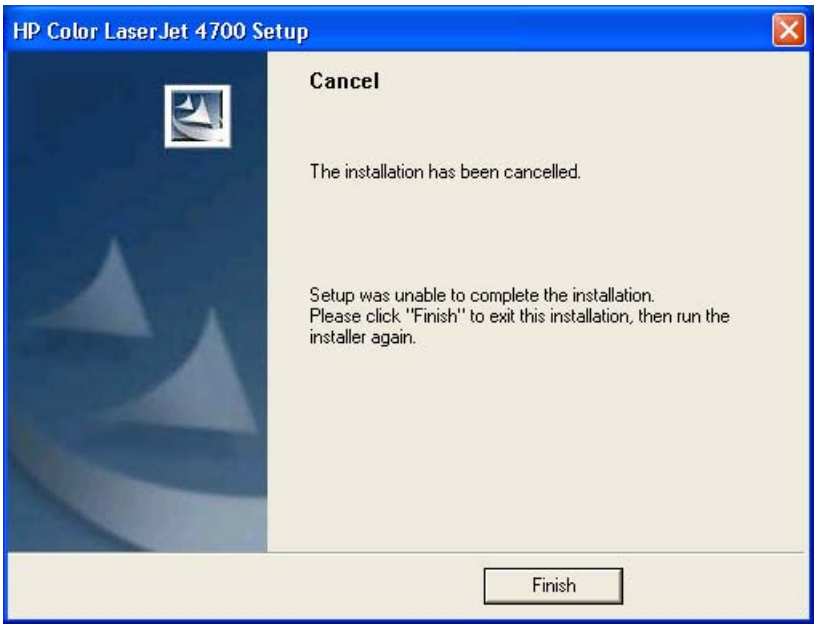


Figure 5-2 **Cancel** dialog box

3. Click the **Finish** button closes the installation screens.

The result of clicking these buttons is explained in context in the following sections.

Modifying a pre-existing installation

If an HP Color LaserJet 4700 has been installed previously on your system, the appearance of the main install screen changes on the CD Browser, and the install printer setting changes to modify installation. A pre-existing installation also changes the sequence of installation screens that are presented, depending on the selections you make.

Typical Installation dialog box sequence

NOTE The dialog boxes shown in this chapter appear in the Windows XP Professional installation sequence. The order and appearance of dialog boxes can vary among operating systems.

The Typical Installation includes the following components:

- HP Color LaserJet 4700 PCL 6 driver
- Screen Fonts
- Install Notes
- User Guide

The first screen to appear after you initiate the installation process from the CD Browser is the **Choose Setup Language** dialog box.

Figure 5-3 **Choose Setup Language** dialog box

When you select the **Install Printer** option from the HP Color LaserJet 4700 printing-system software CD, the **Choose Setup Language** dialog box appears.

NOTE The **Choose Setup Language** dialog box lists only the languages that are available on the HP Color LaserJet 4700 printing-system software CD.

The installer automatically detects the language that your computer system uses and presents this selection as the default.

You can select another language that is available on the CD by clicking the down arrow in the drop-down menu.

Click **OK** to initiate the printing-system setup. The **Preparing to Install** dialog box appears.

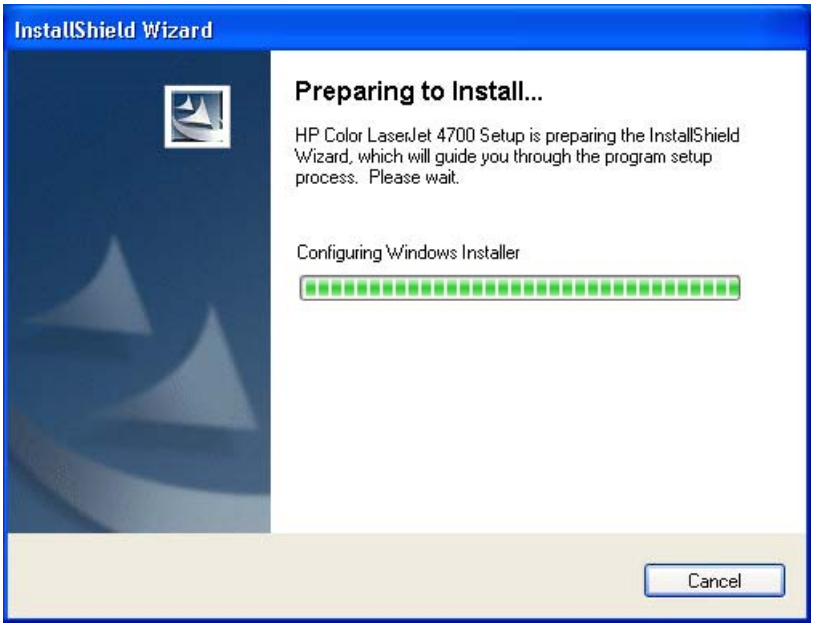


Figure 5-4 **Preparing to Install** dialog box

NOTE If you try using the regular install method in a Windows NT 4.0 operating environment, the following screen appears.

Figure 5-5 Please use the Add Printer Wizard

Windows NT 4.0 does not support the HP Color LaserJet 4700 print drivers, but you can download other drivers from the Web. Use print drivers for legacy HP products whose feature sets closely matches the feature set of the HP Color LaserJet 4700 printer. For instance, you can use the HP Color LaserJet 4650 drivers.

NOTE The HP Color LaserJet 4700 Printing System Install Notes mentioned in this dialog box are available on the printing-system software CD in <root>\Manuals\CLJ4700_install-note_enww.htm

For information about using the Add Printer install method, see the Installing print drivers by using Add Printer section.

Click **OK** to continue the installation. If you are not trying to install the product on Windows NT 4.0, the **Welcome to the HP Color LaserJet 4700 Setup Wizard** dialog box appears, as shown in the following figure.

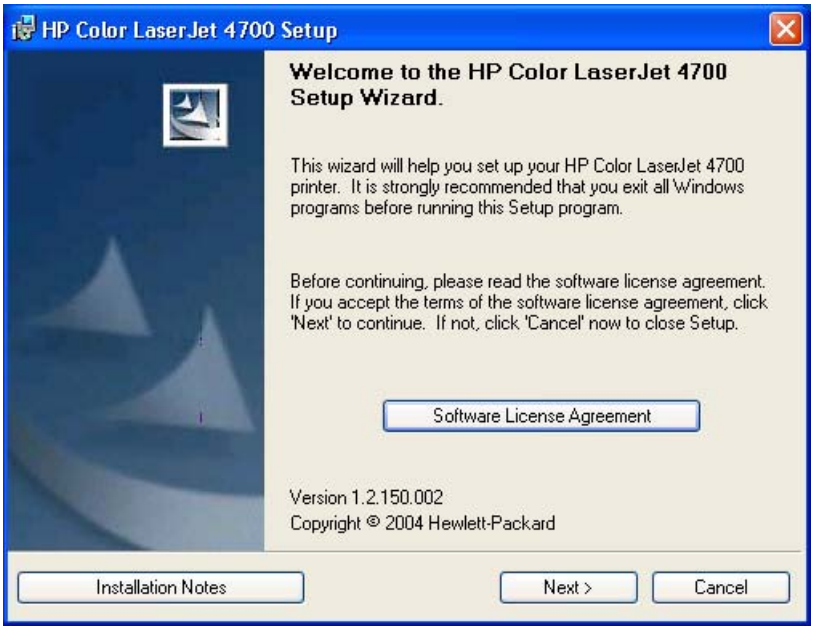


Figure 5-6 **Welcome to the HP Color LaserJet 4700 Setup Wizard** dialog box

Click **Installation Notes** (on the **Welcome to the HP Color LaserJet 4700 Setup Wizard** dialog box) to open the file CLJ4700_INSTALL-NOTE_XXWW.HTM (where XX indicates the language; for example, the English file is named CLJ4700_INSTALL-NOTE_ENWW.HTM).

Click **Software License Agreement** to open the **HP Software License Agreement** dialog box, as shown in the following figure.

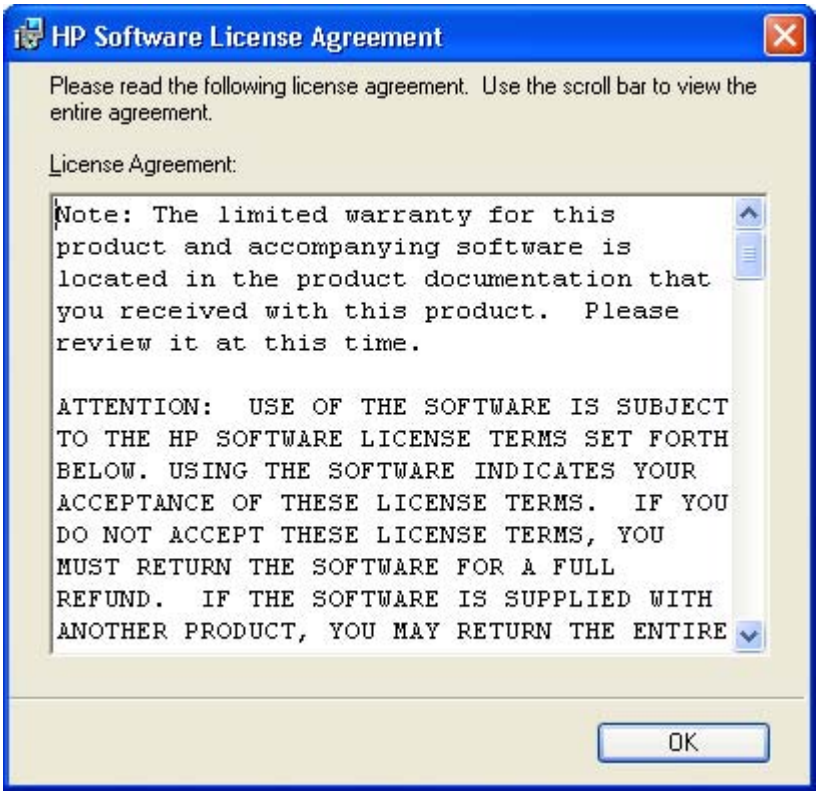


Figure 5-7 **HP Software License Agreement** dialog box

Click **OK** to return to the **Welcome** dialog box and then click **Next** to continue the installation. The **Printer Connection** dialog box opens, as shown in the following figure.

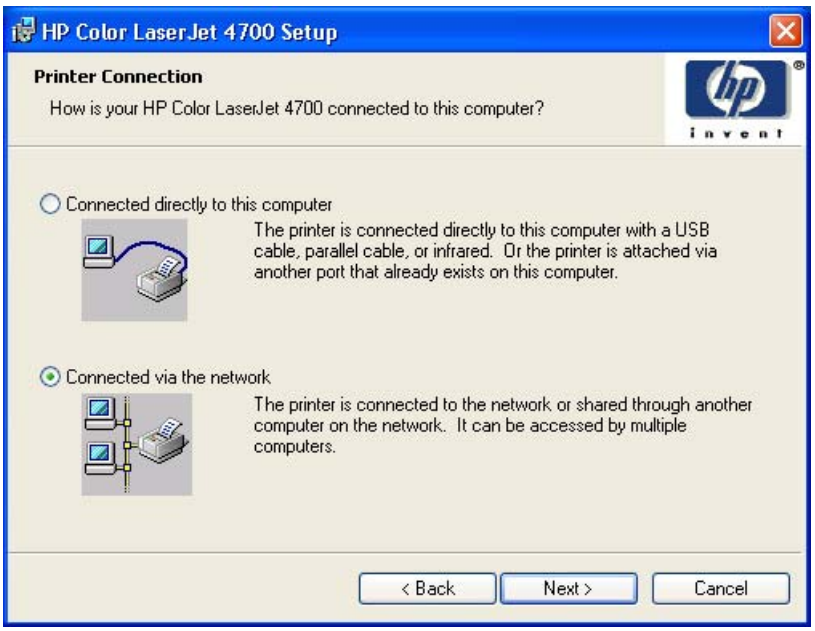


Figure 5-8 **Printer Connection** dialog box

NOTE The HP Color LaserJet 4700 does not support infrared connections.

If you select **Connected directly to this computer** (a "direct connection" using a parallel cable or USB 2.0 cable), and then click **Next**, the **Connector Type** dialog box opens. This is the default option.

NOTE Select the **Connected directly to this computer** option if a network port has already been created for your product (which could occur, for instance, if the product has been previously installed); the installer treats this port as if it is a local direct connection.

The **Connector Type** dialog box is shown in the following figure.

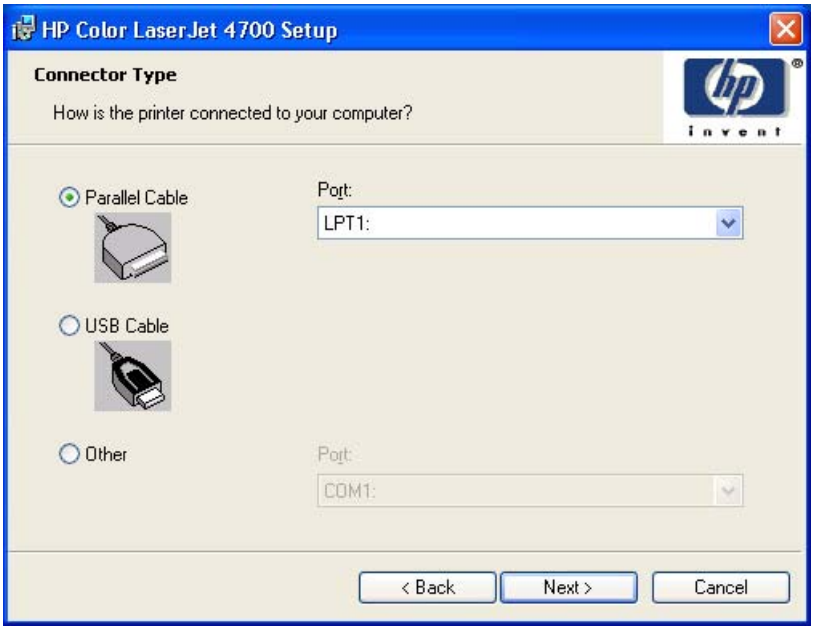


Figure 5-9 **Connector Type** dialog box

NOTE The printing-system software should be installed before the HP Color LaserJet 4700 printer is connected to the computer through a parallel or USB connection and turned on. During the installation process, you will be prompted by the software to connect the device during installation.

Select any option and click **Next** to open the **Installation Type** dialog box. To continue with the default installation sequence, see Figure 5-22 Installation Type dialog box.

If you are installing the HP Color LaserJet 4700 printer over the network, select **Connected via the network** in the **Printer Connection** dialog box.

For a network installation, the HP Color LaserJet 4700 printer must be connected to the network and turned on before the printing-system software is installed so that the software can detect the printer.

Click **Next** to continue. The **Searching** dialog box opens, as shown in the following figure.

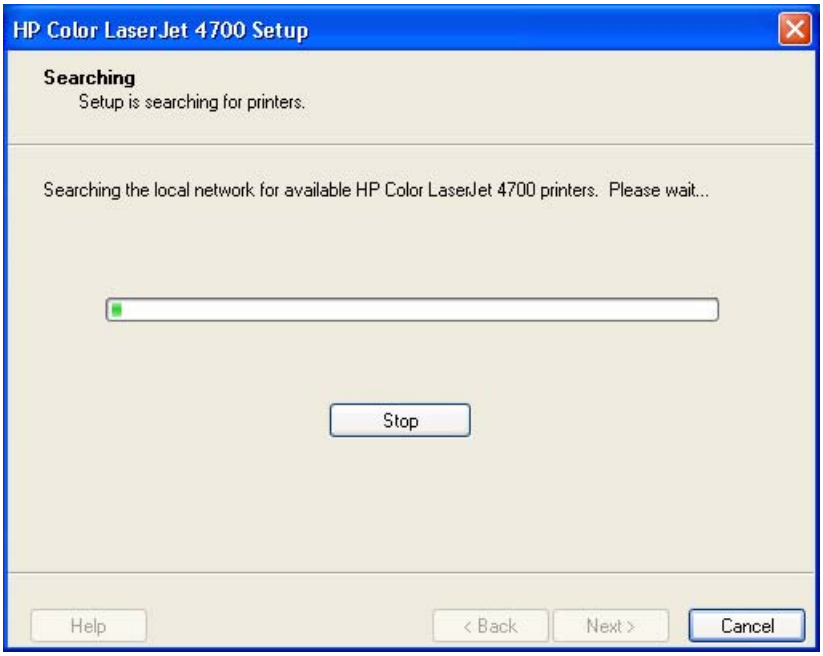


Figure 5-10 **Searching** dialog box

NOTE If you are installing the product over a network, you must let the search complete for the first subnet in the network in order to find all available printers. After the first subnet is scanned for available HP Color LaserJet 4700 printers, the results are displayed in the **Printers Found** dialog box. However, the installer continues to search the network for additional printers after the first results are displayed. The results of searching the first subnet usually takes place within about 20 seconds. It may take some time before the other subnets are searched and the full list of printers is displayed in the Printers Found dialog box, depending on the configuration of the network.

If you click **Stop**, the process is interrupted and you are prompted to search again. The search must be completed in order to continue the installation.

If your network has a firewall that is blocking the installation, the **Notice about Firewalls** dialog box appears, as shown in the following figure.

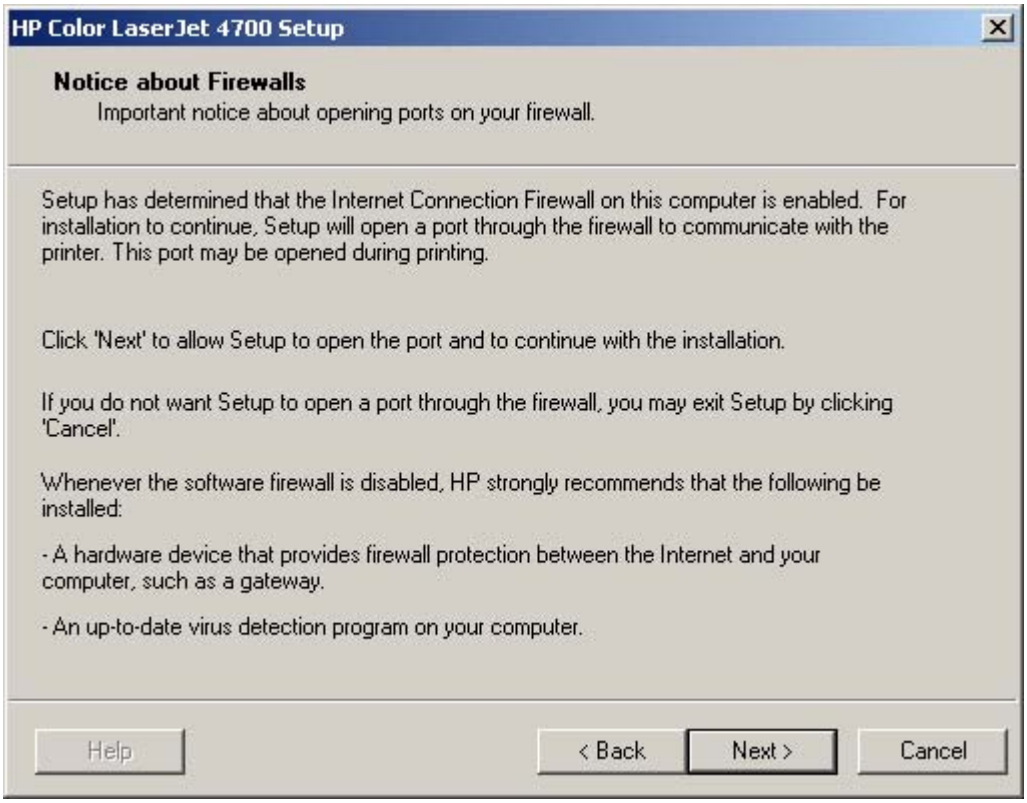


Figure 5-11 **Notice about Firewalls** dialog box

If you are performing a network installation and no printer is found, the **Printer Not Found** dialog box appears, as shown in the following figure.

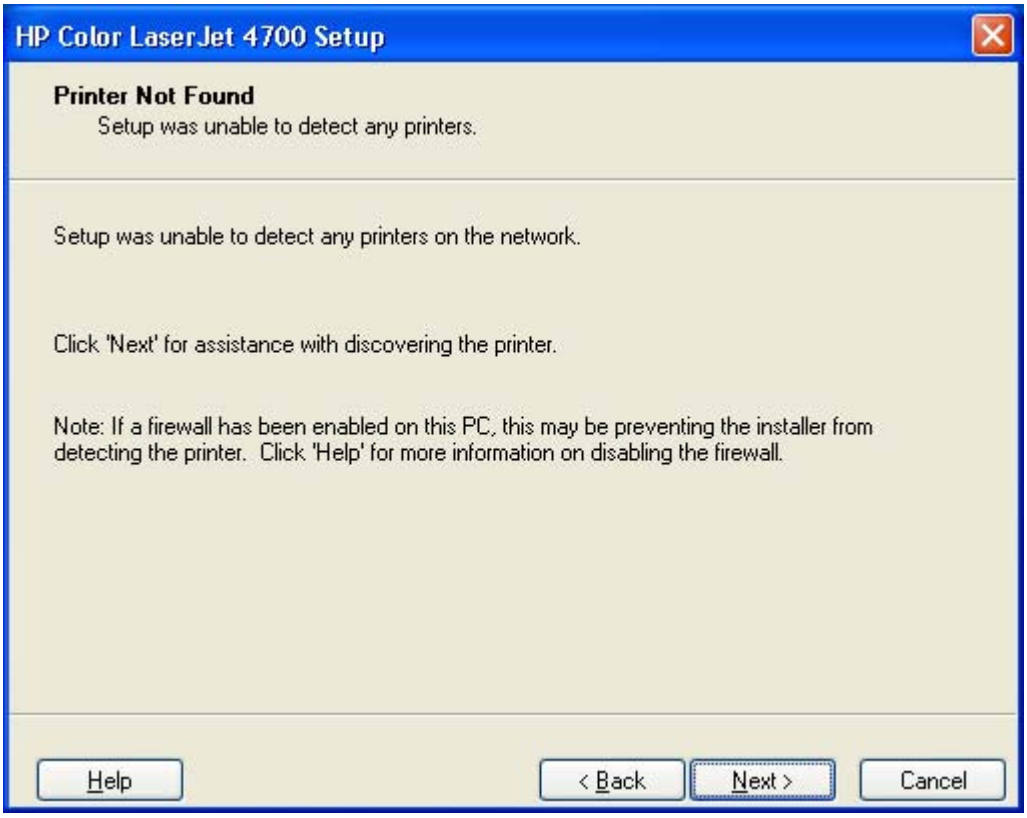


Figure 5-12 **Printer Not Found** dialog box

The product might not be connected to the network. Ensure that the printer is connected and is turned on. If a firewall is blocking the installation and you want the installer to open a port through the firewall, click **Next**.

