

HP LaserJet M4345 MFP

Software Technical Reference



HP LaserJet M4345 MFP

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 LaserJet M4345 MFP printing-system software.

This STR is prepared in an electronic format to serve as a quick-reference tool for Customer Care Center (CCC) agents, support engineers, system administrators, management information systems (MIS) personnel, and HP LaserJet M4345 MFP end users, as appropriate.

The following information is included in this STR:

- 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 LaserJet M4345 MFP, including engineering details

The following table describes the structure of this STR.

Table 1-1 Software technical reference overview

Chapter	Content
Chapter 1, Purpose and scope	<p>This chapter contains basic information about the HP LaserJet M4345 MFP and its software:</p> <ul style="list-style-type: none"> • Overview of the HP LaserJet M4345 MFP • Printing-system software overview, including the following topics: <ul style="list-style-type: none"> • System requirements • Operating-system support • Availability • HP LaserJet M4345 MFP software documentation
Chapter 2, Software description	<p>This chapter provides an overview of the printing-system software installer and print drivers.</p> <p>This chapter also contains general information about other software features, including the following topics:</p> <ul style="list-style-type: none"> • Driver configuration for Microsoft® (MS) Windows® • HP Driver Diagnostic Printer Check Tool • HP Easy Printer Care

Table 1-1 Software technical reference overview (continued)

Chapter	Content
	<ul style="list-style-type: none"> • HP Embedded Web Server • HP Web Jetadmin
Chapter 3, Install MS Windows printing-system components	<p>This chapter provides instructions for installing the HP LaserJet M4345 MFP in MS Windows operating systems by using various installation methods. These methods and additional topics include the following:</p> <ul style="list-style-type: none"> • Font support • Print-driver installation instructions: <ul style="list-style-type: none"> • Installing from printing-system CD • Installing from a network or from downloaded files • Modifying a pre-existing installation • Installing through a USB port • Installing using the Add Printer Wizard • Installing using the Installer Customization Wizard • Setting a default printer • HP Send Fax driver installation instructions
Chapter 4, HP Send Fax driver	This chapter provides detailed descriptions of the HP Send Fax driver.
Chapter 5, HP PCL 6, PCL 5, and PS emulation drivers for MS Windows	This chapter provides detailed descriptions of the HP PCL 6, PCL 5, and PS emulation drivers for Windows 2000, Windows XP, and Windows Server 2003.
Chapter 6, Macintosh	This chapter provides instructions for installing and uninstalling the HP LaserJet M4345 MFP in Macintosh operating systems and for using Macintosh features.
Chapter 7, Engineering details	<p>This chapter contains information about the following special topics:</p> <ul style="list-style-type: none"> • Remote Firmware Updates • Printing print-ready documents • Media attributes • Create an output file

For information about the location of information within chapters, see the table of contents. An index is provided in this STR.

Additional detailed information about the HP LaserJet M4345 MFP printing-system software is published in an addendum to this STR. The following information is available only in the addendum:

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

Topics:

- [Device features](#)

- [Printing-system software](#)
- [HP LaserJet M4345 MFP documentation](#)

Device features

The following table contains descriptions of features that are available for the HP LaserJet M4345 MFP. Device configurations might vary among countries/regions.

Table 1-2 HP LaserJet M4345 MFP features

Models	HP LaserJet M4345 MFP
	<ul style="list-style-type: none"> Base model: HP LaserJet M4345 MFP (part number CB425A) HP LaserJet M4345x MFP (part number CB426A) HP LaserJet M4345xm MFP (part number CB427A) HP LaserJet M4345xs MFP (part number CB428A)
Memory	<ul style="list-style-type: none"> Standard 256 megabytes (MB) RAM of memory; expandable to a maximum of 512 MB RAM One open enhanced input/output (EIO) slot Internal 40 GB hard-disk drive
User interface	<ul style="list-style-type: none"> Graphical mono touchscreen control panel Embedded Web server to gain access to support, order supplies on network-connected devices, and use the virtual machine capability HP smart print supplies system
Supported printer personalities	<ul style="list-style-type: none"> HP PCL 6 HP PCL 5 PostScript® (PS) 3 emulation Portable-document format (PDF)
Job-storage features	<ul style="list-style-type: none"> Job-storage features: <ul style="list-style-type: none"> Off Proof and hold Private jobs Quick Copy Stored Job Personal-identification number (PIN) printing
Environmental features	<ul style="list-style-type: none"> Sleep-mode setting High content of recyclable components and materials Energy Star® compliant Restrictions of Hazardous Substances (RoHS) Directive compliant Blue Angel

Table 1-2 HP LaserJet M4345 MFP features (continued)

	<ul style="list-style-type: none"> • WEE • 508 Compliance
Accessories	<ul style="list-style-type: none"> • Replacement Toner Cartridge (part number Q5945A) • ADF replacement mylar sheets (3-pack) (part number Q6496A) • HP MFP Analog Fax Accessory 300 (part number Q3701A) • Duplex accessory (part number Q5969A) • 75-sheet envelope feeder (Q2438A) • ADF maintenance kit (part number Q5997A) • 110v Engine Maintenance Kit (part number Q5998A) • 220v Engine Maintenance Kit (part number Q5999A) • HP 500-sheet input feeder (part number Q5968A) • HP 3-Bin Mailbox (3-bin 1x500 and 2x100 sheet MBM; part number Q5692A) • HP Staple Cartridge Refill (part number C8081A)
Connectivity	<ul style="list-style-type: none"> • HP Jetdirect inside (JDI)—Fast Ethernet 10/100Base-T • One open enhanced input/output (EIO) card slot for optional connectivity • Device and host universal serial bus (USB) 2.0 connections • FIH connector

Printing-system software

Topics:

- [System requirements](#)
- [Operating-system support](#)
- [Availability](#)

System requirements

The following operating systems support the HP LaserJet M4345 MFP printing-system software:

- [Windows](#)
- [Linux](#)
- [UNIX](#)

Windows

System requirements for 32-bit operating systems

- Pentium® or compatible processor
- Windows 2000: 333-MHz processor with 64 MB RAM
- Windows XP: 333-MHz processor with 128 MB RAM
- Windows Server 2003: 550-MHz processor with 128 MB RAM (Standard Edition) and 220 MB of available hard-disk space
- Minimum 16-color/grayscale display with 640 x 480 pixel resolution (video graphics array [VGA])
- USB port (USB 1.1 or 2.0), or network connection
- CD-ROM drive or Internet connection

System requirements for 64-bit operating systems

- Pentium or compatible processor
- 256 MB RAM or higher
- 1.5 GB of available hard-drive space
- CD-ROM or DVD drive
- Super VGA (800 x 600) or higher-resolution video adapter and monitor

Linux

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

- www.hp.com/go/linuxprinting

UNIX

For information about UNIX® support for the MFP, see the following Web sites:

- www.hp.com/go/jetdirectunix_software
- www.hp.com/go/unixmodelscripts

Operating-system support

MS Windows operating systems provide full-featured support for the HP LaserJet M4345 MFP. Operating systems that are not described in this document provide varying levels of functionality.

Throughout this document, MS 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 devices that have network capabilities.

The HP LaserJet M4345 MFP software has *not* been tested with and is *not* supported in the following operating systems:

- MS Windows 3.1x
- MS Windows 95
- MS Windows 98
- MS Windows Millennium Edition (Me)
- MS Windows NT® 4.0
- IA-64-bit operating systems

These MS Windows operating systems do *not* support the HP LaserJet M4345 MFP. Print drivers for the MFP are not included on the printing-system software CD and are not available on the Web. Other drivers might work on the MFP, but some print-driver features and functions might not be available.

For more information about the HP LaserJet M4345 MFP, go to the following Web site:

HP LaserJet M4345 MFP:

- www.hp.com/support/ljm4345mfp

Topics:

- [Standalone drivers](#)
- [Print driver support in other operating systems](#)

Standalone drivers

The following operating systems support the HP LaserJet M4345 MFP printing-system software, including the HP PCL 6, PCL 5, PS emulation drivers, and the HP Send Fax driver:

- 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 LaserJet M4345 MFP is also supported in the following operating environments:

- Mac OS X (V10.2.8 or later). See the [Macintosh](#) chapter of this STR for more information.
- MS Windows Terminal Server
- Citrix Terminal Server. For more information, go to the following Web site:

h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp

Alternatively, go to the HP.com Web site and search for “c00213455”.

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

Availability

Download the printing-system software from the Web, or order it on a CD from HP fulfillment centers.



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

The following table lists the availability of HP LaserJet M4345 MFP software components by operating system.

Table 1-3 Software component availability for the HP LaserJet M4345 MFP

Component	Windows 2000, Windows Server 2003, and Windows XP (32-bit)	Windows XP and Windows Server 2003 (64-bit)
Drivers		
HP PCL 6 and PCL 5 drivers	x	x
PS Emulation driver	x	x
HP Send Fax driver	x	x
HP PCL 5 Universal print driver	x	x

Table 1-3 Software component availability for the HP LaserJet M4345 MFP (continued)

Component	Windows 2000, Windows Server 2003, and Windows XP (32-bit)	Windows XP and Windows Server 2003 (64-bit)
HP PS Emulation Universal driver	x	x
Installer		
Common MS Windows Installer	x	x
Installer Customization Wizard	x	x
CD Browser	x	x
Add Printer Wizard install	x	x
Other software		
Web Registration	x	x
HP Driver Preconfiguration	x	x
Easy Printer Care Software	x	x
Enterprise Autoconfiguration	x	

Topics:

- [Printing-system software on the Web](#)
- [In-box printing-system software CDs](#)

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 HP Web site offers an option for automatic e-mail notification about new software releases.

The HP LaserJet M4345 MFP printing-system software is available for download at the following Web site:

www.hp.com/support/ljm4345mfp

In-box printing-system software CDs

The software CD for the HP LaserJet M4345 MFP contains a variety of files for installing the printing-system software on the computer.

The HP LaserJet M4345 MFP printing-system software CD is divided into two partitions, one for each of the following operating systems:

- MS Windows
- Macintosh

Each partition includes the necessary software and files that are required to install and uninstall the printing-system components.

Topics:

- [Windows partition](#)
- [CD versions](#)

Windows partition

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

- Autorun
- Drivers
- Fonts
- HP Easy Printer Care
- HP TCP Port Monitor
- Inst Eng
- Manuals
- Opt_SW
- Web Registration

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

- Drivers
- Manuals



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

To view the files, insert the HP LaserJet M4345 MFP printing-system software CD, right-click **Start**, click **Explore**, and then select the CD-ROM drive.

CD versions

The HP LaserJet M4345 MFP printing-system software CD is available in two versions, each of which contains printing-system software in various languages:

- **CD ROW – Americas and Europe (part number CB425-60135):**
 - AR = Arabic
 - CA = Catalan (Català)
 - HR = Croatian
 - CS = Czech (Cesky)
 - DA = Danish (Dansk)
 - NL = Dutch (Nederland)
 - EN = English
 - FI = Finnish (Suomi)

- FR = French (Français)
- DE = German (Deutsch)
- EL = Greek
- HE = Hebrew
- HU = Hungarian (Magyar)
- IT = Italian (Italiano)
- NO = Norwegian (Norsk)
- PL = Polish (Polski)
- PT = Brazilian Portuguese (Português)
- RO = Romanian
- RU = Russian (Russ)
- SK = Slovak
- SL = Slovenian
- ES = Spanish (Español)
- SV = Swedish (Svenska)
- TR = Turkish (Türkçe)
- **CD AS – Asian (part number CB425-60136):**
 - AR = Arabic
 - ZHCN = Simplified Chinese
 - ZHTW = Traditional Chinese
 - EN = English
 - ID = Indonesia (Bahasa)
 - JA = Japanese
 - KO = Korean
 - TH = Thai

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.

Table 1-4 CD ROW – Americas and Europe—CB425-60135 (1 of 5)

Component	AR	CA	HR	CS	DA
HP Send Fax driver	x	x		x	x
HP PCL 6 driver: 32-bit, 64-bit	x	x		x	x
HP PCL 5 driver: 32-bit, 64-bit	x	x		x	x

Table 1-4 CD ROW – Americas and Europe—CB425-60135 (1 of 5) (continued)

Component	AR	CA	HR	CS	DA
PS Emulation driver: 32-bit, 64-bit	x	x		x	x
HP PCL 5 Universal print driver	x	x		x	x
HP PS Emulation Universal driver	x	x		x	x
Common MS Windows Installer	x	x		x	x
Add Printer Wizard Installer	x	x		x	x
Installer Customization Wizard	x	x		x	x
CD Browser	x	x		x	x
Fonts	x	x		x	x
HP Web Registration	x	x		x	x
HP LaserJet M4345 MFP User Guide (.PDF file)	x	x	x	x	x
HP LaserJet M4345 MFP User Guide (.CHM file)	x	x	x	x	x
HP Jetdirect Administrator's Guide	x	x		x	x
HP LaserJet M4345 MFP Printing-System Install Notes	x	x		x	x
HP Embedded Web Server User Guide	x	x		x	x
HP LaserJet MFP Analog Fax Accessory 300 Fax Guide	x	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide	x	x	x	x	x

Table 1-5 CD ROW – Americas and Europe—CB425-60135 (2 of 5)

Component	NL	EN	FI	FR	DE
HP Send Fax driver	x	x	x	x	x
HP PCL 6 driver: 32-bit, 64-bit	x	x	x	x	x
HP PCL 5 driver: 32-bit, 64-bit	x	x	x	x	x
PS Emulation driver: 32-bit, 64-bit	x	x	x	x	x
HP PCL 5 Universal print driver	x	x	x	x	x
HP PS Emulation Universal driver	x	x	x	x	x

Table 1-5 CD ROW – Americas and Europe—CB425-60135 (2 of 5) (continued)

Component	NL	EN	FI	FR	DE
Common MS Windows Installer	x	x	x	x	x
Add Printer Wizard Installer	x	x	x	x	x
Installer Customization Wizard	x	x	x	x	x
CD Browser	x	x	x	x	x
Fonts	x	x	x	x	x
HP Web Registration	x	x	x	x	x
HP LaserJet M4345 MFP User Guide (.PDF file)	x	x	x	x	x
HP LaserJet M4345 MFP User Guide (.CHM file)	x	x	x	x	x
HP Jetdirect Administrator's Guide	x	x	x	x	x
HP LaserJet M4345 MFP Printing-System Install Notes	x	x	x	x	x
HP Embedded Web Server User Guide	x	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Fax Guide	x	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide	x	x	x	x	x

Table 1-6 CD ROW – Americas and Europe—CB425-60135 (3 of 5)

Component	EL	HE	HU	IT	NO
HP Send Fax driver	x	x	x	x	x
HP PCL 6 driver: 32-bit, 64-bit	x	x	x	x	x
HP PCL 5 driver: 32-bit, 64-bit	x	x	x	x	x
PS Emulation driver: 32-bit, 64-bit	x	x	x	x	x
HP PCL 5 Universal print driver	x	x	x	x	x
HP PS Emulation Universal driver	x	x	x	x	x
Common MS Windows Installer	x	x	x	x	x
Add Printer Wizard Installer	x	x	x	x	x
Installer Customization Wizard	x	x	x	x	x

Table 1-6 CD ROW – Americas and Europe—CB425-60135 (3 of 5) (continued)

Component	EL	HE	HU	IT	NO
CD Browser	x	x	x	x	x
Fonts	x	x	x	x	x
HP Web Registration	x	x	x	x	x
HP LaserJet M4345 MFP User Guide (.PDF file)	x	x	x	x	x
HP LaserJet M4345 MFP User Guide (.CHM file)	x	x	x	x	x
HP Jetdirect Administrator's Guide	x	x	x	x	x
HP LaserJet M4345 MFP Printing-System Install Notes	x	x	x	x	x
HP Embedded Web Server User Guide	x	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Fax Guide	x	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide	x	x	x	x	x

Table 1-7 CD ROW – Americas and Europe—CB425-60135 (4 of 5)

Component	PL	PT	RO	RU
HP Send Fax driver	x	x		x
HP PCL 6 driver: 32-bit, 64-bit	x	x		x
HP PCL 5 driver: 32-bit, 64-bit	x	x		x
PS Emulation driver: 32-bit, 64-bit	x	x		x
HP PCL 5 Universal print driver	x	x		x
HP PS Emulation Universal driver	x	x		x
Common MS Windows Installer	x	x		x
Add Printer Wizard Installer	x	x		x
Installer Customization Wizard	x	x		x
CD Browser	x	x		x
Fonts	x	x		x
HP Web Registration	x	x		x
HP LaserJet M4345 MFP User Guide (.PDF file)	x	x	x	x
HP LaserJet M4345 MFP User Guide (.CHM file)	x	x	x	x
HP Jetdirect Administrator's Guide	x	x		x

Table 1-7 CD ROW – Americas and Europe—CB425-60135 (4 of 5) (continued)

Component	PL	PT	RO	RU
HP LaserJet M4345 MFP Printing-System Install Notes	x	x		x
HP Embedded Web Server User Guide	x	x		x
HP LaserJet MFP Analog Fax Accessory 300 Fax Guide	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide	x	x	x	x

Table 1-8 CD ROW – Americas and Europe—CB425-60135 (5 of 5)

Component	SK	SL	ES	SV	TR
HP Send Fax driver	x		x	x	x
HP PCL 6 driver: 32-bit, 64-bit	x		x	x	x
HP PCL 5 driver: 32-bit, 64-bit	x		x	x	x
PS Emulation driver: 32-bit, 64-bit	x		x	x	x
HP PCL 5 Universal print driver	x		x	x	x
HP PS Emulation Universal driver	x		x	x	x
Common MS Windows Installer	x		x	x	x
Add Printer Wizard Installer	x		x	x	x
Installer Customization Wizard	x		x	x	x
CD Browser	x		x	x	x
Fonts	x		x	x	x
HP Web Registration	x		x	x	x
HP LaserJet M4345 MFP User Guide (.PDF file)	x	x	x	x	x
HP LaserJet M4345 MFP User Guide (.CHM file)	x	x	x	x	x
HP Jetdirect Administrator's Guide	x		x	x	x
HP LaserJet M4345 MFP Printing-System Install Notes	x		x	x	x
HP Embedded Web Server User Guide	x		x	x	x

Table 1-8 CD ROW – Americas and Europe—CB425-60135 (5 of 5) (continued)

Component	SK	SL	ES	SV	TR
HP LaserJet MFP Analog Fax Accessory 300 Fax Guide	x	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide	x	x	x	x	x

Table 1-9 CD AS – Asian—CB425-60136 (1 of 2)

Component	AR	ZHCN	ZHTW	EN
HP Send Fax driver	x	x	x	x
HP PCL 6 driver: 32-bit, 64-bit	x	x	x	x
HP PCL 5 driver: 32-bit, 64-bit	x	x	x	x
PS Emulation driver: 32-bit, 64-bit	x	x	x	x
HP PCL 5 Universal print driver	x	x	x	x
HP PS Emulation Universal driver	x	x	x	x
Common MS Windows Installer	x	x	x	x
Add Printer Wizard Installer	x	x	x	x
Installer Customization Wizard	x	x	x	x
CD Browser	x	x	x	x
Fonts	x	x	x	x
HP Web Registration	x	x	x	x
HP LaserJet M4345 MFP User Guide (.PDF file)	x	x	x	x
HP LaserJet M4345 MFP User Guide (.CHM file)	x	x	x	x
HP Jetdirect Administrator's Guide	x	x	x	x
HP LaserJet M4345 MFP Printing-System Install Notes	x	x	x	x
HP Embedded Web Server User Guide	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Fax Guide	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide	x	x	x	x

Table 1-10 CD AS – Asian—CB425-60136 (2 of 2)

Component	ID	JA	KO	TH
HP Send Fax driver		x	x	x
HP PCL 6 driver		x	x	x
HP PCL 5 driver		x	x	x

Table 1-10 CD AS – Asian—CB425-60136 (2 of 2) (continued)

Component	ID	JA	KO	TH
PS Emulation driver		x	x	x
HP PCL 5 Universal print driver		x	x	x
HP PS Emulation Universal driver		x	x	x
Common MS Windows Installer		x	x	x
Add Printer Wizard Installer		x	x	x
Installer Customization Wizard		x	x	x
CD Browser		x	x	x
Fonts		x	x	x
HP Web Registration		x	x	x
HP LaserJet M4345 MFP User Guide (.PDF file)	x	x	x	x
HP LaserJet M4345 MFP User Guide (.CHM file)	x	x	x	x
HP Jetdirect Administrator's Guide		x	x	x
HP LaserJet M4345 MFP Printing-System Install Notes		x	x	x
HP Embedded Web Server User Guide		x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Fax Guide	x	x	x	x
HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide	x	x	x	x

HP LaserJet M4345 MFP documentation

On the main screen of the printing-system software CD Browser, click **Printer Documentation** to open the HP LaserJet M4345 MFP documentation screen, as shown in the following figure.

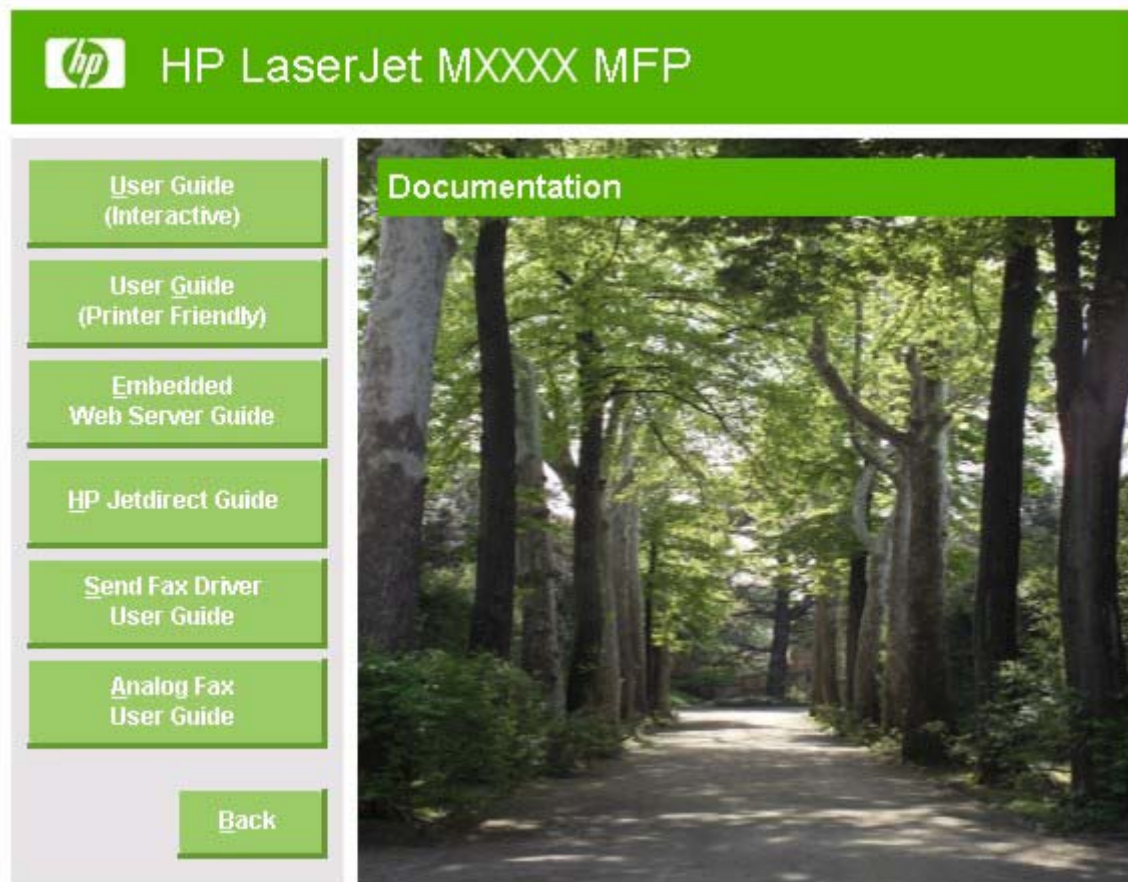


Figure 1-1 Installation software CD documentation screen

The following table lists the HP LaserJet M4345 MFP documents that are available for each operating system.

Table 1-11 Documentation availability

Document	Windows 2000/XP/ Server 2003	Macintosh
<i>HP LaserJet M4345 MFP User Guide (.CHM and .PDF)</i>	x	x
<i>HP LaserJet M4345 MFP Printing-System Install Notes</i>	x	
<i>HP Embedded Web Server User Guide</i>	x	x
<i>HP Jetdirect Administrator's Guide (.CHM and .PDF)</i>	x	x
<i>HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide</i>	x	x
<i>HP LaserJet MFP Analog Fax Accessory 300 Fax Guide</i>	x	x

Access to the HP LaserJet M4345 MFP documents depends on the type of document and its location:

- Some documents can be opened from the CD Browser.
- Some documents appear on the software CD and can be opened by navigating to the folder where they reside.
- Some documents 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 LaserJet M4345 MFP printing-system software CD includes Adobe® Acrobat® Reader for viewing online documentation.
- **Compiled HTML (.CHM).** When you click a documentation link to a .CHM document, a Microsoft HTML Viewer opens the file on the computer screen.
- **Hypertext markup (.HTM).** When you click a documentation link to an .HTM document, a Web browser opens the file on the computer screen.

The following documents are available:

- [HP LaserJet M4345 MFP User Guide](#)
- [HP LaserJet M4345 MFP Printing-System Install Notes](#)
- [HP Embedded Web Server User Guide](#)
- [HP Jetdirect Administrator's Guide](#)
- [HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide](#)
- [HP LaserJet MFP Analog Fax Accessory 300 Fax Guide](#)
- [HP LaserJet MFP Send Fax Driver Installation Notes](#)
- [HP LaserJet MFP Send Fax Driver Readme](#)
- [HP Driver Preconfiguration Support Guide](#)
- [Installer Customization Wizard Readme](#)

HP LaserJet M4345 MFP User Guide

The *HP LaserJet M4345 MFP User Guide* describes the basic device features.

View this guide from the software CD by following these steps:

1. In the main screen of the CD browser, click **Documentation**.
2. Click **User Guide (Interactive)**.

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

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:

LJM4345MFP_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 LJM4345MFP_USE_FRWW.CHM.

The *HP LaserJet M4345 MFP User Guide* is also provided as a printable .PDF file. To print the guide, follow these steps:

1. In the CD Browser, click **Documentation**.
2. Click **User Guide (Printer Friendly)**. The guide opens.
3. Print the guide.

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:

LJM4345MFP_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 LJM4345MFP_USE_FRWW.PDF.

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

HP LaserJet M4345 MFP Printing-System Install Notes

The *HP LaserJet M4345 MFP Printing-System Install Notes* (in .HTM format) contains important information about device features, instructions for installing the printing-system software, and technical assistance.

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:

LJM4345_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 LJM4345_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 LaserJet M4345 MFP.

View this guide from the software CD by following these steps:

1. In the main screen of the CD browser, click **Documentation**.
2. Click **Embedded Web Server Guide**.

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:

LJMM4345MFP_EWS_XXWW.PDF



NOTE The "XX" in the file name corresponds to the language. In French, the file name is LJMM4345MFP_EWS_FRWW.PDF.

When the file is open, 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 .CHM and .PDF format) that contains information about connecting the device directly to a network.

View this guide from the software CD by following these steps:

1. In the main screen of the CD browser, click **Documentation**.
2. Click **HP Jetdirect Guide**.

The guide opens in .PDF format.

Gain access to the .PDF 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 the file is open, click **File** and then click **Save As** to save a copy of the file to another location.

The guide can also be accessed as an MS Windows Help file (.CHM file). This readable, onscreen version of the guide is provided in accordance with the Americans with Disabilities Act (ADA).

Gain access to the .CHM 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.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 HPJDIAG__FRWW.CHM.

HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide

The *HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide* describes the basic device features.

View this guide from the software CD by following these steps:

1. In the main screen of the CD browser, click **Documentation**.
2. Click **Send Fax Driver User Guide**.

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:

LJM4345MFP_FAX-SEND_XXWW.PDF



NOTE The "XX" in the file name corresponds to the language. In French, the file name is LJM4345MFP_FAX-SEND_FRWW.PDF.

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

HP LaserJet MFP Analog Fax Accessory 300 Fax Guide

The *HP LaserJet MFP Analog Fax Accessory 300 Fax Guide* describes the basic device features.

View this guide from the software CD by following these steps:

1. In the main screen of the CD browser, click **Documentation**.
2. Click **Analog Fax User Guide**.

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:

LJMM4345MFP_FAX_XXWW.PDF



NOTE The "XX" in the file name corresponds to the language. In French, the file name is LJM4345MFP_FAX_FRWW.PDF.

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

HP LaserJet MFP Send Fax Driver Installation Notes

The *HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Installation Notes* contains important information about fax features, instructions for installing the fax software, and technical assistance.

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:

LJM4345MFP_FAX-INSTALL-NOTE_XXWW.PDF



NOTE The "XX" in the file name corresponds to the language. In French, the file name is LJM4345MFP_FAX-INSTALL-NOTE_FRWW.PDF.

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

HP LaserJet MFP Send Fax Driver Readme

The *HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Readme* contains important information about the HP Send Fax driver.

The document is available at the following Web site:

www.hp.com/go/mfpfaxaccessory300

HP Driver Preconfiguration Support Guide

The *HP Driver Preconfiguration Support Guide* contains important information about preconfiguring printing-system drivers before installation in network environments.

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_XXWW.PDF



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

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

Installer Customization Wizard Readme

The *Installer Customization Wizard Readme* contains important information about features and installation using the Installer Customization Wizard.

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:

CUSTOMIZATIONDOC.RTF

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

2 Software description

Introduction

The HP LaserJet M4345 MFP comes with software and installers for MS Windows and Apple Computer, Inc., Macintosh systems. Linux and UNIX systems also support the HP LaserJet M4345 MFP, and software is available on the Web. For information about specific system installers, drivers, and components, see the section that corresponds to that system.

Topics:

- [MS Windows printing-system software](#)
- [MS Windows driver configuration](#)
- [HP Driver Diagnostic Printer Check Tool](#)
- [HP Easy Printer Care](#)
- [HP Embedded Web Server](#)
- [HP Web Jetadmin](#)

MS Windows printing-system software

Topics:

- [Printing system and installer](#)
- [HP LaserJet M4345 MFP drivers](#)

Printing system and installer

Topics:

- [HP LaserJet M4345 MFP printing-system software CD for MS Windows systems](#)
- [Installer features](#)

HP LaserJet M4345 MFP printing-system software CD for MS Windows systems

In the MS Windows environment (Windows 2000, Windows XP, and Windows Server 2003), insert the HP LaserJet M4345 MFP printing-system software CD in the CD-ROM drive to open an interactive CD browser. Use the CD browser to install the drivers and related components, and to gain access to online user documentation, a customization utility, and optional HP software.

The following figure shows the main screen of the HP LaserJet M4345 MFP printing-system software CD.

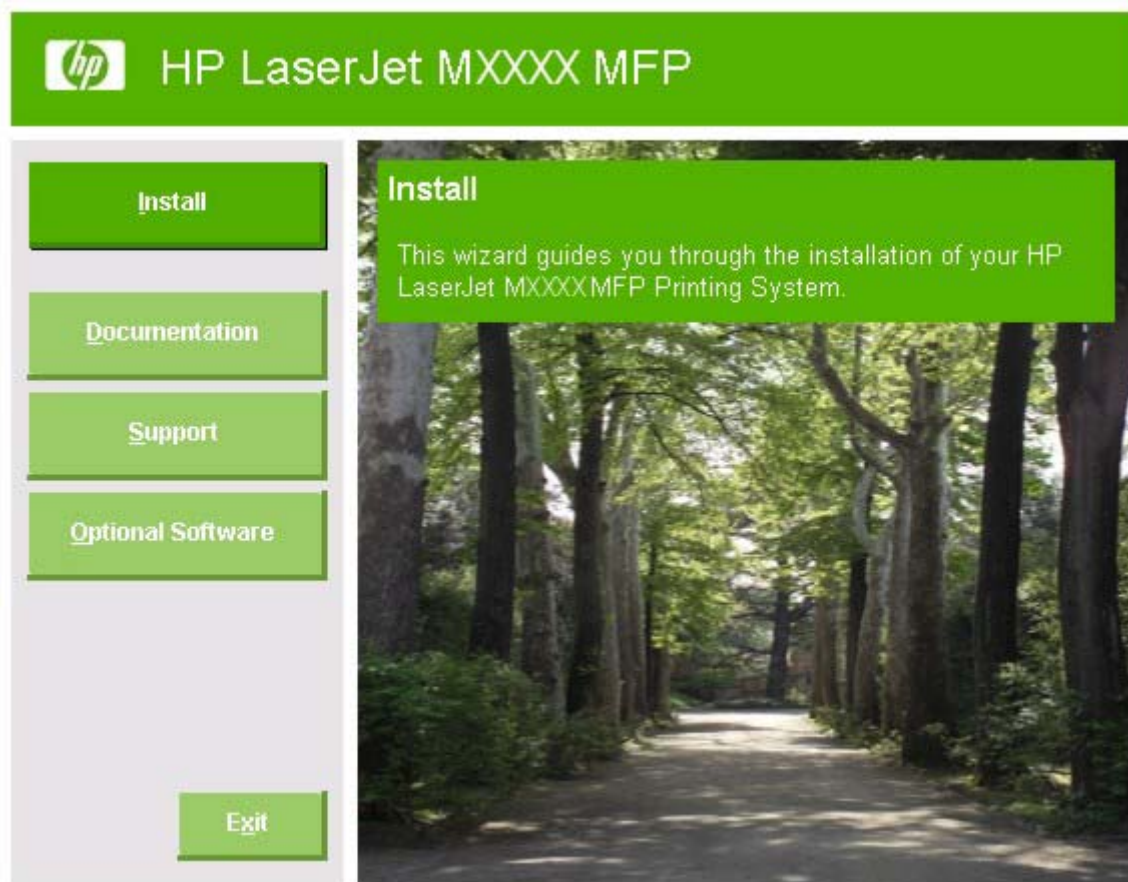


Figure 2-1 Installation software CD browser

If the screen does not appear when you insert the software CD into the CD-ROM drive, 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.

The main screen of the software CD browser contains installation and documentation options in the left panel. Move the cursor over each option to see a description of the option in the right panel.



NOTE The options available for each device might differ from those in the figure.

Install. The installation wizard guides the HP LaserJet M4345 MFP printing-system software installation. Select a Basic Installation or a Custom Installation. If you select Basic Installation, only the necessary software is installed. If you select Custom Installation, select the components that you want to install.

Documentation. Use this option to view the HP LaserJet M4345 MFP user documentation. The following document options are available:

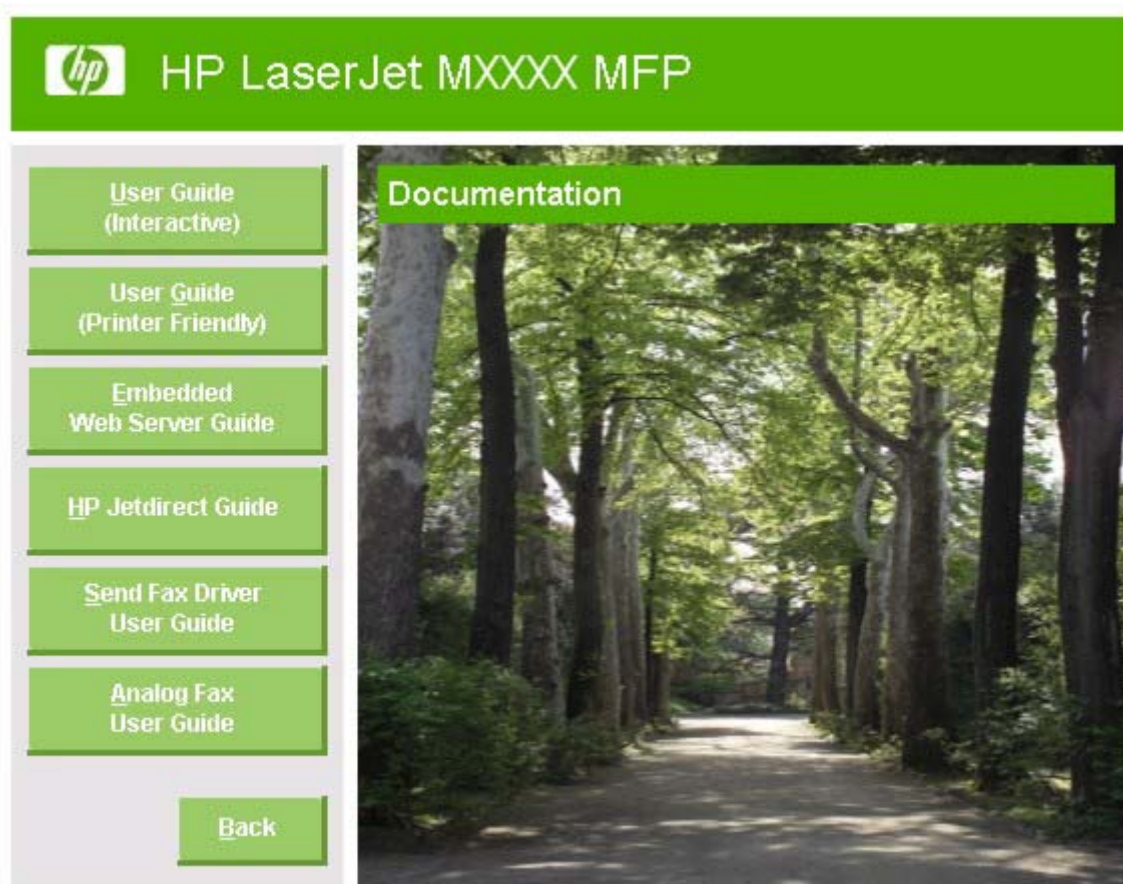


Figure 2-2 Documentation screen

- **User Guide (Interactive)**
- **User Guide (Printer Friendly)**
- **Embedded Web Server Guide**
- **HP Jetdirect Guide**
- **Send Fax Driver User Guide**
- **Analog Fax User Guide**

Click **Back** to return to the main CD browser screen.



NOTE If Adobe Acrobat Reader 4.0 or later is not installed, click any of the links to a portable document format (.PDF) document to open it in a version of Adobe Acrobat Reader that runs from the HP LaserJet M4345 MFP 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 the 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. Click the following links to find support information for the HP LaserJet M4345 MFP on HP Web sites:

- Click **Product Registration** to register the product online.
- Click **Supplies** for information about ordering HP LaserJet M4345 MFP supplies.
- Click **Product Information** to open the HP Instant Support Web page for support information and updates for the HP LaserJet M4345 MFP.
- Click **hp.com** to go to the HP home Web page for information about products and services, support, drivers, and HP online stores.

Optional Software. The following optional software programs are available for the HP LaserJet M4345 MFP:

- **HP PCL 5 Universal print driver.** Use this option to install a print-driver interface from which to find and print to HP PCL 5 devices.
- **HP PS Emulation Universal driver.** User this option to install a print-driver interface from which to find and print to HP PCL 6 devices.
- **Installer Customization Wizard.** Use this wizard to customize the HP LaserJet M4345 MFP installer by presetting the installation options in a response file. The resulting customized installer can then be used for silent, unattended installation.
- **HP Web Jetadmin.** Use this option to download HP Web Jetadmin software from the Web for a Web browser-based network-management tool.
- **HP Easy Printer Care Software.** Use this option to install the HP Easy Printer Care from a downloadable installation file from the Web. This maintenance tool helps track and maintain the devices by providing information about status, alert notifications, usage, and supplies for one or more devices.

Installer features

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

The common installer offers the following features:

- The HP LaserJet M4345 MFP printing-system software CD features an interactive software interface.
- Network connection is integrated so that you can install drivers and connect to a networked device in a single process.
- The selection dialog box sets the operating-system language as the default language. You can use the installer to select any of the languages on the HP LaserJet M4345 MFP printing-system software CD.

The HP LaserJet M4345 MFP printing-system software CD also includes the following features:

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

All of the MS Windows system components are installed by using the HP LaserJet M4345 MFP printing-system installer. The installer automatically detects the language of choice and the operating system. Select from the following types of installation:

- Basic Installation
- Custom Installation

HP LaserJet M4345 MFP drivers

HP LaserJet M4345 MFP drivers provide the printing features and communication between the computer and the device. The printing system includes software for end users and network administrators who are working in the following operating environments:

- Windows 2000, Windows XP (32-bit and 64-bit), and Windows Server 2003 (32-bit and 64-bit)

MS Windows 64-bit drivers for Windows XP and Windows Server 2003 are available for the following systems:

- AMD Athlon 64, AMD Opteron, Intel Xeon, or Pentium 4 with EMT64
- Apple Mac OS X (V10.2.8 or later)



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 LaserJet M4345 MFP Printing-System Install Notes on the printing-system software CD.

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

Topics:

- [Select the best print driver](#)
- [HP print and fax drivers](#)
- [Driver version numbers for MS Windows operating systems](#)

Select the best print driver

HP print drivers are designed for different environments and uses. See the print driver Help for available features.

Topics:

- [Complete LaserJet printing system](#)
- [HP PCL 6 driver](#)
- [HP PCL 5 driver](#)
- [PS Emulation driver](#)
- [HP universal print driver](#)

Complete LaserJet printing system

Use the printing-system software CD to install the full set of drivers and other software for the HP LaserJet M4345 MFP.

HP PCL 6 driver

Overall, the HP PCL 6 driver provides the best performance, print quality, and printer-feature support for most users. The driver aligns with MS Windows graphic device interface (GDI) for best performance in MS Windows environments.

The HP PCL 6 driver may not be fully compatible with third party and custom solutions that are based on PCL 5.

HP PCL 5 driver

The HP PCL 5 driver is recommended for general office monochrome printing in MS Windows environments. The driver is compatible with previous version of PCL and legacy HP LaserJet printers.

The HP PCL 5 driver is the best choice for:

- Any third party or home-grown custom solutions that use forms, fonts, and SAP programs.
- Any environment with mixed operating-systems (such as UNIX, Linux, and mainframe)

PS Emulation driver

The PS Emulation driver is recommended for printing with Adobe or other graphics-rich software programs. The driver is compatible with postscript level-3 and supports postscript font DIMMs.

Use the PS Emulation driver in primarily postscript-specific software programs such as Adobe and Corel.

HP universal print driver

The HP PCL 5 and HP PS emulation universal print drivers are designed for corporate or IT-managed MS Windows environments. These drivers provide a single PCL 5 or PS emulation driver for use with multiple printer models.

The HP universal print drivers are recommended when printing to multiple printer models from a mobile MS Windows computer.

HP print and fax drivers

The following drivers are available on the HP LaserJet M4345 MFP printing-system software CD:

- HP Send Fax driver for Windows 2000, Windows XP, and Windows Server 2003
- HP PCL 6 driver for Windows 2000, Windows XP, and Windows Server 2003
- HP PCL 5 driver for Windows 2000, Windows XP, and Windows Server 2003
- The HP Postscript 3 Emulation driver (PS Emulation driver) for Windows 2000, Windows XP, and Windows Server 2003



NOTE During a Basic Installation or Custom Installation of the printing-system software, the HP PCL 6 driver is installed by default for Windows 2000, Windows XP, and Windows Server 2003.

Table 2-1 Drivers included with the HP LaserJet M4345 MFP

Operating System	HP Send Fax driver	HP PCL 6 driver	HP PCL 5 driver	PS Emulation driver
Windows 2000	x	X	X	X
Windows XP	x	X	X	X
Windows Server 2003	x	X	X	X
Macintosh OS				X

Driver version numbers for MS Windows operating systems

Access to driver version numbers varies, depending on the operating system in which the HP LaserJet M4345 MFP is installed.



NOTE For a list of HP LaserJet M4345 MFP drivers, updated HP printing-system software, and product-support information, go to:

www.hp.com/support/ljm4345mfp

The Windows 2000, Windows XP, and Windows Server 2003 operating systems support the HP PCL 6, PCL 5, and PS emulation drivers, and the HP Send Fax driver. If you are using an HP driver 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 device icon.
5. Click **Properties**.
6. Click the **About** tab.

To determine the latest version, compare the overall build number (in parenthesis after the model name) and the GPD number (in the Driver Files: field). If the overall build number has increased, this is the latest version of the driver.

If the overall build number is the same, check the version number of the GPD file. The driver that has the highest GPD version number is the latest driver.

MS Windows driver configuration

The HP PCL 6, PCL 5, PS emulation drivers and HP Send Fax drivers feature bidirectional communication technology which, in environments that support the drivers, provide automatic discovery and driver configuration for device accessories at the time of installation.

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

Topics:

- [Driver autoconfiguration](#)
- [Bidirectional communication](#)
- [Enterprise AutoConfiguration](#)
- [Update Now](#)
- [HP Driver Preconfiguration](#)

Driver autoconfiguration



NOTE The 64-bit operating systems do not support driver autoconfiguration.

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

- When a print driver is installed by 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 (32-bit) operating systems over a direct connection when the HP LaserJet M4345 MFP 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 device during installation, determines the physical configuration, and then configures the driver accordingly.

Bidirectional communication is the capability of the device 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 device. Bidirectional communication depends on the network operating system and on the type of connection that exists between the computer and the HP LaserJet M4345 MFP. 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 the 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 device. 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 device and automatically match the print driver with the actual device configuration. EAC is activated during installation of the driver or whenever the Update Now feature is used.

If the HP LaserJet M4345 MFP configuration 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.

Update Now

If the HP LaserJet M4345 MFP configuration has been modified 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 device is installed and an optional paper-handling accessory is added later, use the **Update Now** feature to query the device and update the settings to match the new device configuration.

The feature automatically updates the registry and changes the configuration information that appears on the **Device Settings** tab of the HP PCL 6, PCL 5, and PS emulation drivers.



NOTE The **Update Now** feature does not have to be selected for the HP Send Fax driver to update.

Every time the HP Send Fax driver is accessed, the HP Send Fax driver automatically queries the print driver to see if any changes have been made that would affect the HP Send Fax driver configuration. The HP Send Fax driver is automatically updated with any changes.

To activate the **Update Now** feature for these drivers, 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 device name.
5. Click **Printing Preferences**.
6. Click **Device Settings**.
7. If necessary, click **Installable Options** to expand it and show the options.

8. In the **Automatic Configuration** drop-down menu, select **Update Now**.
9. Click **OK** to save the setting.

HP Driver Preconfiguration

HP Driver Preconfiguration is a software architecture and set of tools for customizing and distributing HP printing-system software 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
- Printing-preferences settings

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

The preconfiguration process consists of three basic steps:

- Driver acquisition
- Driver preconfiguration
- 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 device installation workflows or to allow the user to deploy and install the driver. The following tools support driver preconfiguration:

- **HP Driver Configuration Editor.** The HP Driver Configuration Editor is a small standalone MS Windows software program that administrators 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. Use it in environments that have an established process for deploying drivers. It is used in the same way as any ordinary MS Windows software program.

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 to create printer queues on any Windows 2000, Windows XP, or Windows Server 2003. The HP Web Jetadmin Driver Configuration Plugin adds screens to the existing queue-creation workflow from which the drivers that are being installed for the queues can be customized. 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

- **Customization Utility.** The Customization Utility enables an IT administrator to preconfigure the printer drivers as part of customizing the printing system software installation preparing for a silent install.

For detailed information about customizing print drivers within the Customization Utility, download the *HP Preconfiguration Utility User Guide* from the following Web site:

www.hp.com/go/hpdpc_sw

The *HP Driver Preconfiguration Support Guide* is included in the download.

Topics:

- [Lockable features](#)
- [Continuous export](#)

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 LaserJet M4345 MFP supports.
- **Paper Source.** The options are **Printer Auto Select**, **Manual Feed (Tray 1)**, **Tray 1**, **Tray 2**, **Tray 3**, **Tray 4**, or **Tray 5**.

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 locked.

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 the orientation is set to **Landscape** in a driver that was 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 device models.



NOTE Not all of the driver parameters can be exported; however, the exportable components are always the same as the components that can be preconfigured.

HP Driver Diagnostic Printer Check Tool

Use the HP Driver Diagnostic Printer Check Tool, a Web-based diagnostic software program, to determine whether the correct and most current print driver for the HP LaserJet M4345 MFP is in use. Two methods are available to gain access to the HP Driver Diagnostic Printer Check Tool:

1. Open a Web browser.
2. Go to the following Web site:

www.hp.com/go/drivercheck

Alternatively:

1. Open an Internet browser.
2. Go to the HP Business Support Center (BSC) at the following Web site:

www.hp.com/go/bsc

3. Click the **self-help resources** link on the left navigation bar.
4. Click **automatic driver checker** to run the HP Driver Diagnostic Printer Check Tool.

When the HP Driver Diagnostic Printer Check Tool runs, the devices that are currently installed on the computer appear in a list. The tool gathers information about the device, drivers, and system setup in order to diagnose the software driver configuration and check the print driver.

When the HP Driver Diagnostic Printer Check Tool is open, select the HP device that you want to check. The tool verifies whether the latest driver is being used, provides feedback if an incorrect driver is being used, and indicates whether an updated driver version is available. Click the latest driver version to download and install 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 the computer.

HP Easy Printer Care

HP Easy Printer Care software is designed for end users and for those who keep devices up and running in small and large business groups. View the status of up to 15 supported HP LaserJet devices, set up alerts, generate usage reports, and reorder supplies from HP or select resellers.

The HP Easy Printer Care Software is available through a link in the printing-system software CD, or on the Web at the following Web site:

www.hp.com/go/easyprintercare

HP Embedded Web Server

The HP Embedded Web Server (HP EWS) is a standard feature on all HP LaserJet M4345 MFP models that are connected through a network.

The HP EWS provides a simple, easy-to-use solution for one-to-one device 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 devices. The management console must have a supported Web browser.

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

The *HP Embedded Web Server User Guide* is available on the printing-system software CD. Or, for additional information and a copy of the *HP Embedded Web Server User Guide*, go to:

www.hp.com/support/ljm4345mfp

Topics:

- [Access to the HP EWS](#)
- [The HP EWS frame](#)
- [Information tab](#)
- [Links to off-product solutions](#)
- [Device Status screen](#)
- [Configuration Page screen](#)
- [Settings tab](#)
- [Configure Device screen](#)
- [Alerts](#)
- [Security](#)
- [Digital Sending tab](#)
- [Kerberos Authentication](#)
- [HP Digital Sending Software](#)
- [Networking tab](#)

Access to the HP EWS

To open the HP EWS and view information about the HP LaserJet M4345 MFP, open a supported Web browser and type the device transmission control protocol/internet protocol (TCP/IP) address or host name in the address field.

To find the device TCP/IP address, look for **IP Address** on the device configuration page (the Embedded Jetdirect page), which can be printed from the device control-panel display. Follow these steps to print an Embedded Jetdirect page:

1. Touch **Administration**.
2. Touch **Information**.
3. Touch **Configuration/Status Pages**.
4. Touch **Configuration Page**.
5. Touch **Print**.

The HP EWS frame

Each screen in the HP EWS is 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, where a menu includes links to content for that tab. The main-content area shows information and opens options in response to navigation-tab selections and menu-bar selections.



NOTE When the HP EWS screens are opened immediately after the device is turned on, the HP EWS screens may change as you browse. Complete information becomes available when the MFP enters the **Ready** state.

Information tab

The following information is available on the HP EWS **Information** tab. Click the menu items on the left side of the HP EWS **Information** tab to view the information on each screen.



NOTE If an HP EWS password has been set, the **Information** tab is the only available tab until the user logs in. See [Security](#) for more information.

- **Device Status:** Provides current status information about the device.
- **Configuration Page:** Provides information about the device configuration.
- **Supplies Status:** Provides information about the print cartridge.
- **Event log:** Provides information about reported MFP errors.
- **Usage page:** 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:** Shows device information, such as the device TCP/IP address and serial number.
- **Control Panel:** Shows the device control panel.
- **Print:** Includes options to print documents that are print-ready .PCL documents, .PS documents, .PDF files, text (.TXT) files, and files that are generated by a "print to file" driver option.

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

Links to off-product solutions

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

- **hp instant support:** Connects to a set of dynamic Web resources that help solve specific problems and determine additional services that might be available for the device. Specific status and configuration information about the device is retained and directed to the "Solve a Problem" Web site, which offers targeted support content and messages.
- **Shop for Supplies:** Connects to an HP product supplies screen where you can order genuine HP supplies for the device.
- **Product Support:** Connects to an HP product-support screen where you can search for information, contact the HP customer-care home page, or find additional resources for the device.

Device Status screen

Status information, such as whether the device is online or the toner is low, is available through a Web browser on a computer that is linked directly to the device. View this information without going to the device to identify the status.



NOTE For more information, see the *HP Embedded Web Server User Guide*.

The following figure shows how this information is presented on the device Web page.

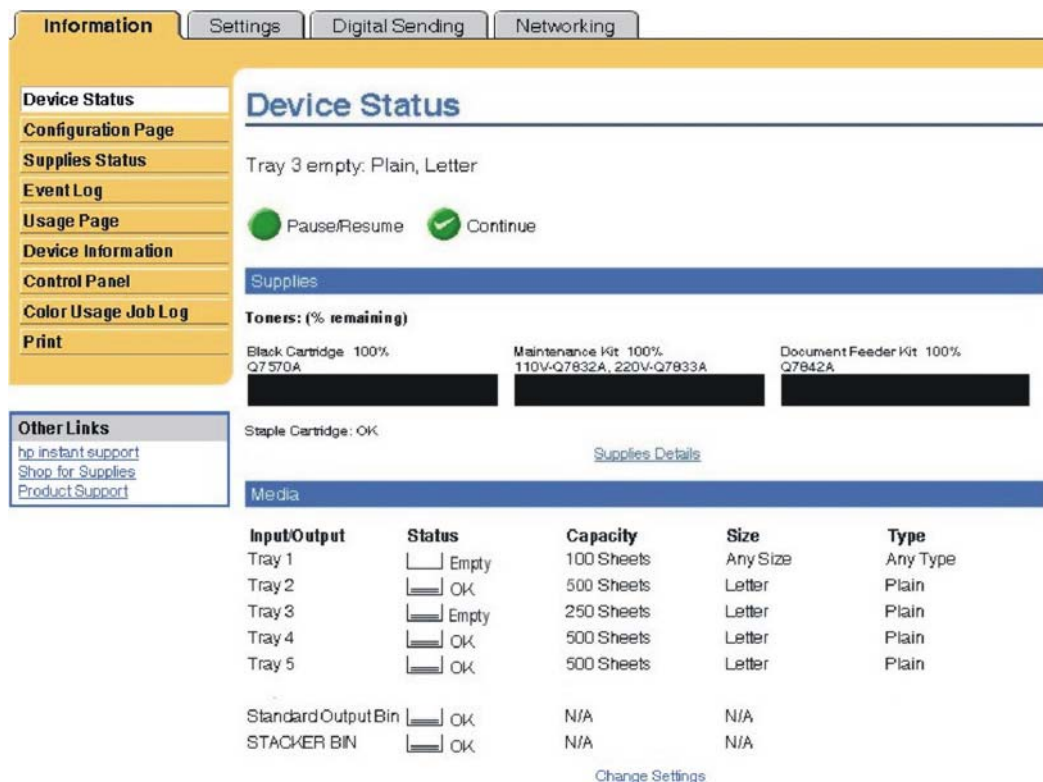


Figure 2-3 HP EWS Information tab – Device Status screen

Configuration Page screen

Gain access to the HP LaserJet M4345 MFP configuration page remotely through the HP EWS. The HP EWS **Configuration Page** screen provides configuration information about the device in the same way as the configuration page that is printed from the device.



NOTE For more information, see the *HP Embedded Web Server User Guide*.

The following figures show an example of a configuration page viewed remotely through the HP EWS.

Information Settings Digital Sending Networking

Device Status
Configuration Page
Supplies Status
Event Log
Usage Page
Device Information
Control Panel
Color Usage Job Log
Print

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

Configuration Page

Device Information

Product Name:	HP LaserJet MXXXXMFP
Device Name:	HP LaserJet MXXXXMFP
Model Number:	CXXXXA
Device Serial Number:	XXXXXXXXXX
Formatter Number:	formatter00
DC Controller:	F
CPB:	2.053 (0.0)
SCB:	XXX 002 3.1
Firmware Datecode:	20060502 47.059.A
Service ID:	00000
PS Wait Time-out:	300 seconds
Engine Cycles:	2
Preventive Maintenance Interval:	200000
Pages Since Last Maintenance:	2
Document Feeder Kit Interval:	60000
Pages Since Last Doc Feeder Maintenance:	0

Installed Personalities and Options

PCL	(20010402)
PCLxL	(20010402)
POSTSCRIPT	(20010402)
PDF	(20050131)
DIMM Slot 1:	Empty
DIMM Slot 2:	Side 1: Unsupported
Card Slot 1:	Empty
Card Slot 2:	Empty
EIO 1:	Empty
EIO 2:	HP Scanner Processor Card
Embedded Jetdirect	HP JetDirect J7974E 63.230.114.145
Internal Fax:	FUJITSU MH: 37 GB
Disk Storage:	38154 MB Capacity
LDAP Gateway	Not Configured
SMTP Gateway	Not Configured
hp MFP Digital Sending Server	Not Configured

Figure 2-4 HP EWS Information tab – Configuration Page screen, 1 of 3

Memory	
Installed DIMM Memory:	0 MB
On Board Memory:	
System:	256 MB
Imaging:	0 MB
Total RAM:	256 MB
DWS:	6.00
Automatic resource saving enabled	
Security	
Control Panel Lock:	None
Control Panel Password:	Disabled
Device Type: Disk	Write Protect: Disabled
File System Access:	
PJL:	Enabled
PML:	Enabled
NFS:	Enabled
PostScript:	Enabled
Secure Disk Erase Mode:	Non-secure fast erase
Direct Ports (USB/IEEE 1284):	Enabled

Figure 2-5 HP EWS Information tab – Configuration Page screen, 2 of 3

Paper Trays and Options	
Default Paper Size:	Letter
Tray 1 Size:	Any Size
Tray 1 Type:	Any Type
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:	Letter
Tray 5 Type:	Plain

Duplex Unit

Internal

Input Trays:

- 1: TRAY 1, 100 Sheets
- 2: TRAY 2, 500 Sheets
- 3: TRAY 3, 250 Sheets
- 4: TRAY 4, 500 Sheets
- 5: TRAY 5, 500 Sheets

Output Bins:

- 1: Standard Output B, 250 Sheets, Face Down

Device 1:

HEWLETT-PACKARD
 HP 500-Sheet Stapler/Stacker [MT01.26] Q7604A

Output Bins:

- 1: STACKER BIN, 500 Sheets, Face Down, Stapler

Figure 2-6 HP EWS Information tab — Configuration Page screen, 3 of 3

Settings tab

The following information is available on the HP EWS **Settings** tab. Click the menu items on the left side of the HP EWS **Settings** tab to view the information. The **Settings** tab is shown in the [Configure Device screen](#) section.

- **Configure Device.** Use the **Configure Device** screen to print device information pages and configure the device remotely.
- **E-mail Server.** Use the **E-mail Server** screen to configure e-mail settings for outgoing e-mail.
- **Alerts.** IT administrators can use the **Alerts** screen to configure the device to send alerts in e-mail messages to anyone.
- **AutoSend.** Use the **AutoSend** screen to send device-configuration and supplies-usage information periodically to your service provider.
- **Security.** Use the **Security** screen to manage security for the device.
- **Authentication Manager.** Use the **Authentication Manager** screen to set the device function that requires the users to log in before use.
- **LDAP Authentication.** Use the **LDAP Authentication** screen to configure a Lightweight Directory Access Protocol (LDAP) server to authenticate device users.

- **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 device, assign an asset number, and configure the company name, the person to contact about the device, and the physical location of the device.
- **Language.** Use the **Language** screen to select the language in which the HP EWS screens appear.
- **Date & Time.** Use the **Date & Time** screen to set the correct date and time for the device.
- **Wake Time.** IT administrators can use the **Wake Time** screen to schedule the device to turn on at a certain time on a daily basis.

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

Configure Device screen

You can obtain device 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 management information systems (MIS) managers the level of control that they require within their network environments.



NOTE For more information, see the *HP Embedded Web Server User Guide*.

The following figure shows an example of device options that can be configured remotely.

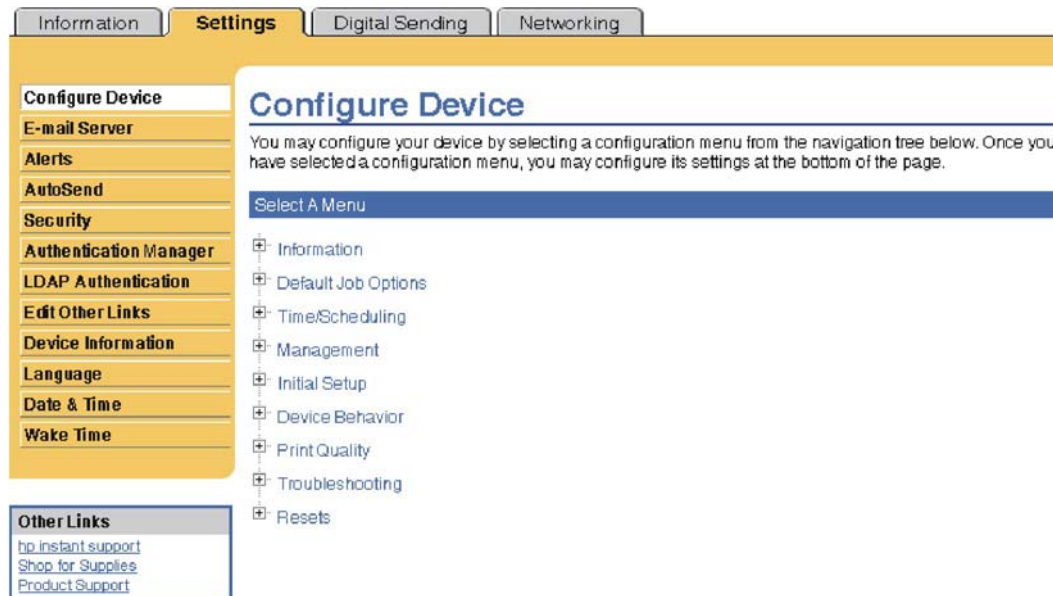


Figure 2-7 HP EWS **Settings** tab – **Configure Device** screen



NOTE The Paper Handling settings are no longer accessed from the Configure Device menus. To configure Tray Size and Type, select **Supplies** on the MFP control panel.