The Searching dialog box appears (see Figure 5-10 Searching dialog box).

If a printer is found, the **Printers Found** dialog box appears, with a list of matching products that have been found on the network. The **Printer Found** dialog box is shown in the following figure.

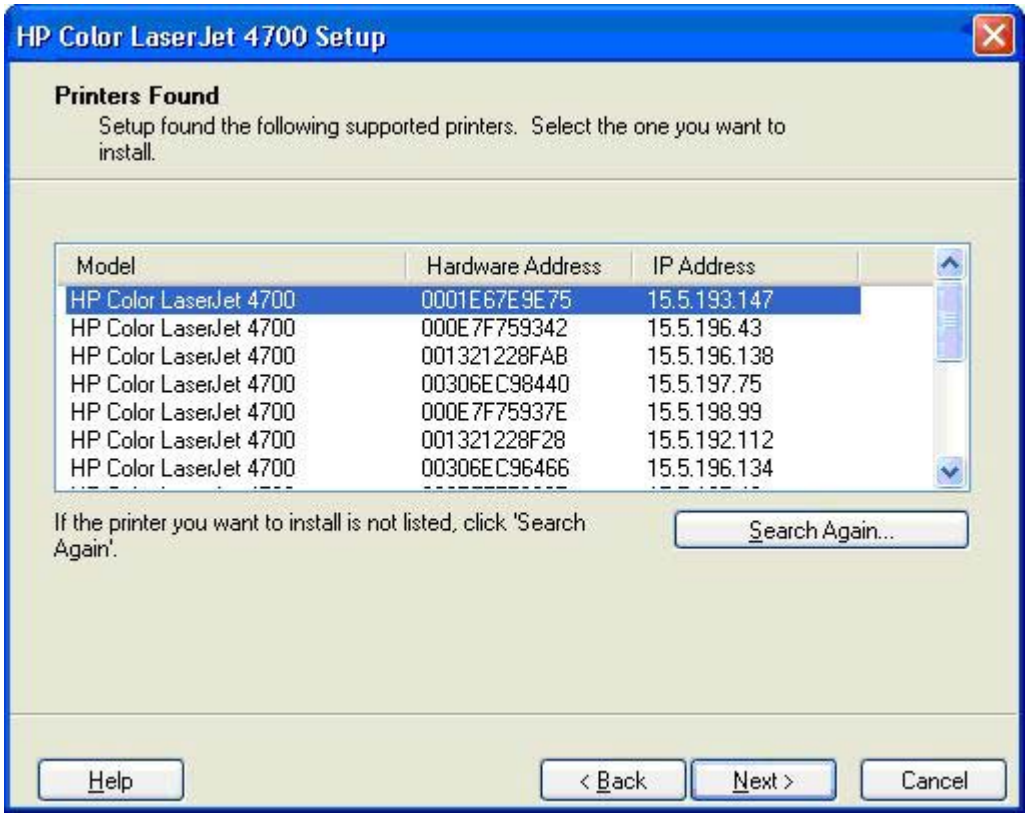
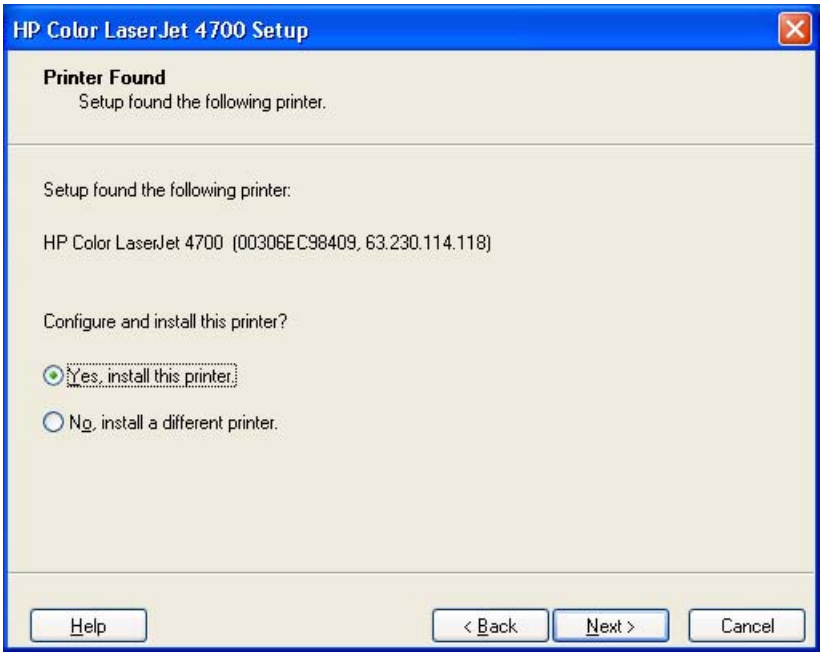


Figure 5-13 **Printers Found** dialog box

Select the printer you want to install and click **Next**. the **Confirm Settings** dialog box opens (see Figure 5-14 Confirm Settings dialog box.

If the printer you want to install is not listed and you know its TCP/IP address, click **Next**. The **Confirm Settings** dialog box opens. See Figure 5-20 Confirm Settings dialog box and follow the instructions for changing the TCP/IP address.

If a single printer is found when the installer conducts its search, the **Printer Found** dialog box appears, as shown in the following figure.



If you click **No, install a different printer** and then click **Next**, the **Check Cable Connection** dialog box opens, advising you to make sure the cable is properly connected, and giving you the option of searching again for a network printer or specifying a printer by address (see Figure 5-16 Check Cable Connection dialog box).

If you select **Yes, install this printer** and then click **Next**, the **Confirm Settings** dialog box opens, as shown in the following figure.

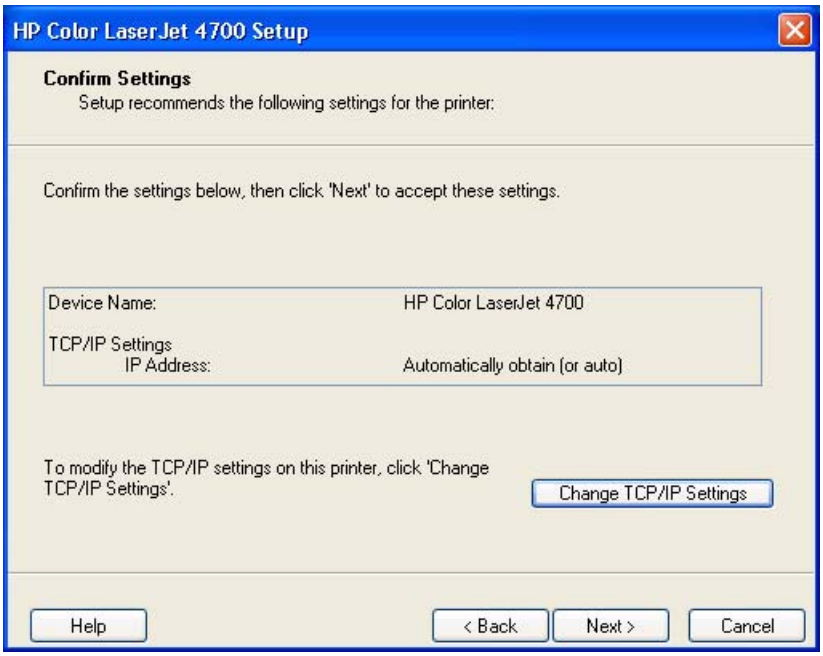


Figure 5-14 Confirm Settings dialog box

Click Next to continue the installation. The **Installation Type** dialog box opens (see Figure 5-22 Installation Type dialog box).

If you click the **Change TCP/IP Settings** button, the **Confirm Change Setting** dialog box opens, as shown in the following figure.

WARNING! When you change the TCP/IP configuration by using the **Change TCP/IP Settings** button, you change the actual settings in the product Jetdirect card. You should make changes to these settings only with the advice of your network administrator.

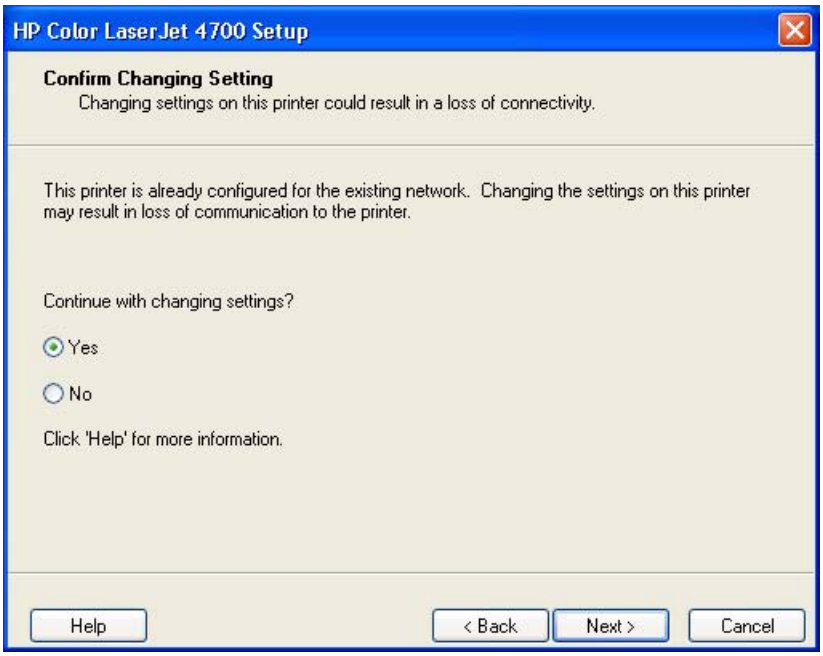


Figure 5-15 Confirm Changing Setting dialog box

If you click **No**, the **Installation Type** dialog box opens (see Figure 5-22 Installation Type dialog box).

If you click Yes, the **Set Network Protocol** dialog box opens (see Figure 5-21 Set Network Protocol dialog box).

The **Check Cable Connection** dialog box is shown in the following figure.

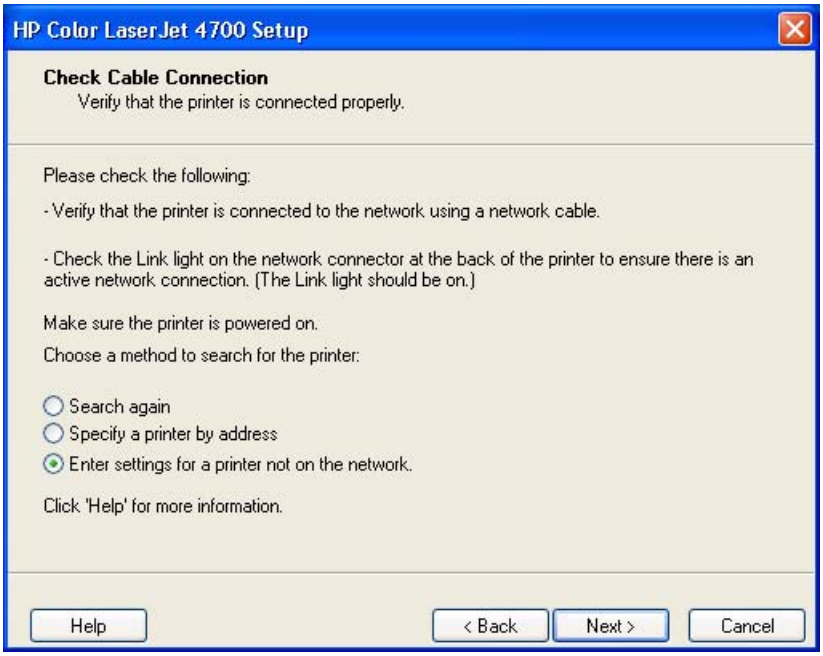


Figure 5-16 **Check Cable Connection** dialog box

If you select **Search again** and then click **Next**, the **Searching** dialog box opens (see Figure 5-10 Searching dialog box).

If you click **Specify Printer by address** and then click **Next**, the **Specify Printer** dialog box opens.

If you select **Enter settings for a printer not on the network** and then click **Next**, the **Printer Settings** dialog box opens (see Figure 5-18 Printer Settings dialog box).

The **Specify Printer** dialog box is shown in the following figure.

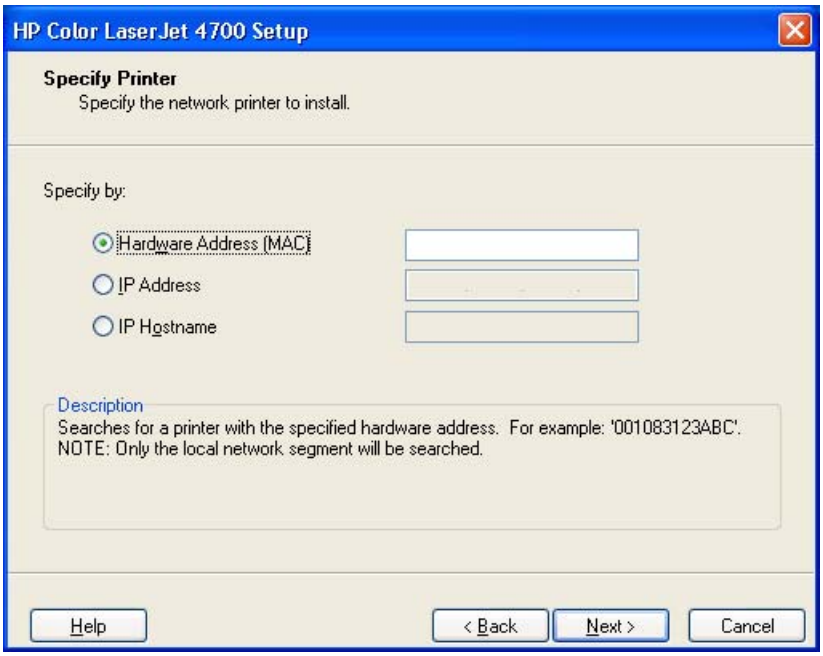


Figure 5-17 **Specify Printer** dialog box

You can specify a printer by selecting one of the following options and typing in the required information:

- **Hardware Address (MAC)**
- **IP Address**
- **IP Hostname**

If you click **Help**, a context-sensitive HTML help screen opens.

When you click **Next**, the **Searching** dialog box opens. When the search is finished, the **Printer Found** dialog box opens (see Figure 5-13 Printers Found dialog box).

If you selected **Specify a printer not on the network** on the **Check Cable Connection** dialog box and then click **Next**, the **Printer Settings** dialog box opens, as shown in the following figure.

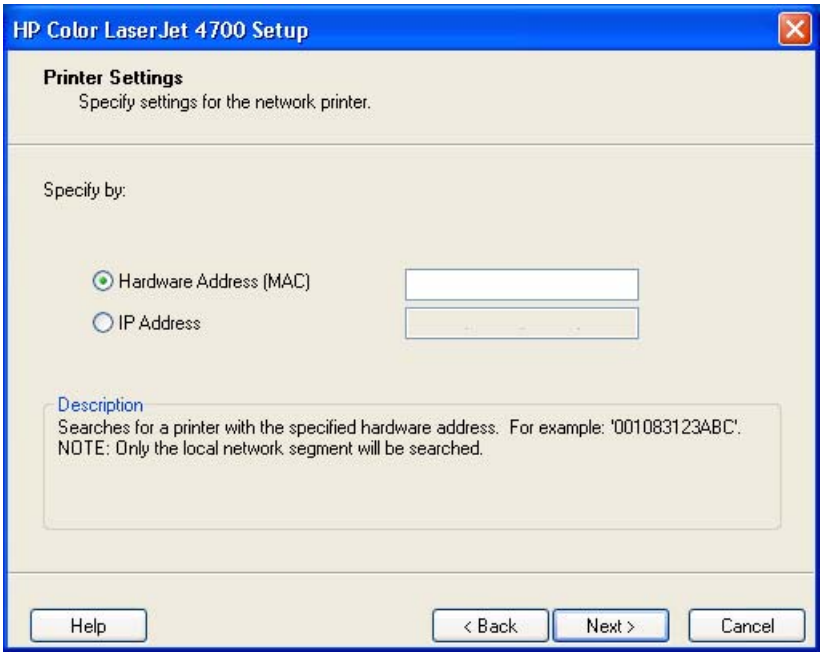


Figure 5-18 **Printer Settings** dialog box

Select **Hardware Address**, type the product hardware address in the field, and click **Next** to continue the installation. The **Set Port Name** dialog box opens.

Select **IP Address**, type the product IP address in the field, and click **Next** to continue the installation. The **Set Port Name** dialog box opens, as shown in the following figure.

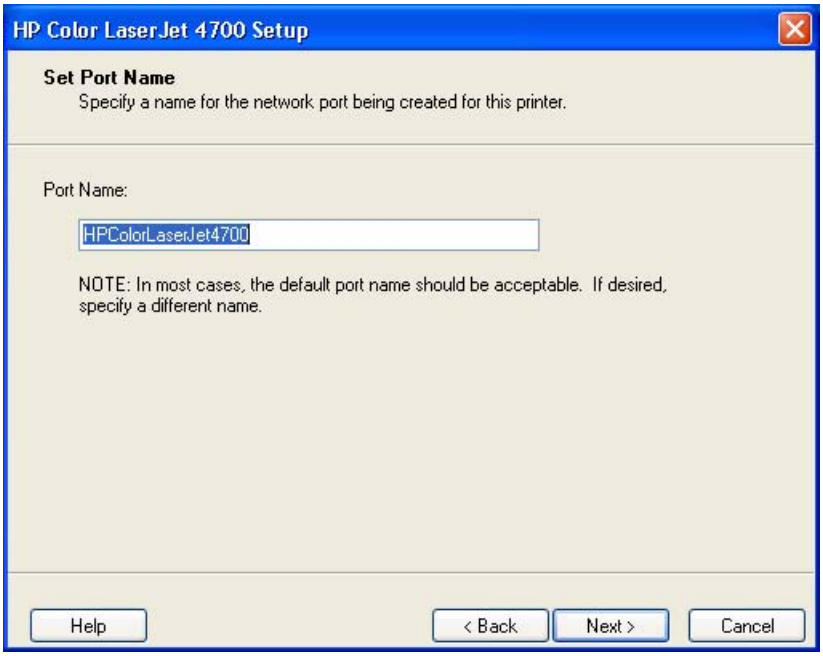


Figure 5-19 **Set Port Name** dialog box

Type a port name in the **Port Name** field and click **Next** to open the **Installation Type** dialog box (see Figure 5-22 Installation Type dialog box).

If you selected **Yes, install this printer** on the **Printer Found** dialog box, the **Confirm Settings** dialog box opens, as shown in the following figure.

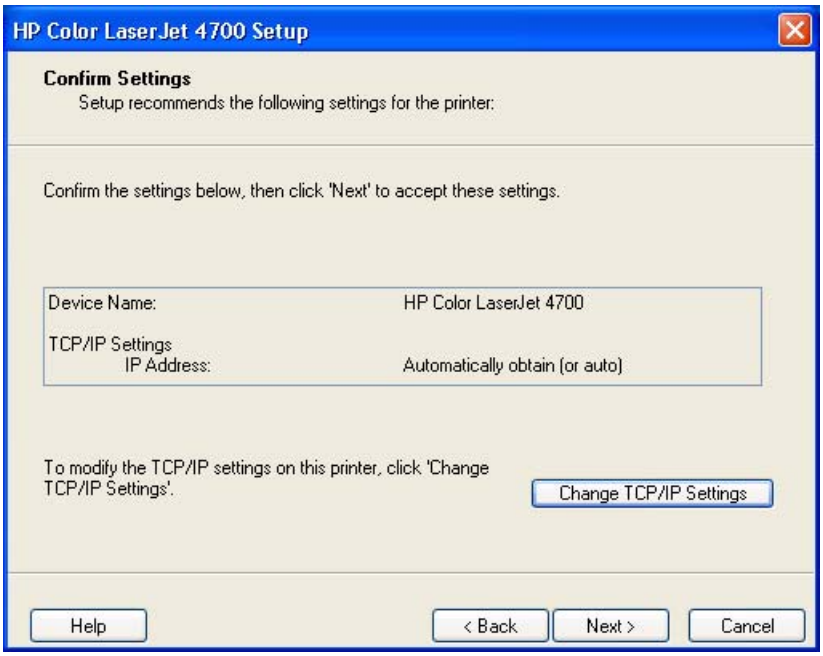


Figure 5-20 **Confirm Settings** dialog box

If you click **Change TCP/IP Settings**, the **Confirm Changing Setting** dialog box opens (see Figure 5-15 Confirm Changing Setting dialog box)

Click **Next** to proceed with the installation. The **Installation Type** dialog box opens (see Figure 5-22 Installation Type dialog box).

NOTE If you selected **Yes** on the **Confirm Changing Setting** dialog box (see Figure 5-20 Confirm Settings dialog box), the **Set Network Protocol** dialog box opens, as shown in the following figure.

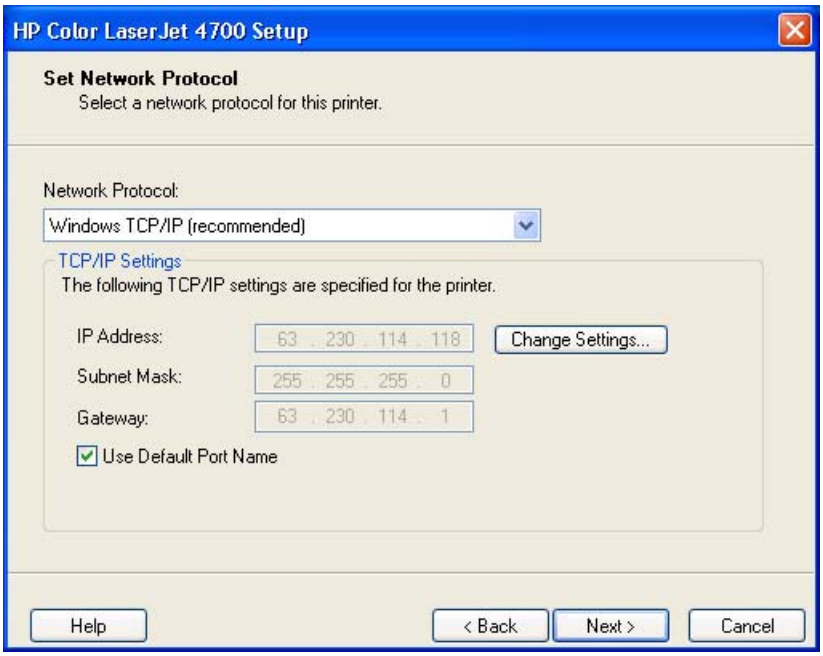


Figure 5-21 Set Network Protocol dialog box

If you click **Change Settings...** the text boxes become active and the text in the **Change Settings...** button changes to **Suggest Settings...**. Type a different IP Address, Subnet Mask, or Gateway address and then click **Next** to open the **Confirm Settings** dialog box (see Figure 5-20 Confirm Settings dialog box).