Alerts

The device can automatically send e-mail alerts about printing problems or job status to specified e-mail addresses. For example, if toner is low, the device can notify the person who is responsible for ordering or changing the print cartridge. If a device failure occurs, the device 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.



NOTE For more information, see the *HP Embedded Web Server User Guide*.

The following figures show examples of the **Alerts** settings that can be configured remotely.

Alerts - setup

Step 1: Type the list name

Type a name for your destination list.

ListName:

Step 2: Type the alert destinations

Type a maximum of 20 alert destinations in any of the following forms:

- An e-mail address (e.g., your-name@your-company.com)
- A mobile device (e.g., 208-555-5555@mobile-company.net)
- A posting to a website (e.g., <http://www.your-server.com>)

Separate alert destinations using a semi-colon (;) or a comma (,).

Alert Destinations:

Step 3: Select Alerts

Select the alerts that you would like the alert destinations to receive. The most common alerts are listed here.

AlertName	Selected	Threshold
Order Cartridge	<input type="checkbox"/>	10 (0-100) percent
Order Staple Cartridge	<input type="checkbox"/>	
Replace Cartridge	<input type="checkbox"/>	
Replace Staple Cartridge	<input type="checkbox"/>	
Non-HP Supply Installed	<input type="checkbox"/>	
Remove Paper Jam	<input type="checkbox"/>	2 minutes elapsed
Close Drawers, Doors And Covers	<input type="checkbox"/>	2 minutes elapsed
Tray Open	<input type="checkbox"/>	2 minutes elapsed
Tray Empty (Load)	<input type="checkbox"/>	2 minutes elapsed

Figure 2-8 HP EWS **Settings** tab – **Alerts** screen, 1 of 2

Tray Empty (Load)	<input type="checkbox"/>	2 minutes elapsed
ADF Paper Jam	<input type="checkbox"/>	2 minutes elapsed

* Changes to threshold values apply to all destinations for this device.

Additional Alerts

To view all of the alerts for this product, click the **Show All Alerts** button.

Note: Clicking this button saves your current changes and opens the page that lists all of the alerts options.

Show All Alerts

Step 4: Select Control Panel Messages to Suppress

Select the message(s) below that you do not want to show on the device control panel. The option is available only if the corresponding e-mail alert has been selected in the previous step.

☐ Order and Replace Cartridge

Step 5: Select e-mail attachments (optional)

Select the attachments that you want to include with each e-mail alert message in this destination list. Go to the **Information** tab to see examples of these pages.

☐ Supplies Status Page

☐ Usage Page

☐ Configuration Page

☐ Event Log Page

Select this option if one of the alert destinations you have chosen to receive alerts is an automated computer system.

☐ XML Data

OK Cancel

Figure 2-9 HP EWS **Settings** tab – **Alerts** screen, 2 of 2

Security

The HP EWS screens that appear, and the settings on them, vary according to the specific HP EWS. Three modes of user access are possible:

- General user
- IT administrator
- Service provider

To control access to the HP EWS screens, set a password on the **Security** page.

Figure 2-10 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 available.

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



NOTE For more information, see the *HP Embedded Web Server User Guide*.

Digital Sending tab

Use the screens available on the HP EWS **Digital Sending** tab to control the digital-sending features of the device.

An example of the HP EWS **Digital Sending** tab is shown in the following figure.

Figure 2-11 HP Digital Sending tab — General Settings screen

For more information, see the *HP Embedded Web Server User Guide*.

Kerberos Authentication

Kerberos is a network authentication protocol designed to provide secure authentication for client/server programs by using the secret keys that are delivered with session tickets.

For more information about Kerberos or for information about configuring Kerberos for your device, see the *HP Embedded Web Server User Guide*.

HP Digital Sending Software

The HP Digital Sending Software (HP DSS) is a software program that, in conjunction with firmware, enables HP MFPs to send scanned documents directly to electronic mailboxes (e-mail) or to fax destinations, transforming paper-based information into digital images that can be shared, stored, or edited.

Documents are initially scanned at the MFP, and then are transmitted to a network-connected computer where the HP DSS is installed. This prevents users from having to create an electronic copy of a hard-copy document. The HP DSS can also be configured to require user authentication, ensuring that only authorized persons use the digital-sending feature of the MFP.

For more information about HP DSS, see the *HP Digital Sending Software Technical Reference*.

Networking tab

The HP EWS **Networking** tab provides access to HP Jetdirect network configuration parameters and status for the device.

An example of the HP EWS **Networking** tab is shown in the following figure.

NPID09EAC / 15.5.197.119

Home Device **Networking**

Configuration

- TCP/IP Settings**
- Network Settings
- Other Settings
- Privacy Settings
- Select Language

Security

- Settings
- Authorization
- Mgmt. Protocols
- 802.1x Authentication
- Firewall

Diagnostics

- Network Statistics
- Protocol Info
- Configuration Page

TCP/IP Settings

Support ?

Summary **Network Identification** TCP/IP(v4) TCP/IP(v6)

Config Precedence Advanced

Host Name : host name

TCP/IP(v4) Settings

IPv4 Status : Enabled
Fully Qualified Domain Name(IPv4) : NPID09EAC.americas.hpqcorp.net

IPv4 Address:

Address:	192.168.0.10
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.1.1

Config By : DHCP
DHCP Lease Time : 604800 Seconds

TCP/IP(v6) Settings

IPv6 Status : Enabled
Fully Qualified Domain Name(IPv6) :

IPv6 Address	Prefix length	Config By	Valid Lifetime	Preferred Lifetime
xx00::000:00xx:xx0:0xxx	64	Link-Local	Infinite	Infinite

Default Route Information:

IPv6 Address	Expires In

Refresh

Figure 2-12 HP EWS **Networking** tab – **TCP/IP Settings** screen

For more information, see the *HP Jetdirect Administrator's Guide*.

HP Web Jetadmin

Use the HP Web Jetadmin and a browser to manage HP Jetdirect-connected devices within an intranet. HP Web Jetadmin is a browser-based management tool that 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 host systems that support HP Web Jetadmin, go to the following Web site:

www.hp.com/go/webjetadmin

3 Install MS Windows printing-system components

Introduction

The HP LaserJet M4345 MFP comes with software and installers for MS Windows and Apple Computer, Inc., Macintosh systems. Linux and UNIX systems support the HP LaserJet M4345 MFP, and software is available on the Web. This document provides procedures for installing and removing the HP LaserJet M4345 MFP printing-system software for MS Windows operating systems.

Topics:

- [Font support](#)
- [Print-driver installation instructions](#)
- [Fax-driver install instructions](#)

Font support

The following sections list the fonts that are included with MS Windows software, and the fonts that are available on the CD that came with the device.

Topics:

- [Basic fonts](#)
- [Default fonts](#)

Basic fonts

MS Windows software includes these basic fonts, which can be used with any HP printing device:

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

Default fonts

The following default fonts are installed through a Full Installation of the HP LaserJet M4345 MFP printing-system software.

Table 3-1 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

Table 3-1 Default fonts (continued)

Font name	Font style	File name
Antique Olive	Italic	OLVR56W.TTF
CG Omega	Regular	CGOR45W.TTF
CG Omega	Bold	CGOR65W.TTF
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	Oblique	HELR46W.TTF
Helvetica Narrow	Regular	HELR47W.TTF
Helvetica Narrow	Bold	HELR67W.TTF
Helvetica Narrow	Bold Oblique	HELR68W.TTF
Helvetica Narrow	Oblique	HELR48W.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

Table 3-1 Default fonts (continued)

Font name	Font style	File name
ITC Bookman Demi	Italic	BOKR76W.TTF
ITC Zapf Chancery	Medium Italic	CHANC____.TTF
ITC Zapf Dingbats	Regular	DINGS____.TTF
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	SYMP5____.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	Medium	UNVR55W.TTF
Univers	Medium Italic	UNVR56W.TTF
Univers Condensed	Bold	UNVR67W.TTF
Univers Condensed	Bold Italic	UNVR68W.TTF
Univers Condensed	Medium	UNVR57W.TTF
Univers Condensed	Medium Italic	UNVR58W.TTF

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

Table 3-2 Additional PS emulation fonts

Font name	Font style	File name
Albertus MT	Regular	PS_12639.TTF

Table 3-2 Additional PS emulation fonts (continued)

Font name	Font style	File name
Albertus MT	Italic	PS_12640.TTF
Albertus MT Lt	Regular	PS_14530.TTF
Antique Olive CompactPS	Regular	PS_11120.TTF
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

Table 3-2 Additional PS emulation fonts (continued)

Font name	Font style	File name
GillSans	Italic	PS_13873.TTF
GillSans Light	Italic	PS_13871.TTF
GillSans Light	Regular	PS_13870.TTF
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

Table 3-2 Additional PS emulation fonts (continued)

Font name	Font style	File name
Optima	Bold	PS_12510.TTF
Optima	Bold Italic	PS_12511.TTF
Optima	Italic	PS_12507.TTF
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

Print-driver installation instructions

Topics:

- [General MS Windows installation instructions](#)
- [Detailed MS Windows installation instructions](#)
- [Set a default printer](#)

General MS Windows installation instructions

Installation is similar for the Windows 2000 and Windows XP operating systems.

If the HP LaserJet M4345 MFP is connected through a file or print server, the printing-system software must be installed on the server before installation 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, the person installing the software must have administrator rights on the system.

When the HP LaserJet M4345 MFP printing-system installer runs, the HP LaserJet uninstaller is added to the system.

Topics:

- [Install from the printing-system CD](#)
- [Install from a network or from downloaded files](#)

Install from the printing-system CD

Follow these instructions to install the HP LaserJet M4345 MFP printing system from the CD that came with the device.

1. Quit all unnecessary software programs.
2. Insert the CD in the CD-ROM drive.



NOTE If the 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.

Install from a network or from downloaded files

Follow these instructions when installing printing-system files downloaded from the Web, or when installing files from a network. 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 device is installed. For detailed installation instructions, see [Detailed MS Windows installation instructions](#).

Detailed MS Windows installation instructions

A series of dialog boxes appear during installation of the HP LaserJet M4345 MFP printing-system software in MS Windows environments.

Topics:

- [Help, Back, Next, and Cancel buttons](#)
- [Direct-connect installation through a USB port](#)
- [Unsupported operating system dialog box](#)
- [Installation dialog-box sequence](#)
- [Modify a pre-existing installation](#)
- [Install drivers by using Add Printer](#)
- [Installer Customization Wizard for Windows](#)
- [Point and Print installation for Windows 2000, Windows XP, and Windows Server 2003](#)

Help, Back, Next, and Cancel buttons

Click the **Help** button on any screen where it appears to find suggestions for and explanations about the installation process.

Click the **Back** button in any installation dialog box to return to the previous dialog box. The specific dialog box depends on previous selections.

Select any options on a given screen and click the **Next** button to proceed to the next step in the installation sequence.

To exit the installation sequence without installing the device, follow these steps from any dialog box where the **Cancel** button appears.

1. Click **Cancel**. A dialog box opens that prompts you with this question: "Are you sure you want to cancel the installation?"

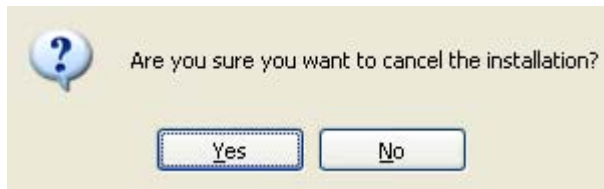


Figure 3-1 Are you sure you want to cancel the installation? dialog box

2. Click **Yes**. The **Cancel** dialog box opens, stating that the setup was interrupted.



Figure 3-2 Cancel dialog box

3. Click **Finish** to close the installation screens.

Direct-connect installation through a USB port

The printing-system software should be installed *before* the HP LaserJet M4345 MFP is connected to the computer through a USB connection and turned on. During the installation process, the software generates a prompt to connect the device.

Unsupported operating system dialog box

The MS Windows NT 4.0 and MS Windows 98 operating systems do not support the HP LaserJet M4345 MFP. When attempting to install the software in these environments, an **Unsupported Operating System** dialog box appears.

An example of an **Unsupported Operating System** dialog box is shown in the following figure.



Figure 3-3 Setup Error – Unsupported Operating System, MS Windows NT 4.0

Installation dialog-box sequence



NOTE The dialog boxes shown in this document appear in the Windows XP Professional installation sequence. The order and appearance of dialog boxes can vary among operating systems.

Select the **Install Printer** option from the HP LaserJet M4345 MFP printing-system software CD. The **Language Selection** dialog box appears.

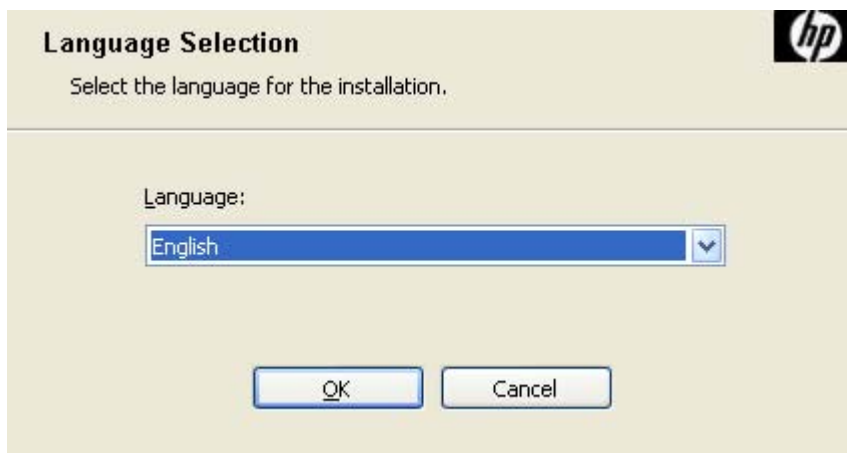


Figure 3-4 Language Selection dialog box



NOTE The **Language Selection** dialog box lists only the languages that are available on the HP LaserJet M4345 MFP printing-system software CD.

The installer automatically detects the language that the computer system uses and presents this selection as the default.

Select any other language that is available on the CD by clicking the down arrow on the drop-down menu.

Click **OK** to initiate the printing-system setup. The **Welcome** dialog box appears.

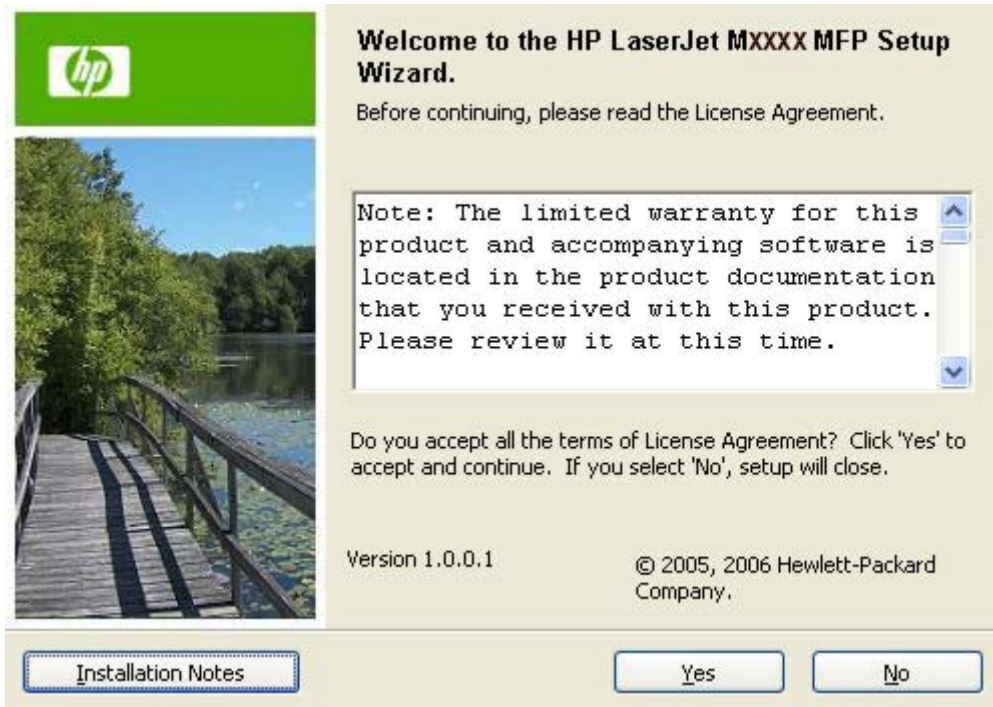


Figure 3-5 Welcome to the HP LaserJet MXXXX MFP Setup Wizard dialog box



NOTE Click **Installation Notes** to view the HP LaserJet M4345 MFP Printing-System Install Notes for more information about the printing-system features and installation requirements.

Read the software-license agreement, click **I agree**, and then click **Yes** to proceed with the installation.

The **Printer Connection** dialog box opens, as shown in the following figure.

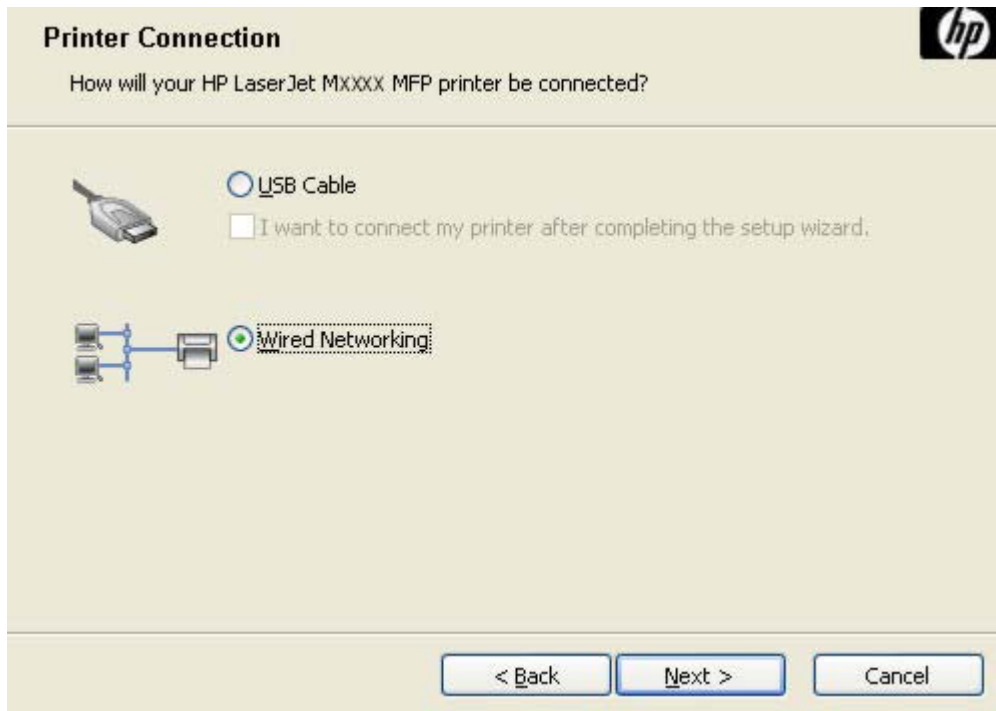


Figure 3-6 Printer Connection dialog box

Two options are available in the **Printer Connection** dialog box:

- **USB Cable.**

The **I want to connect my printer after completing the setup wizard** check box is unchecked by default. Select this check box to install the software now but connect to your printer at a later time.

- **Wired Networking.**



NOTE The HP LaserJet M4345 MFP does not support infrared connections or connections over a parallel port.

NOTE The printing-system software should be installed *before* the HP LaserJet M4345 MFP is connected to the computer through a USB connection and turned on. During the installation process, the software generates a prompt to connect the device.

Click **USB Cable** (a "direct connection" using a USB 2.0 cable) and then click **Next**. The **Installation Type** dialog box opens. This is the default option.



NOTE When plugged into an individual unit, a USB port is created during the driver installation. As a result, plugging in five different units results in five new copies of the driver and five new USB ports created. The extra copies can be removed, but the extra ports cannot be deleted unless the extra copies of the driver are deleted with the USB still connected.

If the USB is disconnected, the extra driver copies can be removed, but the extra USB ports cannot be removed.

To continue with the default installation sequence (using a "direct connection"), see [Figure 3-19 Installation Type dialog box](#).

When installing the HP LaserJet M4345 MFP over the network, click **Wired Networking** in the **Printer Connection** dialog box.

For a network installation, connect the HP LaserJet M4345 MFP to the network and turn it on before installing the printing-system software.



NOTE Wired networking refers to the print device being connected to the network by a network cable. For wireless installation instructions using an HP Jetdirect ew2400 802.11g Wireless Print Server or an HP Direct 380x802.11B wireless print server, consult the documentation that comes with the print server.

Click **Next** to continue. The **Searching** dialog box opens, as shown in the following figure.



Figure 3-7 Searching dialog box



NOTE When installing the device over a network, allow the search for the first subnet in the network to finish in order to find all available devices. After the first subnet is scanned for available HP LaserJet M4345 MFP, the results appear in the **Printers Found** dialog box. However, the installer continues to search the network for additional devices. The results of the first search usually takes place within about 20 seconds. Subsequently, the search of the other subnets for the full list of devices occurs. The results appear in the **Printers Found** dialog box (see [Figure 3-10 Printers Found dialog box](#)).

NOTE If the device does not appear, the installation process includes the option of using the TCP/IP address for the HP LaserJet M4345 MFP, which might be preferable to waiting for the installer to finish the search.

If the network has a firewall that is blocking the installation, the **Firewall Detected** dialog box appears, as shown in the following figure.

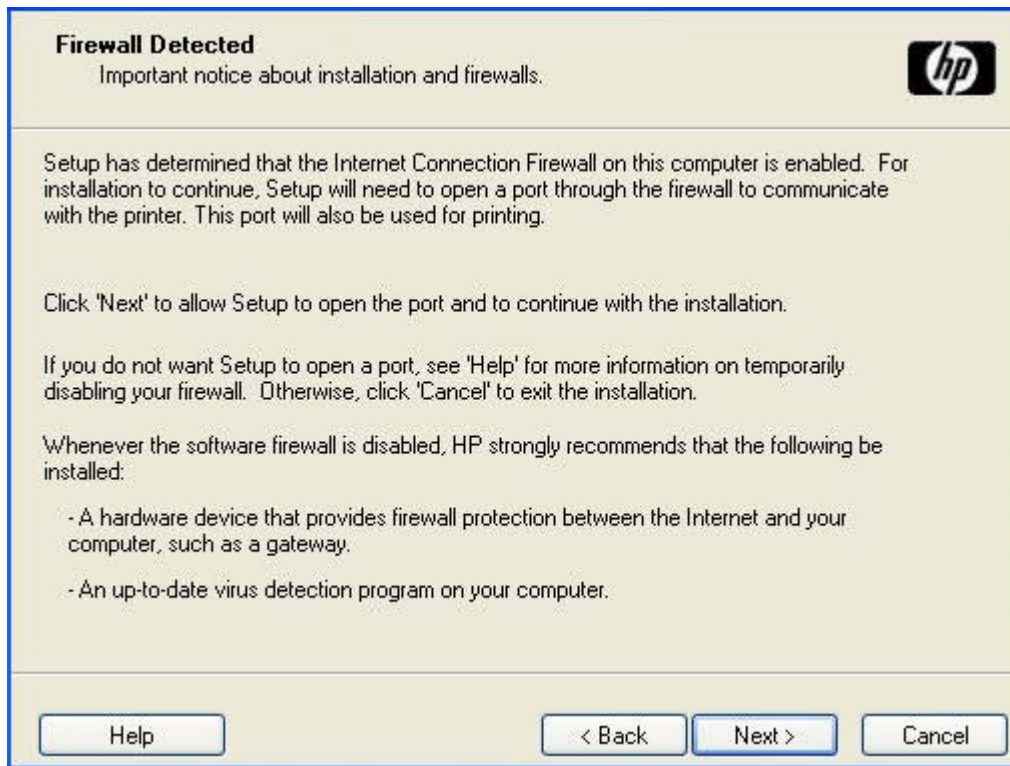


Figure 3-8 Firewall Detected dialog box

If no device is found during a network installation, the **Printer Not Found** dialog box appears, as shown in the following figure.

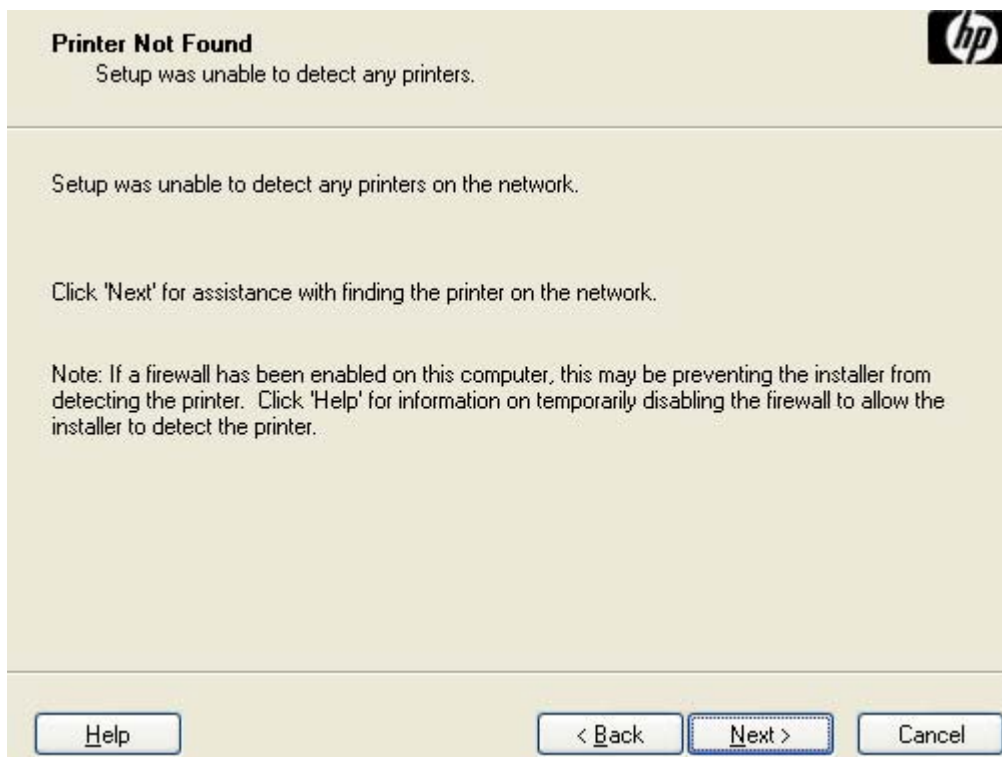


Figure 3-9 Printer Not Found dialog box

If this dialog box appears, the device might not be connected to the network. Ensure that the device is connected and 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 3-7 Searching dialog box](#)).

If the software finds devices, the **Printers Found** dialog box appears, containing a list of matching devices that have been found on the network, as shown in the following figure.

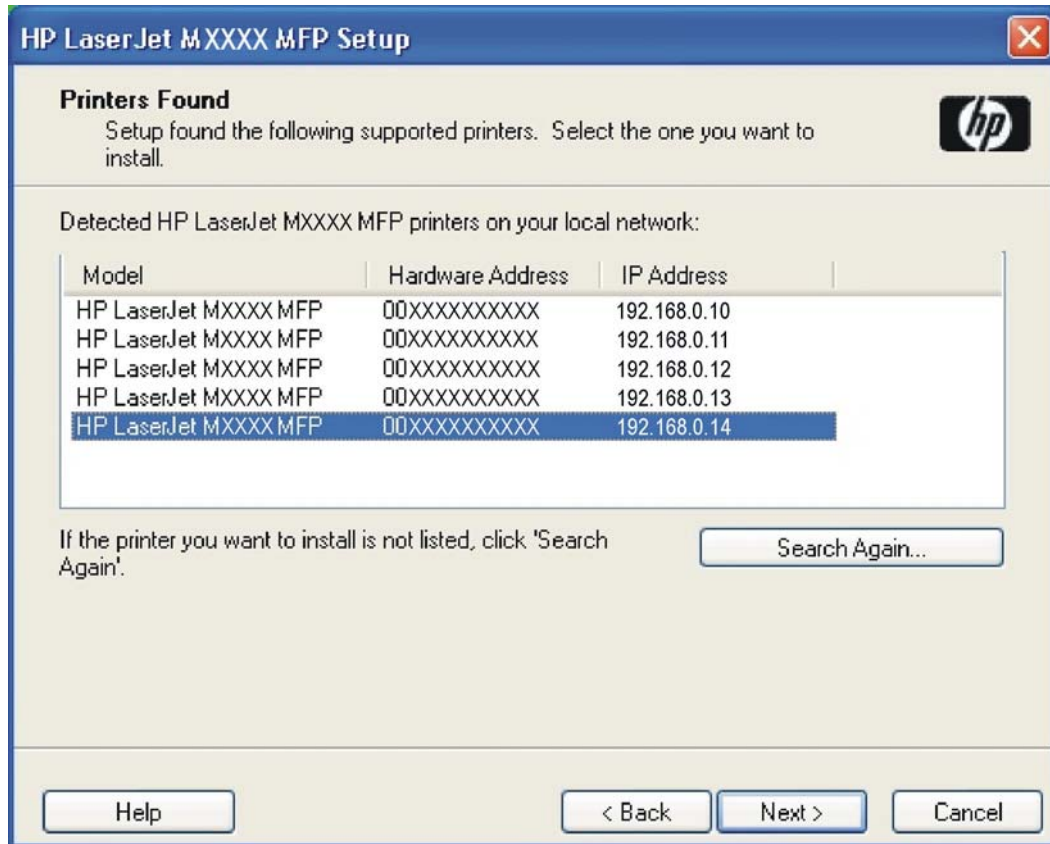


Figure 3-10 Printers Found dialog box

Select the device to install and click **Next**. The **Confirm Network Settings** dialog box opens (see [Figure 3-12 Confirm Network Settings dialog box](#)).

If the device to install is not listed and you want the installer to continue searching network subnet masks, select a search option and click **Next** to perform another search.

If the device to install is not listed and you know its TCP/IP address, click **Search Again....** The **Check Printer Connection** screen appears (see [Figure 3-15 Check Printer Connection dialog box](#)).

If a single device is found, the **Printer Found** dialog box appears, containing a list of matching devices on the network. The **Printer Found** dialog box is shown in the following figure.