If you clear the **Use Default Port Name** check box and click **Next**, the **Set Port Name** dialog box opens (see Figure 5-19 Set Port Name dialog box).

When you click **Next** on the **Set Network Protocol** dialog box, the **Installation Type** dialog box opens, as shown in the following figure.

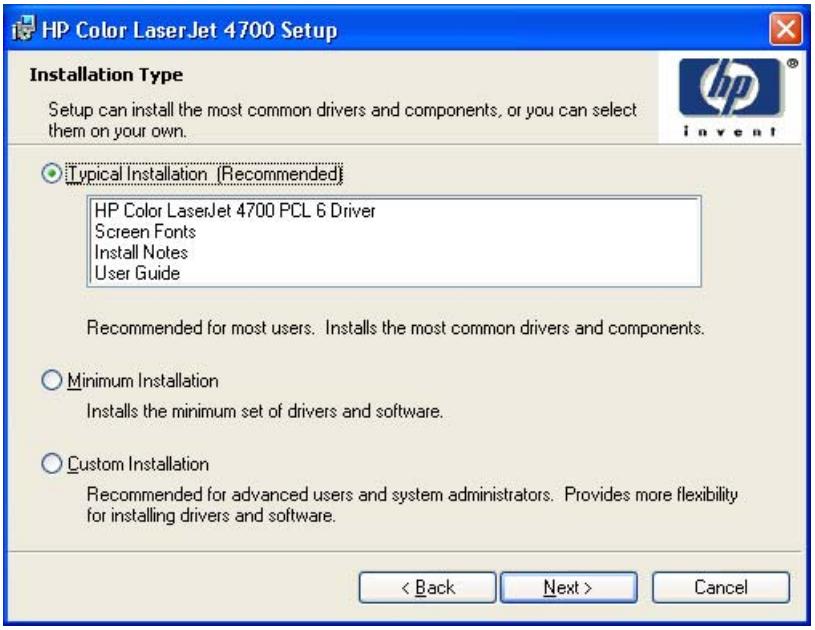


Figure 5-22 Installation Type dialog box

NOTE The components of a Typical Installation might vary from product to product.

If you select **Typical Installation (Recommended)** and then click **Next**, the **Printer Name** dialog box opens.

Select **Minimum Installation** to install only the HP PCL 6 Unidriver (Windows 2000, Windows XP, and Windows Server 2003) or the HP Traditional PCL 6 Driver (Windows 98 and Windows Me) and screen fonts. If you select **Minimum Installation** and then click **Next**, the **Printer Name** dialog box opens (see Figure 5-38 Printer Name dialog box).

If you select **Custom Installation** and then click **Next**, the **Features** dialog box opens, as shown in the following figure.

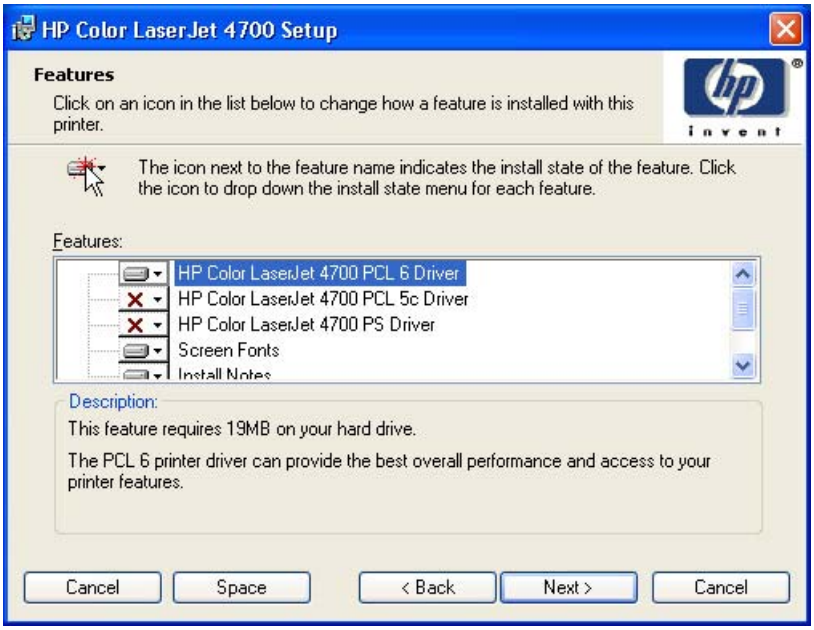


Figure 5-23 **Features** dialog box

A red X in the icon indicates that the feature is not installed. The installed icon appears when you select an install state for that feature.

Click **Space** to open the **Disk Space Requirements** dialog box, which shows the amount of available space on your hard drive and advises you if there is not enough space for the features you have selected.

Click **Next** to proceed with the installation. The **Printer Name** dialog box opens.

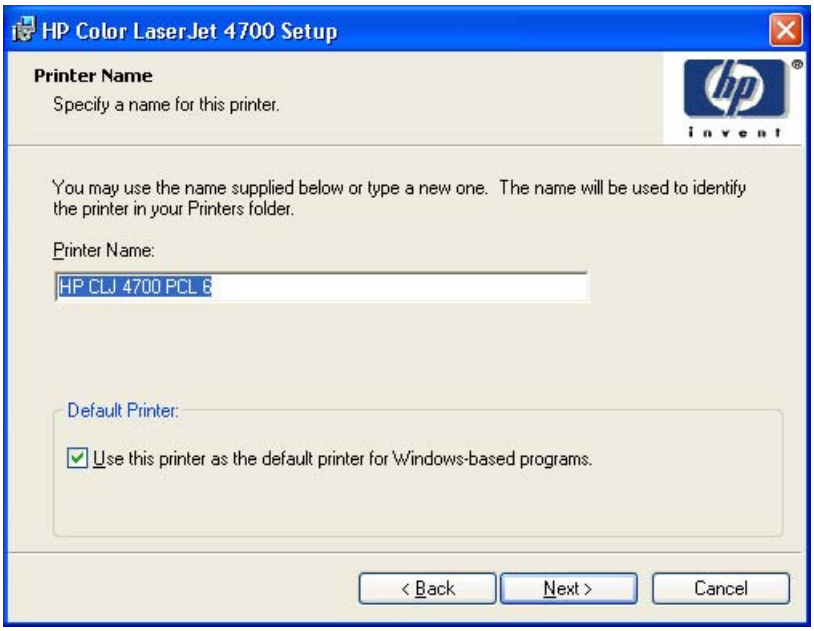


Figure 5-24 **Printer Name** dialog box

Select the **Use this printer as the default printer for Windows-based programs** check box to set the HP Color LaserJet 4700 as your default printer. Clear this check box if you do not want the HP Color LaserJet 4700 to be your default printer.

Click **Next** to proceed with the installation. The **Printer Sharing** dialog box opens.

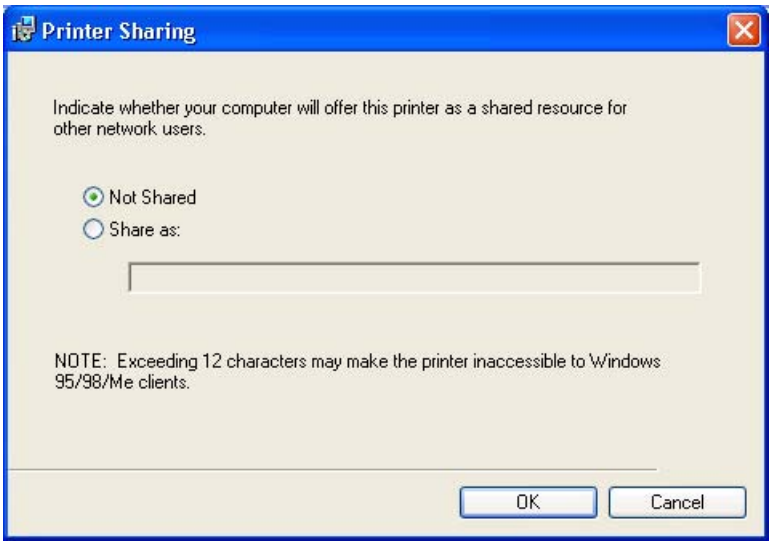


Figure 5-25 **Printer Sharing** dialog box

NOTE The **Printer Sharing** dialog box does not appear if your computer is running Windows 98 or Windows Me.

If you select **Not shared** and then click **Next**, the **Ready to Install** dialog box opens (see Figure 5-26 Ready to Install dialog box)

NOTE When you do not share the printer, additional driver support is not available. If you share the printer on Windows 2000, Windows XP, or Windows Server 2003 operating systems by selecting **Share as:**, you must type a name. You can also provide additional print driver support for other operating systems.

If you select **Share as:**, the text box becomes available. Type the share name and then click **Next**. The **Ready to Install** dialog box opens.

NOTE The share name should not exceed *seven* characters (not twelve, as indicated in the **Printer Sharing** screen).

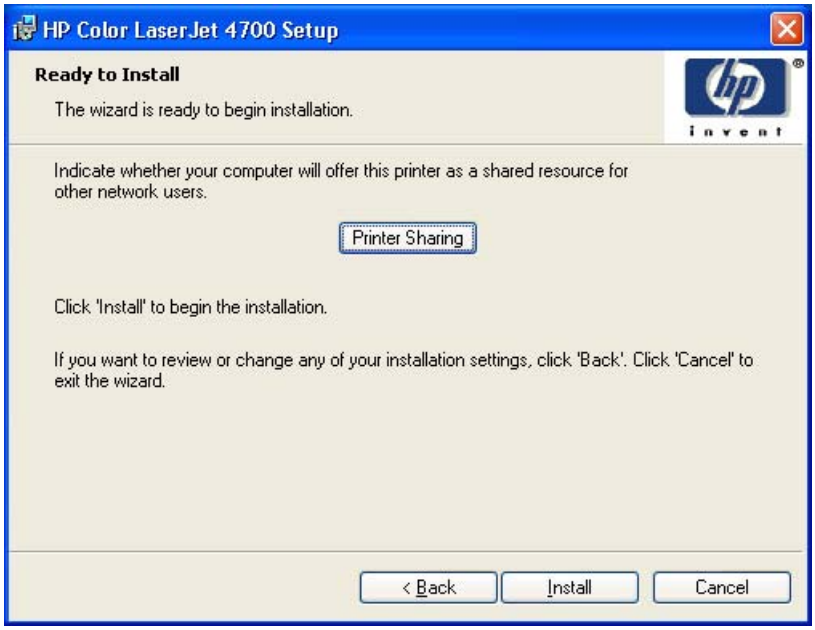


Figure 5-26 **Ready to Install** dialog box

Clicking **Install** starts the installation process.

While the installation is in progress, the **Installing** dialog box appears. The information in the Status field changes to report on different stages of the installation process.

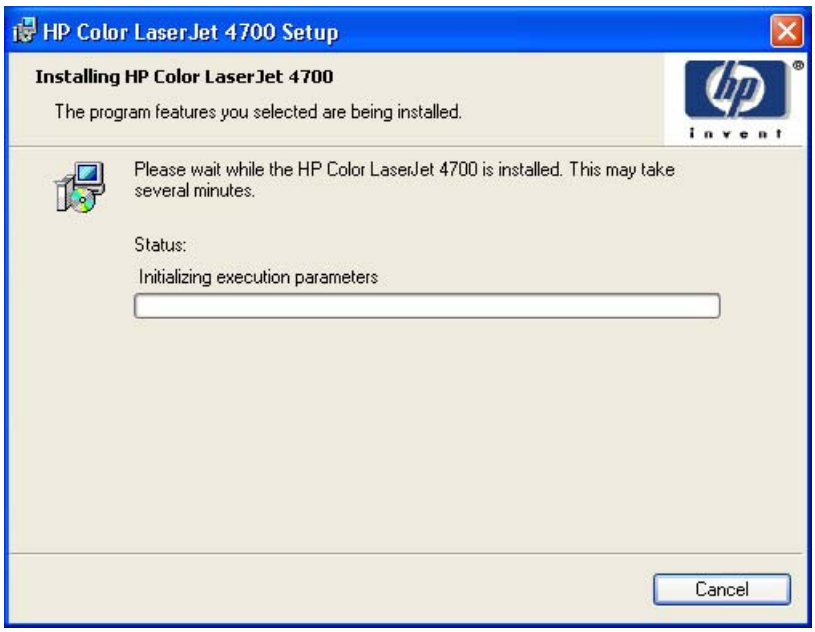


Figure 5-27 **Installing** dialog box

When installation is complete, the **Finish** dialog box appears, as shown in the following figure.

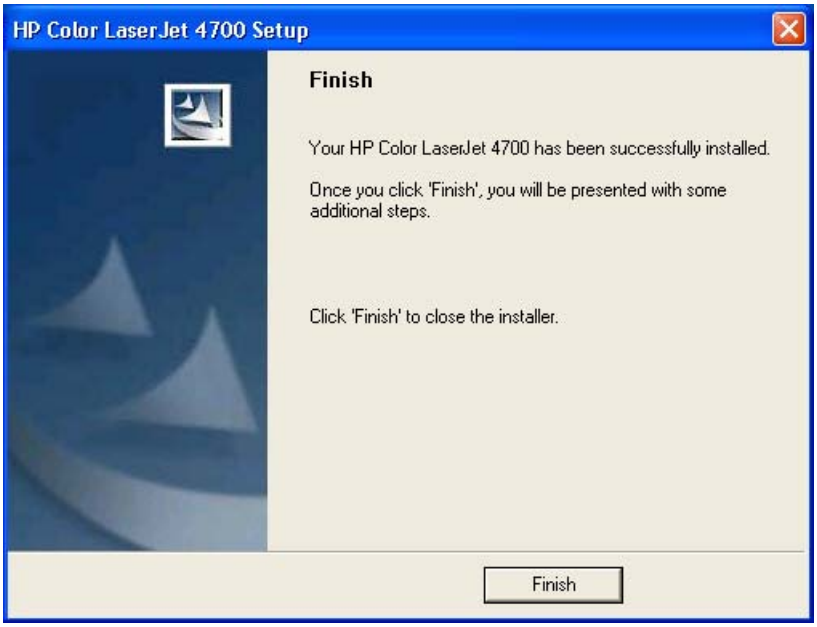


Figure 5-28 **Finish** dialog box

Custom Installation

The **Custom Installation** gives you the option of installing the following components:

- **HP Color LaserJet 4700 PCL 6 Driver** (for direct-connect and network installations)
- **HP Color LaserJet 4700 PCL 5c Driver** (for direct-connect and network installations)
- **HP Color LaserJet 4700 PS Driver** (for direct-connect and network installations)
- **Screen Fonts**
- **Install Notes**
- **User Guide**

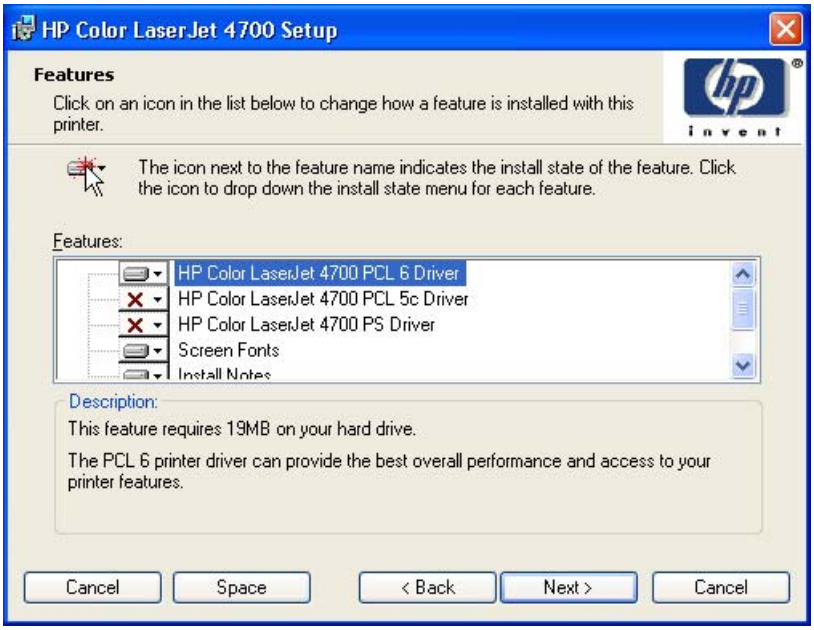


Figure 5-29 **Features** dialog box, Custom Installation

NOTE The features available in a Custom Installation might vary from product to product.

The appearance of the **Features** dialog box might vary, depending on the product and the connection type.

Installing print drivers by using Add Printer

Use the following steps to install the print drivers by using the Add Printer feature of Windows:

1. Insert the CD in the CD-ROM drive.

2. Go to the Add a printer feature in Windows.

   In Windows XP, click **Start** on the desktop, click **Settings**, and then click **Printers and Faxes**. The **Printers and Faxes** window appears. Click **Add a printer**. The **Add a printer** wizard screen appears. In Windows NT 4.0, Windows 98, Windows Me, and Windows 2000, click **Start** on the desktop, click **Settings**, click **Printers**, and then click **Add a printer**. The **Add a printer** wizard screen appears.

3. Use the **Add a printer** wizard to find and connect to the printer. The print drivers are loaded as a part of this process.

If your computer is running a 64-bit Windows operating system, you must install the corresponding 64-bit print driver. 64-bit print drivers are included on the software CD-ROM. Use the following steps to install a print driver by using the Add Printer feature.

1. Insert the CD in the CD-ROM drive.

2. Click **Start** on the desktop, click **Settings**, click **Printers and Faxes**, and then click **Add a printer**. The **Add a printer** wizard screen appears.

3. Use the **Add a printer** wizard to find and connect to the product. The print drivers are loaded as a part of this process.

4. Select the **Have disk** option and navigate to one of the following files on the software CD:

   To install the HP PCL 6 Unidriver, select \<language>\Drivers\(your operating system)\PCL6 \hpc90xmd.inf

   To install the HP PCL 5 Unidriver, select \<language>\Drivers\(your operating system)\PCL5 \hpc90xmd.inf

   To install the PS Emulation Unidriver, select \<language>\Drivers\(your operating system)\PS \hpc90xmd.inf

5. Complete the wizard steps. The print driver will be installed as part of the wizard process.

Installer Customization Wizard for Windows

Administrators can use the **Installer Customization Wizard** option to customize the HP Color LaserJet 4700 installer by pre-setting the installation options in a response file. To start the utility, click **installer customization wizard** on the main menu of the software CD browser. Using this option, administrators can create a silent (unattended) installer that is customized with any of the following selections:

- Language
- Operating system
- Print drivers
- Components

NOTE For detailed information about the Installer Customization Wizard, see the *HP Device Installer Customization Wizard*. This document (CUSTOMIZATION_README_ENWW.RTF) is available on the printing-system software CD in the Manuals\<language> folder.

Running the Installer Customization Wizard

Running the Installer Customization Wizard produces one installation package and a response file (RESPONSE.INI) for a single system installation. The installation package might work for multiple systems that have the same response information, or the RESPONSE.INI file can be edited for system configuration differences directly in the RESPONSE.INI file. The Installer *HP Device Installer Customization Wizard*, available on the printing-system software CD in the Manuals\<language> folder, provides the exact text for replacing entries in the RESPONSE.INI file.

To run the Installer Customization Wizard

1. Insert the HP Color LaserJet 4700 software CD in the CD-ROM drive.

2. In the CD browser main screen, click **installer customization wizard**.

3. Choose the setup language you want. The installer automatically detects the language that your computer system uses and presents this selection as the default. Click **OK** to continue.

You can select another language that is available on the CD by clicking the down arrow in the drop-down menu.

The Installer Customization Wizard starts automatically. To complete the installation, follow the instructions in the dialog boxes, as described in the following section.

Dialogs

The Installer Customization Wizard runs from the CD. It can be started from the CD browser, depending on product-specific instantiation. It runs separately from MSI with its own interface.

The **Choose Setup Language** dialog box and the **Preparing to Install** dialog box appear the same as they appear in the standard installer. After these dialog boxes, the **Installer Customization Wizard Welcome** dialog box appears.

Figure 5-30 Installer Customization Wizard Welcome dialog box

Click **Cancel** on this or any other screen where it appears to cancel the installation (see Using the Help, Back, Next, and Cancel buttons.)

Click **Next** to open the **Language** dialog box.

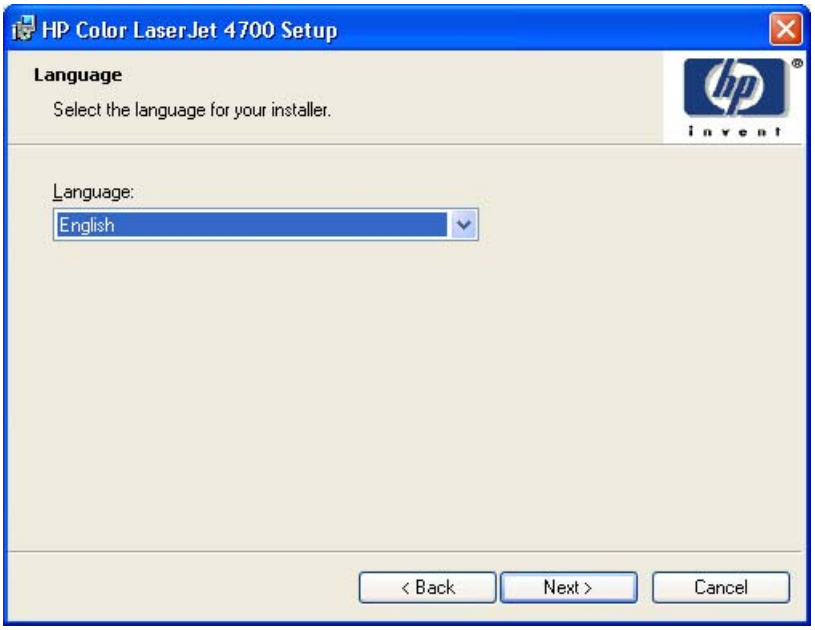


Figure 5-31 **Language** dialog box

NOTE The customized installer limits all system installations of the product to the language that is selected in the **Language** dialog box. Maintenance mode on systems where installation has been completed using the customized installer does not provide options for changing the language. To change the language on a system that used an Installer Customization Wizard installation, the customized installation must be uninstalled, and a new product must be installed to restore the option to install other languages.

The language that you selected is installed on users' computers regardless of the language of the text in the dialog boxes (as specified in the **Choose a language** dialog box earlier). The **Language** dialog box defaults to the language that was selected in the **Choose a language** dialog box, but any language that is available on the CD can be chosen for the customized installer. The language selection is recorded in the response file.

Click **Next** to open the **Printer Port** dialog box, as shown in the following figure.

Click **Back** on this or any screen where it appears to return to a previous screen.

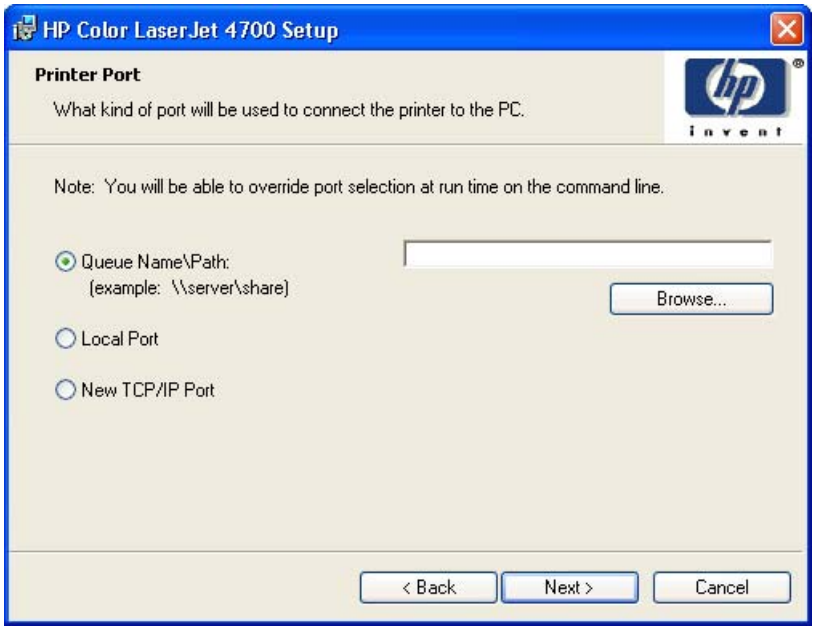


Figure 5-32 **Printer Port** dialog box

Select **Queue Name\Path** to make the text field available for a queue name entry. If you select **Queue Name\Path** and click the **Browse** button, the **Browse for Printer** dialog box opens.

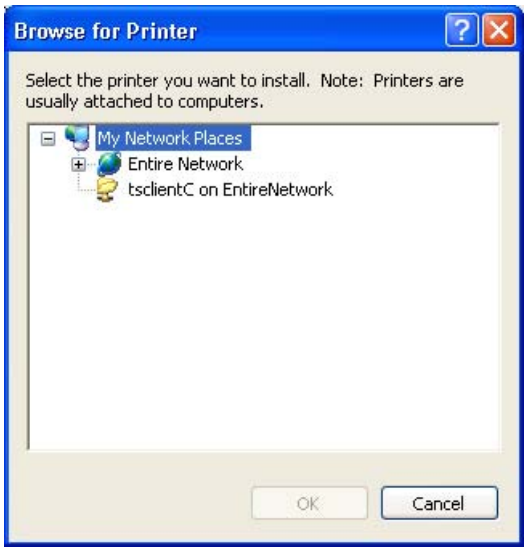


Figure 5-33 **Browse for Printer** dialog box

Navigate to a printer and click **OK** to record the path in the **Queue Name\Path** field on the Printer Port dialog box. Click **Cancel** to close the **Browse for Printer** dialog box.

Select **Local Port** and then click **Next** to open the **Connector Type** dialog box. The **Connector Type** dialog box includes all types of local ports regardless of local support. It also includes all custom network ports that are available on the local system. To use any custom network port for the customized installer, the port must be created identically on the system where it will be used.

Click **New TCP/IP Port** and then click **Next** to open the **Specify Printer** dialog box.

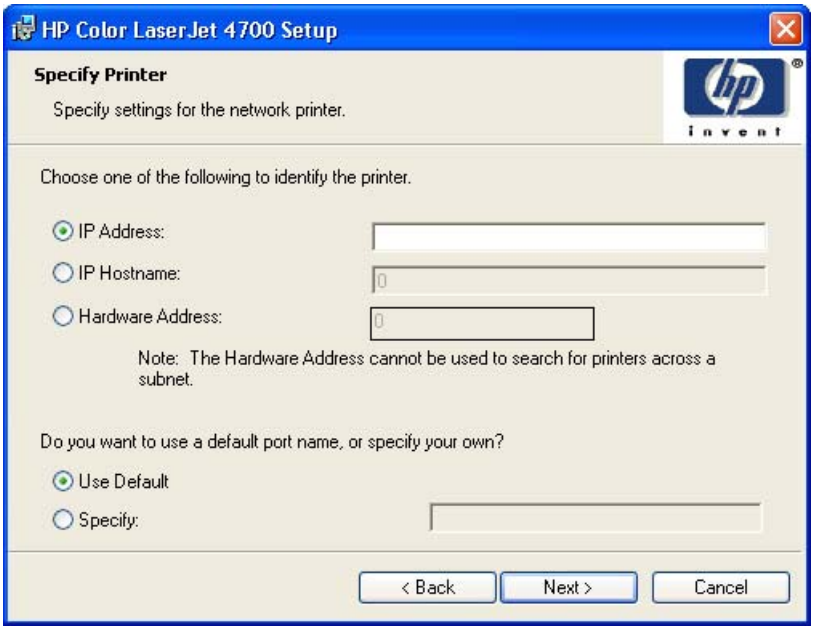


Figure 5-34 **Specify Printer** dialog box

Click **IP Address:** to make the field available for typing the IP address for the printer. Only numerals are allowed in this field. If this option is selected, you must type at least one digit in the **IP Address:** field to prevent an error message from appearing and prompting you for a valid IP address.

Click **IP Hostname:** to make the field available for typing the IP hostname for the printer. Any characters are allowed in this field, but an error message appears if spaces are included in the field. If this option is selected, you must type at least one character in the **IP Hostname** field to prevent an error message from appearing and prompting you for a valid IP hostname.

Click **Hardware Address:** to make the field available for typing the hardware address of the printer. It accepts any characters but limits the entry to 12 characters. If this option is selected, you must type at least one character in the **Hardware Address:** field to prevent an error message from appearing, prompting you for a valid hardware address.

After you select any the options, type the appropriate name or address, and then click **Next**, the **Features** dialog box opens, as shown in the following figure.

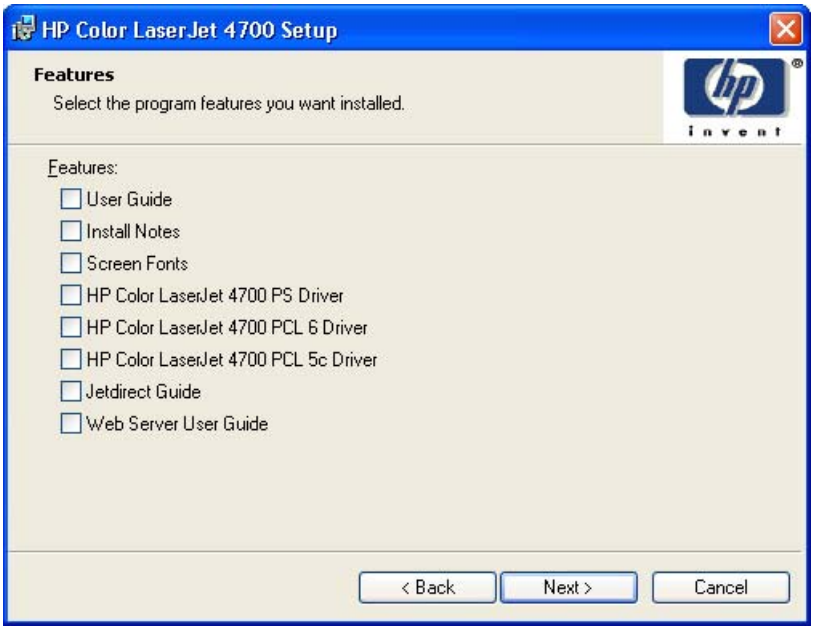


Figure 5-35 **Features** dialog box

Any combination of features can be selected for the installer, and none depends on any other selection. It is possible to create a custom installer that installs features without including a print driver.

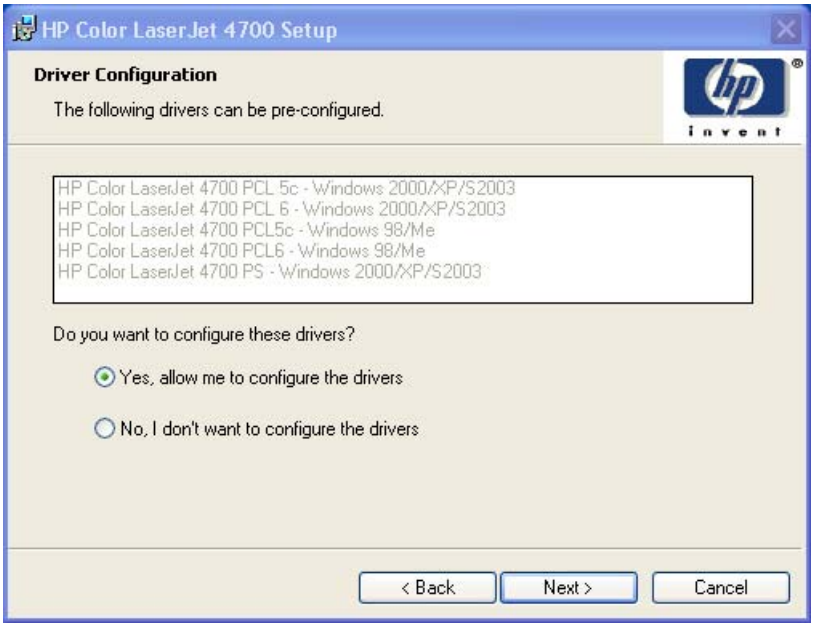


Figure 5-36 **Driver Configuration** dialog box

It is possible to supply a preconfigured driver in the customized installer if the driver supports it. You can use the preconfigured driver to place default settings on the printer that is installed. If a driver that supports this feature is selected in the **Features** dialog box, the **Driver Configuration** dialog box appears when you click **Next** on the **Features** dialog box.

Click **Yes, allow me to configure the drivers** and then click **Next** to open a list of all printing preferences and device options for the product.

Click **No, I don't want to configure the drivers** and then click **Next** to open the **Printer Name** dialog box (see Figure 5-38 Printer Name dialog box).

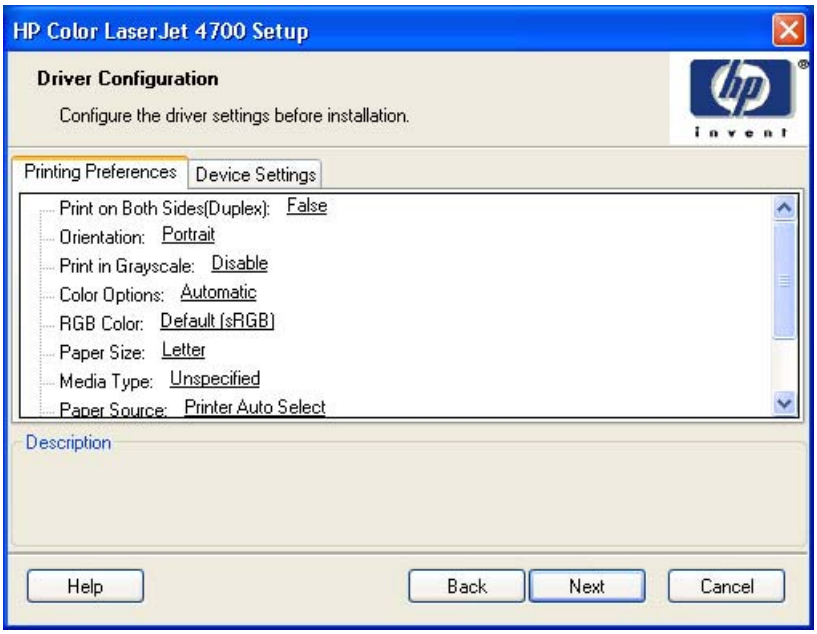


Figure 5-37 **Driver Configuration** preconfigure driver dialog box

Click the **Printing Preferences** tab and use the scroll bar to see the printing-preference settings that can be preconfigured. Some of the printing-preference settings can be locked to prevent users at client machines from changing them. If a setting can be locked, a **Lock** check box appears beside the option when you select it. The **Lock** check box is clear by default; select it to limit users to that selection only. For more information, see HP Driver Preconfiguration.

Click the **Device Settings** tab and use the scroll bar to see the **Device Settings** tab that can be preconfigured.

Any setting in this dialog box, including those on the **Device Settings** tab, can be preset before the printer is installed (subject to normal driver constraints).

Click **Next** to open either the **Preconfigure Printer** dialog box for another driver that supports preconfiguration (if any), or the **Printer Name** dialog box.

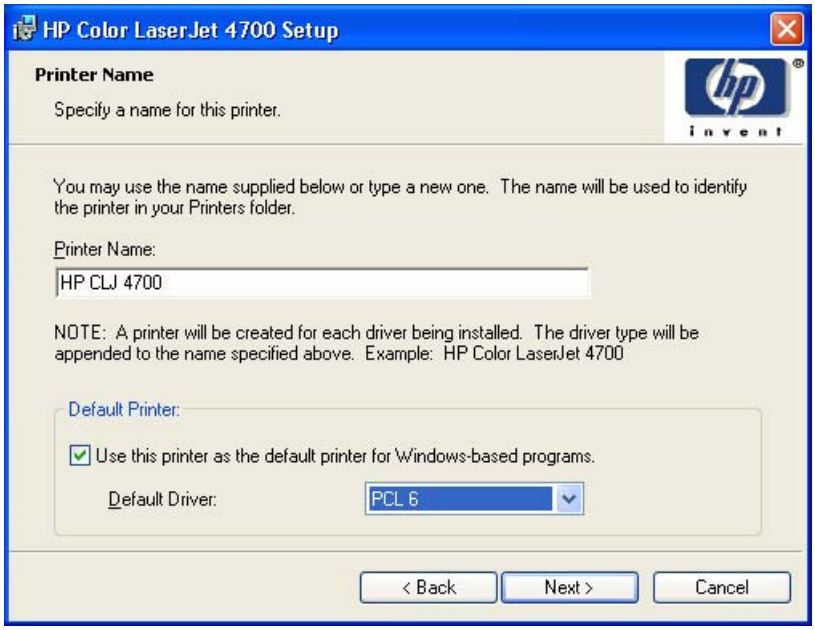


Figure 5-38 **Printer Name** dialog box

The **Default Printer:** drop-down menu lists only those drivers that are selected in the **Features** dialog box.

Click **Next** to open the **Printer Sharing** dialog box, which is shown in the following figure.

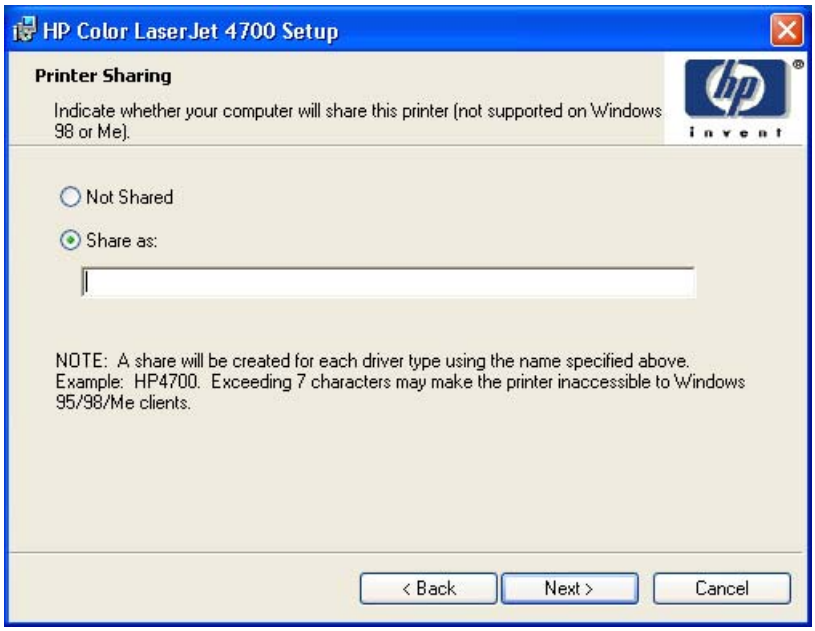


Figure 5-39 **Printer Sharing** dialog box

Click **Share as:** to open the field where you can type a name for the product as it will appear on the network.

If you click **Next** with **Not Shared** selected, the **Printer Location and Comment** dialog box opens (see Figure 5-41 Printer Location and Comment dialog box).

Click **Share as:** and then click **Next** to open the **Client Driver Support** dialog box, which is shown in the following figure.

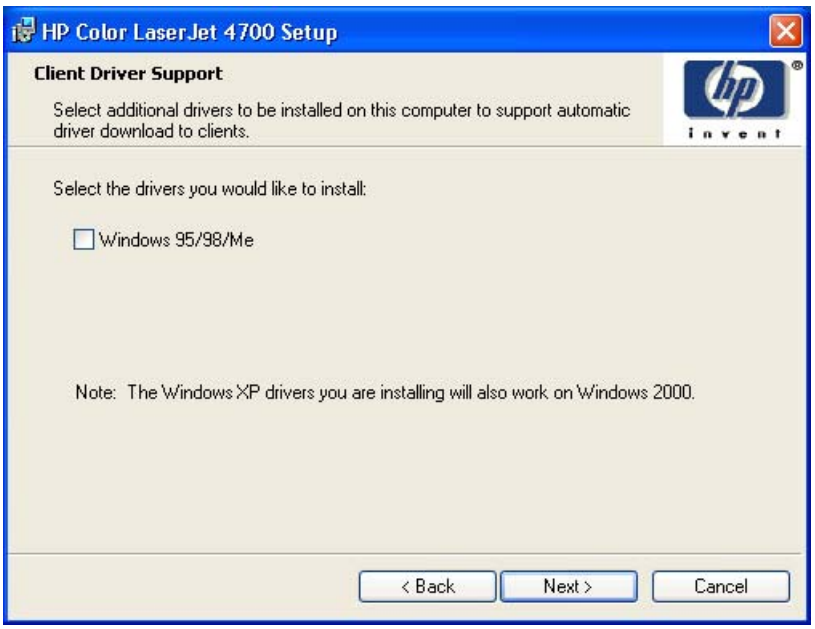


Figure 5-40 Client Driver Support dialog box

NOTE This dialog box provides options for selecting operating system-specific drivers to provide for Point and Print driver vending on the system. Either or both optional drivers can be selected.

Click **Next** to open the **Printer Location and Comment** dialog box, which is shown in the following figure.

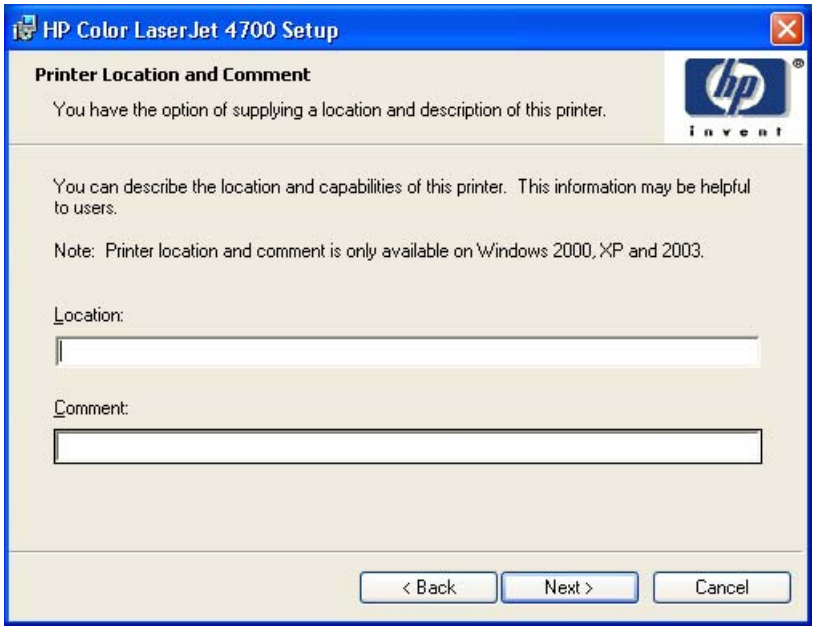


Figure 5-41 **Printer Location and Comment** dialog box

Use the **Location:** text field to type a description of the physical location of the printer. The field is limited to 241 characters.

Use the **Comment:** text field to type any other helpful text such as capabilities about the printer. The field is limited to 241 characters.

Click **Next** to open the **Custom Installer Location** dialog box, which is shown in the following figure.

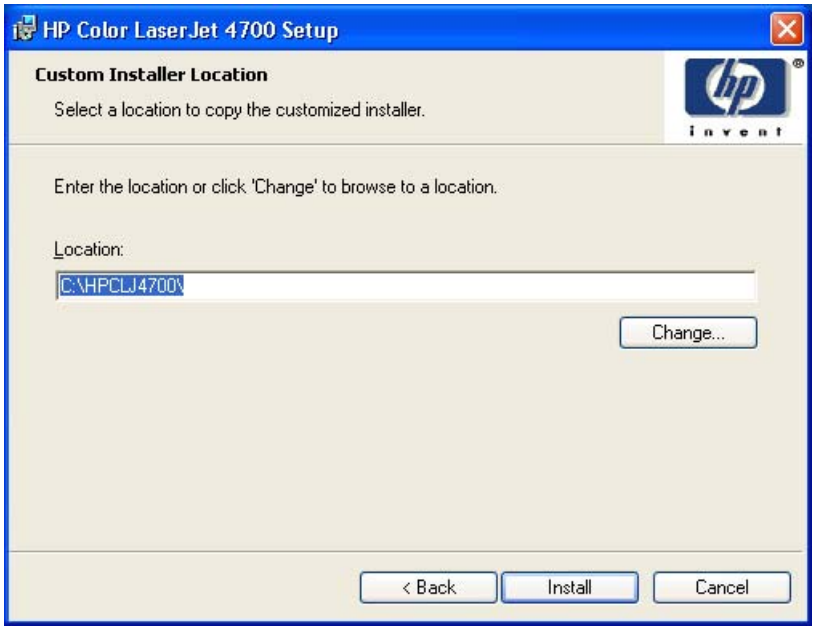


Figure 5-42 **Custom Installer Location** dialog box

NOTE The location for the installer package defaults to the drive that the system user opened last.

Click the **Change** button to open the **Change Current Destination Folder** dialog box, where you can navigate to the drive that you want.

Click **Install** after you have specified a location (or browsed to a location) to open the **Installing** dialog box and start the file-copy process (see Figure 5-44 Installing dialog box).