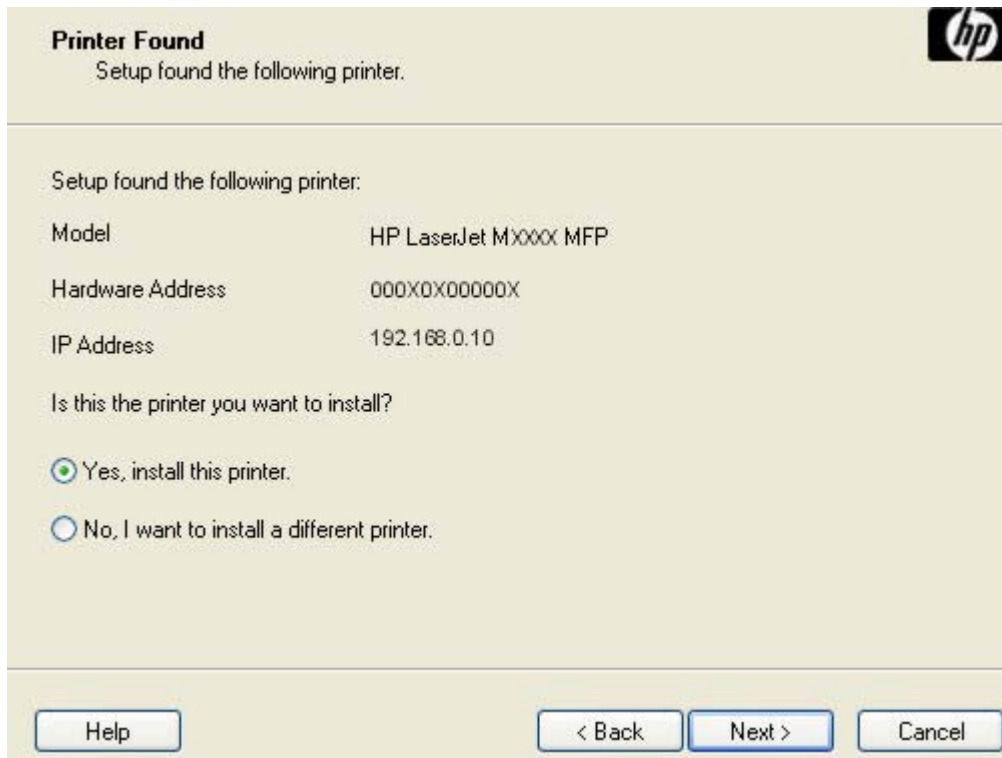


Figure 3-11 Printer Found dialog box

To install a different device, click **No, I want to install a different printer** and then click **Next**. The **Check Printer 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 device or specifying a device by address (see [Figure 3-15 Check Printer Connection dialog box](#)).

To install the device listed, click **Yes, install this printer** and then click **Next**. The **Confirm Network Settings** dialog box opens, as shown in the following figure.

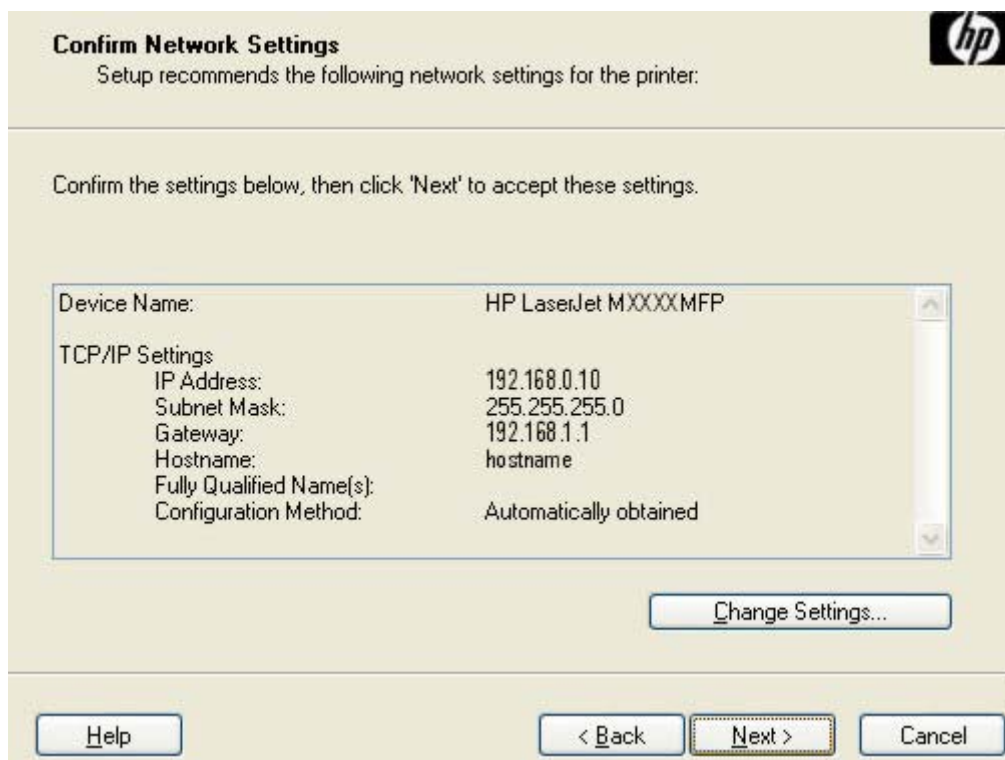


Figure 3-12 Confirm Network Settings dialog box

In the **Confirm Network Settings** dialog box, click **Next** to continue the installation. The **Installation Type** dialog box opens (see [Figure 3-19 Installation Type dialog box](#)).

If you click **Change Settings...**, the **Confirm Change Setting** dialog box opens, as shown in the following figure.



WARNING! When the TCP/IP configuration is changed by using the **Change Settings** button, the actual settings in the device change. Make changes to these settings only with the advice of the network administrator.

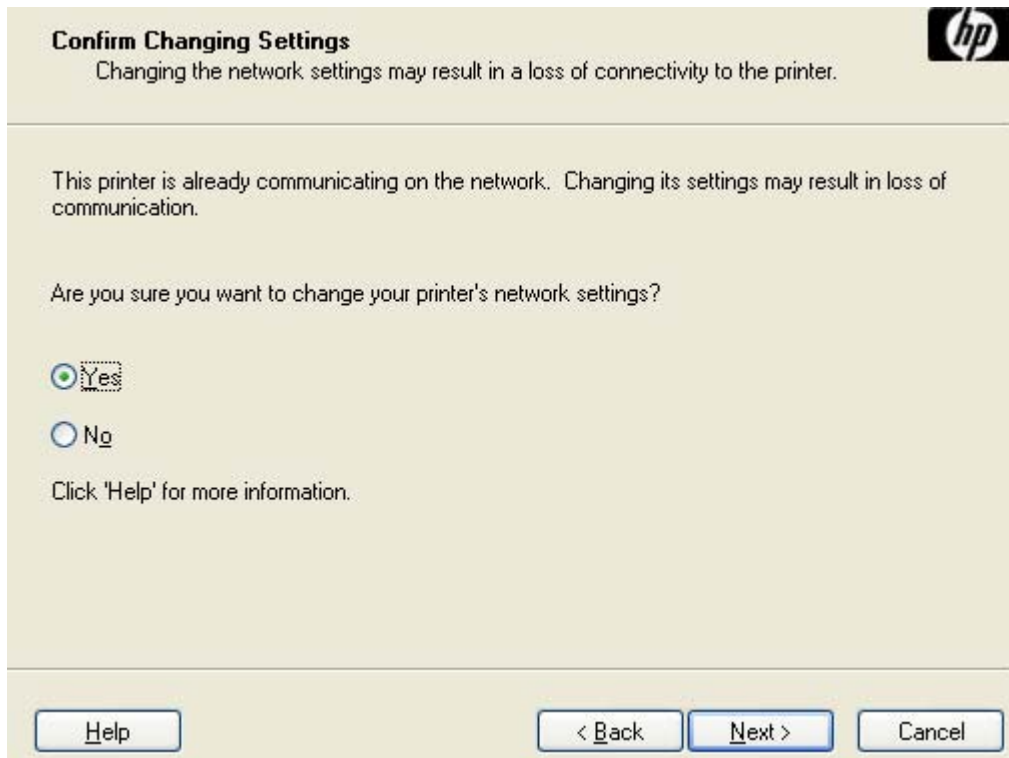


Figure 3-13 Confirm Changing Setting dialog box

If you click **No** in the **Confirm Changing Settings** dialog, the **Installation Type** dialog box opens (see [Figure 3-19 Installation Type dialog box](#)).

If you click **Yes**, the **Change TCP/IP Settings** dialog box opens (see [Figure 3-14 Change TCP/IP Settings dialog box](#)).

Change TCP/IP Settings
Specify new TCP/IP settings.

Use the following TCP/IP settings for the printer.

IP Address: 192 . 68 . 0 . 10 [Suggest Settings...](#)

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 192 . 68 . 0 . 1

☒ Use Default Port Name

[Help](#) [< Back](#) [Next >](#) [Cancel](#)

Figure 3-14 Change TCP/IP Settings dialog box

If information in the **IP Address:**, **Subnet Mask:**, or **Gateway:** fields change (without clicking **Next**) and then click **Suggest Settings...**, the fields refresh with information that was found by the installer and reported in the **Printer Found** screen.

Type a different TCP/IP Address, Subnet Mask, or Gateway address and then click **Next** to open the **Confirm Network Settings** dialog box (see [Figure 3-12 Confirm Network 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 3-18 Set Port Name dialog box](#)).

The **Check Printer Connection** dialog box, which appears when **No, I want to install a different printer** is selected in the **Printer Found** dialog box or if the system failed to detect the device over the network, is shown in the following figure.

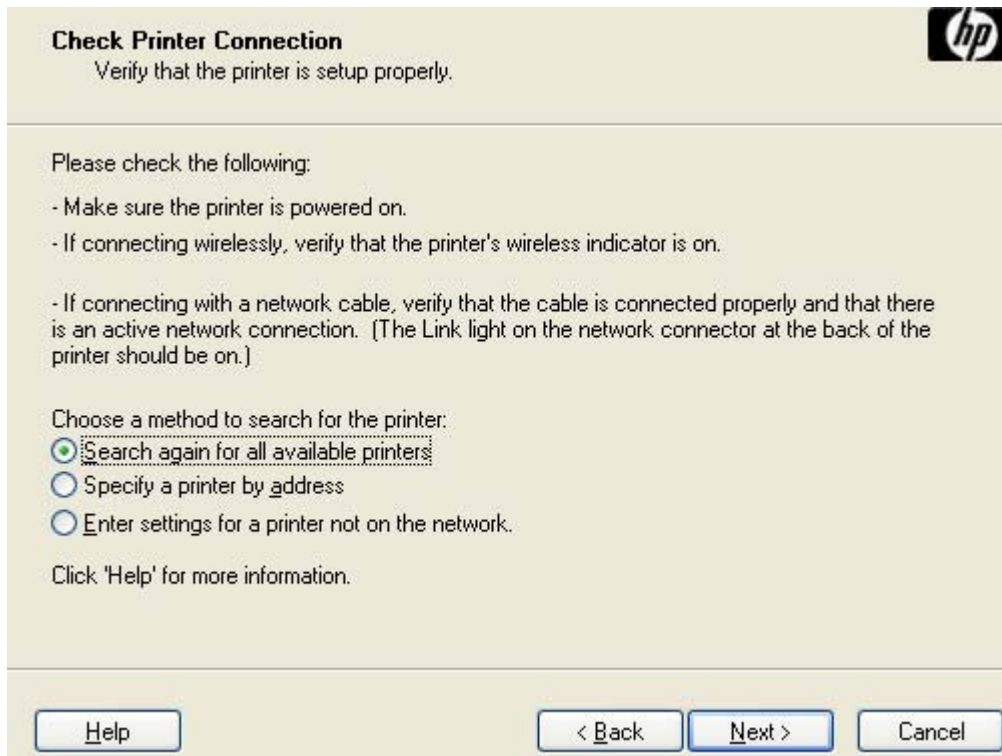


Figure 3-15 Check Printer Connection dialog box

If you click **Search again for all available printers** and then click **Next**, the **Searching** dialog box opens (see [Figure 3-7 Searching dialog box](#)).

If you click **Specify Printer by address** and then click **Next**, the **Specify Printer** dialog box opens. The **Specify Printer** dialog box is shown in the following figure.

If you click **Enter settings for a printer not on the network** and then click **Next**, the **Printer Settings** dialog box opens (see [Figure 3-17 Printer Settings dialog box](#)).

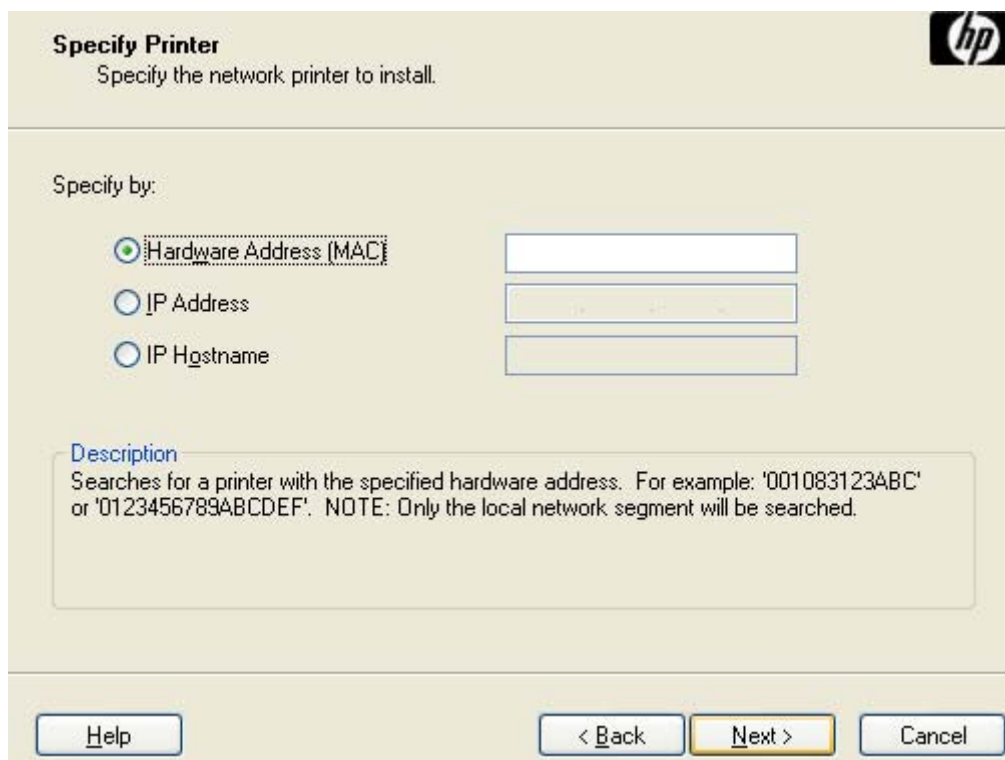


Figure 3-16 Specify Printer dialog box

Specify a device by clicking one of the following options and typing in the required information:

- **Hardware Address (MAC)**
- **IP Address**
- **IP Hostname**

When you click **Next**, the **Searching** dialog box opens. When the search is finished, the **Printer Found** dialog box opens (see [Figure 3-11 Printer Found dialog box](#)).

If you click **Enter settings for a printer not on the network** in the **Check Printer Connection** dialog box and then click **Next**, the **Printer Settings** dialog box opens, as shown in the following figure.

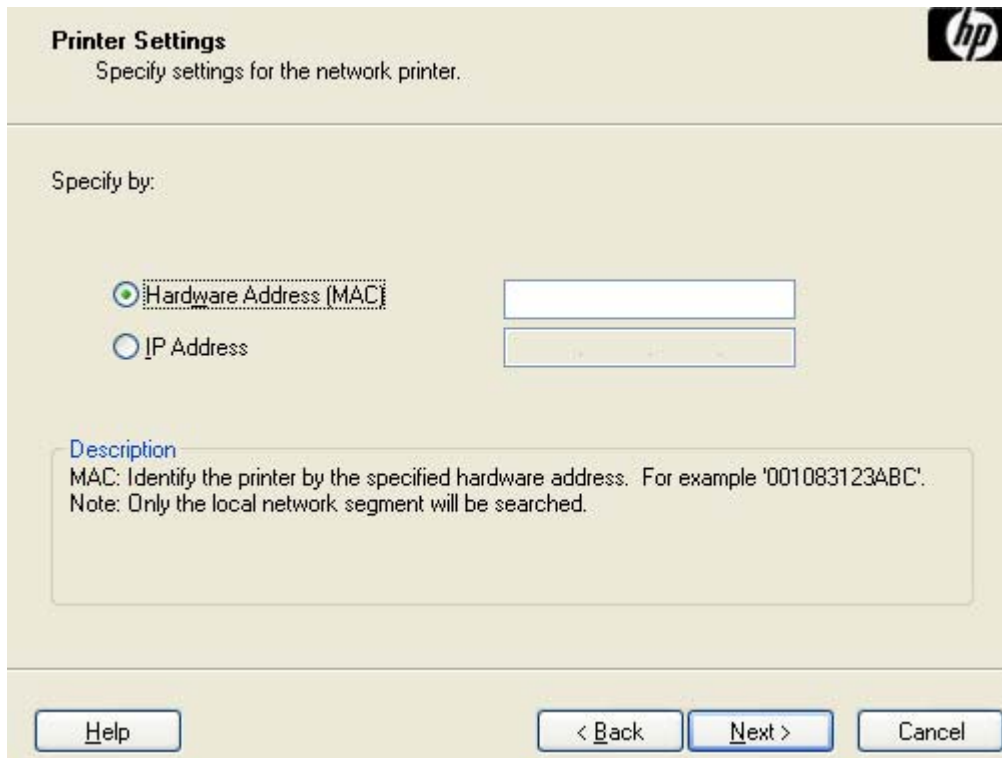


Figure 3-17 Printer Settings dialog box

To install the device by using the hardware address, click **Hardware Address (MAC)**, type the device hardware address in the field, and then click **Next** to continue the installation. The **Set Port Name** dialog box opens, as shown in the following figure.

To install the device using the TCP/IP address, click **IP Address**, type the device TCP/IP address in the field, and then click **Next** to continue the installation. The **Set Port Name** dialog box opens, as shown in the following figure.

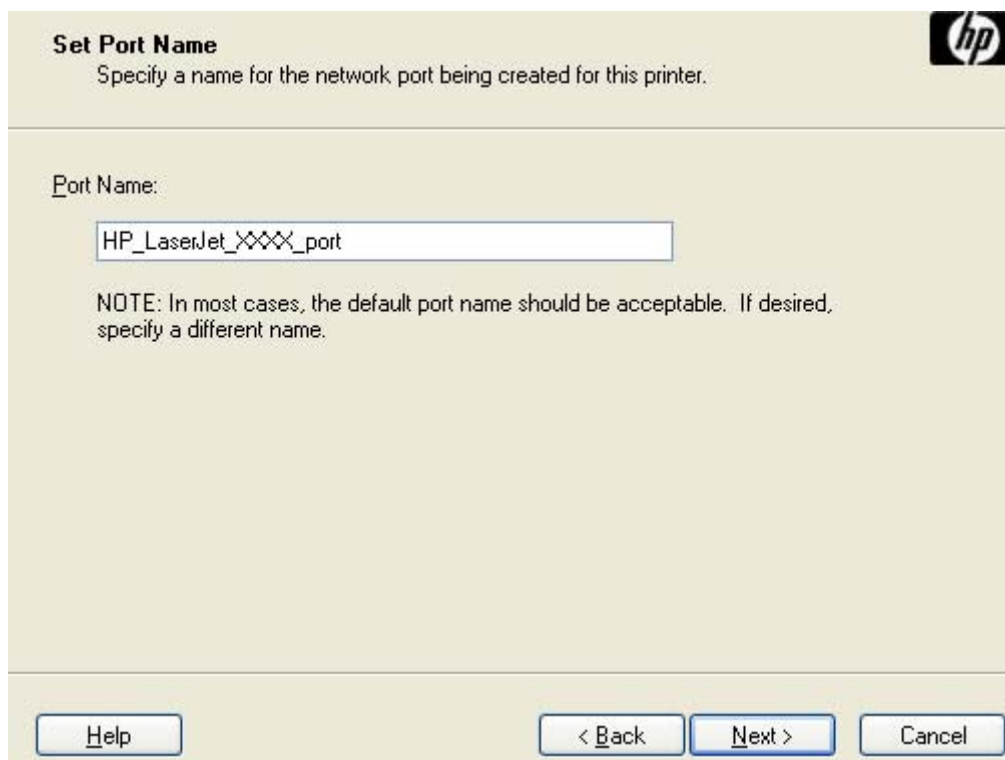


Figure 3-18 Set Port Name dialog box

Type a port name in the **Port Name:** field and click **Next** to open the **Installation Type** dialog box (see [Figure 3-19 Installation Type dialog box](#)).

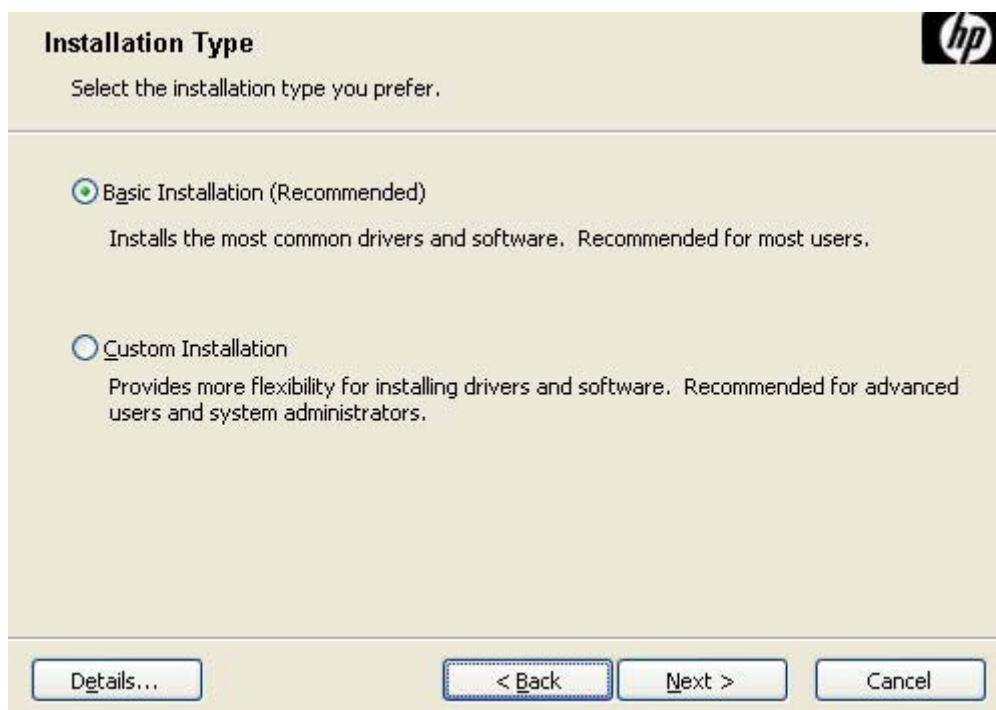


Figure 3-19 Installation Type dialog box

Click **Basic Installation** to install only the HP PCL 6 driver and screen fonts. If you click **Basic Installation** and then click **Next**, the **Ready to Install** dialog box opens (see [Figure 3-22 Ready to Install dialog box](#)).

If you select **Custom Installation** and then click **Next**, the **Feature Selection** dialog box opens, as shown in the following figure.



NOTE Select **Custom Installation** to install the HP Send Fax driver, HP PCL 5 and PS emulation drivers, as appropriate.

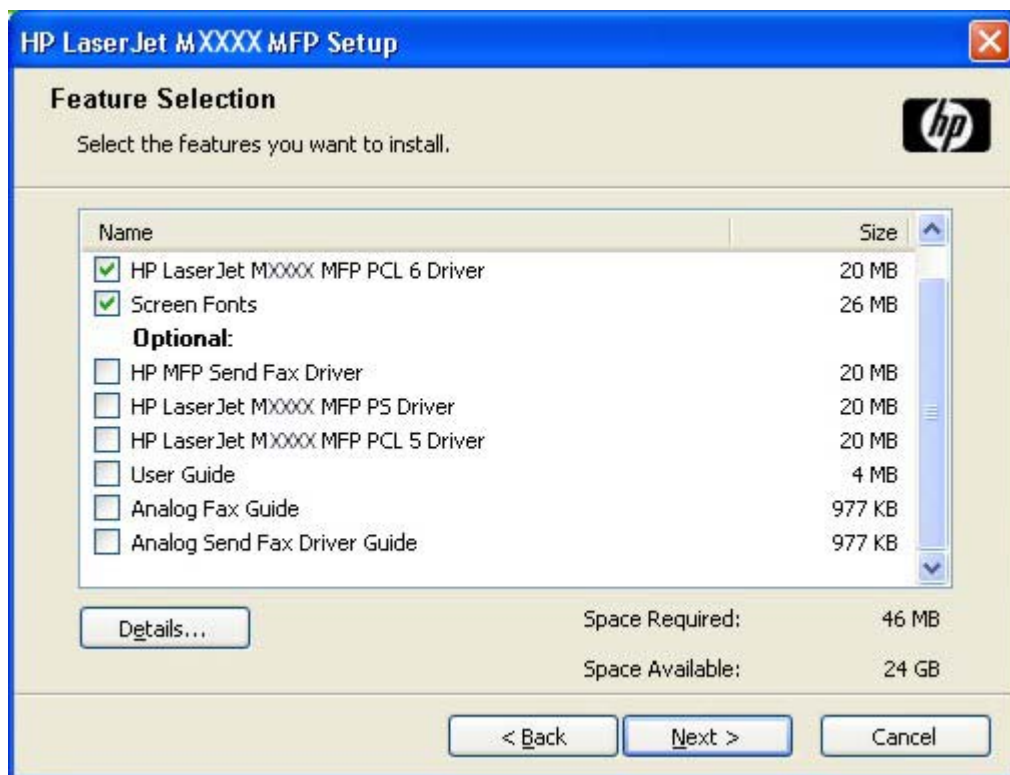


Figure 3-20 Feature Selection dialog box

An empty check box indicates that the feature is not installed. A check mark appears next to any driver or document that is to be installed.

Information about the space required and the space available on the hard drive appears in the dialog box.

Any combination of features can be selected for the installer. It is possible to create a custom installer that installs features without including a print driver. Select the drivers and support documents to install.

To view details about the features, click **Details....** The **Details** dialog box appears, as shown in the following figure.

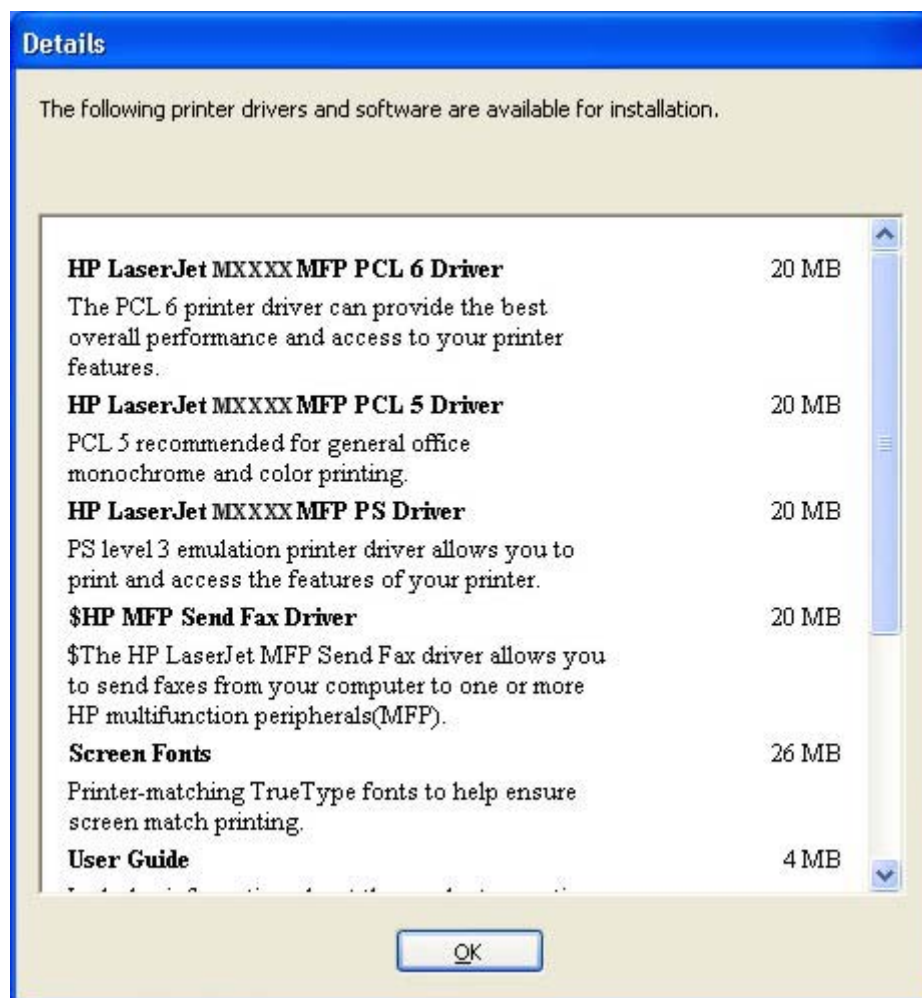


Figure 3-21 Details dialog box

Click **OK** to return to the **Feature Selection** dialog box.

In the **Feature Selection** dialog box, click **Next** to continue the installation.

The **Ready to Install** dialog box appears.

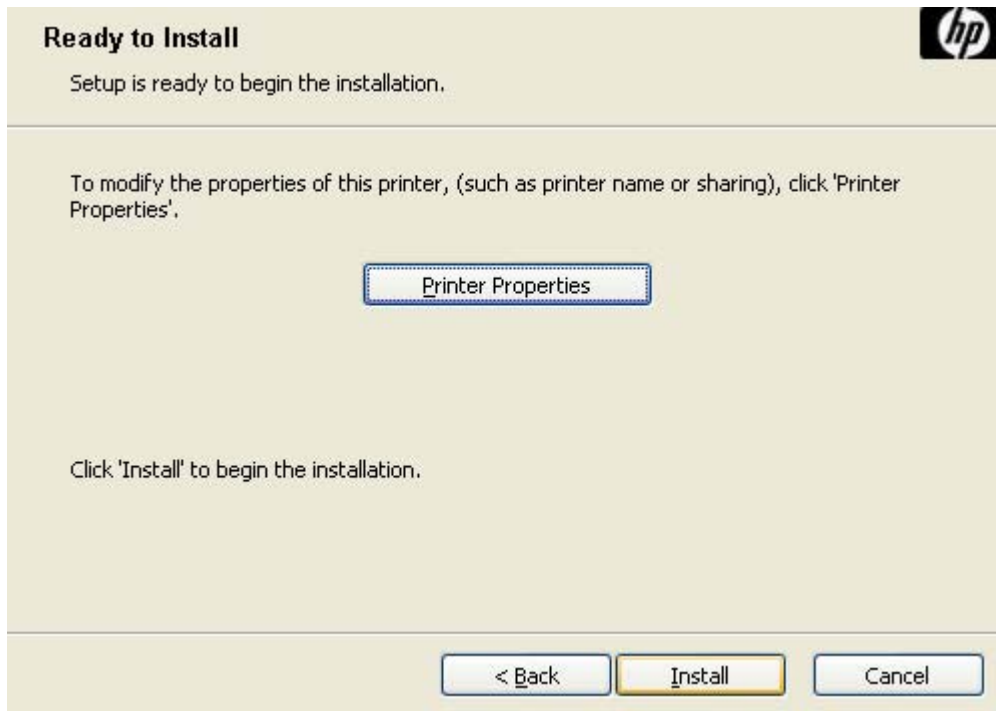


Figure 3-22 Ready to Install dialog box

Click **Install** to start the installation process.

Click **Printer Properties** to open the **Printer Properties** dialog box.