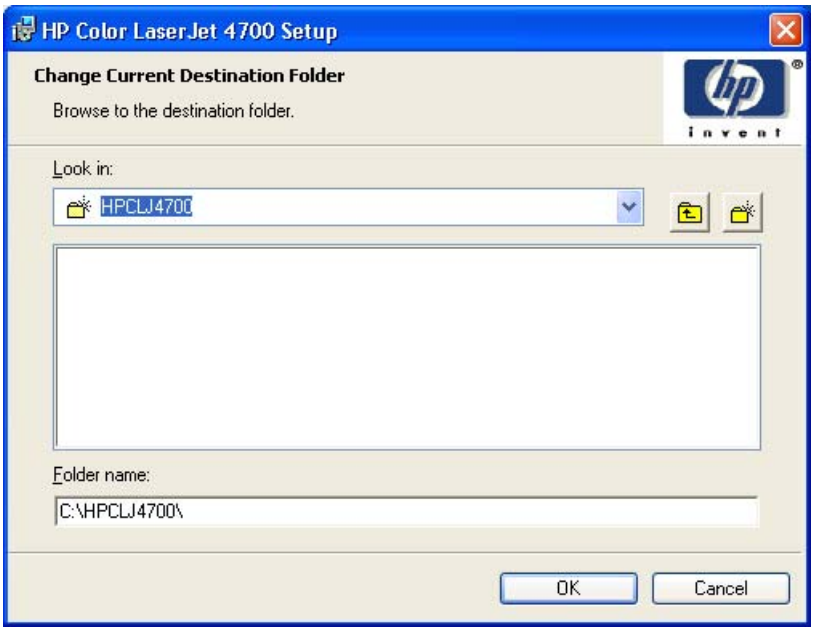


Figure 5-43 Change Current Destination Folder dialog box

NOTE During installation, several files, including system files, are placed at the root of the directory that appears in the **Folder Name** field. These files collectively occupy approximately 37 MB on the directory. Be sure that enough space is available on the directory before continuing.

Click the **New Folder** icon to create a new folder, or click the **Up one folder** icon to browse to a pre-existing folder.

After you select a location, click **OK** to return to the **Custom Installer Location** dialog box. The location appears in the **Folder name** field.

Click OK to begin the process of copying and installing the printing-system software folders and files. The **Installing** dialog box is shown in the following figure.

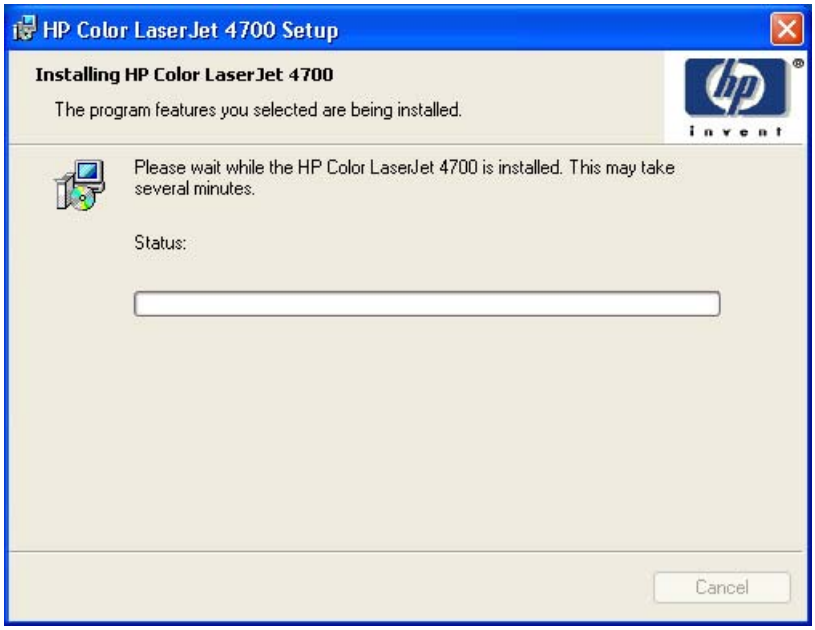


Figure 5-44 **Installing** dialog box

This dialog box remains on the screen until the status bar fills.

Click **Cancel** to close the Installer Customization Wizard without installing the printing-system software. At a certain point, the **Cancel** button disappears and the process cannot be revoked.

When the installation is complete, the **Finish** dialog box appears, as shown in the following figure.

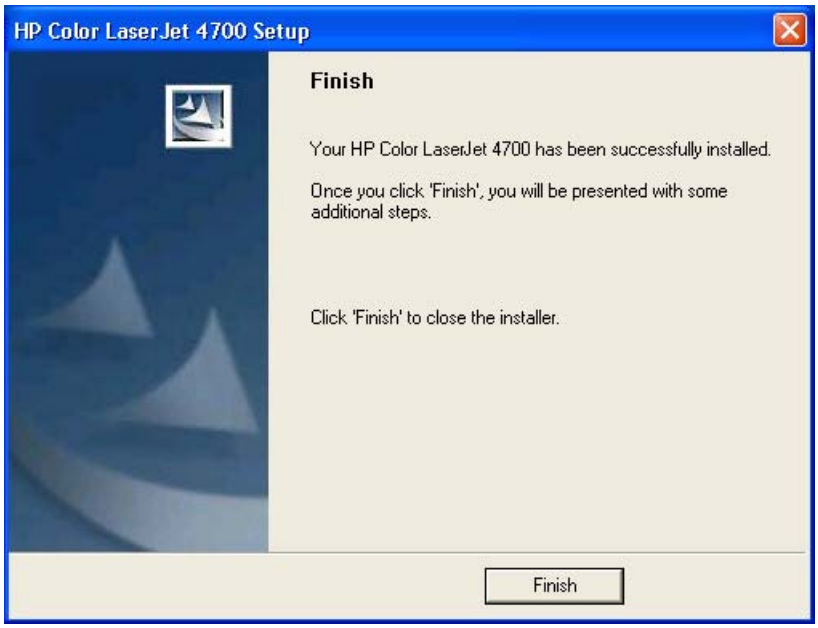


Figure 5-45 **Finish** dialog box

Click the **Finish** button to close the **Finish** dialog box and exit the Installer Customization Wizard.

NOTE Depending on the type of installation and selected options, you might or might *not* be presented with some additional steps after you click **Finish**.

Distribution

The installation package is now ready for distribution. It is the same as the package on the CD, except that it is limited to one language, and it contains the features and options that you selected. The installation package is run silently so that it requires no user interaction. This installation method is useful when you want to use the default selections that the installer provides or when you want to run the installation without being prompted.

You can perform the silent installation in two ways:

- Customized silent installer
- Command-line silent installer

The response file can be renamed, but it must be in the root directory of the installer package. The name cannot contain spaces; spaces prevent the SETUP.EXE file from passing to the installer package.

The end-user cannot customize the command-line silent installer. It installs only the printing-system components that are included in the Typical Installation. For more information, see the *HP Device Installer Customization Wizard*. This document (CUSTOMIZATION_README_XXWW.RTF) is available on the printing-system software CD at the root of the **<language>** folder.

Point and Print installation for Windows 98, Me, 2000, XP, and Server 2003

The following information helps you install a print driver by using the Microsoft Point and Print function when you cannot see the product on the network.

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

This section outlines the procedures for installing print drivers by using Point and Print. If these procedures are not successful, contact Microsoft.

Hewlett-Packard provides drivers that are compatible with the Point and Print feature, but this is a function of the Microsoft operating systems, not of HP print drivers. Windows 2000, Windows XP, and Windows Server 2003 drivers from HP are supported only on Intel *X*86 processor types.

To install the print driver on a Windows 2000,Windows XP, or Windows Server 2003 operating system, you must have administrator privileges. To completely install the Windows 2000 print driver on the Windows 2000 server, you must have administrator privileges on the server. The Windows 2000 Printer .INF file must contain the same product name as the Windows 98 or Windows Me printer .INF file.

Point and Print installation of a postscript driver is supported only with a Microsoft Windows 98 or Windows Me PS Driver V4.0 or later.

In a homogenous operating system environment (one in which all of the clients and servers running the same operating system), the same print driver version that is vended from the server to the clients in a Point and Print environment also runs and controls the print queue configuration on the server.

However, in a mixed operating system environment (one in which servers and clients might run on different operating systems), conflicts can occur when client computers run a version of the print driver that is different from the one on the print server.

In an effort to increase operating system stability, Microsoft determined that, starting with Windows 2000 and continuing with all future operating systems, print drivers would run as *user*-mode processes. User-mode drivers run in a protected part of the operating system, as do all of the normal end-user processes

and software programs. A user-mode print driver that functions incorrectly can terminate (or “crash”) only the process in which it is running, — not the whole operating system. Because access to critical system resources is restricted, overall operating system stability is increased.

Setting a default printer

This section applies to the Windows 98, Windows Me, Windows 2000, Windows XP, and Windows Server 2003 operating systems.

1. In Windows 98, Windows Me, and Windows 2000 operating systems, click **Start**, click **Settings**, and then click **Printers**. In Windows XP and Windows Server 2003, click **Start**, click **Control Panel**, click **Printers and Faxes** (Windows XP Professional) or **Printers and other hardware devices** (Windows XP Home).

2. Right-click the product that you want to set as the default printer.

3. Click **Set As Default**. A check mark appears next to the menu option.

6 Installation for Macintosh operating systems

Introduction

The HP Color LaserJet 4700 comes with software and installers for Microsoft Windows and Apple Computer, Inc. Linux and UNIX systems are supported, and software is available on the Web. For detailed information about operating systems that support printing-system software installation for the HP Color LaserJet 4700 printer, see Supported operating systems

This chapter provides procedures for installing and removing the HP Color LaserJet 4700 printing-system software for Macintosh operating systems. The chapter provides information about these topics:

- Macintosh component descriptions
- Installing the Macintosh printing system
- Uninstalling the Macintosh printing system
- In-box disk layout
- Mac OS Classic installation
- Mac OS X installation

Macintosh component descriptions

The product includes the following software for Macintosh computers:

- PPDs for Mac OS 9 V9.2.2 and Mac OS X V10.1.5 and later
- PDEs for Mac OS X only (V10.1.5 and later)

HP LaserJet PPDs

In Mac OS 9 V9.2.2, postscript printer definition (PPD) files for the HP Color LaserJet 4700 are installed to the **Printer Descriptions** folder, which is in the **Extensions** folder within the **System** folder. In Mac OS X V10.1.5 or later, the PPDs are installed in **Library/Printers/PPDs/Contents/Resources:<lang>.lproj**, where **<lang>** is the appropriate localized folder.

PPDs, in combination with the driver, provide access to the product features and allow the computer to communicate with the product. A print setup tool for the PPDs is provided on the printing-system software CD. For information about the print setup tools in various Macintosh operating systems, see Table 6-1 Adding a printer in Macintosh operating systems.

PDEs

Printer Dialog Extensions (PDEs) are code plug-ins (for Mac OS X V10.1.5 or later only) that provide access to product features, such as number of copies, duplexing, and quality settings.

HP Embedded Web Server

Mac OS 9 V9.2.2 supports the HP EWS. Use the HP LaserJet Utility to control features that are not available in the driver. Use the HP EWS to perform the following tasks:

- Name the product, assign it to a zone on the network, and change product settings.
- Set a password for the product.
- From the computer, lock out functions on the control panel to prevent unauthorized access (see the printing software help).

Install 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 that was provided with Mac OS 9.*x* HP products. The help system is in English only, and can be viewed through a browser or in the Macintosh OS Help Center.

Screen fonts

The printing-system software for Macintosh operating systems no longer includes a font installer. The HP Color LaserJet 4700 printer uses previously installed system fonts when installed on a Macintosh computer.

Installing the Macintosh printing system

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

NOTE If the computer is connected to the printer by a LocalTalk (printer port) or EtherTalk connection, you must configure the AppleTalk (or network) control panel for the correct connection to communicate with the product. You must set up the HP Color LaserJet 4700, connect it to the computer or network, and turn it on before the software is installed. Macintosh operating systems do not support parallel connections.

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

NOTE Detailed installation steps can be found in Mac OS Classic installation or Mac OS X installation.

Installing the HP LaserJet printing-system software for the Macintosh OS

1. Insert the Macintosh printing-system software CD into the CD-ROM drive.

   NOTE If the CD screen does not open automatically, double-click the **hp color LaserJet 4700** CD-ROM icon on the desktop to open the CD-ROM window.

2. Double-click the icon for your OS. For instance, if you are installing the printer in any version of Mac OS X, double-click the **Mac OS X** icon. If you are installing the printer in Mac Classic or any version of Mac OS 9, click the **Mac OS 9** icon.

   NOTE The **Continue** button appears only after you type the "admin" password in the **Authenticate** dialog box (Mac OS X, V10.1.5 and later only).

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

   NOTE If you are installing the printing-system software on a Macintosh OS X system, please be patient. The installer must perform an initial search of the computer for up to 1 minute. During this time the installer might appear to be stalled.

4. When software installation is complete, click **Quit**. Select one of the following options to finish setting up your product:

   - Set up an AppleTalk networked printer with Mac OS 9 V9.2.2.
   - Set up a printer with Mac OS X

The software program that you use to finish setting up the printer varies by operating system. The following table shows the print setup tools that are available.

Table 6-1 Adding a printer in Macintosh operating systems

Operating System	HP LaserJet Utility	LaserWriter 8	Print Center	Printer Setup Utility
Mac OS 9 V9.2.2	x	x		
Mac OS X V10.1.5			x	
Mac OS X V10.2.8			x	
Mac OS X V10.3.9				x
Mac OS X V10.4.1			x	x

Setting up an AppleTalk networked printer with Mac OS 9. V9.2.2

1. Open the **Chooser** from within the **Apple Menu**.
2. Click the appropriate print setup tool (see Table 6-1 Adding a printer in Macintosh operating systems) on the left side of the **Chooser** dialog box.
3. Click the appropriate **Zone** to select it, if required.
4. Click your product name from the list that appears on the right side of the **Chooser** dialog box, and then click **Create**. For the HP Color LaserJet 4700 printer, the selection is **HP Color LaserJet 470014**.

Setting up a printer with Mac OS X V10.4

1. In the **Applications** folder, open the **Utilities** Folder, and then run the **Printer Browser**.

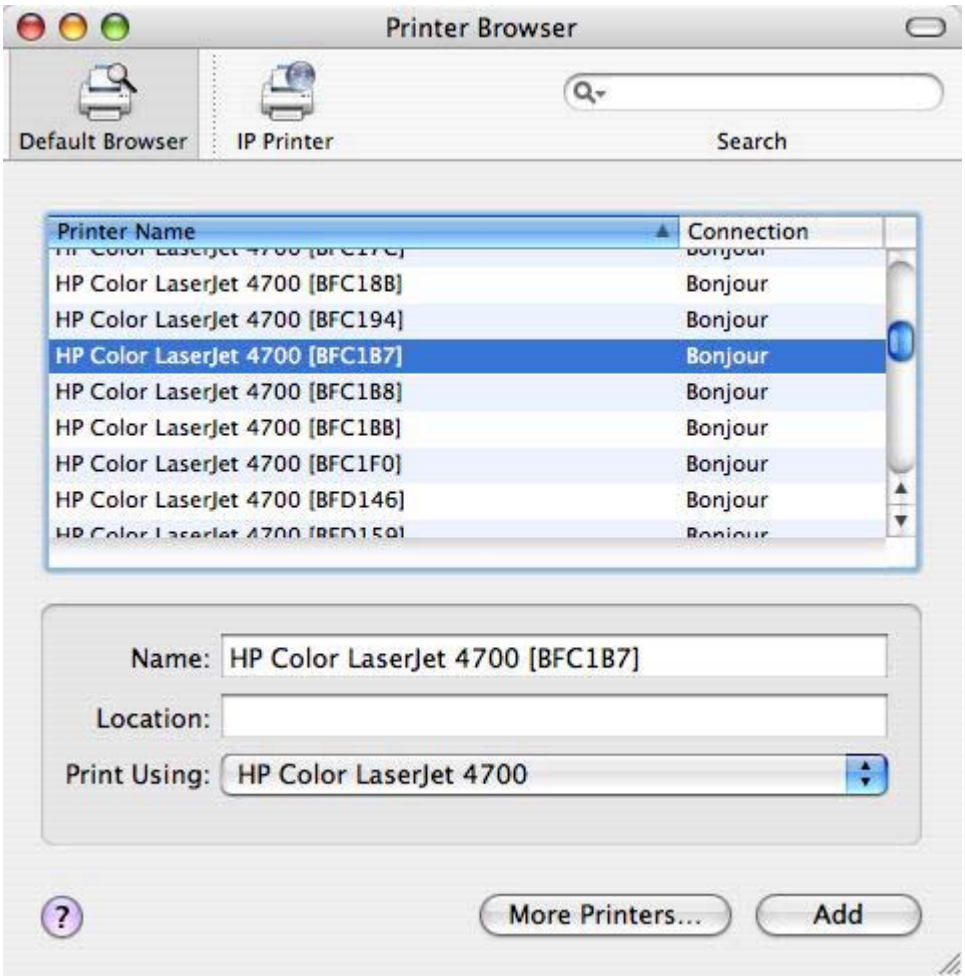


Figure 6-1 **Printer Browser** screen

2. Select the product and click **Add**. The **Installable Options** screen appears.

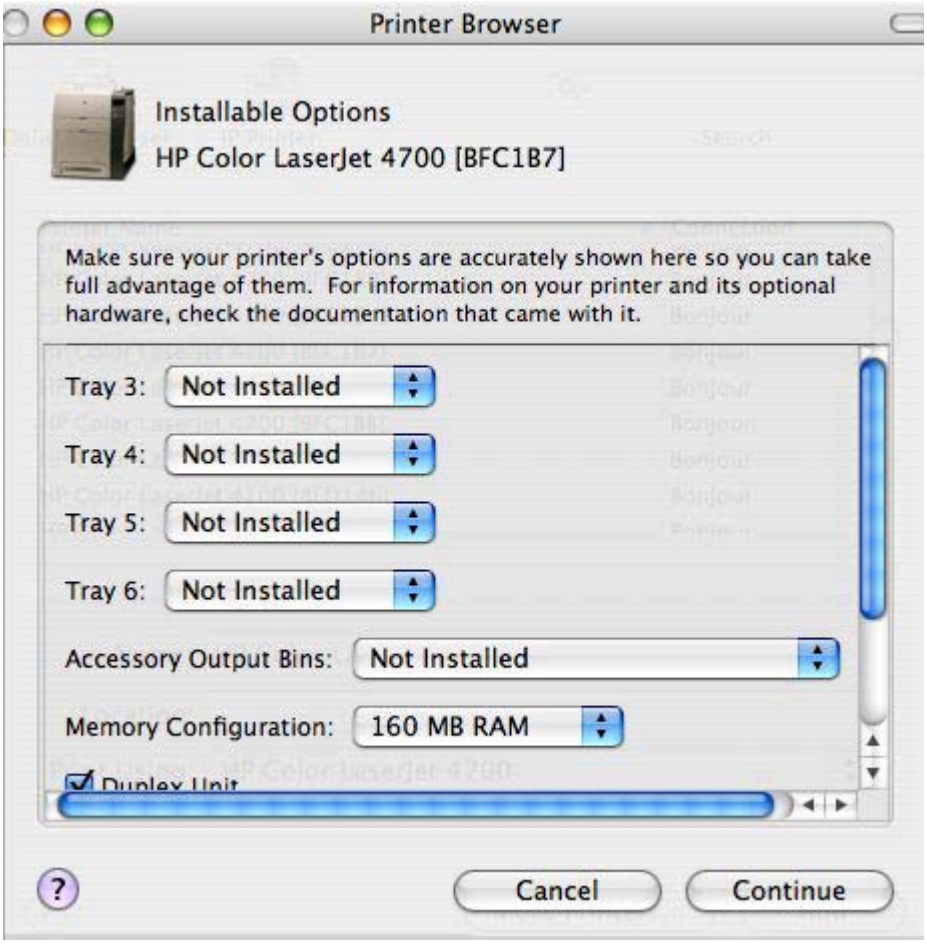


Figure 6-2 **Installable Options** screen

3. In the **Installable Options** screen, use the drop-down menus to match the options on the product and then click **Continue**.

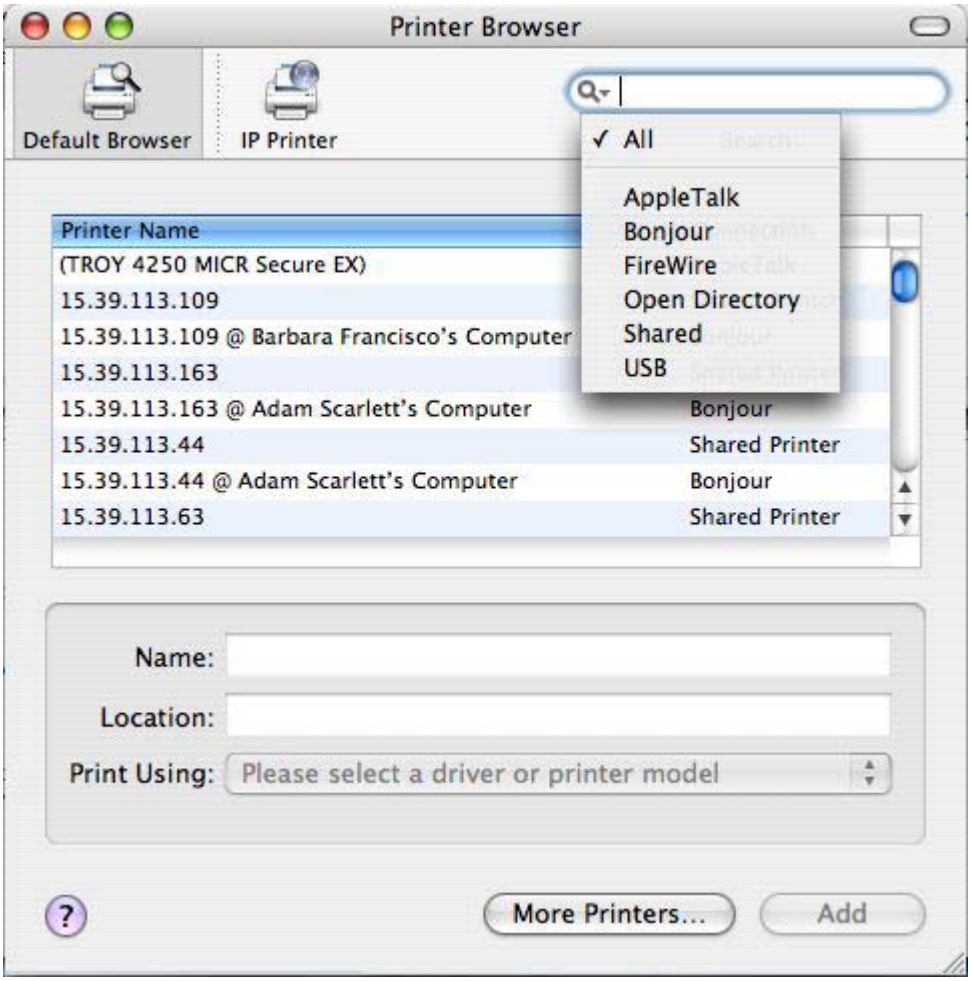


Figure 6-3 **Printer Browser** screen — connection type

4. In the **Printer Browser** screen, select the appropriate connection type and click **Add**. The product name appears in the **Printer List**.