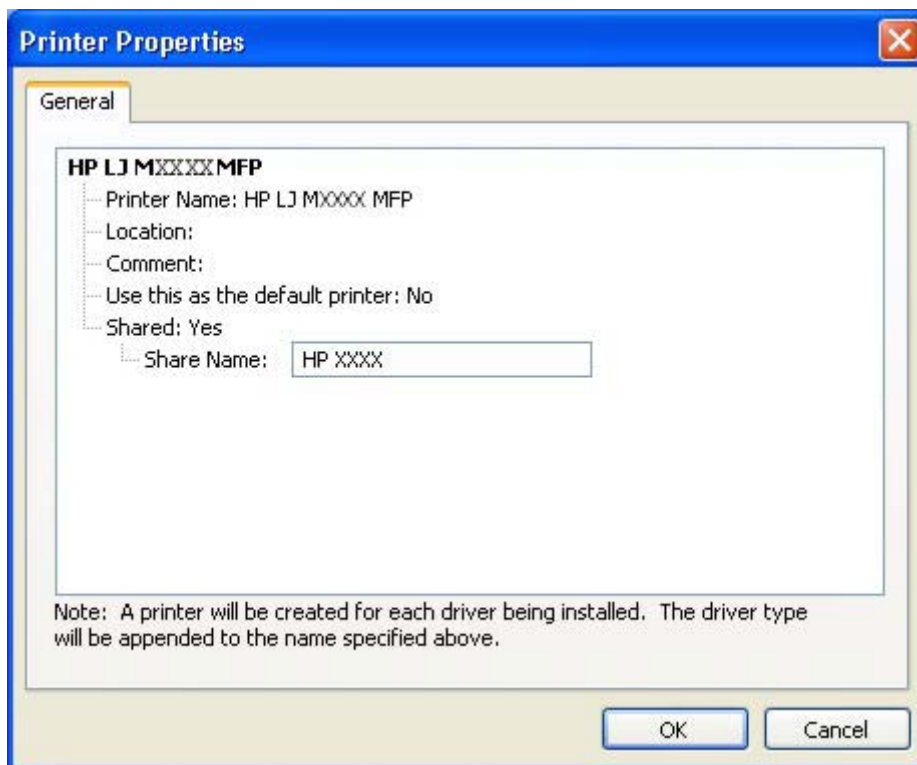


Figure 3-23 Printer Properties **General** tab

On the **General** tab, the device name can be changed by typing a new name in the **Printer Name** field.

Use the **Location:** and **Comment:** fields to describe the device, as appropriate.

To use the HP LaserJet M4345 MFP as the default device, select the **Use this as the default printer** and select **Yes** in the drop-down menu. **No** is selected by default.

If the device is being installed on a network and it will be shared among users, select **Shared** and then click **Yes** in the drop-down menu. The device is not shared by default.

Click **OK** to return to the **Ready to Install** dialog box.



NOTE If you share the device on Windows 2000, Windows XP, or Windows Server 2003 operating systems, type a name. Additional print driver support for other operating systems is also available.

If the device is not shared, additional driver support is not available.

In the **Ready to Install** dialog box, click **Next** to begin the process of copying and installing the printing-system software folders and files. The **Installation Status** dialog box is shown in the following figure.



Figure 3-24 Installation Status dialog box

This dialog box remains on the screen until the status bar fills.

Click **Cancel** to close the installer 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.

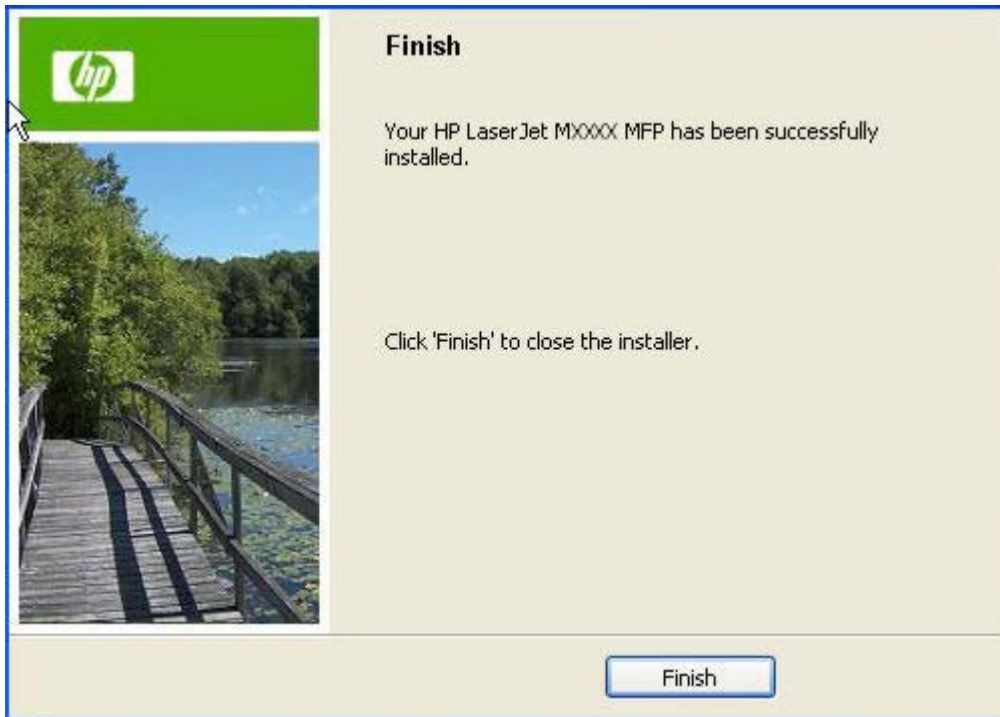


Figure 3-25 Finish dialog box

Click **Finish** to close the **Finish** dialog box and exit the installer.



NOTE Depending on the type of installation and selected options, additional steps might appear after you click **Finish**.

The **HP LaserJet M4345 MFP Next Steps** dialog box appears.

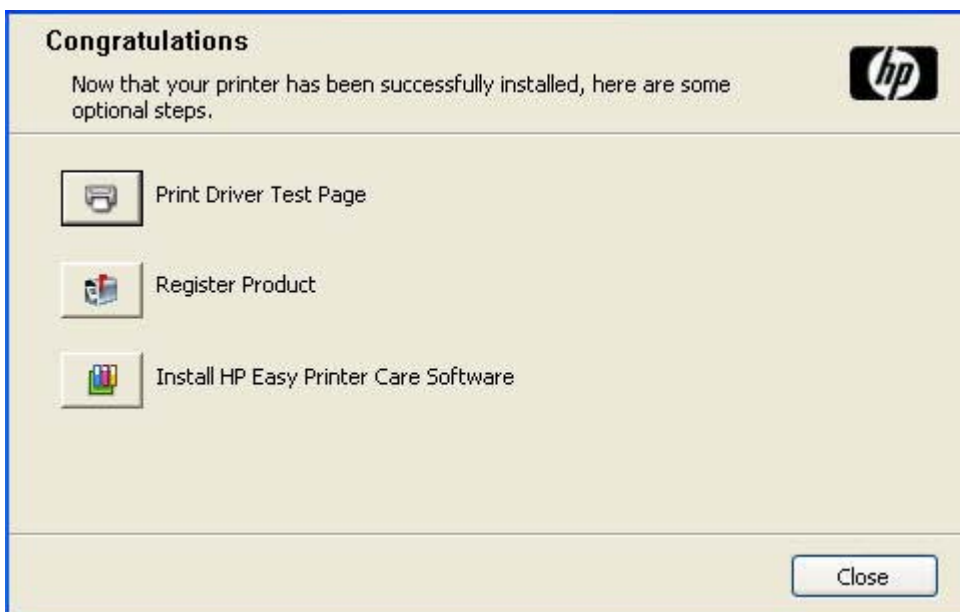


Figure 3-26 HP LaserJet M4345 MFP Next Steps — Congratulations dialog box

To verify that the device is connected, click **Print Driver Test Page**.

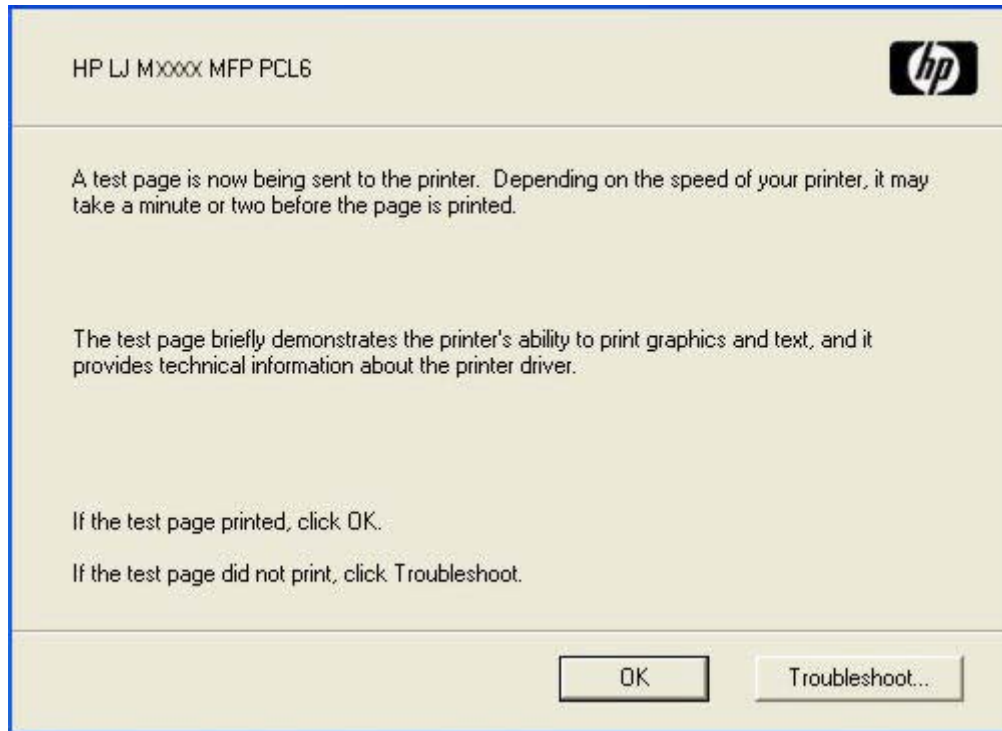


Figure 3-27 Test Page dialog box

If the test page prints correctly, click **OK** to continue. If it does not print, open the **Printer Properties** tab and try to print another test page, or click **Troubleshoot**.

If connected to the Internet, register the device online. In the **Congratulations** dialog box, click **Register Product** to open the **Sign up now** screen.

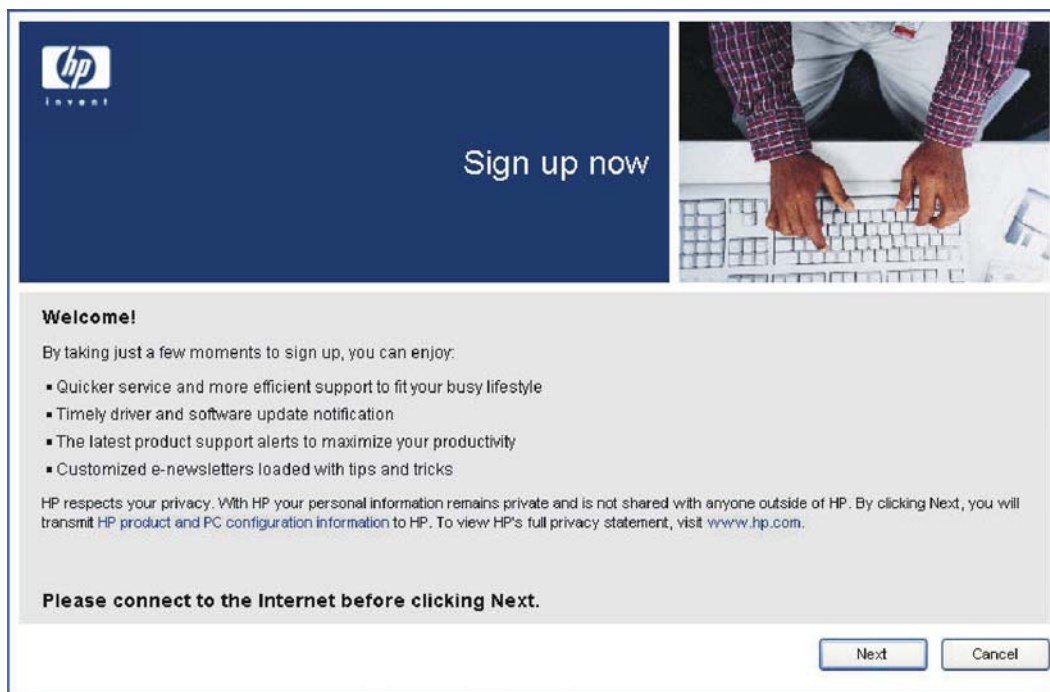


Figure 3-28 Sign up now screen

Connect to the Web and click **Next** to open the HP Registration Web site, as shown in the following figure.

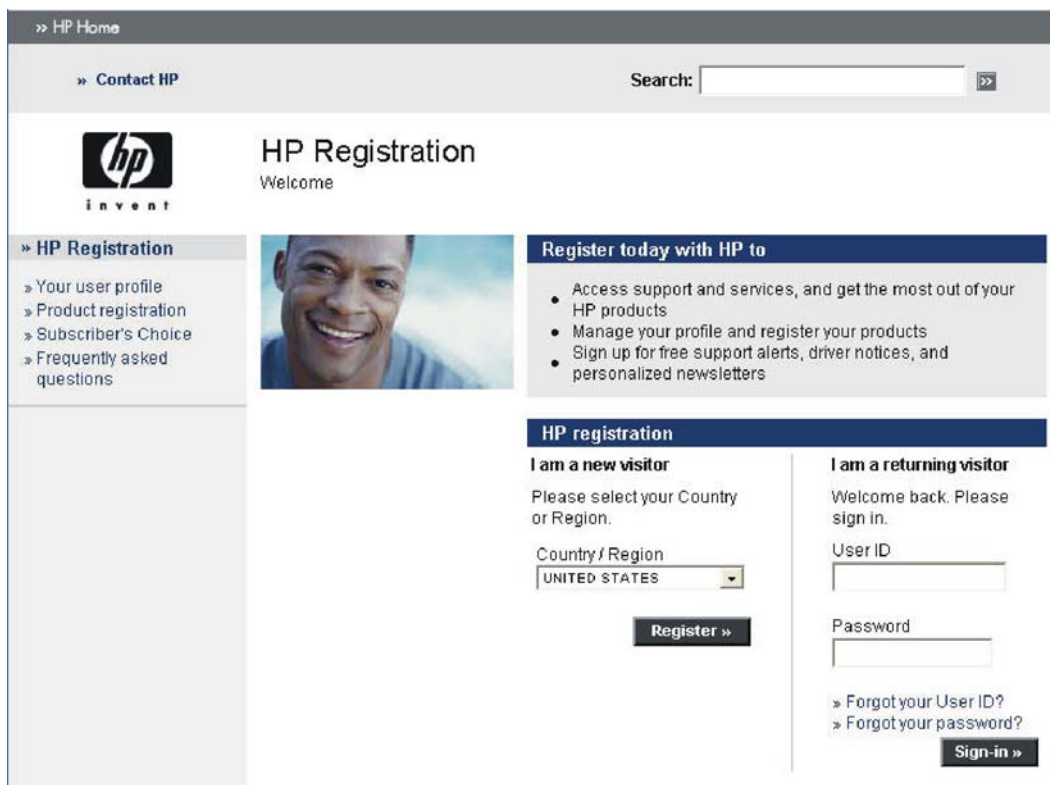


Figure 3-29 HP Registration screen

If connected to the Internet, install the HP Easy Printer Care Software, as appropriate. In the **Congratulations** dialog box, click **Install HP Printer Care Software**.

For more information, go to the HP Printer Care Web site:

www.hp.com/go/easyprintercare

Modify a pre-existing installation

If an HP LaserJet M4345 MFP has been previously installed, the appearance of the main installation 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 appear.

When you click modify installation on the main CD Browser screen, the **Setup Maintenance** dialog box appears, as shown in the following figure.

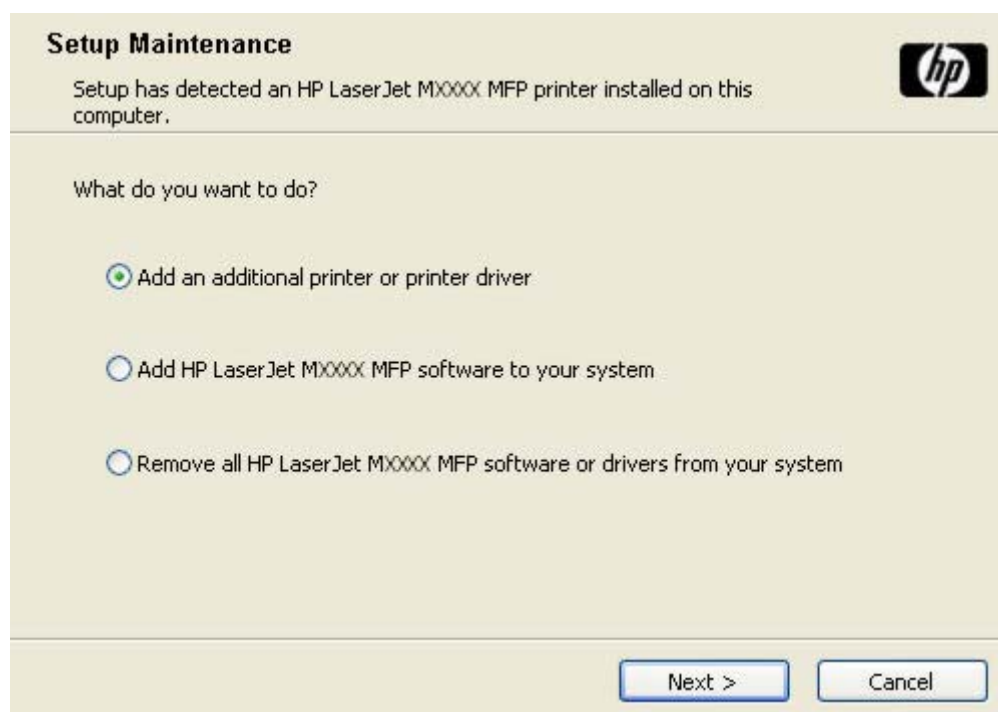


Figure 3-30 Setup Maintenance dialog box

Select the **Add an additional printer or printer driver** option to add a print driver other than the one that was added during the previous installation. When you select this option, the installer discovers a list of available printers upon which to install the software, and a list appears from which to choose the installation type.

Select **Add HP LaserJet MXXXX MFP software to your system** to add additional software, or to upgrade drivers you have previously installed on the system. When you select this option, the installer does *not* perform discovery of the previous installation. The options that appear are the same as those that appear when you performed the original installation (see [Figure 3-21 Details dialog box](#)).

Install drivers by using Add Printer

Use the following steps to install the drivers by using the MS Windows Add Printer tool:

1. Insert the CD in the CD-ROM drive.
2. Go to the **Add a printer** feature in MS 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 Printer**. The **Add Printer Wizard** screen appears.

In Windows 2000, click **Start** on the desktop, click **Settings**, click **Printers**, and then click **Add Printer**. The **Add Printer Wizard** screen appears.
3. Use the **Add Printer Wizard** to find and connect to the device. The drivers are loaded as a part of this process.

If the computer is running a 64-bit MS Windows operating system, you must install the corresponding 64-bit driver. The 64-bit drivers are included on the software CD-ROM. Use the following steps to install a driver by using the **Add Printer Wizard**.

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 Printer**. The **Add Printer Wizard** screen appears.
3. Use the **Add Printer Wizard** to find and connect to the device. The drivers are loaded as a part of this process.
4. Select the **Have disk** option and navigate to one of the driver files on the software CD in Windows 2000, Windows XP, or Windows Server 2003:
 - To install the HP PCL 6 driver, select the following file:
`\Drivers\<operating system>\PCL6\hpcm434u.inf`
 - To install the HP PCL 5 driver, select the following file:
`\Drivers\<operating system>\PCL5\hpcm434t.inf`
 - To install the PS Emulation driver, select the following file:
`\Drivers\<operating system>\PS\hpcm434v.inf`
 - To install the HP Send Fax driver, select the following file:
For 32-bit: `\Driver\<your operating system>\SendFax\hpc4730e.inf`
For 64-bit: `\Driver\<operating system>\SendFax\hpc4730w.inf`
5. Complete the wizard steps. The driver is installed as part of the wizard process.

Installer Customization Wizard for Windows

Administrators can use the **Installer Customization Wizard** option to customize the HP LaserJet M4345 MFP installer by preconfiguring 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 Installer Customization Wizard Readme*. (See [Installer Customization Wizard Readme](#).)

Topics:

- [Run the Installer Customization Wizard](#)
- [Dialog boxes](#)
- [Distribution](#)

Run the Installer Customization Wizard

The Installer Customization Wizard runs from the CD. It can be started from the CD browser, depending on device-specific instantiation. It runs separately from the common Microsoft Installer (MSI), and has its own interface.

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 directly edited for system-configuration differences.

For the exact text with which to replace entries in the RESPONSE.INI file, see the *HP Installer Customization Wizard Readme*. (See [Installer Customization Wizard Readme](#).)

To run the Installer Customization Wizard

1. Insert the HP LaserJet M4345 MFP software CD in the CD-ROM drive.
2. In the CD browser main screen, click **Optional Software**.
3. Click **Installer Customization Wizard**.
4. Follow the instructions in the dialog boxes to complete the installation.

Dialog boxes

The **Language Selection** dialog box appears, as shown in the following figure.

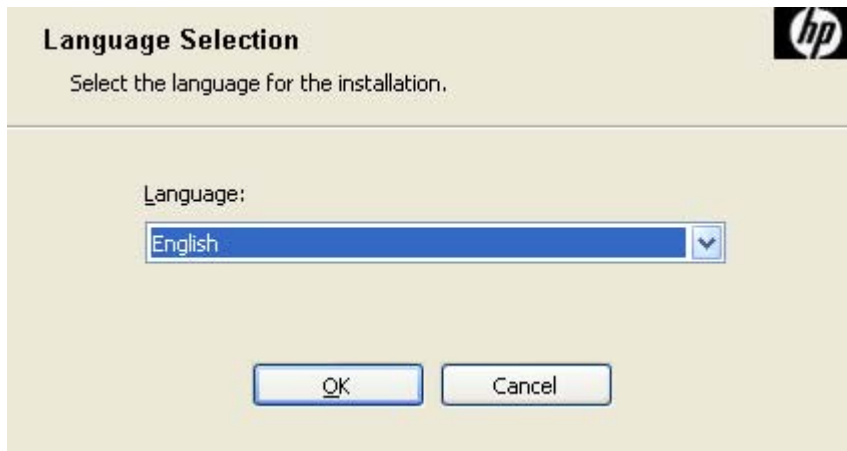


Figure 3-31 Language Selection dialog box

The language selected in this dialog box is the language in which the Customization Wizard will run during configuration. (This is not necessarily the language in which the customization package will be installed. The customization package language is selected later in the installation.)

Select a language and click **OK**.

The **Welcome** dialog box appears, as shown in the following figure.



Figure 3-32 Welcome to the HP LaserJet M4345 MFP Installation Customization Wizard screen

Click **Next** in the **Welcome to the HP LaserJet M4345 MFP Installation Customization Wizard** dialog box.

The **Software License Agreement** dialog box appears.

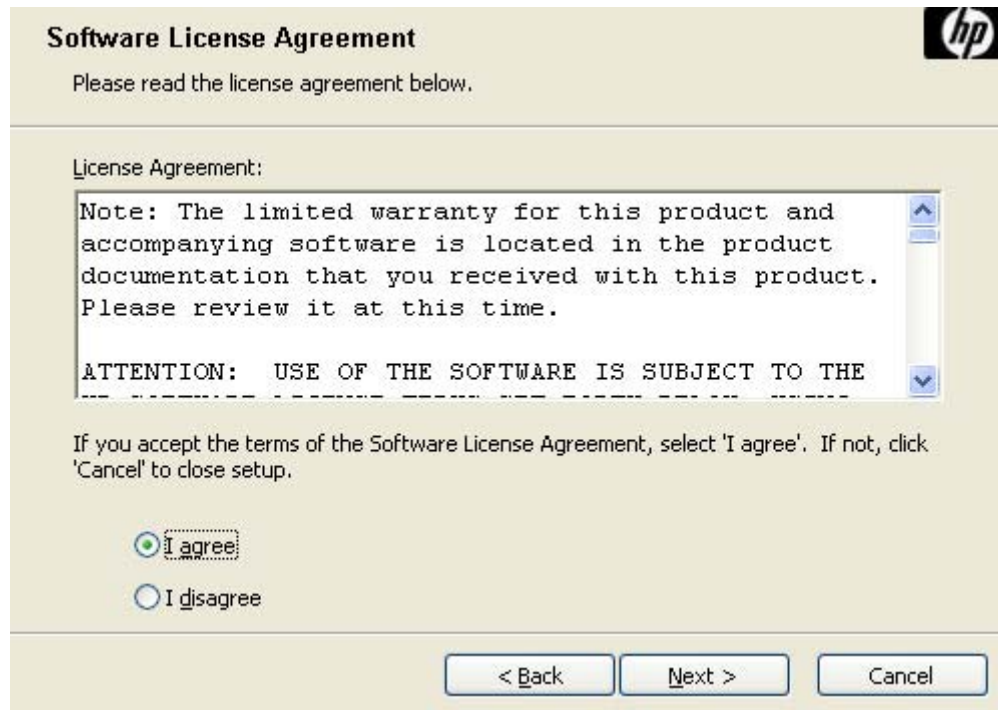


Figure 3-33 Software License Agreement dialog box

To cancel the installation, click **Cancel** on this or any other screen where it appears (see [Help, Back, Next, and Cancel buttons](#)).

Read the software-license agreement, click **I agree**, and then click **Next** to open the **Language** dialog box.

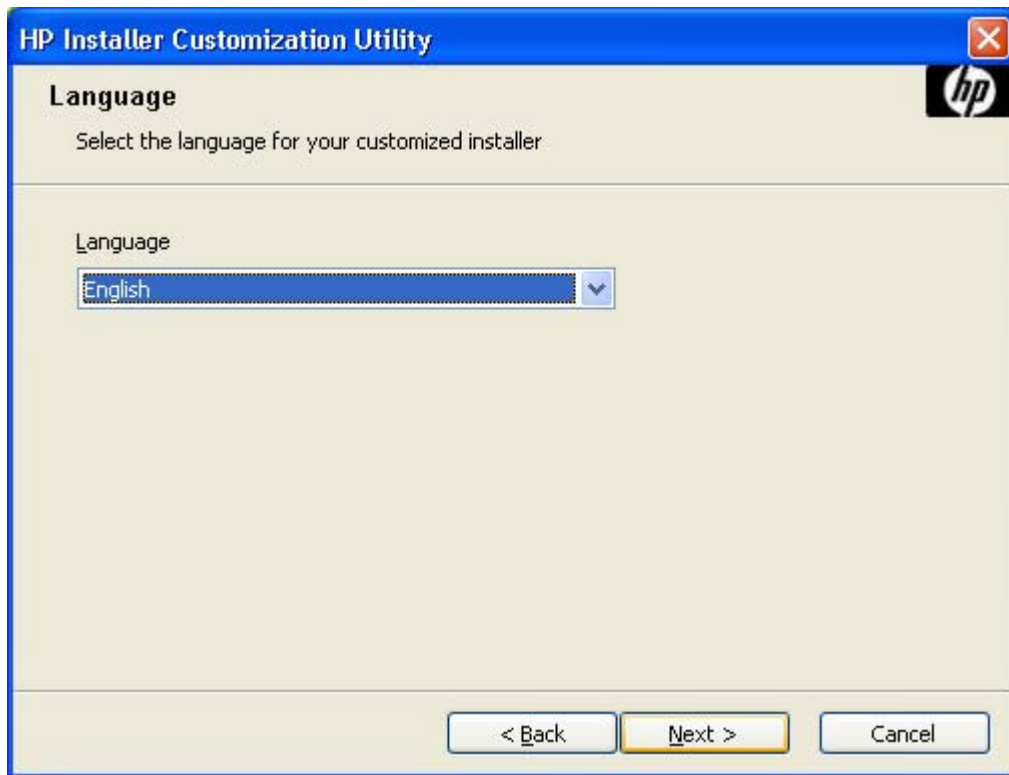


Figure 3-34 Language dialog box

This is the language in which the customization package will be installed. The language selected is installed on the computer regardless of the language of the text in the dialog boxes (as specified in the **Language Selection** dialog box earlier).

The **Language** dialog box defaults to the language that was selected in the **Language Selection** dialog box, but any language that is available on the CD can be selected for the customized installer. The language selection is recorded in the response file.



NOTE After installation, the language used in the driver is limited to the one that was selected in the Language dialog box during installation. **Maintenance** mode does *not* provide options for changing the language.

To change the language on a system that used an Installer Customization Wizard installation, uninstall the software, and then install a new device in order to restore the option to install other languages.

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.

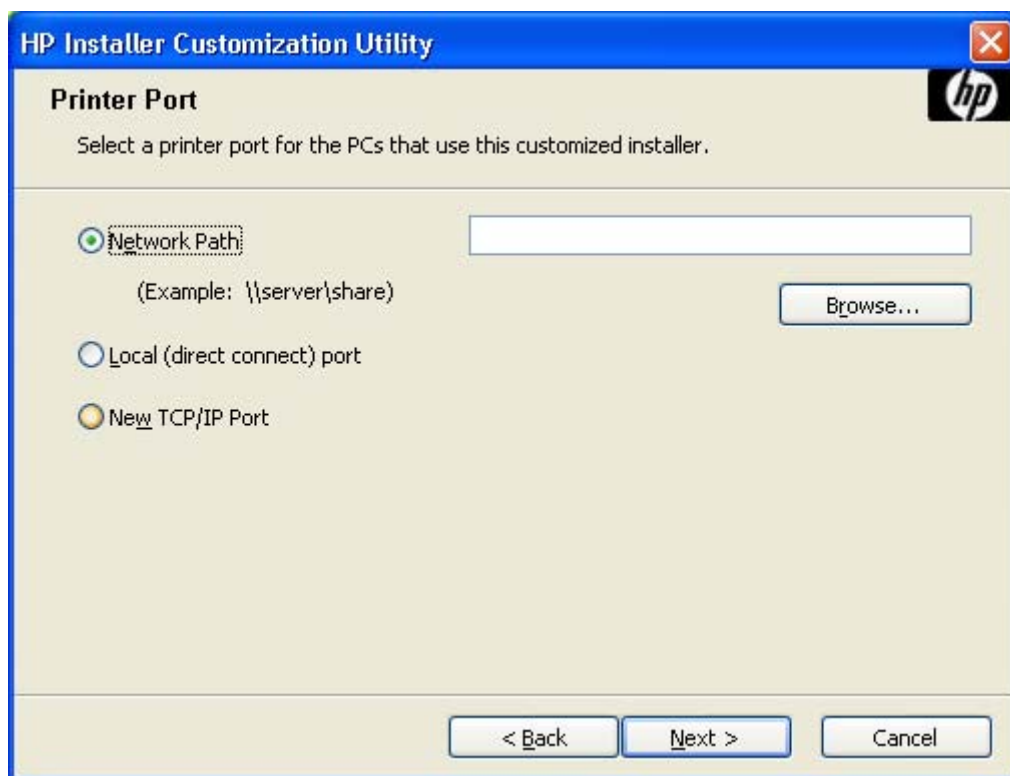


Figure 3-35 Printer Port dialog box

Click **Network Path** to make the text field available for a queue-name entry. If you click **Network Path** and click the **Browse**, the **Browse for Printer** dialog box opens.



Figure 3-36 Browse for Printer dialog box

Navigate to a device and click **OK** to record the path in the **Network Path** field in the **Printer Port** dialog box. Click **Cancel** to close the **Browse for Printer** dialog box.

In the **Printer Port** dialog box, click **Local (direct connect) port** and then click **Next** to open the **Drivers** dialog box.

In the **Printer Port** dialog box, click **New TCP/IP Port** and then click **Next** to open the **Specify TCP/IP Port** dialog box. This dialog box 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.

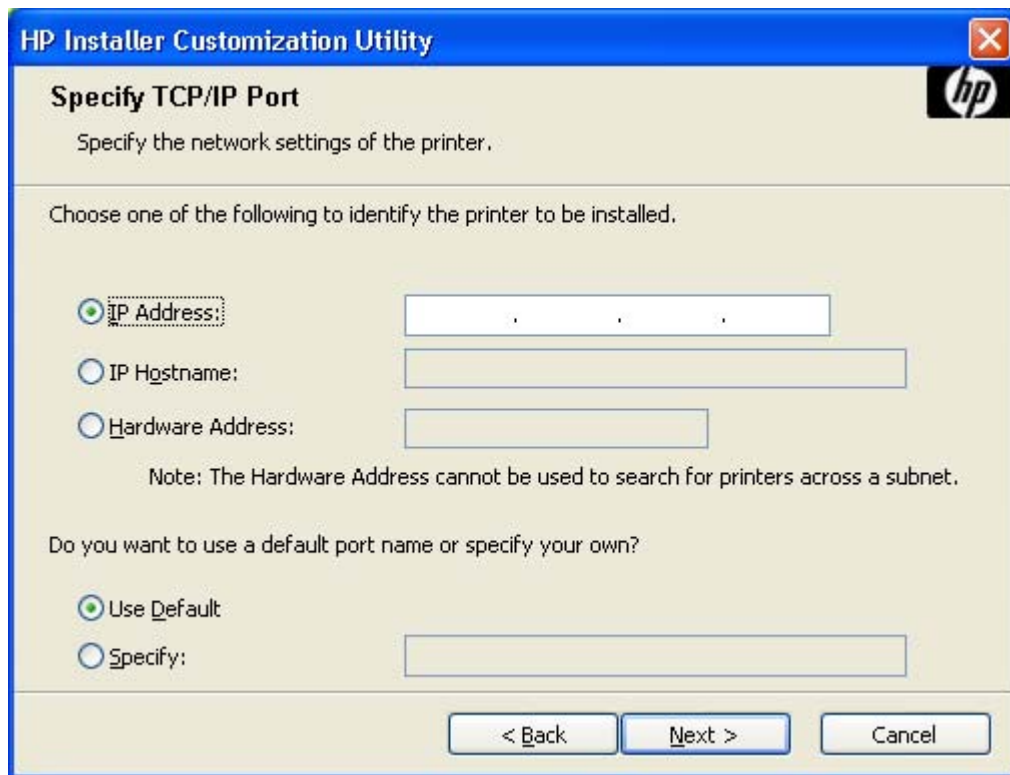


Figure 3-37 Specify TCP/IP Port dialog box

Click **IP Address** to make the field available for typing the TCP/IP address for the device. Only numerals are allowed in this field. If this option is selected, type at least one digit in the **IP Address** field to prevent an error message from appearing and prompting for a valid IP address.

Click **IP Hostname** to make the field available for typing the IP hostname for the device. Any characters are allowed in this field, but an error message appears if spaces are included in the field. If this option is selected, type at least one character in the **IP Hostname** field to prevent an error message from appearing and prompting for a valid IP hostname.

Click **Hardware Address** to make the field available for typing the hardware address of the device. Any characters are allowed in this field, but the entry is limited to 12 characters. If this option is selected, type at least one character in the **Hardware Address** field to prevent an error message from appearing and prompting for a valid hardware address.

After selecting any of the options, type the appropriate name or address and then click **Next**. The **Drivers** dialog box opens.

For each of the options in the **Specify TCP/IP Port** dialog box, either use the default port name (as specified in each of the three options) or specify a different name.

To use the default port name, select **Use Default** and click **Next**. To specify a different name, click **Specify**, type a port name of your choice, and click **Next**. The **Port Creation Options** dialog box appears.

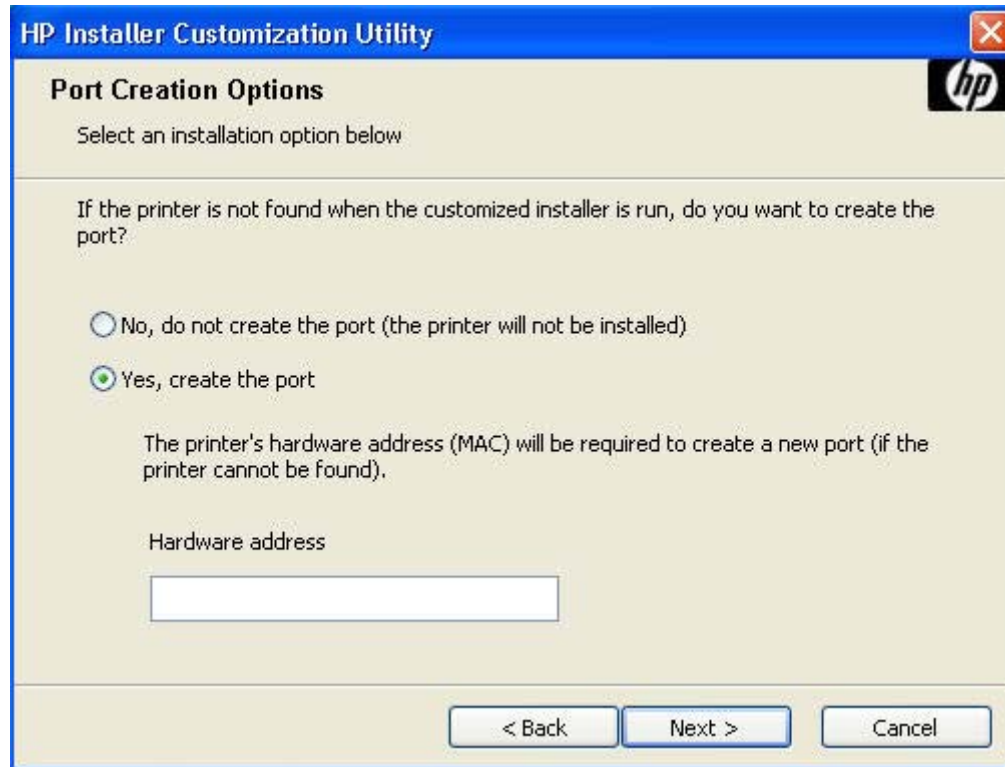


Figure 3-38 Port Creation Options dialog box

Click **No, do not create the port (the printer will not be installed)** if you do not want to create a port.

If you click **Yes, create the port**, type the device hardware address in the **Hardware Address** field and then click **Next** to open the **Drivers** dialog box.

If you click **Next** without typing a hardware address, a network setup error message appears, as shown in the following figure.



Figure 3-39 Please enter a Hardware address: Network Setup Error dialog box



NOTE To print a configuration page to see the hardware address, see [Print the configuration page](#).

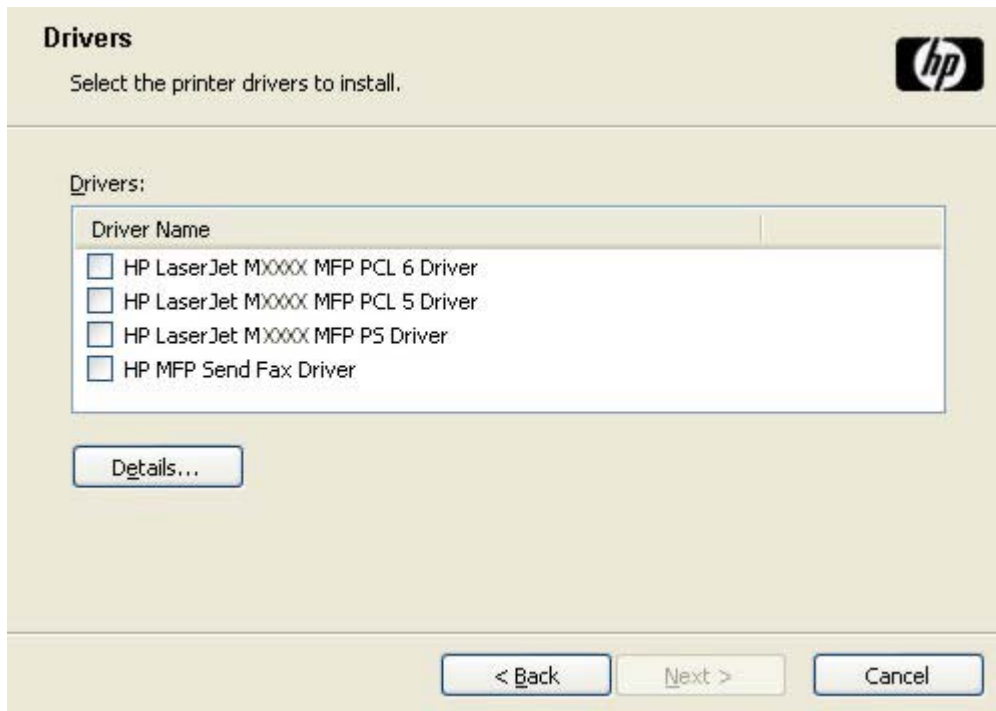


Figure 3-40 Drivers dialog box

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. Select the drivers to install.

To view details about the drivers, click **Details....** The driver **Details** dialog box appears.

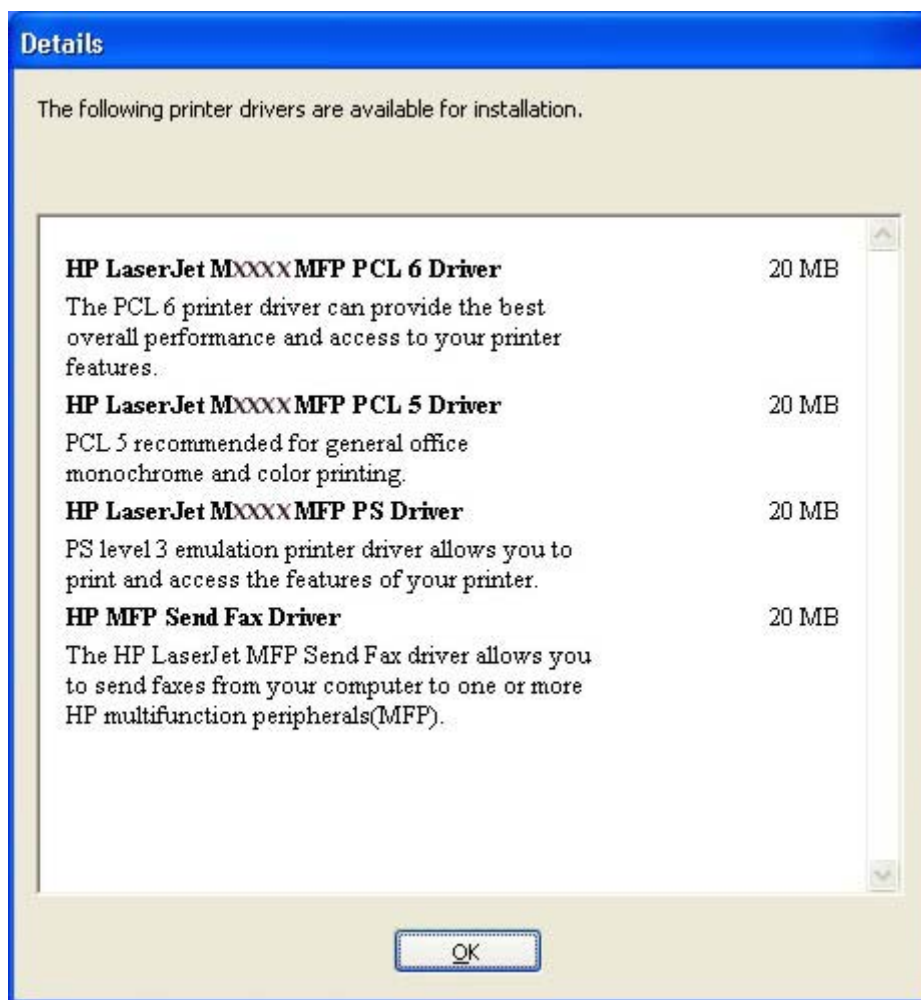


Figure 3-41 Driver **Details** dialog box

All the drivers that are available on the **Drivers** dialog box are described in the **Details** dialog box. Click **OK** to return to the **Drivers** dialog box.

On the **Drivers** dialog box, select one or more drivers, and click **Next** to continue the installation.

The **Driver Configuration** dialog box appears.

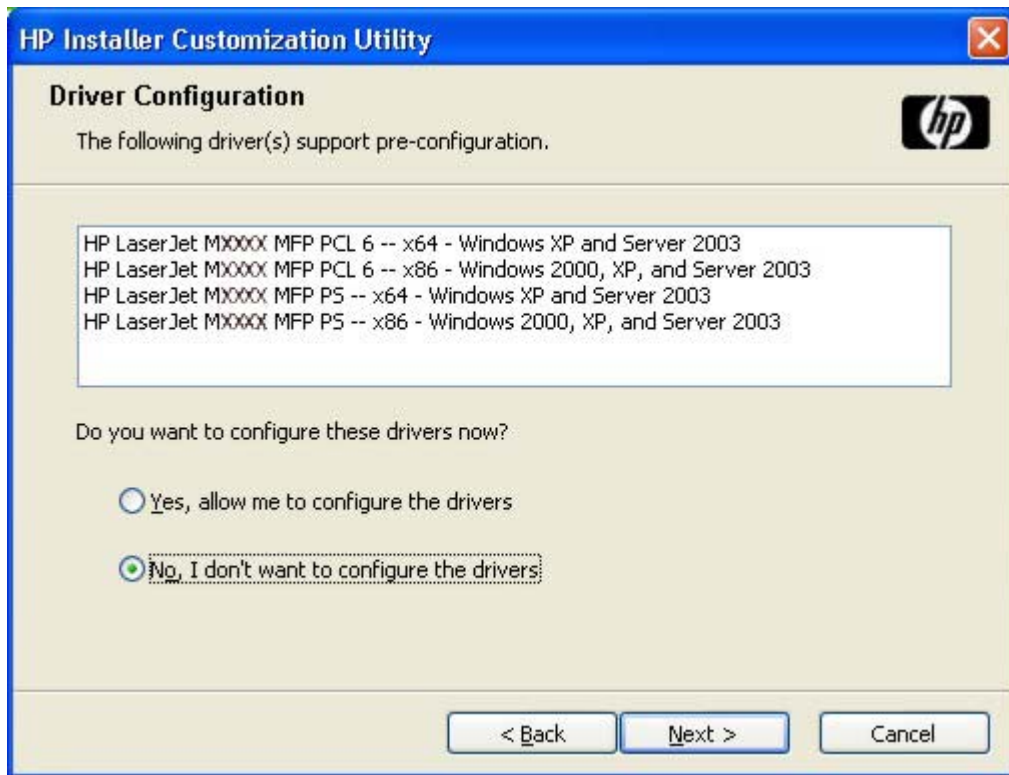


Figure 3-42 Driver Configuration dialog box

To preconfigure the driver settings, select **Yes, allow me to configure the drivers**, and click **Next**. The **Driver Configuration** dialog box changes to show two tabs:

- **Printing Preferences**
- **Device Settings**

These tabs are shown in the following figures.

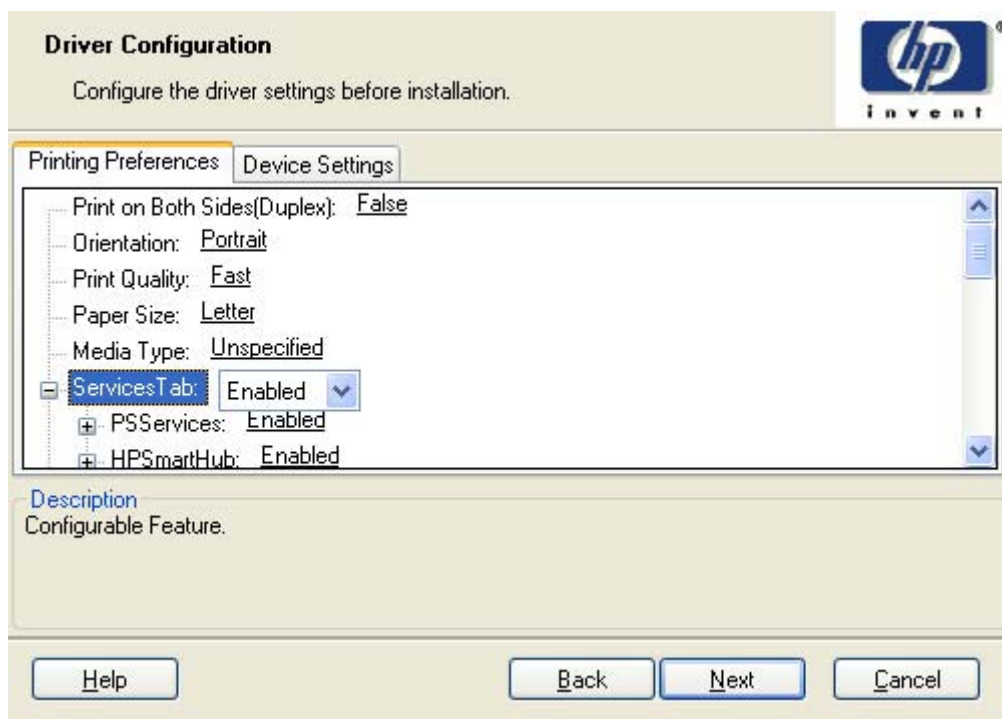


Figure 3-43 Printing Preferences tab

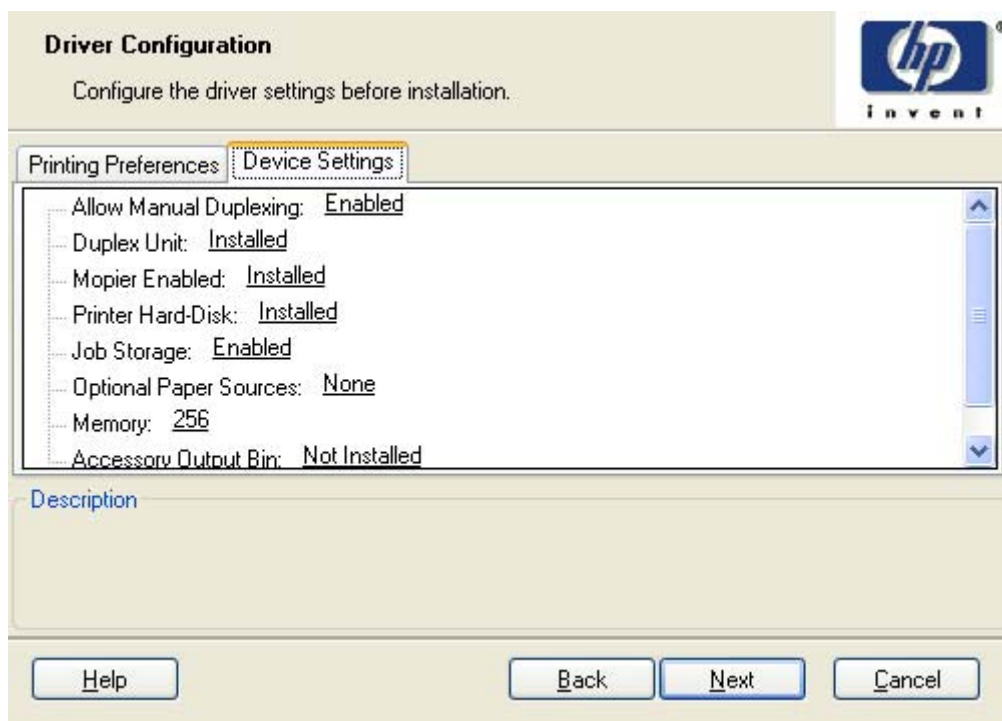


Figure 3-44 Device Settings tab

Select the settings on each tab. For each setting, a drop-down menu appears that lists the options. If the setting can be locked, a Lock check box appears beside the drop-down arrow. For example, the **Print on Both Sides (Duplex)** setting can be locked to ensure that users use double-sided printing.

In some instances, an **Invalid Selection** message might appear. For example, when **Left Edge Binding** is selected for the **Booklet Printing** option, an error message appears, as shown in the following figure.

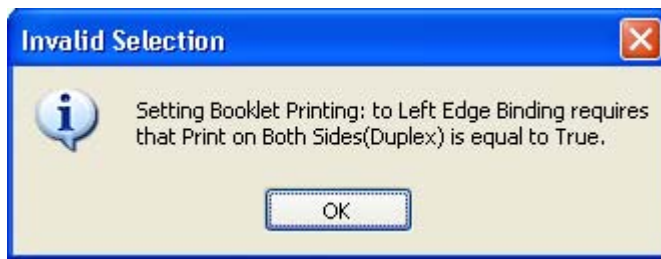


Figure 3-45 Invalid Selection dialog box

When the settings have been selected, click **Next** to continue the installation.

The **Additional Software** dialog appears.

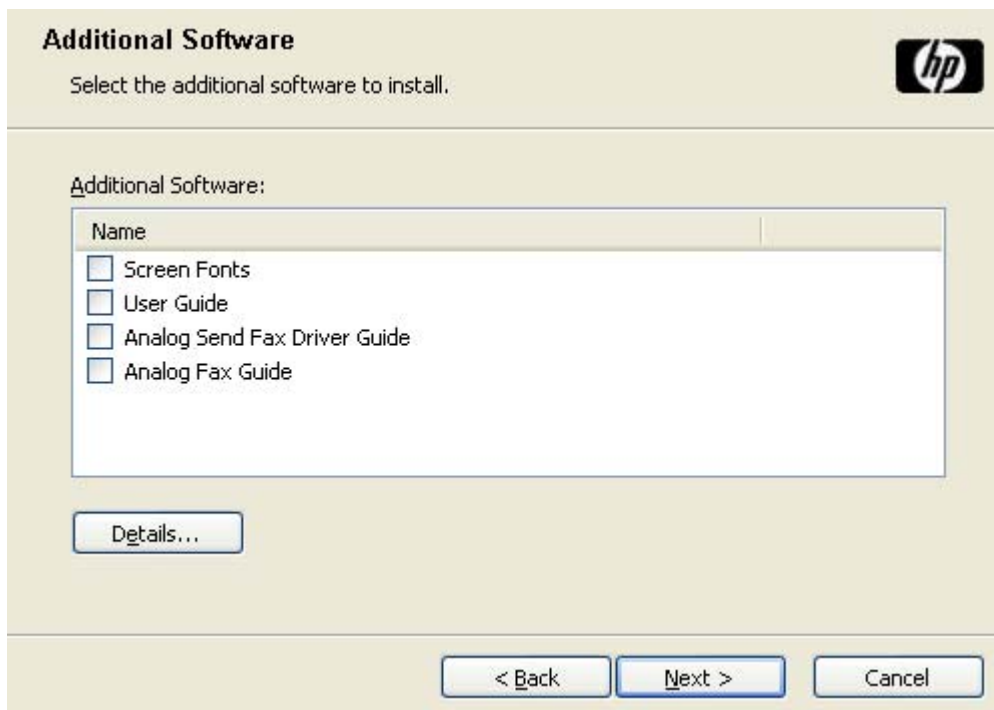


Figure 3-46 Additional Software dialog box

To view details about the additional software, click **Details**. The additional software **Details** dialog box appears.

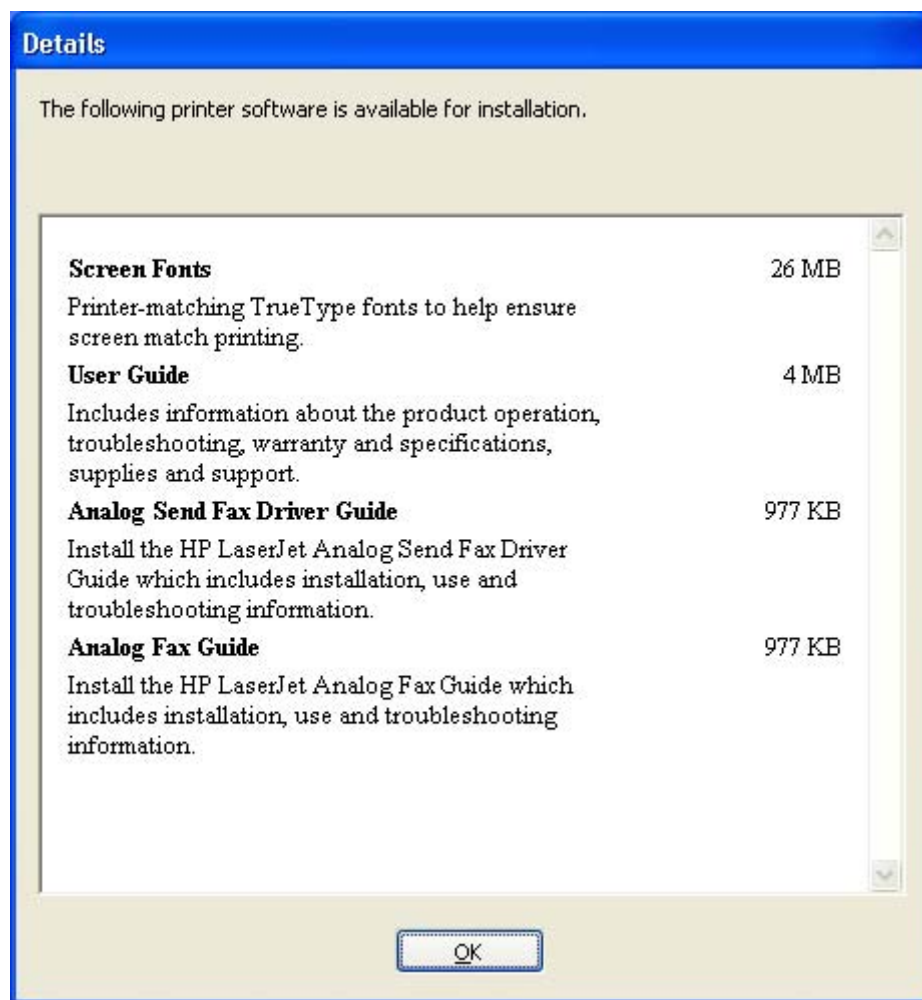


Figure 3-47 Additional software **Details** dialog box

All the software selected in the **Additional Software** dialog box is described in the **Details** dialog box. Click **OK** to return to the **Additional Software** dialog box.

In the **Additional Software** dialog box, click **Next** to open the **Custom Installer Location** dialog box, which is shown in the following figure.

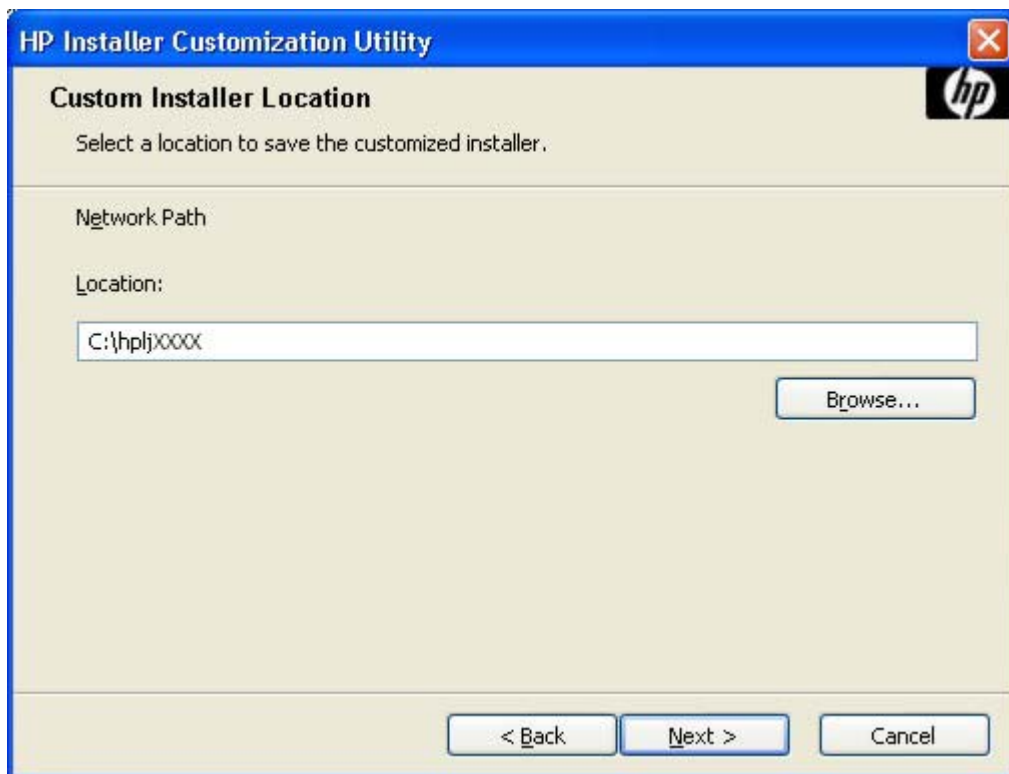


Figure 3-48 Custom Installer Location dialog box

Use the **Location:** text field to type a description of the physical location of the device. The field is large, but is limited as to the number of characters that it can accommodate.

To change the physical location of the device, click **Browse...**, navigate to the appropriate folder, and click **OK** to return to the **Custom Installer Location** dialog box.

Click **Next** to open the **Ready to Create Installer** dialog box, which is shown in the following figure.