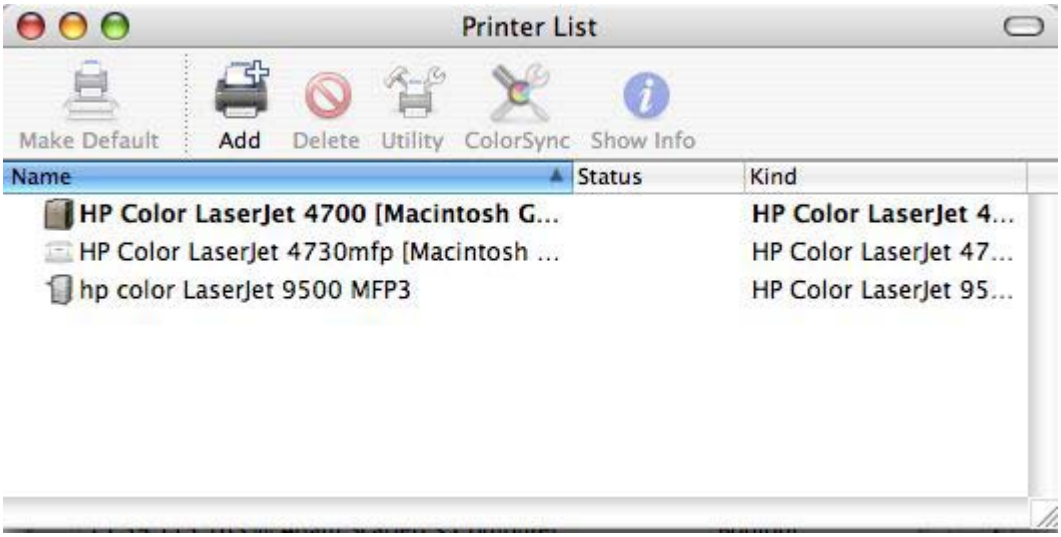


Figure 6-4 **Printer List** screen

5. Click the product name to open the **Select Printer** screen and verify that the product has been installed.

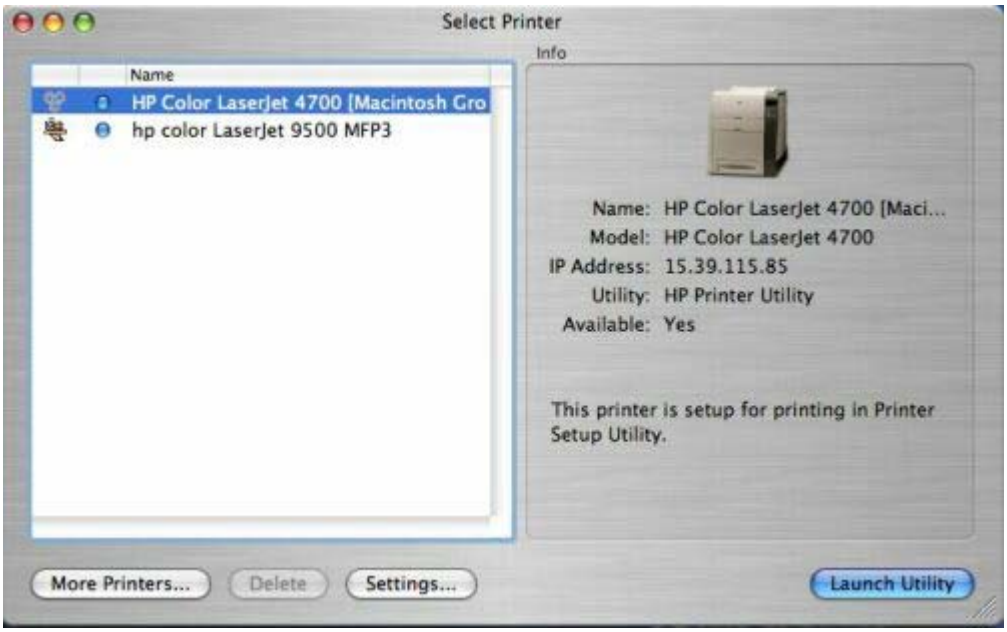


Figure 6-5 **Select Printer** screen

Setting up a printer with Mac OS X V10.3

1. In the **Applications** folder, open the **Utilities** folder, and then run the **Printer Setup Utility**.

2. Click **Add Printer** (in Mac OS X V10.1), or click Add (Mac OS X V10.2), or click **Printers** and then click **Add Printer** (Mac OS X V10.2.8 or later).

3. When the **New Printer drivers detected** popup box appears, click **OK**.

4. From the top pop-up menu, select the appropriate connection type for your product.
5. Select or type in any other information as indicated for the type of connection for your product. For example, if you are using an AppleTalk connection, select your product zone; or if you are using IP Printing, type an IP address in the **Printer Address** field. In the **Printer Model** drop-down menu, select HP. In the **Model Name** drop-down menu, select **HP Color LaserJet 4700**.

   NOTE If the automatic selection fails, or if you want to manually select a .PPD file, click the **Printer Model** pop-up menu, select **HP**, and then select the .PPD file you want to add.

6. Click **Add**. The HP Color LaserJet 4700 appears in the **Printer List**.
7. To configure installable options in Mac OS X V10.2 and later, such as a duplexing unit or optional paper trays, click **Show Info?** and select **Installable Options** in the drop-down menu.

   NOTE This step is necessary only for network connections and USB connections using Rendezvous/Bonjour. AppleTalk automatically configures the installable options.

8. Configure the options, click **Apply Changes**, and then close the **Printer List** dialog box.

Setting up an IP/LPR networked Printer with Mac OS 9.*x*

1. Run the **Apple Desktop Printer** utility.
2. Click **Printer (LPR)**, and then click **OK**.
3. Click **Change** in the LPR Printer Selection area.
4. Click the appropriate IP address and Queue, and then click **OK**.
5. Click **Change** and scroll through the list of products.
6. Click the correct product, and then click **Select**.
7. 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 three files: the HP LaserJet Installer—Integrated installer program for Mac OS X and for Mac OS 9, and a PDF folder for manuals. The folders are named as follows:

- Mac OS X
- Mac OS 9
- PDF

Mac OS Classic installation

This section provides information about the various installation dialog box sequences for the Mac OS Classic.

Main Install dialog box sequence

This subsection provides information about the Macintosh installation dialog box sequence for the Easy Install (the Typical Installation option).

A Custom Installation is not available in Mac OS 9 for the HP Color LaserJet 4700.

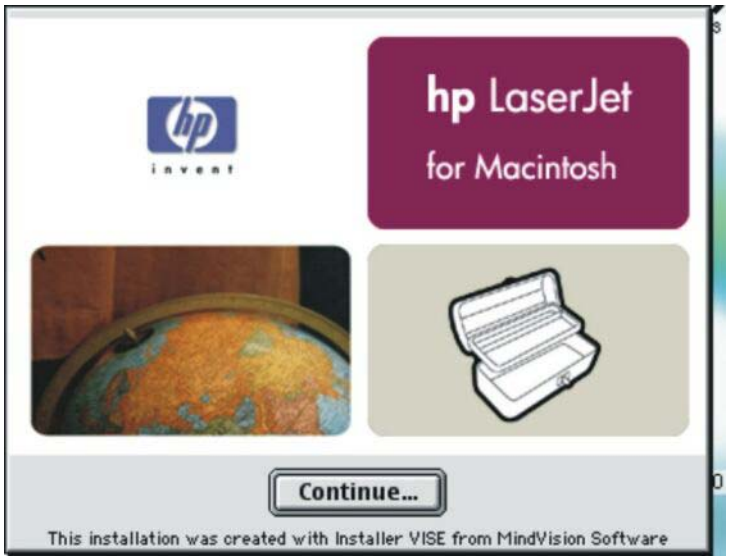


Figure 6-6 HP LaserJet for Macintosh installer startup screen dialog box

Click **Continue** to open the **HP LaserJet Installer** dialog box.

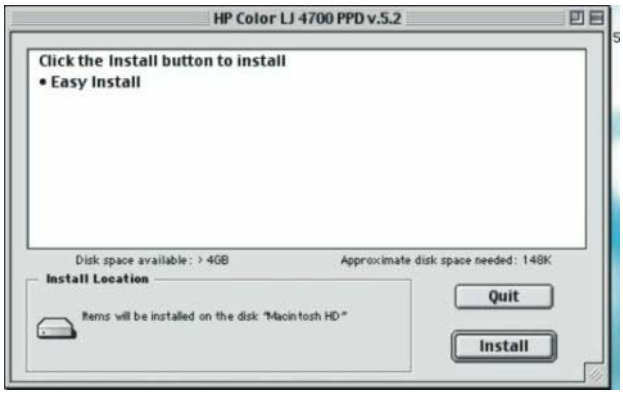


Figure 6-7 **HP LaserJet Installer** dialog box (easy install)

If you want to install the files in a location other than the default "Macintosh HD," click **Install Location:** to specify a location.

Click **Install** to start the installation on the selected disk.

Click **Quit** to quit the Installer without making changes to the system.

Figure 6-8 **Installing** dialog box

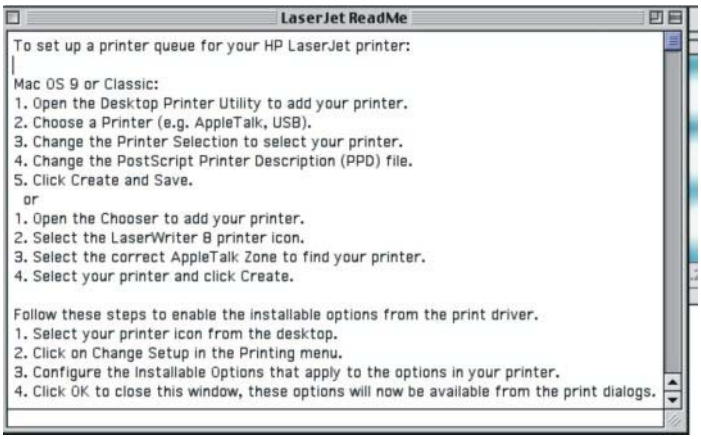
This dialog box shows installation progress. No action is required unless you want to stop the installation. Click **Stop** to interrupt the install file copy process.

Figure 6-9 Installation was successful dialog box

Click **Quit** to exit the Installer. The Printer Setup Assistant opens.

Click **Continue** to return to the HP LaserJet Installer.

The Mac OS 9 Readme opens. Follow these instructions to continue setting up the printer.



Mac OS X installation

This section provides information about the various installation dialog box sequences for the Mac OS X operating system.

Main Install dialog box sequence

This section provides information about the Macintosh installation dialog box sequence for the Easy Install (the Typical Installation option).

If the CD screen does not open automatically when the CD is put into the CD-ROM drive, double-click the **hp LaserJet 4700** CD-ROM icon on the desktop to open the installer folder.

Figure 6-10 CD-ROM HP Color LaserJet 4700 installer icon

The **hp LaserJet Software** dialog box opens.

In the **hp LaserJet 4700** folder, double-click the Mac OS X folder to open it.

In the Mac OS X folder, double-click the **HP Color LaserJet v.5.2** icon. This begins the install process.

Figure 6-11 **HP Color LaserJet v.5.2** icon

If you are installing your product on Mac OS X V10.1 or later, the **Authenticate** dialog box appears.

Figure 6-12 **Authenticate** dialog box

Type the correct “admin” password and click **OK** to continue. The installer startup screen appears.

Click **Cancel** to exit the installation.

Figure 6-13 HP LaserJet for Macintosh installer startup screen dialog box

Click **Continue**. The **License** dialog box appears.

Figure 6-14 **License** dialog box

Click **Print...** to open the **Page Setup** dialog box for your default printer and print a copy of the license agreement.

Click **Save As...** to open the system **Save** dialog box and save the license agreement to disk.

Click **Decline** to end the installation process and close the installer.

Click **Accept** to continue the installation. The **HP LaserJet Installer** dialog box appears.

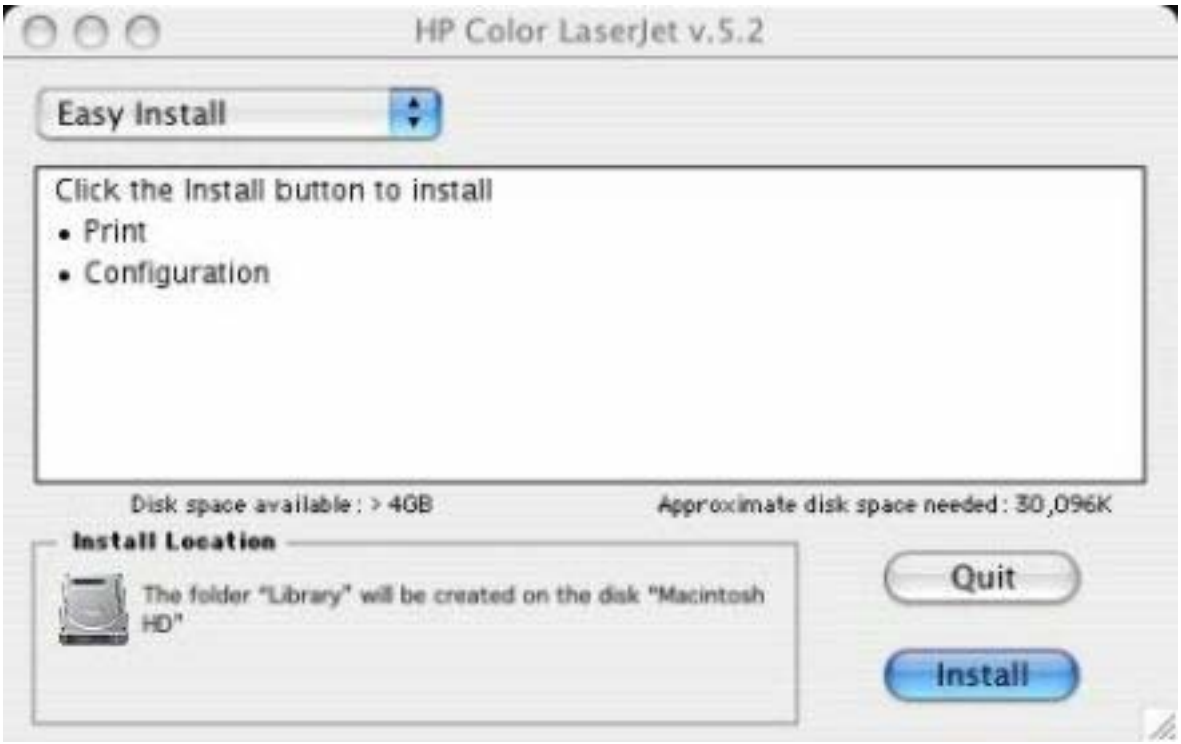


Figure 6-15 **HP LaserJet Installer** dialog box (easy install)

The default option in the drop-down menu at the top of the screen is **Easy Install**. You can also select **Custom Install** in the same menu.

Click **Install** to start the installation on the selected disk

Click **Quit** to quit the Installer without making changes to the system.

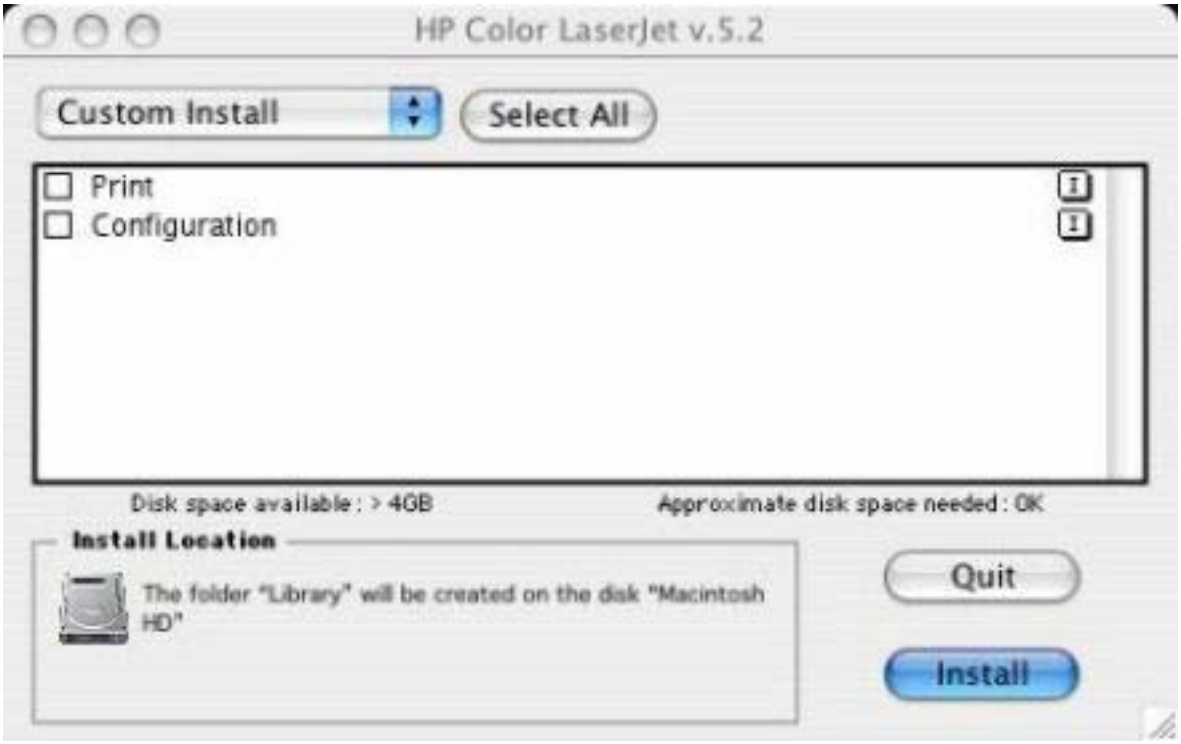


Figure 6-16 **HP LaserJet Installer** dialog box (custom install)

Click **Select** All to install all of the options that are available on the printing-system software CD, or the components that you want to install by using the check boxes in the list

Click the **I** icon on the left of each item in the list to open a popup screen that describes the component.

Click **Install** to start the installation on the selected disk. The files are installed in the Library folder on the Macintosh CD.

Click **Quit** to quit the Installer without making any changes to the system.

Figure 6-17 **Installing** dialog box

The **Installing** dialog box shows installation progress. No action is required unless you want to stop the installation. Click **Stop** to interrupt the install file copy process.

When installation is complete, the LaserJet Readme.RTF file opens and the LaserJet ReadMe icon appears on the desktop. Follow these instructions to set up a printer queue for your HP Color LaserJet 4700 printer. For more information about setting up a printer queue

A popup message also appears, stating that the installation was successful.

Figure 6-18 Installation success message

Click **Quit** to exit the installer.

Click **Continue** to return to the HP LaserJet Installer.

7 Engineering Details

Introduction

This chapter presents engineering detail for the following topics:

- Media attributes
- Remote firmware update
- Printing print-ready documents
- Driver-feature comparison in various operating systems

Media attributes

This section includes the following information about media attributes:

- media sources and destinations
- media-tray configurations
- media-source commands
- media types and sizes
- PCL 6 custom media sizes

Media sources and destinations

The following table indicates the standard and optional media sources and destinations for the HP Color LaserJet 4700 printer:

Table 7-1 HP Color LaserJet 4700 media sources and destinations

Media sources	100-sheet multipurpose tray (tray 1)	standard
	500-sheet paper tray (tray 2)	standard
	500-sheet paper tray (tray 3)	optional
	500-sheet paper tray (tray 4)	optional
	500-sheet paper tray (tray 5)	optional
	500-sheet paper tray (tray 6)	optional
Media destinations	standard left bin	standard (not available when accessory output device is attached)
	HP 750-Sheet Stapler/Stacker	optional

Media-source commands

The PCL 6 attribute for paper source is `ubyte # MediaSource` or `ubyte_array "string" MediaSource`. See the following table for values of #. For example, "`ubyte 4 MediaSource`" is the command for tray 2.

The PCL 5 escape sequence for media source is `Esc&l#H` (the "l" is a lowercase "L" rather than the numeral "1"). See the following table for values of #. For example, `Esc&l1H` is the command fortray 2.

Table 7-2 Media-source commands

Media source	PCL 6 `ubyte # MediaSource` or `ubyte_array "string" MediaSource`[1]	PCL 5 `Esc&l#H`	PostScript `/MediaPosition # / ManualFeed true | false` or `null`
Manual feed in tray 1	2	2	3 true
Tray 1 (100-sheet)	3	4	3 false

Table 7-2 Media-source commands (continued)

Media source	PCL 6 `ubyte # MediaSource or ubyte_array "string" MediaSource`[1]	PCL 5 `Esc&l#H`	PostScript `/MediaPosition # / ManualFeed true | false or null`
Tray 2 (500-sheet)	4	1	0 false
Tray 3 (500-sheet)	5	5	1 false
Tray 4 (500-sheet)	7	8	4 false
Tray 5 (500-sheet)	uint32	9	38 false
Tray 6 (500-sheet)	uint32	10	39 false
Automatically Select (HP unidrivers)	NA	NA	NA
Automatically Select (HP traditional PCL drivers) or Printer Auto Select (HP unidrivers)	7	1	null false

[1] For the string value, you must use include the quotation marks around the variable. For example, `ubyte_array "TRAY2" MediaSource` is the PCL 6 command for tray 2.

Media types and sizes

The tables in this section provide information about media features, media attributes, and media-handling constraints for the HP Color LaserJet 4700 printer.

Driver features and attributes

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 contains all of the following sizes, and might contain sizes from other drivers.