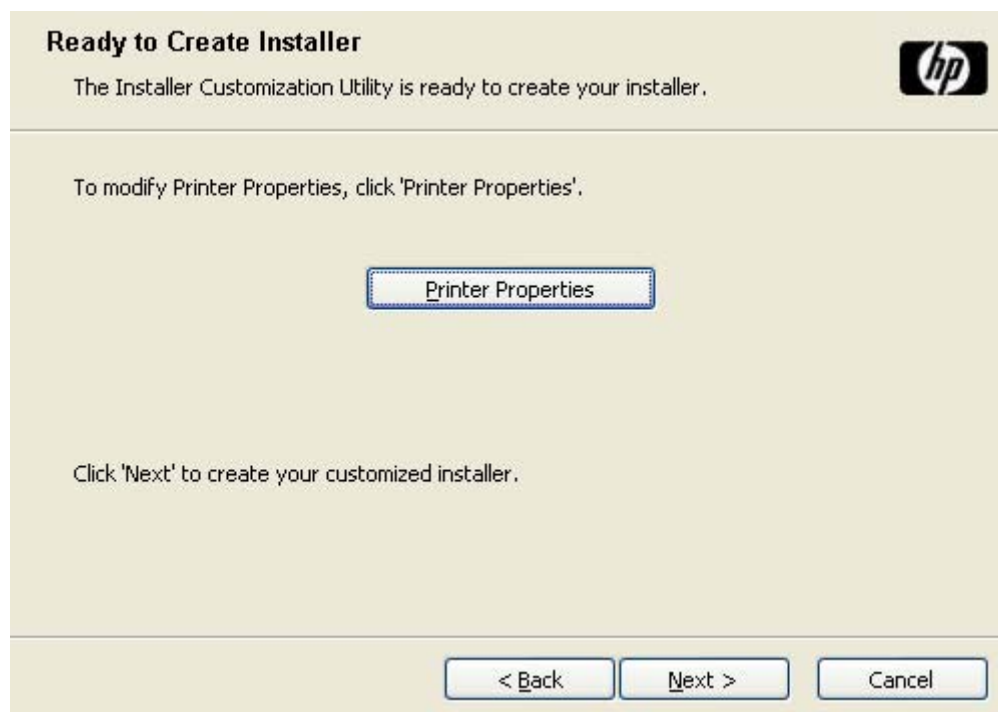


Figure 3-49 Ready to Create Installer dialog box



NOTE The location for the installer package defaults to `c:\<name of printer>`.

NOTE During installation, several files, including system files, are placed at the root of the directory that appears in the **Location** field. Be sure that enough space is available on the directory before continuing.

Click **Printer Properties** to open the **Printer Properties** dialog box.

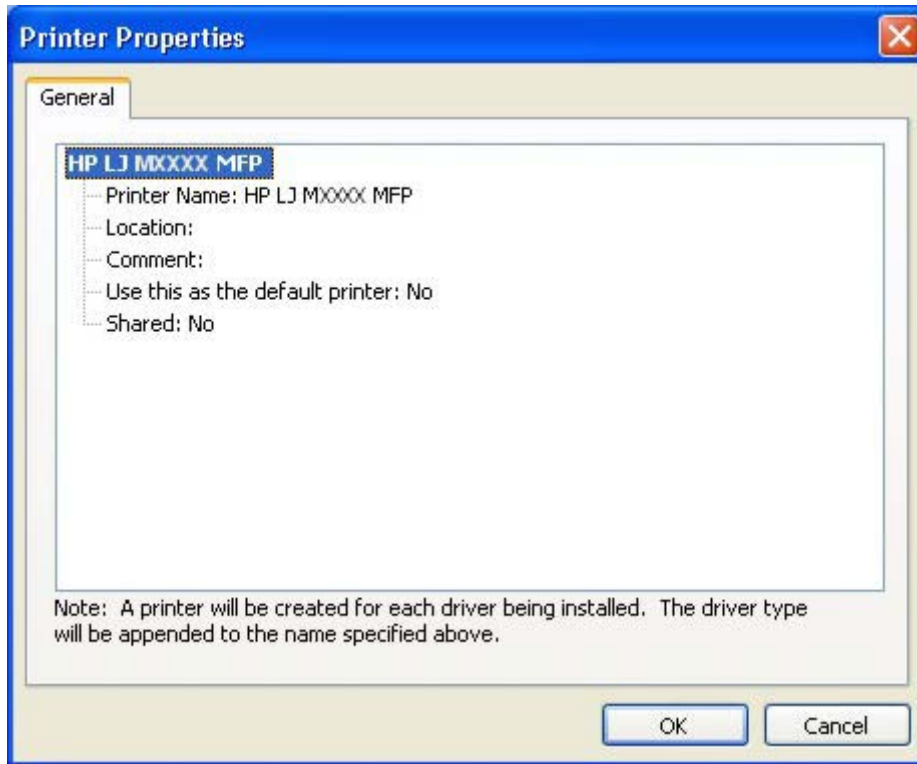


Figure 3-50 Printer Properties **General** tab

On the **General** tab, change the device name by typing a new name in the **Printer Name** field, as appropriate.

Use the **Location** and **Comment** fields to describe the device, or leave these fields blank.

If you want to use the HP LaserJet M4345 MFP as your default device, select **Yes** in the **Use this as the default printer** drop-down menu.

To share the device over a network, select **Yes** in the **Shared** drop-down menu. The default setting is **No**.

Click **OK** to return to the **Ready to Create Installer** dialog box.

In the **Ready to Create Installer** dialog box, click **Next** 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.

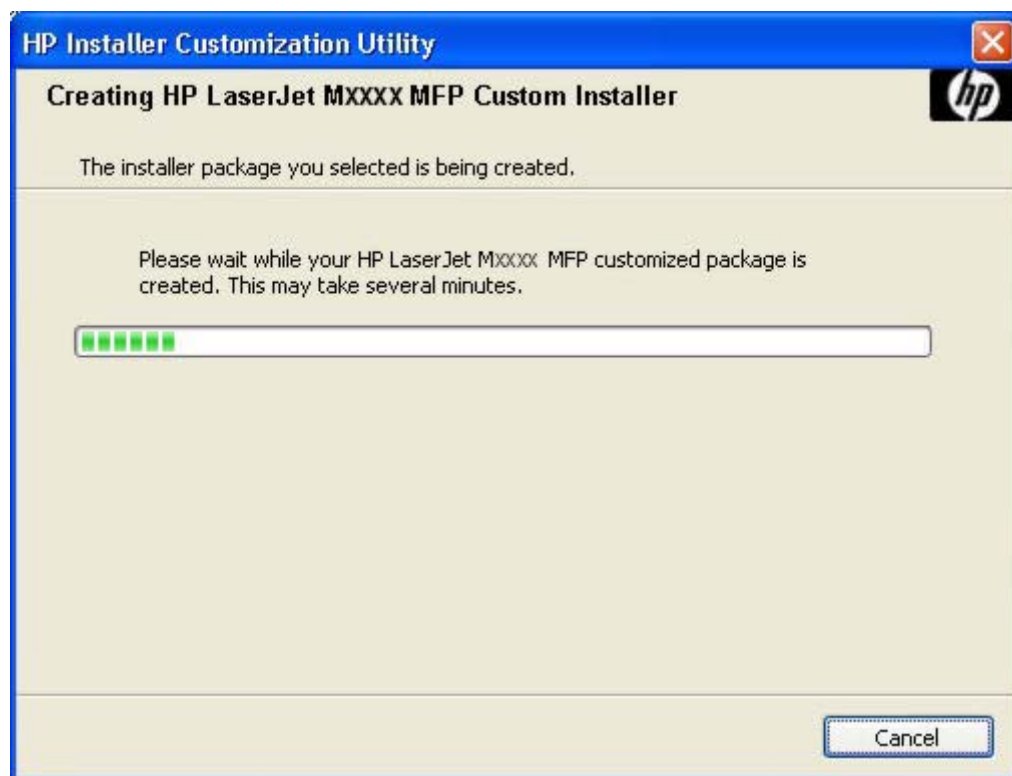


Figure 3-51 Installing dialog box

This dialog box remains on the screen until the status bar fills.

Click **Cancel** to close the Installer Customization Wizard without creating the customized printing-system software package.

When the creation is complete, the **Finish** dialog box appears, as shown in the following figure.

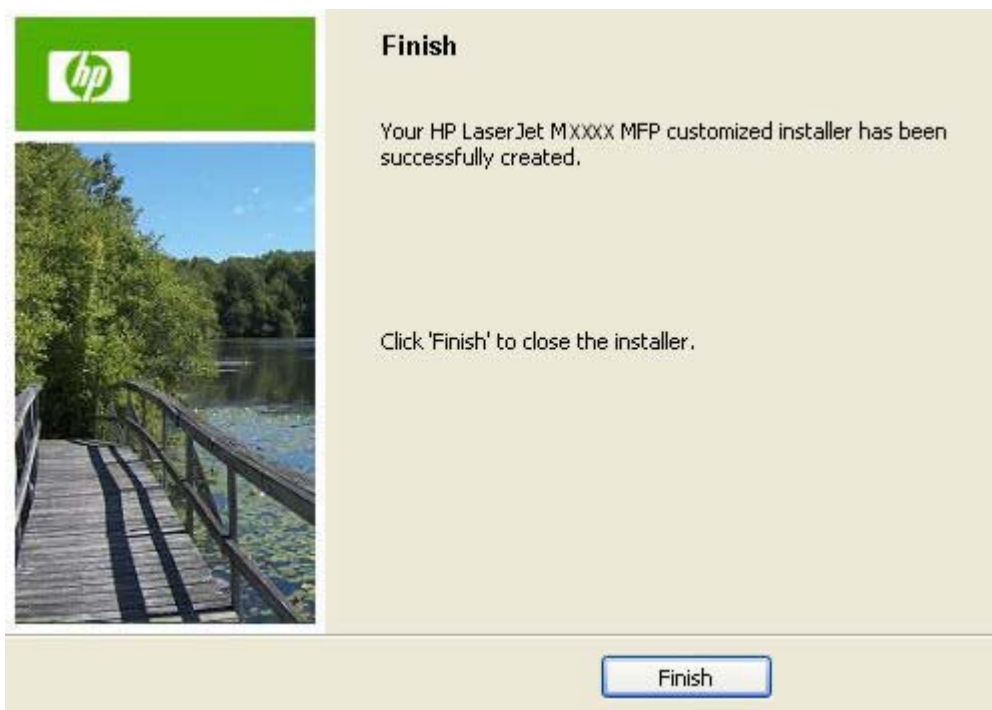


Figure 3-52 Finish dialog box

Click **Finish** to close the **Finish** dialog box and exit the Installer Customization Wizard.

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 selected features and options. The installation package is run silently so that it requires no user interaction. This installation method is useful when using the default selections that the installer provides or when running 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, because spaces prevent the SETUP.EXE file from passing to the installer package.

The end-user cannot customize the command-line silent installer. It installs the printing-system components specified during package creation.

For more information (including the exact content for replacing entries in the RESPONSE.INI file), see the *Installer Customization Wizard Readme*. (See [Installer Customization Wizard Readme](#).)

Point and Print installation for Windows 2000, Windows XP, and Windows Server 2003

Use the following information to install a print driver through the Microsoft Point-and-Print function when you do not connect directly to the device 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 MS Windows operating systems, not of HP print drivers.

Administrator privileges are necessary to install the print driver on a Windows 2000, Windows XP, or Windows Server 2003 operating system.

In a homogenous operating system environment (one in which all of the clients and servers are running in 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.

Set a default printer

This section applies to the Windows 2000, Windows XP, and Windows Server 2003 operating systems.

1. In Windows 2000, click **Start**, click **Settings**, and then click **Printers**.

In Windows XP and Windows Server 2003, click **Start**, click **Control Panel**, and then click **Printers and Faxes** (Windows XP Professional) or **Printers and other hardware devices** (Windows XP Home).

2. Right-click the device to set as the default device.
3. Click **Set As Default**. A check mark appears next to the menu option.

Fax-driver install instructions

The HP Send Fax driver software is for users who want to send fax jobs from their computer to their MFP over a network without visiting the MFP. The driver is installed on the client computer.

This document provides information about the HP Send Fax driver that is used with the HP MFP Analog Fax Accessory 300 when it is installed in specific HP LaserJet M4345 MFPs. The fax accessory might be factory installed (bundled) or could be installed as an accessory, depending on the HP LaserJet M4345 MFP model.

The following operating systems support this driver:

- Windows 2000
- Windows XP
- Windows Server 2003

For additional information, also see the *HP Send Fax Install Notes* or the *HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide*.

Minimum firmware

HP LaserJet M4345 MFPs require firmware support for the HP Send Fax driver. To support the driver, the HP LaserJet M4345 MFP must have the minimum firmware version installed. To determine if the HP LaserJet M4345 MFP has a minimum supporting firmware version, print a configuration page from the control panel to check the firmware datecode, and verify the **PC Send Fax** menu item appears in the control panel.

To print a configuration page:

1. Touch **Administration**.
2. Touch **Information**.
3. Touch **Configuration/Status Pages**.
4. Touch **Configuration Page**.
5. Touch **Print**.

The firmware datecode is listed in the **Device Information** section of the configuration page.

To ensure the **PC Send Fax** menu item is enabled:

1. On the control panel, touch **Administration**.
2. Scroll to and touch **Initial Setup**.
3. Scroll to and touch **Fax Setup**.
4. Scroll to and touch **PC Fax Send**. If **PC Fax Send** does not appear, update the firmware.
5. Touch **Enabled**.
6. Touch **Save**.

To update the firmware, see [Remote firmware updates](#). After it is updated, or if firmware is already current, install the HP Send Fax driver.

Install the HP Send Fax driver on MS Windows

To install the fax driver, follow the instructions provided in [Print-driver installation instructions](#).

4 HP Send Fax driver

Introduction

The HP Send Fax driver allows the user to send faxes from a PC to one or more network connected MFPs. The HP Send Fax driver can be accessed by printing from an application and selecting **HP Send Fax driver** in the Print dialog box. Other settings in the driver are available by accessing the driver settings.

This document describes the options that are available for the HP Send Fax driver. These options are located on the dialog box tabs that are displayed through the driver **Properties**, **Printing Defaults**, **Printing Preferences**, and **Document Properties**.

Most of the tabs and options available on these driver dialog boxes are standard Windows print settings and selections. Only the settings and selections specific to the HP Send Fax driver are covered.

Topics:

- [Access to the HP Send Fax driver](#)
- [Help system](#)
- [Driver Properties tab features](#)
- [Printing Defaults, Printing Preferences, Document Properties tab features](#)



NOTE For information about installing, configuring, and using the HP Send Fax driver, refer to the *HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide* available on the printing-system CD or on the Web at:

www.hp.com/support/ljm4345mfp

NOTE For information on sending faxes directly from the device control panel, see the *HP LaserJet MFP Analog Fax Accessory 300 Fax Guide*.

Access to the HP Send Fax driver

There are multiple access points to the various settings and preferences for the HP Send Fax driver. The primary interface is the driver **Properties** dialog box. There are also **Printing Defaults**, **Printing Preferences**, and **Document Properties** dialog boxes.

Driver Properties 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. Click **Settings**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.

The following **Properties** fax-driver tabs are available:

- **General**
- **Sharing**
- **Ports**
- **Advanced**
- **Color Management**
- **Security**
- **Device Settings**
- **About**

In addition to the HP Send Fax driver **Properties**, there are three other dialog boxes associated with the HP Send Fax driver. These are **Printing Defaults**, **Printing Preferences**, and **Document Properties**. They look identical but have different uses. This table describes how they are accessed and their function.

Table 4-1 Printing Defaults, Printing Preferences, Document Properties

Accessed from:	Dialog box title	Description
Printers and Faxes folder, right-click Properties, Advanced tab, Printing Defaults button.	HP MFP Send Fax Printing Defaults	Sets default values that apply to all sharing users of the HP Send Fax driver (for example, through a shared device)

Table 4-1 Printing Defaults, Printing Preferences, Document Properties (continued)

Printers and Faxes folder, right-click Properties, General tab, Printing Preferences button.	HP MFP Send Fax Printing Preferences	Sets default values that apply to the local user of the HP Send Fax driver
OR		
Printing and Faxes folder, right-click Printing Preferences.		
SW program application Print dialog box, Properties button	HP MFP Send Fax Document Properties	Applies to software program only; changes lost after application is closed

Printing Defaults, Printing Preferences, and Document Properties all have the same three tabs:

- **Advanced**
- **Paper/Quality**
- **Services**

Printing Defaults tabs

To gain access to the HP Send Fax driver **Printing Defaults** tabs, follow these steps:

1. Click **File**.
2. Click **Print**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click the **Advanced** tab.
7. Click the **Printing Defaults** button.

The appearance and names of the fax driver tabs can vary, depending on the operating system.

Printing Preferences tabs

To gain access to the HP Send Fax driver **Printing Preferences** tabs, follow these steps:

1. Click **File**.
2. Click **Print**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click the **General** tab.
7. Click the **Printing Preferences** button.

OR

1. Click **File**.
2. Click **Print**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Printing Preferences**.

The appearance and names of the fax driver tab can vary, depending on the operating system.

Document Properties tabs

To gain access to the HP Send Fax driver **Document Properties** tabs from within most software programs, follow these steps:

1. Click **File**.
2. Click **Print**.
3. In the printer name drop-down list, select the **HP Send Fax driver**.
4. Click **Properties**.

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

Help system

The HP Send Fax driver includes a full-featured Help system to provide assistance with printing and configuration options.

Windows provides a Help system that gives basic information about a setting/function on the driver **Properties** and associated dialog boxes. This help information is not customized specifically for the HP Send Fax driver, and thus the descriptions may be more applicable for print applications than the HP Send Fax driver.

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 the driver tab or in a dialog box, a context-sensitive Help message appears.

Driver Properties tab features

- [General tab](#)
- [Sharing tab](#)
- [Ports tab](#)
- [Advanced tab](#)
- [Device Settings tab](#)
- [About tab](#)

General tab

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

1. Click **Start**.
2. Click **Settings**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click the **General** tab.

The **General** tab provides the following controls for the HP Send Fax driver.

- Change the driver name in the box next to the printer icon.
- Specify the physical location of the device in the **Location:** field. This location is displayed in the **Printers and Faxes** folder.
- Enter a comment about the device in the **Comment:** field.
- Click the **Printing Preferences** button to open the **Printing Preferences** dialog box.
- Click the **Print Test Page** button to open the HP Send Fax driver user interface for sending a fax.

Sharing tab

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

1. Click **Start**.
2. Click **Settings**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.

5. Click **Properties**.
6. Click the **Sharing** tab.

The **Sharing** tab provides the following controls for the HP Send Fax driver.

- Click **Share this printer** to share the HP Send Fax driver. The **Share Name** must be entered to enable this feature.
- Click **Additional Drivers** to share the HP Send Fax driver in other operating system environments. (Only Windows 2000/Windows XP and x64 Windows XP/Windows Server 2003.)

Ports tab

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

1. Click **Start**.
2. Click **Settings**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click the **Ports** tab.

The **Ports** tab provides the following controls for the HP Send Fax driver.

- Modify the HP Send Fax driver port by clicking **Add Port**, **Delete Port**, or **Configure Port**.
- Click **Enable Printer Pooling** to allow the HP Send Fax job to be sent to multiple devices.

Advanced tab

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

1. Click **Start**.
2. Click **Settings**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click the **Advanced** tab.

The **Advanced** tab provides the following controls for the HP Send Fax driver.

- Click **Always Available** to send the Send Fax job immediately. (This is the default setting.)
- Click **Available from** to hold the Send Fax job in the spooler during the unavailable time span. The Send Fax job releases during the available time span.

Configure the available time span by clicking the up and down arrows next to the time fields.

- Click the **New Driver** button to update the existing HP Send Fax driver. See [Upgrade the HP Send Fax driver](#) for more information.
- Ensure the following default spooler settings are selected:
 - **Spool print documents so program finishes printing faster**
 - **Start printing immediately**
 - **Print spooled documents first**
 - **Enable advanced printing features**



NOTE Although the spooler settings are active, they should not be changed from the default settings for the HP Send Fax driver.

- Click the **Printing Defaults** button to open the **Printing Defaults** dialog box.
- Click the **Print Processor** button to open the **Print Processor** dialog box. Do not change the default settings.
- Click the **Separator Page** button to create a Separator page for the Send Fax job.



NOTE The **Separator Page** feature is not supported for the HP Send Fax driver.

Upgrade the HP Send Fax driver

Use this method of upgrading the HP Send Fax driver to retain the phone book that was established with an earlier HP Send Fax driver version.



NOTE The newer versions of the HP Send Fax driver has a phone book export feature.

To update the HP Send Fax driver, follow these steps:

1. Click **Start**.
2. Click **Settings**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click the **Advanced** tab.
7. Click **New Driver** and follow the instructions in the **Add Printer Driver Wizard**. (See [Install drivers by using Add Printer](#).)

Device Settings tab

To gain access to the **Device Settings** tab, follow these steps:

1. Click **Start**.
2. Click **Settings**.

3. Click **Printers** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click **Device Settings**.

The following figure shows the **Device Settings** tab.

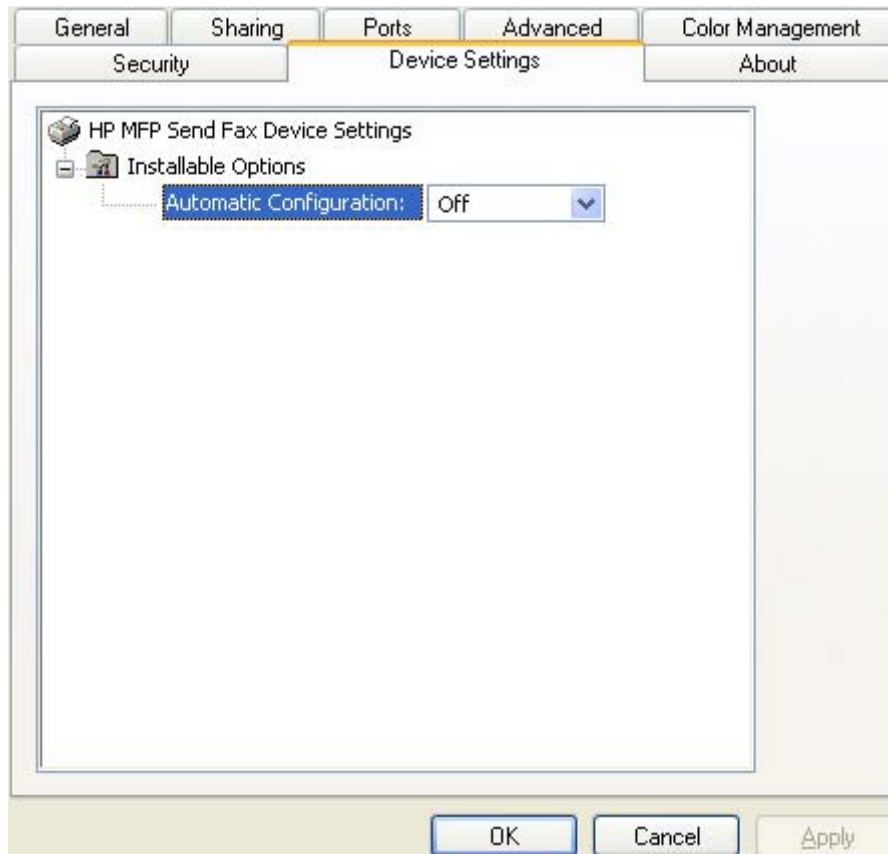


Figure 4-1 Device Settings tab

The **Device Settings** tab provides the following controls for the HP Send Fax driver.

- **Installable Options.** The **Automatic Configuration** pull-down menu can be used to perform an **Update Now** function.

This will cause the HP Send Fax driver to query the device for any setting or configuration changes. Normally, this is not required as the driver will automatically perform this function each time the driver is opened.

The default setting is **Off**. After an automatic configuration is performed, the setting returns to **Off**.

See the *HP LaserJet MFP Analog Fax Accessory 300 Send Fax Driver Guide* for more information.

About tab

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

1. Click **Start**.
2. Click **Settings**.
3. Click **Printers** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device 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 parenthesis after the model name) together with specific information about each of the components. The information varies according to the HP LaserJet M4345 MFP model number, driver, date, and versions.

The following figure shows the **About** tab.

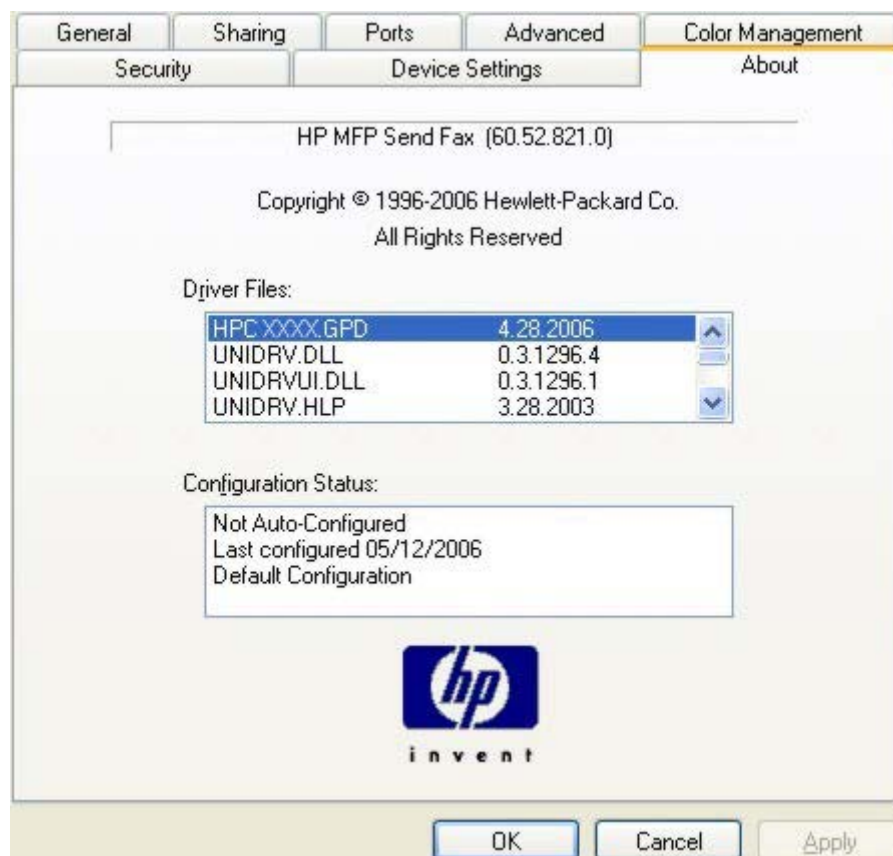


Figure 4-2 About tab

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

To determine the latest version, compare the overall build number (in parenthesis after the model name) and the GPD number (in the Driver Files: field). If the overall build number has increased, this is the latest version of the driver.

If the overall build number is the same, check the version number of the GPD file. The driver that has the highest GPD version number is the latest driver.

Printing Defaults, Printing Preferences, Document Properties tab features

For information about accessing each of these dialog boxes and the differences between them, see [Table 4-1 Printing Defaults, Printing Preferences, Document Properties](#).

Topics:

- [Advanced tab](#)
- [Paper/Quality tab](#)
- [Services tab](#)

Advanced tab

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

1. Click **Start**.
2. Click **Settings**.
3. Click **Printers** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Printing Preferences**.
6. Click the **Advanced** tab.

Use the **Advanced** tab to enable or disable special controls that are not commonly used, as well as to control features such as 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.

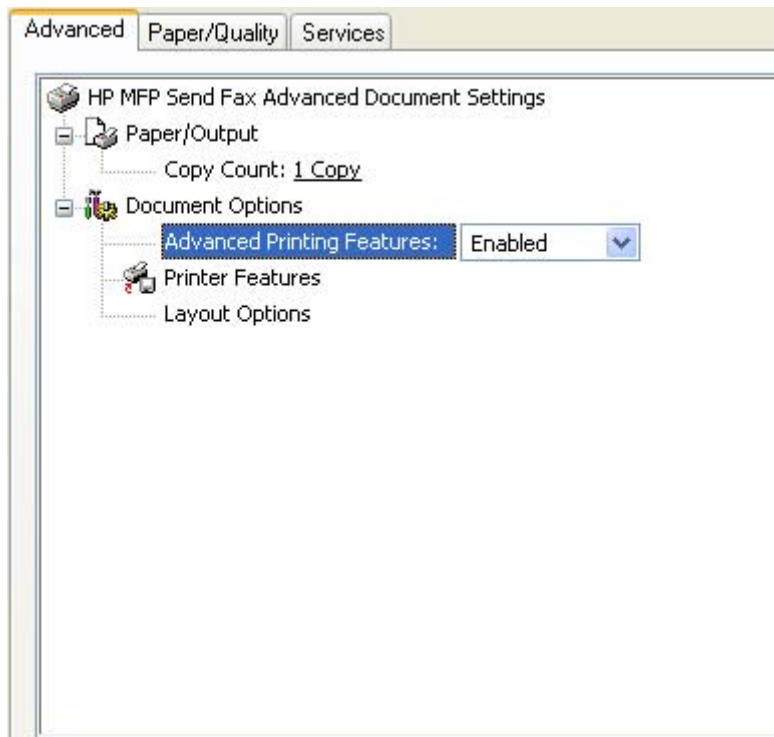


Figure 4-3 Advanced tab

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

- [Paper/Output](#)
- [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. For the HP Send Fax driver, this will cause additional fax jobs to be sent if the number of copies is changed to any number greater than 1. The default setting is 1.

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.



NOTE The **Collated** setting is not applicable to the HP Send Fax driver.

Document Options

The **Document Options** setting contains the following controls:

- **Advanced Printing Features**
- **Printer Features**
- **Layout Options**

Advanced Printing Features

This feature is not applicable to the HP Send Fax driver. The **Advanced Printing Features** setting should be **Enabled** as default.

Paper/Quality tab

To gain access to the **Paper/Quality** tab, follow these steps:

1. Click **Start**.
2. Click **Settings**.
3. Click **Printers** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Printing Preferences**.
6. Click **Paper/Quality**.

Use the **Paper/Quality** tab to specify the size, and orientation of the media. These will be applied to Send Fax jobs.

The following figure shows the **Paper/Quality** tab.

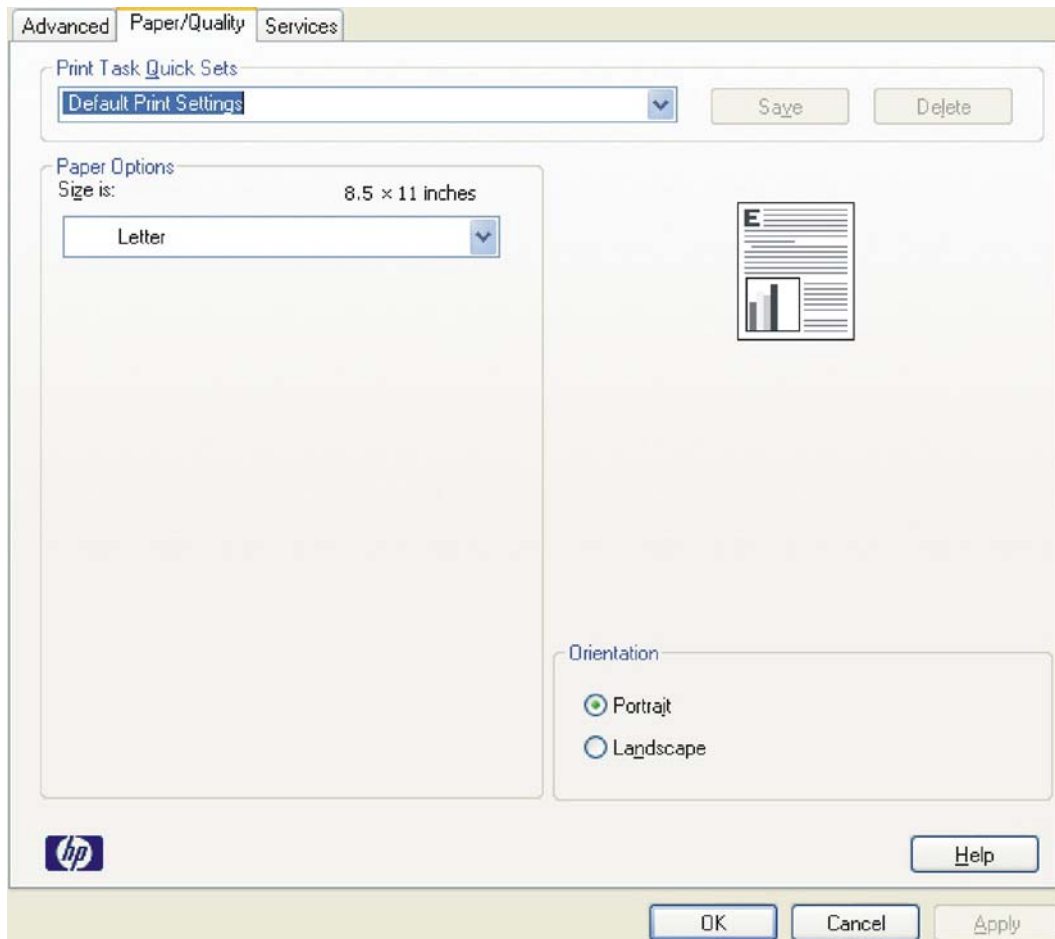


Figure 4-4 Paper/Quality tab

The **Paper/Quality** tab contains the following control sets:

- [Print Task Quick Sets](#)
- [Paper Options](#)
- [Document preview image](#)
- [Orientation](#)

Print Task Quick Sets

The first group box in the upper portion of the **Paper/Quality** tab is **Print Task Quick Sets**. Use the **Print Task Quick Sets** setting to store the current combination of driver settings. **Print Task Quick Sets** are either preset by network-administrator settings or user-defined printing specifications (such as media size). The **Print Task Quick Sets** control does **not** appear on the driver **Properties** page.