Table 7-3 Supported media sizes and attributes

Paper sizes[1]	Width	Height	PCL 6 [2]
Letter	216 mm (8.5 inches)	279 mm (11.0 inches)	"LETTER"
Statement	215.9 mm (8.5 inches)	139.7 mm (5.5 inches)	"STATEMENT"
16K	197 mm (7.75 inches)	273 mm (10.75 inches)	"ROC16K"
8.5 x 13	216 mm (8.5 inches)	330 mm (13 inches)	"8.5x13"
A4	210 mm (8.27 inches)	297 mm (11.69 inches)	"A4"

Table 7-3 Supported media sizes and attributes (continued)

Paper sizes[1]	Width	Height	PCL 6 [2]
A5	148 mm (5.83 inches)	210 mm (8.27 inches)	"A5"
B5 (JIS)	182 mm (7.17 inches)	257 mm (10.12 inches)	"JIS B5"
Double Postscard (JIS)	100 mm (3.94 inches)	200 mm (7.87 inches)	"JPOSTD"
Double Japan Postscard Rotated	148 mm (5.83 inches)	200 mm (7.87 inches)	“Double Postcard (JIS)”
Envelope #10	105 mm (4.13 inches)	241 mm (9.5 inches)	"COM10"
Envelope B5	176 mm (6.93 inches)	250 mm (9.84 inches)	"B5 ENV"
Envelope C5	162 mm (6.38 inches)	229 mm (9.02 inches)	"C5"
Envelope DL	110 mm (4.33 inches)	220 mm (8.66 inches)	"DL"
Envelope Monarch	99 mm (3.88 inches)	190 mm (7.5 inches)	"MONARCH"
Executive	185 mm (7.25 inches)	266 mm (10.5 inches)	"EXEC"
Executive (JIS)	216 mm (8.5 inches)	330 mm (12.99 inches)	"JISEXEC"
Legal	216 mm (8.5 inches)	355 mm (14.0 inches)	"LEGAL"
Custom	Minimum: 127 mm (5.0 inches) Maximum: 215.9 mm (8.5 inches)	Minimum: 76.2 mm (3.0 inches) Maximum: 355.6 mm (14.0 inches)	[4]

[1] For all paper sizes, the PCL 6 margins are 100 dots, at 600 dots per inch.

[2] The PCL 6 command for paper size is ubyte_array “String” MediaSize. The values in this column are the values for "String."

[4] For custom sizes, the PCL 6 Driver specifies actual dimensions, for example, for 8 by 9 inch custom size, "real32_xy 8.0 9.0 CustomMediaSize ubyte eInch CustomMediaSizeUnits."

Table 7-4 Supported input media types

Media types (command string)	Tray 1/top bin/stacker bin	Trays 2, 3, 4, 5, and 6 (500-sheet)	Duplexing unit	Manual duplexing	HP 750-Sheet Stapler/Stacker [1]
Unspecified	Y	Y	Y	Y	Y
Plain	Y	Y	Y	Y	Y
Preprinted	Y	Y	Y	Y	Y
Letterhead	Y	Y	Y	Y	Y
Transparency	Y	Y	N	N	N
Prepunched	Y	Y	Y	Y	Y
Labels	Y	Y	N	N	N
Bond	Y	Y	Y	Y	Y
Recycled	Y	Y	Y	Y	Y
Color	Y	Y	Y	Y	Y
Light (60–75 g/m^2, or 16.4 - 20.5 lb.)	Y	Y	Y	Y	Y
Intermediate (90 - 104 g/m^2, or 24.7 - 28.5 lb.)	Y	Y	Y	Y	Y
Heavy (105 - 120 g/m^2, or 28.8 - 32.9 lb.)	Y	Y	Y	Y	Y (20)
Extra Heavy (120 - 163 g/m^2, or 32.9 - 44.7 lb.)	Y	N	N	N	Y (20)
Cardstock (164 - 220 g/m^2, or 45 - 60.3 lb.)	Y	N	N	Y	Y (20)
Rough (90 - 105 g/m^2, or 24.7 - 28.8 lb.)	Y	Y	Y	Y	Y
Glossy (75 - 120 g/m^2, or 20.5 - 32.9 lb.)[2]	Y	Y	Y	Y	Y (20)
Heavy Glossy (120 - 160 g/m^2, or 32.9 - 43.9 lb.)[2]	Y	N	N	Y	Y (20)
Extra Heavy Glossy (160 - 220 g/m^2, or 43.9 - 58 lb.)[2]	Y	N	N	Y	Y (20)
Tough Paper (Glossy Film)[2]	Y	Y	N	N	N
Envelope	Y	N	N	N	N

[1] Staples a maximum of 30 pages weighing from 60 g/m^2 to 220 g/m^2 (16 lb to 58 lb) except where listed as N (no) or Y (other number).

[2] Use *only* HP *LaserJet* glossy media. Using HP *Inkjet* glossy media can cause permanent damage to your printer.

Custom paper sizes

The following table shows custom paper sizes that are available for the HP Color LaserJet 4700:

Table 7-5 PCL 6 custom media sizes

Tray	Dimensions	Minimum	Maximum
Tray 1 (100-sheet multipurpose)	Width	76.2 mm (3.0 inches)	215 mm (8.5 inches)
	Height	127.0 mm (5.0 inches)	355.6 mm (14.0 inches)
Tray 2 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 3 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 4 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 5 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Tray 6 (500-sheet)	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)
Duplexing unit	Width	148.0 mm (5.83 inches)	215.9 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	355.6 mm (14.0 inches)

Media-type commands

The PCL 5 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.

Table 7-6 Media-type commands

Esc&	n#	Wd	Paper type
Esc&	6	Wd	Plain
Esc&	11	Wd	Preprinted
Esc&	11	Wd	Letterhead
Esc&	13	Wd	Transparency[1]
Esc&	11	Wd	Prepunched
Esc&	7	Wd	Labels
Esc&	5	Wd	Bond
Esc&	9	Wd	Recycled
Esc&	6	Wd	Color

Table 7-6 Media-type commands (continued)

Esc&	n#	Wd	Paper type
Esc&	6	Wd	Light
Esc&	13	Wd	Intermediate
Esc&	6	Wd	Heavy
Esc&	12	Wd	Extra Heavy
Esc&	11	Wd	Cardstock[2]
Esc&	6	Wd	Rough
Esc&	7	Wd	Glossy
Esc&	13	Wd	Heavy Glossy
Esc&	19	Wd	Extra Heavy Glossy
Esc&	12	Wd	Tough Paper (Glossy Film)
Esc&	9	Wd	Envelope

[1] You must spell out the word "Transparency" in the string, although it is abbreviated as TRNSPRNCY on the control panel.

[2] The correct command for cardstock is "Esc&n11WdCard Stock", with a space between the "d" and the "S", and with an uppercase "S".

Remote firmware update

The HP Color LaserJet 4700 features remote firmware update (RFU) capability. The method for downloading remote firmware updates from the Web site is similar to that used to download the latest printing-system software and print drivers.

The process for remotely upgrading firmware involves three steps:

1. Determine the current level of firmware that is installed on the printer.
2. Go to the HP Web site and download the latest firmware to your computer.
3. Download the new firmware to the product.

Determining the current level of firmware

To determine the current level of firmware, view the configuration page. To print a configuration page, follow these instructions.

1. Press the select button (the one with the check mark) to open the menus.
2. Press the up and down buttons to scroll to **INFORMATION**, and then press the select button.
3. Press the up and down buttons to scroll to **PRINT CONFIGURATION**.
4. Press the select button to print the configuration page.
5. Look in the "Printer Information" section on the configuration page for the firmware date code. The firmware date code looks something like this: 20051002 07.000.0.

Downloading the new firmware from the HP Web site

The remote firmware update (.RFU) 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, go to the following URL:

www.hp.com/go/clj4700_firmware

The .EXE file consists of a readme file and the .RFU file.

NOTE For UNIX systems, the remote firmware update file is a .TAR file.

Downloading the new firmware to the product

For support information about downloading new firmware from the Web, go to www.hp.com/support/clj4700.

The product can receive an RFU update to a product when the product is in a **READY** state. The product waits for all of the I/O channels to become idle before performing the update.

NOTE If the firmware update involves a change in the format of nonvolatile random-access memory (NVRAM), any menu settings that are changed from the default settings will return to default settings. The settings must be changed again if you want them to be different from the defaults. Examples of settings that are affected in this way are tray types, default symbol sets, and Web-access alerts.

The elapsed time for an update depends on the I/O transfer time, as well as the time that it takes for the product to reinitialize. The I/O transfer time depends on a number of things, including the speed of the host computer that is sending the update and the I/O method (parallel or network). The reinitialization time depends on the specific hardware configuration of the product, such as the number of EIO devices installed, the presence of external paper-handling devices, and the amount of memory that is installed.

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

Use one of the methods described in this manual to update your product firmware.

Printer messages during the firmware update

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

Table 7-7 Troubleshooting a firmware update

Cause	Result
The job was cancelled from the control panel.	No update has occurred.
A break in the I/O stream occurred during send (for example, the parallel cable was removed).	No update has occurred.
A power cycle occurred during the **RECEIVING UPGRADE** process.	No update has occurred.
A power cycle occurred during the **PERFORMING UPGRADE** process.	No update has occurred. Resend the update through a parallel port.
A power cycle occurred during the **INITIALIZING** process.	The update has been completed.

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

All HP LaserJet products leave the factory with the most recent firmware version installed. If a remote firmware update fails in a Windows OS, the .RFU file must be resent. For more information, see Table 7-9 Update messages.

If a remote firmware update fails in a Macintosh OS, contact support from an HP Customer Care Center.

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

Table 7-8 Troubleshooting a firmware update failure

Reason for firmware update failure	Corrective action
The .RFU file is corrupted.	The product recognizes that the file is corrupted and rejects the update. Download the file again and send the new file to the product. Download the file from www.hp.com/go/clj4700_firmware.
The wrong product is contained in the .RFU file.	The product recognizes the printer mismatch and rejects the update. Download the correct file and send it to the product. Download the file from www.hp.com/go/clj4700_firmware.

Table 7-8 Troubleshooting a firmware update failure (continued)

Reason for firmware update failure	Corrective action
The upgrade was interrupted.	See Table 7-9 Update messages.
A flash hardware failure occurred.	Although it is extremely unlikely, the product might have a hardware failure. Call technical support to address the problem (see the flyer that came with the product for a local telephone support list).

Three messages appear during a normal update process; a fourth (RESEND UPGRADE) appears only if the update process does not succeed.

Table 7-9 Update messages

Printer message	Explanation
RECEIVING UPGRADE	This message appears from the time the product recognizes the beginning of an .RFU update until the time the product has verified the validity and integrity of the .RFU update. **NOTE** If the remote firmware update process is interrupted before the firmware is downloaded (while **RECEIVING UPGRADE** appears on the control-panel display), the firmware file must be sent again. No message appears on the product control panel to indicate that the update was interrupted.
PERFORMING UPGRADE	This message appears while the product is actually reprogramming the firmware. **NOTE** If power is lost during the flash DIMM update (while **PERFORMING UPGRADE** appears on the control-panel display), the update is interrupted and the message **RESEND UPGRADE** appears on the control-panel display.
INITIALIZING	This message appears from the time the product has finished reprogramming the DIMM until the product reinitializes.
RESEND UPGRADE	This message appears (in English only) if the firmware update fails because the RFU process is interrupted. It can also occur if firmware for accessories (such as the duplex unit or an output device becomes is corrupted. Perform another update by any means that is supported by the printer, regardless of the connection (network, parallel, or USB).
RFU LOAD ERROR **SEND RFU UPGRADE** **ON PARALLEL PORT**	This message appears (in English only) if the firmware update fails because the print-engine firmware is corrupted. If this message appears, the update must now be sent only by a computer that is attached to the parallel port of the product.

NOTE To verify that the firmware update succeeded, print a new configuration page from the control panel and verify that the firmware date code on the configuration page has changed.

Remote firmware update by using FTP through a browser

Complete the following steps to update the product firmware by using file transfer protocol (FTP) through a browser.

NOTE The following instructions can be used on Windows or Macintosh operating systems.

1. Make note of the TCP/IP address on the EIO-Jetdirect page. The EIO-Jetdirect page is the second page of the configuration page printout. To print a configuration page, see Determining the current level of firmware
2. Open a browser window.
3. In the address line of the browser, type `ftp://<IPADDRESS>`, where <IPADDRESS> is the TCP/IP address of your product. For example, if the TCP/IP address is 192.168.0.90, type `FTP://192.168.0.90`
4. Locate the downloaded .RFU file for the product.
5. Drag and drop the .RFU file onto the **PORT1** icon or onto any open space in the browser window.

   NOTE If the **PORT1** icon does not appear as a folder name, you might have to enable folder viewing for FTP sites in your Web browser. In Microsoft Internet Explorer, use the following procedure to enable the folder view.

   a. Select **Tools**, then select **Internet Options**, and then select the**Advanced** tab.

   b. Select the **Enable folder view for FTP sites**.

   c. Click **OK** to save the setting.
6. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

   NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.
7. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

Remote firmware update by using FTP on a direct network connection

If the HP Color LaserJet 4700 uses a direct network connection, use file transfer protocol (FTP) to update the firmware. Complete the following steps for your operating system.

Windows operating systems

1. Make note of the TCP/IP address on the Embedded Jetdirect page. The HP Embedded Jetdirect page 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 product, make sure that the product is not in Powersave mode. Also make sure that any error messages are cleared from the control-panel display.
2. Open a command window on your computer.

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`.
4. Press Enter on the keyboard.
5. When prompted for the user name, press Enter.
6. When prompted for the password, press Enter.
7. Type `bin` at the command prompt.
8. Press Enter. The message **200 Type set to I, Using binary mode to transfer files** appears in the command window.
9. Type `put <FILENAME>`, where <FILENAME> is the name of the .RFU file that was downloaded from the Web, including the path. For example, type `put C:\LJ\4700FW.RFU`, and then press Enter.

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `put "c:\My Documents\LJ\4700fw.rfu"` .

   The following series of messages appears in the command window:

   200 PORT command successful

   150 Opening BINARY mode data connection

   226 Ready

   226 Processing Job

   226 Transfer complete

   After these messages appear, a message containing transfer-speed information appears.
10. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

    NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.
11. Print a configuration page and verify that the firmware revision number matches the revision of the current update.
12. At the command prompt, type `bye` to exit the FTP command.
13. At the command prompt, type `exit` to return to the Windows interface.

Macintosh operating systems

1. Make a note of the TCP/IP address on the EIO-Jetdirect page. The EIO-Jetdirect page is the second page of the configuration page printout. To print a configuration page, see Determining the current level of firmware.
2. Open a Terminal window on your Macintosh. You can find the Terminal program on the computer hard drive in the Applications/Utilities folder.
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`
4. Press Enter on the keyboard.
5. When prompted for a user name and password, press Enter.
6. Type `put <path>`, where <path> is the location where the .RFU file was downloaded from the Web, including the path. For example, type `put /username/desktop/4700fw.rfu`, and then press Enter.

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `put "/user name/desktop/4700FW.RFU".`

   To ensure that the entire path to the .RFU file is placed in the `put` command, type `put` and a space, and then drag and drop the .RFU file onto the terminal window. The complete path to the file is automatically placed after the `put` command .
7. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

   NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.
8. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

Remote firmware update through a local Windows port

If the product is connected through a local port (parallel), then you can send the .RFU file directly to the product by using a `COPY` command from a command prompt or an MS-DOS window. At the command prompt, perform the following steps for your operating system.

Windows 98 or Windows Me

1. From a command prompt or in an MS-DOS window, type the following:

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

   NOTE If the product is attached to a parallel port other than LPT1, then substitute the correct LPT port number in the **mode** command.

2. Press Enter on the keyboard. The response you receive should be similar to these examples:

   > LPT1 Not Rerouted

   > Resident portion of MODE loaded

   > Infinite retry on parallel printer time-out

3. At a command prompt, type `copy /b <FILENAME> <PORTNAME>`, where <FILENAME> is the name of the .RFU file (including the path) and <PORTNAME> is the name of the appropriate product port (such as LPT1). For example, type the following:

   ```
   C:\>copy /b c:\4700fw.rfu lpt1
   ```

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type`C:\>copy /b "c:\My Documents\4700fw.rfu" lpt1`

4. Press Enter on the keyboard.

5. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

   NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.

6. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

7. Type `exit` at the command prompt to close the command window.

Windows NT 4.0, Windows 2000, Windows XP, or Windows Server 2003

The .RFU file can be sent directly to the product by typing a **copy** command at a command prompt or in an MS-DOS window.

Windows NT 4.0 does not support the HP Color LaserJet 4700 printer *drivers*, but it is possible to update the printer firmware in Windows NT 4.0.

1. At a command prompt, type `copy /b <FILENAME> <PORTNAME>` , where <FILENAME> is the name of the .RFU file (including the path) and <PORTNAME> is the name of the appropriate printer port (such as LPT1). For example, type the following:

   ```
   C:\>copy /b c:\4700fw.rfu lpt1
   ```

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `C:\>copy /b "c:\My Documents\4700fw.rfu" lpt1`

2. Press Enter on the keyboard.

3. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

   NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.

4. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

5. At the command prompt, type `exit` to close the command window.

Remote firmware update through a Windows network

If the product is shared on a Windows network, follow these instructions.

1. From a command prompt or in an MS-DOS window, type `copy /b <FILENAME> \\<COMPUTERNAME>\<SHARENAME>`, where <FILENAME> is the name of the .RFU file (including the path), <COMPUTERNAME> is the name of the computer from which the product is being shared, and <SHARENAME> is the product share name. For example, type the following:

   ```
   C:\>copy /b c:\4700fw.rfu \\your_server\your_computer
   ```

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `C:\>copy /b "c:\My Documents\4700fw.rfu" \\your_server\your_computer`

2. Press Enter on the keyboard. The messages described in the section Printer messages during the firmware update appear on the control panel. The message **1 file(s) copied** appears on the computer screen.

3. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.

4. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

Remote firmware update for UNIX systems

For UNIX systems, any command method that delivers the .TAR file to the product is acceptable, including the following:

1. At the command prompt, type `cp /home/yourmachine/FILENAME /dev/parallel>`, where </home/yourmachine/FILENAME> is the location of the .TAR file.
2. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.

3. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

Remote firmware update by using the HP Printer Utility

Make sure that you have the tools and files that are necessary for the update. You will need the HP Printer Utility and the 4700FW.RFU file, which is the firmware file for the product. The HP Printer Utility is a software program that is available only for Mac OS X V10.2 or later.

The HP Printer Utility can be found on the HP Color LaserJet 4700 printing-system software CD-ROM that came with the product. If you do not have the CD-ROM, you can obtain the HP Printer Utility by downloading the latest product installer from www.hp.com/go/clj4700_software.

The firmware file (4700FW.RFU) can be downloaded from the following Web site: www.hp.com/go/clj4700_firmware

See Downloading the new firmware to the product for more information.

After you have the firmware file and the HP Printer Utility, you are ready to begin the update process. Complete the following steps:

1. Open the HP Printer Utility.
2. Select **Update Firmware**, click **Choose** and browse to firmware upgrade file, and click **Open**.
3. On the **Update Firmware** screen, click **Update**.

NOTE You may receive an error message on the screen indicating that the printer is offline. Verify that the printer is turned on. If it is, ignore the message. The **Updating** screen appears and the update proceeds as expected.

4. The update process can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.

5. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

Remote firmware update by using the HP LaserJet Utility (Mac OS 9.*x* only)

Make sure that you have the tools and files that are necessary for the update. You will need the HP LaserJet Utility and the 4700FW.RFU file, which is the firmware file for the product.

The firmware file (4700FW.RFU) can be downloaded from the following Web site: www.hp.com/go/clj4700_firmware

See Downloading the new firmware to the product for more information.

After you have the firmware file and the HP LaserJet Utility, you are ready to begin the update process. Complete the following steps:

1. Open the HP LaserJet Utility.
2. Click **Select Printer**, select the product that you want to update on the network, and then click **OK**. An information dialog box for the printer appears.
3. On the left side of the information dialog box, click **Files**. A dialog box appears where you can select a file to be downloaded to the product.
4. Click **Select File**.
5. Locate the 4700FW.RFU file on your hard disk, and click the file name to highlight it. Click **Select**. The **Files** dialog boxes are updated to show the 4700FW.RFU file under **File to download**.
6. Click **Download**.
7. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. A progress bar in the HP LaserJet Utility shows how much of the file has been downloaded. The messages described in the section Printer messages during the firmware update appear on the control panel.

NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.

8. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

Remote firmware update by using the LPR command

NOTE This remote firmware update method is for use in Windows NT 4.0, Windows 2000, Windows XP, and Windows Server 2003.

Complete the following steps to update the firmware by using the LPR command.

1. From a command window, type `lpr -P <IPADDRESS> -S <IPADDRESS> -o l <FILENAME>` -OR- `lpr -S <IPADDRESS> -Pbinps <FILENAME>`, where <IPADDRESS> can be either the TCP/IP address or the hostname of the product, and where <FILENAME> is the filename of the .RFU file.

   NOTE The parameter (-o l) consists of a lowercase "O", not a zero, and a lowercase "L", not the numeral 1. This parameter sets the transport protocol to binary mode.

2. Press Enter on the keyboard. The messages described in the section Printer messages during the firmware update appear on the control panel.

3. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

   NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.

4. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

5. Type `exit` at the command prompt to close the command window.

Remote firmware update through HP Web Jetadmin

This procedure requires that you install HP Web Jetadmin V7.8 or later on your computer. Complete the following steps to update a single product through HP Web Jetadmin after downloading the .RFU file from the HP Web site.

1. Start HP Web Jetadmin.

2. Type the TCP/IP address or IP host name of the product in the **Quick Device Find** field, and then click **Go**. The product Status window opens.

3. Open the **Device Management** folder in the drop-down list in the Navigation panel. Navigate to the **Device Lists** folder.

4. Expand the **Device Lists** folder and select **All Devices**. Locate the product that you want to update in the list of products, and click to select it.
5. Locate the drop-down box for **Device Tools** in the upper-right corner of the window. Select **Update Printer Firmware** from the **choose action** list.
6. If the name of the .RFU file is not listed in the **All Available Images** dialog box, click **Browse** in the **Upload New Firmware Image** dialog box and navigate to the location of the .RFU file that you downloaded from the Web at the start of this procedure. If the filename is listed, select it.
7. Click **Upload** to move the .RFU file from your hard drive to the HP Web Jetadmin server.
8. Refresh the browser.
9. Select the .RFU file from the **Printer Firmware Update** drop-down menu.
10. Click **Update Firmware**. HP Web Jetadmin sends the selected .RFU file to the product.
11. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or the computer. The messages described in the section Printer messages during the firmware update appear on the control panel.

    NOTE The product automatically turns off and then on again to activate the update; this can happen more than once. At the end of the update process, the **READY** message appears on the control panel. Do *not* turn off the product or interfere with the update until you see this message.
12. Print a configuration page and verify that the firmware revision number matches the revision of the current update.

HP Web Jetadmin V7.8 and later can also be used to perform multiple or unattended installations. Complete the following steps for multiple or unattended installations.

1. Start HP Web Jetadmin.
2. Create a device group. A simple way to do this is to follow these steps:

    a. Click **Device Management**, and then click **All Devices**.

    -or-

    b. Shift-click to select products that you want to be included in the group, and then click **OK**.

    -or-

    c. When prompted, type a name for the new device group, and then click **OK.**
3. To modify several products in a group, click the group name, and then click **Open**.
4. The drop-down menu for **Device Group Tools** appears on the right side of the window. Scroll if necessary to view it.
5. In the **Device Group Tools** drop-down box, select an action. Type the appropriate information. Click **Return to Device Group** when finished.

Printing print-ready documents

Several methods are available for printing documents independently of the original software program that was used to create the document. Normally, the document is printed by opening the original application and printing it to a file, or is printed by means of a distribution method such as internet downloading. The following print-ready file formats can be sent directly to the HP Color LaserJet 4700 printer without first opening the original software program:

- HP LaserJet Printer Control Language (.PCL)
- Portable Document Format (.PDF)
- Postscript (.PS)
- Text (.TXT)

Use one of the following methods to send print-ready files to your product.

NOTE The examples that are used in this section are for printing .PDF documents. However, any print-ready file type can be substituted.

Print-ready file printing by using FTP through a browser

Complete the following steps to print print-ready files directly by using FTP through a browser.

NOTE The following instructions can be used on Windows or Macintosh operating systems.

1. Make note of the TCP/IP address on the Embedded Jetdirect page. The HP Embedded Jetdirect page is the second page of the configuration page printout. To print a configuration page, see Determining the current level of firmware.
2. Open a browser window.
3. In the address line of the browser, type `ftp://<IPADDRESS>`. For example, if the TCP/IP address of your product is 192.168.0.90, type the following:

   `FTP:// 192.168.0.90`
4. Locate the print-ready file for the product.
5. Drag and drop the print-ready file onto the **PORT1** icon in the browser window.

NOTE If the **PORT1**icon does not appear as a folder name, you might have to enable folder viewing for FTP sites in your Web browser. In Microsoft Internet Explorer, use the following procedure to enable the folder view.

1. Select **Tools**, then select **Internet Options**, and then select the **Advanced** tab.
2. Select the **Enable folder view for FTP sites**.
3. Click **OK** to save the setting.

Print-ready file printing by using FTP on a direct network connection

If the HP Color LaserJet 4700 uses a direct network connection, use file transfer protocol (FTP) to print a print-ready file. Complete the following steps for the operating system:

Windows operating systems

1. Take note of the TCP/IP address on the Embedded Jetdirect page. The HP Embedded Jetdirect page is the second page of the Configuration page printout. To print a Configuration page, see Determining the current level of firmware.
2. Open a command window on your computer.
3. Type `ftp <TCP/IP printer ADDRESS>`. For example, if the TCP/IP address is 192.168.0.90, type the following:

   `ftp 192.168.0.90`
4. Press Enter on the keyboard.
5. When prompted for the user name, press Enter.
6. When prompted for the password, press Enter.
7. Type `bin` at the command prompt.
8. Press Enter. The message **200 Types set to I, Using binary mode to transfer files** appears in the command window.
9. Type `put <FILENAME>`, where <FILENAME> is the name of the print-ready file to be printed, including the path. For example, type the following:

   `put C:\LJ\4700FW.PDF`

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `put "c:\My Documents\LJ\4700FW.PDF"`

   The following series of messages appears in the command window:

   200 PORT command successful

   150 Opening BINARY mode data connection

   226 Ready

   226 Processing Job
10. Press Enter on the keyboard.
11. The print-ready file prints.
12. At the command prompt, type `bye` to exit the FTP command.
13. At the command prompt, type `exit` to return to the Windows interface.

Macintosh operating systems

1. Make note of the TCP/IP address on the Embedded Jetdirect page. The HP Embedded Jetdirect page is the second page of the configuration page printout. To print a configuration page, see Determining the current level of firmware.
2. Open a Terminal window on your Macintosh. You can find the Terminal program on the computer hard drive in the following folder:

   System/Applications/Utilities/Terminal
3. Type `FTP <TCP/IP printer ADDRESS>`. For example, if the TCP/IP address is 192.168.0.90, type the following:

   ```
   FTP 192.168.0.90
   ```
4. Press Enter on the keyboard.
5. When prompted for a user name and password, press Enter.
6. You can drag and drop the firmware file into the Terminal folder (System/Applications/Utilities/Terminal). Alternatively, you can type `put <path>`, where <path> is the location where the print-ready file was downloaded from the Web. For example, type the following:

   ```
   put /username/desktop/4700FW.PDF
   ```

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `put "/user name/desktop/4700FW.PDF"`

   To ensure that the entire path to the print-ready file is placed in the `put` command, type `put` and a space, and then click and drag the print-ready file onto the terminal window. The complete path to the file is automatically placed after the `put` command .
7. Press Enter.
8. The download process begins and the firmware is updated on the product. This can take about five minutes. Let the process finish without further interaction with the product or computer.
9. The product automatically turns off and on again to activate the update.

Print-ready printing by using a local Windows port

To print directly by using a local Windows port, follow the instructions in this section for your operating system.

Windows 98 or Windows Me

1. From a command prompt or in an MS-DOS window, type the following:

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

   NOTE If the product is attached to a parallel port other than LPT1, then substitute the correct LPT port number in the `mode` command.

2. Press Enter on the keyboard. The response you receive should be similar to these examples:

   > LPT1 Not Rerouted

   > Resident portion of MODE loaded

   > Infinite retry on parallel printer time-out

3. At a command prompt, type `copy /b <FILENAME> <PORTNAME>`, where <FILENAME> is the name of the print-ready file (including the path) and <PORTNAME> is the name of the appropriate printer port (such as LPT1). For example, at the `c:\>` command prompt, type the following:

   ```
   copy /b c:\4700FW.PDF lpt1
   ```

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `C:\>copy /b "c:\My Documents\4700FW.PDF"`

4. Press Enter on the keyboard. The message **PROCESSING JOB** appears on the control panel, and the job prints.

5. At the command prompt, type `exit` to close the command window.

Windows NT 4.0, Windows 2000, Windows XP, or Windows Server 2003

The print-ready file can be sent directly to the product by typing a `copy` command at a command prompt or in an MS-DOS window.

1. At a command prompt, type `copy /b <FILENAME> <PORTNAME>`, where <FILENAME> is the name of the print-ready file (including the path) and <PORTNAME> is the name of the appropriate printer port (such as LPT1). For example, type the following:

   ```
   C:\>copy /b c:\4700FW.PDF lpt1
   ```

2. Press Enter on the keyboard.

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `C:\>copy /b "c:\My Documents \4700FW.PDF"`. The message **PROCESSING JOB** appears on the control panel, and the job prints.

3. At the command prompt, type `exit` to close the command window.

Print-ready file printing in a Windows network

If the product is shared on a Windows network, complete the following steps.

1. From a command prompt or in an MS-DOS window, type `copy /b <FILENAME> \ \<COMPUTERNAME>\<SHARENAME>`, where <FILENAME> is the name of the print-ready file (including the path), <COMPUTERNAME> is the name of the computer from which the product is being shared, and <SHARENAME> is the product share name. For example, type the following:

   ```
   C:\>copy /b c:\4700FW.PDF \\your_server\sharename
   ```

   NOTE If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `C:\>copy /b "c:\My Documents\4700FW.PDF" \\your_server\sharename`

2. Press Enter on the keyboard. The message **PROCESSING JOB** appears on the control panel, and the job prints. The message **1 file(s) copied** appears on the computer screen.

Print-ready file printing in UNIX systems

For UNIX systems, any command method that delivers the print-ready file to the product is acceptable, including the following:

- At the command prompt, type `cp </home/yourmachine/FILENAME/ dev/parallel>`, where </home/yourmachine/FILENAME> is the location of the print-ready file.

Print-ready file printing by using the LPR command

NOTE This direct printing method is for use in Windows NT 4.0, Windows 2000, Windows XP, and Windows Server 2003.

Complete the following steps to print a print-ready file by using the LPR command.

1. Make note of the TCP/IP address on the Embedded Jetdirect page. The HP Embedded Jetdirect page is the second page of the configuration page printout. To print a configuration page, see Determining the current level of firmware.

2. From a command window, type the following:

   ```
   lpr -P IPADDRESS -S IPADDRESS -o l FILENAME lpr -S <IPADDRESS> -Pbinps <FILENAME>
   ```

   where IPADDRESS can be either the TCP/IP address or the host name of the product, and where FILENAME is the file name of the print-ready file.

   NOTE The parameter (-o l) consists of a lowercase "O", not a zero, and a lowercase "L", not the numeral 1. This parameter sets the transport protocol to binary mode.

3. The file prints, but no messages appear in the command prompt window.

4. Type `exit` at the command prompt to close the command window.

Driver-feature comparison in various operating systems

The following tables detail the software features that are available for each driver type and for each supported operating system that the HP Color LaserJet 4700 supports. The printing-system drivers for Windows 98 and Windows Me are the HP Traditional PCL 6 Driver, HP Traditional PCL 5 Driver and PS Emulation Driver. The printing-system drivers for Windows 2000, Windows XP, and Windows Server 2003 are the new HP unidrivers, with a user interface look and feel that is consistent across the HP PCL 6 Unidriver, HP PCL 5 Unidriver, and PS Emulation Unidriver.

For more information about the HP traditional PCL 6, PCL 5, and PS emulation drivers, see HP traditional print drivers for Windows. For more information about the HP PCL 6, PCL 5, and PS emulation unidrivers, see HP PCL 6, PCL 5, and PS emulation unidrivers for Windows.

NOTE HP Color LaserJet 4700 print driver features are supported in Windows XP (both 32-bit and 64-bit) and Windows XP (both 32-bit and 64-bit) operating systems.

HP Color LaserJet 4700 print driver features are supported in Mac OS 9 V9.2.2 and Mac OS X V10.1.5 or later, except as otherwise noted.

Job stream output

Table 7-10 Driver support for job stream output feature

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
HP Traditional PCL 5 Driver support		x			x		
PCL 6 support	x			x			
PCL 6 pass-through support	x			x			
PCL 6 XL Color	x			x			
Postscript 3			x				x
Postscript 1, 2						x	x

PCL 6 raster compression

Table 7-11 PCL 6 color raster compression support

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
PCL 6 color raster compression	x			x			

PJL/PJL Encoding

Table 7-12 Printer Job Language (PJL) and PJL encoding

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
PJL support	x	x	x	x	x	x	
UTF-8 encoding for PJL (Unicode to 8-bit)	x	x	x	x	x		

Job tracking

Table 7-13 Driver support for job tracking

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
PRN file driver identification	x	x	x	x	x		x
Job accounting information	x	x	x	x	x		
Job accounting enhancements (UUID)	x	x	x	x	x		
Reliable Time Services – born on date (PJL DMINFO)	x	x	x	x	x		
Job Timestamp – born on date (PJL TIMESTAMP)	x	x	x	x	x		
Sending user name with every job	x	x	x	x	x		

Connectivity/Printing

Table 7-14 Driver support for connectivity features

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Parallel (direct connect)	x	x	x	x	x	x	
Network — TCP/IP	x	x	x	x	x	x	x

Table 7-14 Driver support for connectivity features (continued)

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
USB (Direct Connect) through 7.1.2 Port Monitor (MS USB Print) (bidirectional)	x	x	x	x	x		
USB (Direct Connect) through 1284.4 Port Monitor (HP DOT4 / 7.1.3) (bidirectional)	x	x	x	x	x		
USB (Direct Connect) through 1284.4 Port Monitor (MS DOT4 / 7.1.3) (bidirectional) — Windows XP only	x	x	x				
USB (Direct Connect) through 7.1.2 (Apple USB Print) (bidirectional)							x
USB (Direct Connect) through 1284.4 (HP Hose DOT4 / 7.1.3) (bidirectional) **Mac OS 9 only**							x
USB (Direct Connect) through 1284.4 (HP CIA DOT4 / 7.1.3) (bidirectional) **Mac OS X only**							x

Bidirectional communication

Table 7-15 Driver support for bidirectional communication features

Operating System	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
EAC	x	x	x	x	x		
Direct connect – parallel — LPT — DOT4 stack	x	x	x	x	x		
Network — TCP/IP	x	x	x	x	x		
Automatic Configuration (other than EAC)							x
USB (through 1284.4 port monitor)	x	x	x	x	x		
USB (direct connect) through 1284.4 Port Monitor (MS DOT4 / 7.1.3) (bidirectional) — Win XP Only	x	x	x				

Table 7-15 Driver support for bidirectional communication features (continued)

Operating System	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
USB (direct connect) through 7.1.2 (Apple USB Print) (bidirectional)							x
USB (direct connect) through 1284.4 (HP Hose DOT4 / 7.1.3) (bidirectional) **Mac OS 9 only**							x
USB (direct connect) through 1284.4 (HP CIA DOT4 / 7.1.3) (bidirectional) **Mac OS 9 only**							x
Update Now	x	x	x	x	x		
Language Monitor[1]				x	x		

[1] MasterMon, a pseudo-language monitor that is used for all HP LaserJet products for the duplex communication channel with bidirectional communication products and to insert PJL commands into the job stream. It loads TCPMON for TCP/IP ports.

HP Driver Preconfiguration

Table 7-16 Driver support for HP Driver Preconfiguration

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
HP Driver Preconfiguration	x	x	x	x	x		
Feature lockout	x	x	x	x	x		
Continuous export	x	x	x	x	x		

Bundle support

Table 7-17 Bundle support

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
Printer Bundle in UI				x	x		

Tray and paper assignment

Table 7-18 Tray and paper assignment

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98 and Windows Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Assign paper size to tray	x	x	x			x	

Installable options

Table 7-19 Driver support for installable options

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Duplexing unit	x	x	x	x	x	x	x
Manual duplex enable	x	x	x	x	x		x
Printer hard disk	x	x	x	x	x	x	x
Total memory	x	x	x	x	x	x	x
DWS (available memory)				x	x	x	
Additional source trays	x	x	x	x	x	x	x
Additional destination bins	x	x	x	x	x	x	x
HP 750-Sheet Stapler/Stacker	x	x	x	x	x	x	x
Font DIMM/compact flash support				x			
Font DIMM Installer	x	x		x	x		
Mopier enabled	x	x	x	x	x	x	x
Job Storage enabled	x	x	x	x	x	x	x
Postscript passthrough			x				x

Printer services

Table 7-20 Printer services (**Services** tab)

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Internet Services Links/Launch product support Web site	x	x	x				x
Launch HP EWS features through TCP/IP port	x	x	x				

UI features

Table 7-21 Driver support for UI features

Operating system	Windows XP,Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
UI tabs ("Panels" in Macintosh)	x	x	x	x	x	x	x
UI extensions	x	x	x				x
Page preview images	x	x	x	x	x		x
Printer image bitmaps with hot spots				x	x		
Paper size dimensions				x	x		x
About . . .	x	x	x	x	x		x
Accessibility/Disability (JAWS)	x	x	x	x	x		x (Mac OS X only)
Accessibility architecture	x	x	x	x	x		

Help features

Table 7-22 Driver support for Help features

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
What's this? Help (F1)	x	x	x	x	x	x	

Table 7-22 Driver support for Help features (continued)

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Help button	x	x	x	x	x		
Bubble Help				x	x		
MS Windows "?" Help	x	x	x	x	x	x	
Constraint Help	x	x	x	x	x	x	

Quick Sets

Table 7-23 Driver support for Quick Sets

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Print Task Quick Sets	x	x	x	x	x		
User Defined Quick Sets	x	x	x	x	x		x

Paper Sizes

Table 7-24 Driver support for paper sizes

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Paper Size selection	x	x	x	x	x	x	x
User-defined custom paper	x	x	x	x	x	x	x
Custom paper dialog through driver UI	x	x	x	x	x		x

Media Types

Table 7-25 Driver support for media types

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Media types appear in one list	x	x	x	x	x	x	x
User Defined Media Types	x	x	x	x	x		
Combined Media Types & Sources in program. (Always ON, NO driver UI switch)	x	x	x			x	
Combined Media Types and sources in program (optional, driver UI switch)				x	x		
Combined Media Types and sources in program (in driver UI)						x	x
Alternative Letterhead mode	x	x	x	x	x	x	

Job storage

Table 7-26 Driver support for job-storage features

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Proof and hold	x	x	x	x	x	x	x
Private job	x	x	x	x	x	x	x
Quick Copy	x	x	x	x	x	x	x
Stored Job	x	x	x	x	x	x	x
Job name	x	x	x	x	x		x
User name	x	x	x	x	x	x	x
PIN	x	x	x	x	x	x	x
Job storage pop-up	x	x		x	x		
Automatic job and user name	x	x	x	x	x		x
Job Storage override	x	x	x	x	x	x	x

Print quality and resolution

Table 7-27 Print-quality and resolution features

Operating system	Windows XP,Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
Print-quality options	x	x	x	x	x	x	x
Print-quality — custom options recall				x	x		
Print optimizations	x	x					
Rendering mode (automatic)					x		
Send graphics as vector		x			x		
Send graphics as raster		x			x		
Send page as raster					x		
Color REt[1]	x	x	x	x	x		x
Scale Patterns (WYSIWYG)				x	x		
Image Mode	x	x	x	x	x	x	x

[1] Activated through the **Edge Control** option.

Reordering Options

Table 7-28 Driver support for reordering options

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
Page order (based on output bin)	x	x	x	x	x		x (Mac OS X only)
Page order (reordering for job)	x	x	x				x (Mac OS X only)

Resizing options

Table 7-29 Resizing options

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Print Document On	x	x	x	x	x		
Scale to Fit	x	x	x	x	x		x
Allow Scaling from Large Paper	x	x	x	x	x		
% of Normal Size	x	x	x	x	x		x
Rotate by 180 degrees	x	x	x	x	x	x	x

Color settings

Table 7-30 Color settings

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Mac
Driver type	HP unidriver			HP traditional driver			Mac
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Color Options	x	x	x	x	x	x	x
Manual/automatic color options	x	x	x	x	x	x	x
CMYK inks			x			x	x
Print in Grayscale	x	x	x	x	x	x	x
Color/monochrome switching	x	x	x	x	x	x	x
ICM (ink)/ColorSync (Macintosh)							x (Mac OS X only)
ICM Method	x	x	x				
ICM Intent	x	x	x				

Watermarks

Table 7-31 Driver support for watermarks feature

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh[11]
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Watermarks on/off	x	x	x	x	x	x	x

Table 7-31 Driver support for watermarks feature (continued)

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh[11]
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
First page only	x	x	x	x	x	x	x
Custom watermark definition	x	x	x	x	x	x	x
Watermark angle	x	x	x	x	x	x	x
Watermark font name	x	x	x	x	x	x	x
Watermark font color	x	x	x	x	x	x	x
Watermark font shading	x	x	x	x	x	x	x
Watermark font size	x	x	x	x	x	x	x
Watermark font style	x	x	x	x	x	x	x
Locally defined watermarks	x	x	x	x	x		

[1] Mac OS8.5 – 9.*x* only; not supported by Mac OS X or later.

Alternative source/paper type

Table 7-32 Driver support for alternate source/paper type feature

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	**HP unidriver**			**HP traditional driver**			**Macintosh**
Driver	**PCL 6**	**PCL 5**	**PS Emulation**	**PCL 6**	**PCL 5**	**PS Emulation**	**Postscript**
All pages the same	x	x	x	x	x	x	x
Use different paper (UI control)	x	x	x	x	x		x
Front Cover (Blank Front Cover Inserted)	x	x	x	x	x		
First Page	x	x	x	x	x		x
Other pages	x	x	x	x	x		x
Last Page	x	x	x	x	x		
Back Cover — Blank Back Cover Inserted	x	x	x	x	x		

Printing destination

Table 7-33 Driver support for printing-destination feature

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Paper Destinations	x	x	x	x	x		x
Custom Names for Mailbox Bins	x	x	x	x	x		

Finishing options and duplexing

Table 7-34 Duplexing

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Auto duplex/print on both sides	x	x	x	x	x	x	x
Manual duplex	x	x	x	x	x		x
Mixed duplex and simplex in single job	x	x	x	x	x		
Long Edge/Short Edge (Flip On)	x	x	x	x	x	x	x
Pages per sheet (N-up)	x	x	x	x	x	x	x
Page borders on/off	x	x	x	x	x		x
Page order (N-Up)	x	x	x	x	x		x
Booklet Printing (layout through software)	x	x	x	x	x		x (Mac OS X only)
Booklet Target Size	x	x	x	x	x		
Staple Options	x	x	x	x	x	x	x

Other document options

Table 7-35 Other document options

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
Orientation (portrait/landscape)	x	x	x	x	x	x	x
Number of copies	x	x	x	x	x	x	x
Ignore application collation				x	x		
Collate	x	x	x	x	x	x	x
Collate – feature in driver UI						x	x
Collate through mopy	x	x	x	x	x	x	x
Advanced printing features	x	x	x				

Font support

Table 7-36 Font support

Operating system	Windows XP, Windows 2000, Windows Server 2003			Windows 98, Me			Macintosh
Driver type	HP unidriver			HP traditional driver			Macintosh
Driver	PCL 6	PCL 5	PS Emulation	PCL 6	PCL 5	PS Emulation	Postscript
General device font support			x	x	x	x	x
Font substitution	x	x	x			x	x
Font DIMM (on/off)	x	x		x	x		
Send TrueType as Bitmap	x	x		x	x		
TrueType Fonts (UI option)			x			x	
Print Text as Black	x	x	x	x	x		

Postscript-specific features

Table 7-37 Driver support for postscript-specific features

Operating system	Windows XP	Windows 98, Me	Macintosh
	HP unidriver		Postscript
Driver	PS Emulation Unidriver	PS Emulation Driver	Postscript
Postscript memory	x	x	

Table 7-37 Driver support for postscript-specific features (continued)

Operating system	Windows XP	Windows 98, Me	Macintosh
	HP unidriver		Postscript
Driver	PS Emulation Unidriver	PS Emulation Driver	Postscript
Output protocol	x	x	
Send CTRL-D before each job	x	x	
Send CTRL-D after each job	x	x	
Convert gray text to postscript gray	x		
Convert gray graphics to postscript gray	x		
Add euro currency symbol	x		
Job timeout	x	x	
Wait timeout	x	x	
Minimum font size to download as outline	x		
Minimum font size to download as bitmap	x		
Printing Preferences			
Postscript language level	x	x	x
CMYK Inks	x	x	x
Postscript Language Level	x	x	
Send postscript error handler	x	x	
Mirrored output	x	x	x
Output options			
Optimize for speed	x	x	
Optimize for portability	x	x	
Encapsulated postscript (EPS)	x	x	
Archive format	x	x	
Fit to Page	x	x	
TrueType font download option			
Automatic	x	x	
Outline	x	x	
Bitmap	x	x	
Native TrueType	x	x	

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