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.

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

- **Default 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 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 by clicking **OK**.

When you select **Default Print Settings**, the following defaults are restored:

- **Paper Options** — **Size is:** Letter
- **Orientation** — Portrait

By default, the **Print Task Quick Sets** menu is set to **Default Print Settings**. When you change any of the default settings and you want to save the configuration as a Print Task Quick Set, highlight the words **Default Print Settings**, 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 You can store a maximum of 25 Print Task Quick Sets on a particular system. If you attempt to save more, a message appears that states: **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 on the **Paper/Quality** tab apply to all of the pages of the document.

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

- **Size is:**

Size is:

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

When you move the cursor over the dimensions label, the 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.

The media size will be applied to the Send Fax job; no printing will occur.

For information about media sizes, see the [Media attributes](#) section of this STR.

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.

Move the cursor over the document preview image to change the cursor from an arrow to a gloved hand. Toggle between portrait and landscape page orientation by clicking the image.

Orientation

Orientation refers to the layout of the image on the page, and does not affect the way that media feeds into the device. You can specify the orientation of the fax job. The two available orientations are portrait and landscape. The default orientation is **Portrait**.



NOTE Nearly all software programs establish the orientation for the 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 two 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.

You can toggle orientation between portrait and landscape by clicking the document preview image.

Services tab

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

1. Click **Start**.
2. Click **Settings**.
3. Click **Printers** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Printing Preferences**.
6. Click **Services**.

The **Services** tab is shown in the following figure.

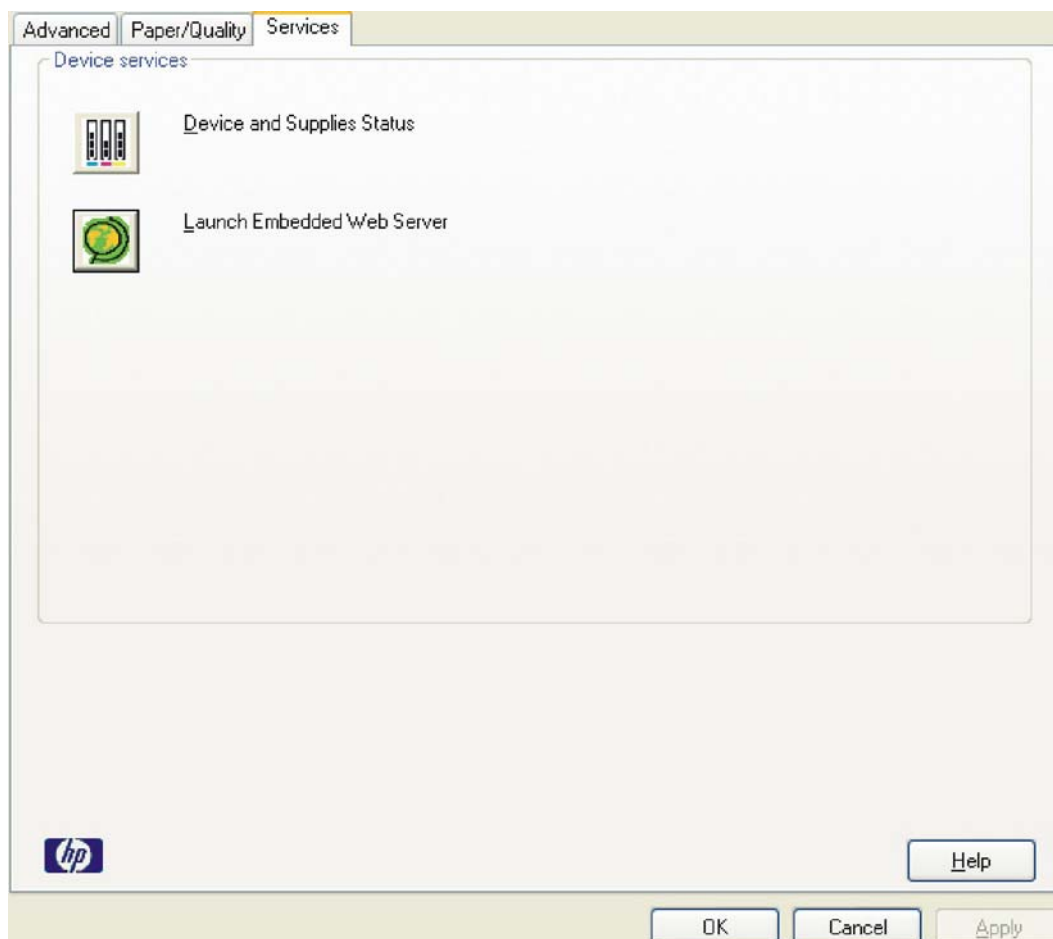


Figure 4-5 Services tab

The **Services** tab contains the following features:

- [Device and Supplies Status](#)
- [Launch Embedded Web Server](#)



NOTE The **Services** tab options only appear if the HP Send Fax driver is connected to a valid TCP/IP port.

Device and Supplies Status

Click the **Device and Supplies status** icon to open the **Device Status** screen of the HP EWS.

Launch Embedded Web Server

Click the **Launch Embedded Web Server** to open the HP EWS.

Refer to the HP Embedded Web Server User Guide for additional information about the HP EWS.

5 HP PCL 6, PCL 5, and PS Emulation drivers for MS Windows

Introduction

This document describes the features of the HP PCL 6 driver, the HP PCL 5 driver, and the HP Postscript 3 Emulation driver (PS Emulation driver) for Windows 2000, Windows XP (32-bit and 64-bit), and Windows Server 2003 (32-bit and 64-bit).

Control print jobs from any of several places:

- Device control panel
- Software-program print-dialog box
- Driver user interface

Generally, for features that are duplicated in more than one location (for instance, select the media input tray), settings that are established in the software program take precedence over print-driver settings. Print-driver settings, in turn, override device control-panel settings.

When installing the print-system software in Windows 2000, Windows XP, and Windows Server 2003, the HP PCL 6 driver is installed by default. The HP PCL 5 and PS emulation drivers 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, PCL 5, and PS emulation drivers.

This document also describes differences between the HP PCL 6, PCL 5, and PS emulation drivers. Unless otherwise noted, features described here apply to all three.

Topics:

- [Access to print drivers in Windows 2000, Windows XP, and Windows Server 2003](#)
- [Help system](#)
- [Advanced tab features](#)
- [Paper/Quality tab features](#)
- [Effects tab features](#)
- [Finishing tab features](#)
- [Output tab features](#)
- [Job Storage tab features](#)

- [Services tab features](#)
- [Device Settings tab features](#)
- [About tab features](#)

Access to print drivers in Windows 2000, Windows XP, and Windows Server 2003

Depending on the operating system on which the print drivers are installed, gain access to the print drivers and different print-driver interfaces is available in several ways:

- [Device control panel](#)
- [Software-program print-dialog box](#)
- [Print-driver user interface](#)

Device control panel

For information about controlling print jobs from the device control panel, see the *HP LaserJet M4345 MFP User Guide* that came with the device, or download it from following Web site:

www.hp.com/support/ljm4345mfp

Software-program print-dialog box

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.

Print-driver user interface

Control the drivers directly from the **Printers** folder for access to two sets of driver tabs: the **Printing Preferences** tabs and the **Properties** tabs. The settings on the **Printing Preferences** driver tabs control the driver default settings for each user's profile. Configure installable options on the **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 device name.
5. Click **Printing Preferences**.

The following **Printing Preferences** print-driver tabs are available:

- **Advanced**
- **Paper/Quality**
- **Effects**
- **Finishing**
- **Output**
- **Job Storage**
- **Services**

All of these tabs are device-specific.

The **Job Storage** tab is available only when the **Job Storage** setting is **Enabled** on the tab. To make the settings take effect, click **OK** on the **Device Settings** tab.

The **Output** tab is available only when an output device is connected to the HP LaserJet M4345 MFP.

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 device name.
5. Click **Properties**.

The following **Properties** print-driver tabs are available:

- **General**
- **Sharing**
- **Ports**
- **Advanced**
- **Security**
- **Device Settings**
- **About**

Only device-specific HP driver tabs are described in this document; the other driver tabs are part of the operating system. The following **Properties** driver tabs are described in this document:

- **Device Settings**
- **About**

Help system

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

What's this? Help

Windows 2000, Windows XP, and Windows Server 2003 support What's this? Help. 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 (constraint) messages are unsolicited messages that appear in response to specific print-driver selections. These messages appear in response to selections that are illogical or impossible given the device capabilities 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 device to perform. Sending a job that has incompatible settings can lead to unexpected results. If print jobs do not print as expected, see the device documentation to ensure that the device has the expected capabilities.

In Windows 2000, Windows XP, and Windows Server 2003 operating environments, some technically invalid print-driver configurations result in warning messages when trying to save the conflicting settings in the driver. Duplexing, for example, is not possible when the Transparency media type is selected. The following figure shows an example of an **Incompatible Print Settings** message.

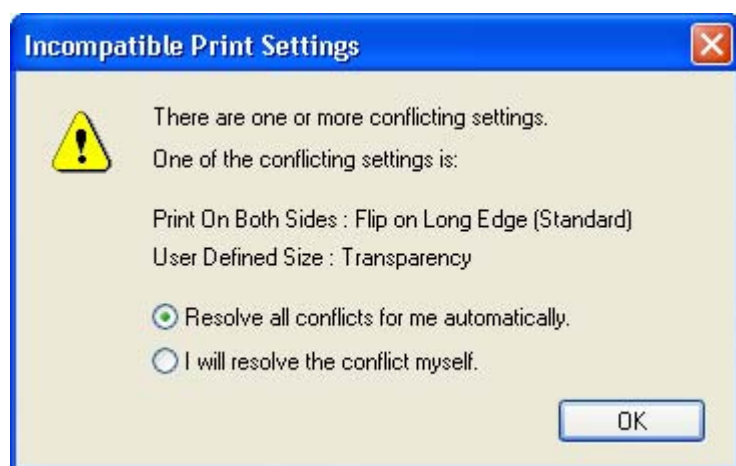


Figure 5-1 An Incompatible Print Settings message

To accept the change that was just made, click the **Resolve all conflicts for me automatically** option and then click **OK**. The driver resets the conflicting control to a setting that is compatible with the new value.

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 device.

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 device name.
5. Click **Printing Preferences**.
6. Click the **Advanced** tab.

Use the **Advanced** tab to change the layout of printed pages and to configure special controls that are not commonly used. Also use this tab 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.

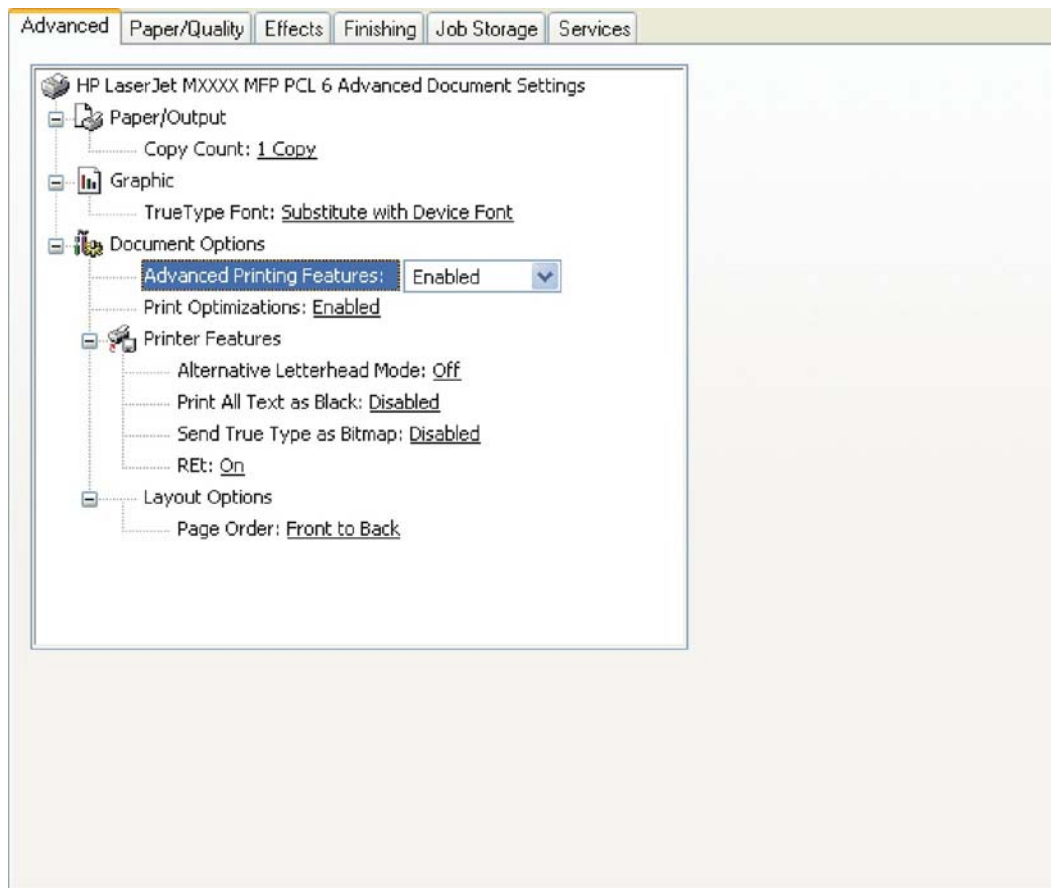


Figure 5-2 The default appearance of the **Advanced** tab

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 requested number of copies appears in the **Copy Count** option. 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. 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 the number of copies can be set in some software programs, conflicts between the software program 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 software program) appears in the other (such as the driver). For some software programs, this communication does not take place, and the copies values are treated independently. For example, setting 10 copies in the program and then setting 10 copies in the driver results in 100 copies (10 x 10) being printed. Set the number of copies in the software 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 on 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. Therefore, 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.

To obtain uncollated printed output, clear the **Collate** setting in *both* the driver and the software program.

Graphic

The **Graphic** setting contains the **True Type Font** control.

True Type Font

Use **Substitute with Device Font** (the default setting) to use equivalent printer fonts to print documents that contain TrueType fonts. This permits faster printing, but can eliminate 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 the device. For normal printing, leave the **Advanced Printing Features** setting at the default (**Enabled**). If compatibility problems occur, disable the feature. However, some advanced printing features might still be available in the print driver, even if they have been disabled. Selecting an advanced printing feature in the print driver that has been disabled on the **Advanced** tab automatically makes the feature available.

Print Optimizations



NOTE Print Optimization settings are available only in the HP PCL 6 and PCL 5 drivers. They are not available in the PS Emulation driver.

The default setting for **Print Optimizations** is **Enabled**. When this feature is enabled and the 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, 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 PS Emulation driver. They are not available in the HP PCL 6 and PCL 5 drivers.

Select one of the following settings in the **PostScript Output Options** drop-down menu:

- **Optimize for Speed.** This is the default setting.
- **Optimize for Portability.** Use this setting to create a file that conforms to the Adobe Document Structuring Conventions (ADSC). Each page of the document is a self-contained object. For example, this option is for creating a postscript file and printing it on a different device.
- **Encapsulated PostScript (EPS).** Use this setting to include the file as an image in another document that is to be printed from another program.
- **Archive format.** Use this option to create a postscript file that you can use later.

Select one of the following settings in the **TrueType Font Download** drop-down menu:

- **Automatic.** This is the default setting.
- **Outline.** Select this option if you want to download the TrueType font as a scalable outline font.
- **Bitmap.** Select this option to download the TrueType font as a bitmap font.
- **Native TrueType.** If the device is a TrueType rasterizer printer; select this option to download the TrueType font as an outline font.

Select one of the following settings in the **PostScript Language Level** drop-down menu:

- **3**
- **2**
- **1**

The default setting is **3**. It is usually better to select the highest number available, because it provides more features. In some instances, lower numbers might be necessary. For example, if you are printing a file to disk and that file is to be printed by someone who has a level-1 device, select **1**.

Select one of the following settings in the **Send PostScript Error Handler** drop-down menu:

- **Yes.** This is the default setting. When an error occurs in the print job, an error page is sent to the device.
- **No.** Select this setting if you do not want an error page to be printed when an error occurs.

Select one of the following settings in the **Negative Output** drop-down menu:

- **Yes.** Select this option to print a negative of the image by reversing the values for black and white.
- **No.** Print the image without reversing the values for black and white. This is the default setting.

Printer Features

The **Printer Features** setting contains the following controls:

- **Alternative Letterhead Mode.** (available only when an automatic duplexing unit is installed)

When selected, this option eliminates the need to flip or reload letterhead or preprinted paper in a tray, whether you are printing on one or both sides of the sheet. Load the paper as you would for printing on both sides.

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

- **Letterhead**
- **Preprinted**
- **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 TrueType as Bitmap.** (available only in the HP PCL 6 and PCL 5 drivers)

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. When **Enabled**, the driver sends TrueType fonts to the printer as outlines, which retains the standard format (outline) of the fonts.

- **Graphics Mode.** (available only in the HP PCL 5 driver)

Use the **Graphics Mode** feature to select one of the following settings:

- **Send Graphics as Vector.** Select this setting to send graphics to the device 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 device as images composed of individual dots. This setting might improve printing speed in some cases.

Layout Options

The **Layout Options** setting contains the **Page Order** setting.

Page Order specifies the order in which the pages of the 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 **Pages per Sheet** (on the **Finishing** tab) is 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 device 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. Also use this tab to specify different media selections for the front cover, first page, other pages, last page, and back cover of the document. The following figure shows the **Paper/Quality** tab.

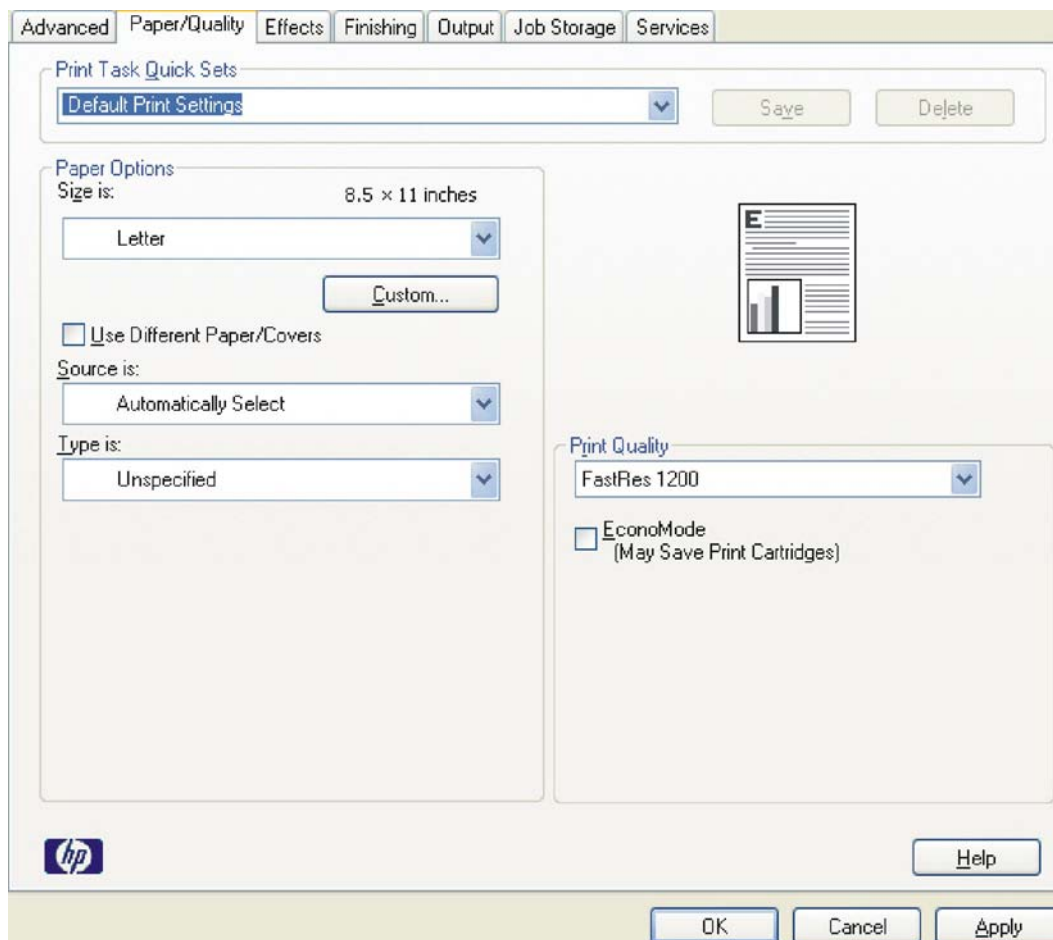


Figure 5-3 Paper/Quality tab

The **Paper/Quality** tab contains the following control sets:

- [Print Task Quick Sets](#)

- [Paper Options](#)
- [Use Different Paper/Covers](#)
- [Document preview image](#)
- [Print Quality](#)

Print Task Quick Sets

The first group box in the upper portion of the **Paper/Quality** tab is **Print Task Quick Sets**. Because they are all the same control, any change to the **Print Task Quick Sets** group box that is made on the **Paper/Quality** tab affects all the **Printing Preferences** driver tabs that have the **Print Task Quick Sets** setting:

- **Paper/Quality**
- **Effects**
- **Finishing**
- **Job Storage**

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.

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 a computer user last closed the printing **Properties** dialog box by clicking **OK**.

The following table shows the default settings for **Print Task Quick Sets**.

Table 5-1 Print Task Quick Set default values for the HP LaserJet M4345 MFP printer

Driver feature	Feature setting location	Default values for U.S. English Print Task Quick Sets	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 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
Message Angle (watermark)	Effects tab, Watermark Details dialog box (Click Edit for Watermark Details .)	Diagonal	Yes
Watermark message angle (angle)	Effects tab, Watermark Details dialog box (Click Edit for Watermark Details .)	Unavailable unless the Angle option is selected, 52 degrees	Yes
Name (watermark font)	Effects tab, Watermark Details dialog box, Font Attributes group box	Arial	Yes
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
Size (watermark font)	Effects tab, Watermark Details dialog box, Font Attributes group box	80	No

Table 5-1 Print Task Quick Set default values for the HP LaserJet M4345 MFP printer (continued)

Driver feature	Feature setting location	Default values for U.S. English Print Task Quick Sets	Preconfigurable ¹
Style (watermark font)	Effects tab, Watermark Details dialog box, Font Attributes group box	Regular	Yes
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
Economode	Paper/Quality tab, Print Quality dialog box	Available, unselected	Yes
Unlabeled group box	Job Storage tab	Status message: for example, Your job will be printed but not stored on the device	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
MS 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
Job Name	Job Storage tab, Job Name group box	Unavailable, Automatically selected	No

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.

User Guide Print Settings

The **User Guide Print Settings** option provides a Print Task Quick Set for optimal printing of the *HP LaserJet M4345 MFP 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, the **Print on Both Sides** check box is selected.
- On the **Finishing** tab, the **Flip Pages Up** check box is selected.
- 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**.

Default Print Settings

By default, the **Print Task Quick Sets** menu is set to **Default Print Settings**. To change any of the default settings on any of the **Printing Preferences** driver tabs and save the configuration as a Print Task Quick Set, highlight the words **Default Print Settings**, type the name for the 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.

A maximum of 25 Print Task Quick Sets can be stored on a particular system. If you attempt to save more, a message box appears: **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.

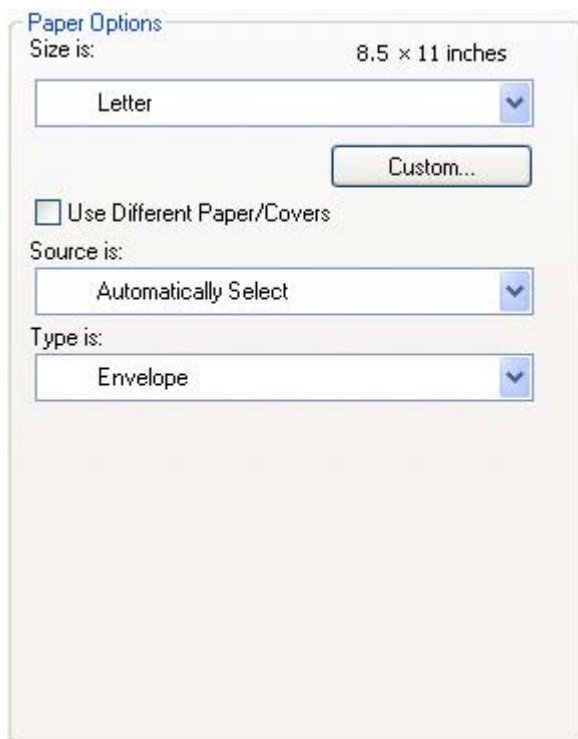


Figure 5-4 Paper Options group box

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.

Move the mouse cursor over the dimensions label to change the cursor 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 printing from software programs that do not include a media-size setting, such as NotePad, or when 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 device, a control-panel message appears that prompts you to load the media size or select another tray.

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.

Custom Paper Size

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

The **Custom Paper Size** dialog box for the HP LaserJet M4345 MFP, shown in the following figure, does not reflect the maximum media size that the HP LaserJet M4345 MFP supports.

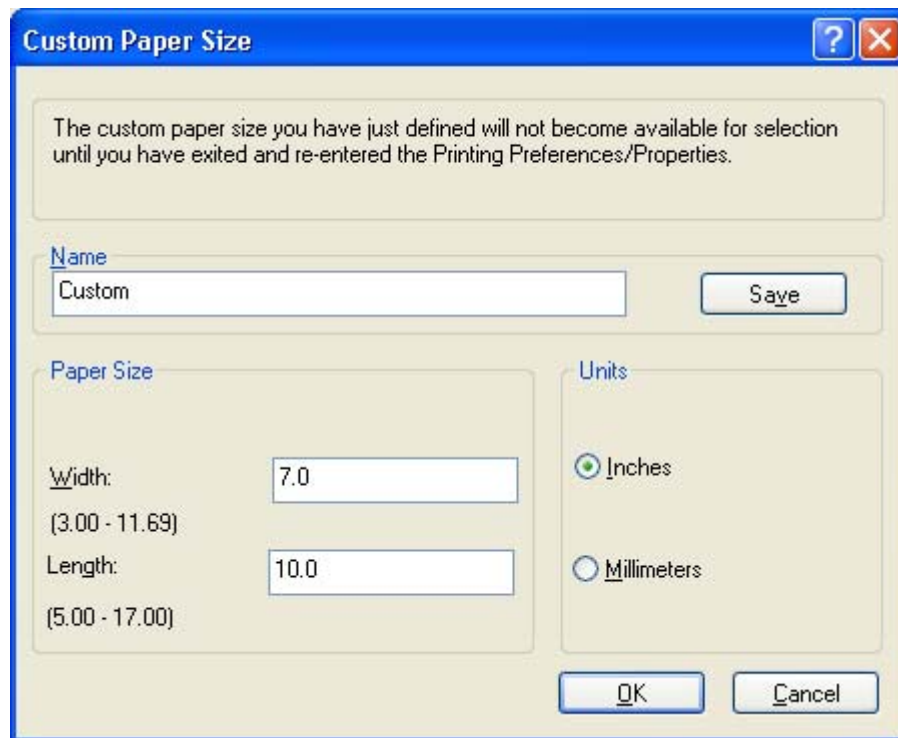


Figure 5-5 Custom Paper Size dialog box

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 **Save**, you can change the width and height values without losing the name. However, if you close the dialog box without clicking **Save**, any unsaved name or size values are lost without warning.

Paper size

Change the width and height values 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 1 millimeter or 1/10 of an inch, depending on the current measurement units.

Units

To change measurement units, click one of the options in the **Units** group box (either **Inches** or **Millimeters**).

Custom width and height control limits

The minimum media size for the HP LaserJet M4345 MFP 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 5-2 HP PCL 6 driver custom media sizes

Tray	Dimensions	Minimum	Maximum
Tray 1 (100-sheet multipurpose)	Width	76 mm (3.0 inches)	215 mm (8.5 inches)
	Height	127 mm (5.0 inches)	356 mm (14.0 inches)
Tray 2 (500-sheet)	Width	148.0 mm (5.83 inches)	215 mm (8.5 inches)
	Height	210 mm (8.26 inches)	356 mm (14.0 inches)
Trays 3–5 (500-sheet, optional)	Width	148.0 mm (5.83 inches)	215 mm (8.5 inches)
	Height	210 mm (8.26 inches)	356 mm (14.0 inches)
Duplexing unit	Width	148.0 mm (5.83 inches)	215 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	356 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 device accessories that are installed. 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 device:

- **Automatically select**
- **Printer Auto Select**

- **Manual Feed in Tray 1**
- **Tray 1**
- **Tray 2**
- **Tray 3**
- **Tray 4**
- **Tray 5**

The default setting is **Automatically Select**. When this setting is selected, the HP LaserJet M4345 MFP uses the source tray that supports the selected media size. 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 [Media attributes](#).

Type is:

The **Type is:** drop-down menu shows all of the media types that the HP LaserJet M4345 MFP supports. When you use the default setting, **Unspecified**, the device 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 device 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 list:

- **Unspecified**
- **Plain**
- **Preprinted**
- **Letterhead**
- **Transparency**
- **Prepunched**
- **Labels**
- **Bond**
- **Recycled**
- **Color**
- **Light < 75 g/m2 (20 lb)**
- **Cardstock > 163 g/m2 (45 lb)**
- **Rough**
- **Envelope**

The default setting is **Unspecified**, and the program selects the media type. Before selecting a different setting, make sure that the correct media type is loaded in the tray that is specified in the **Source is:** setting.

If the print-driver setting is changed to a media type that is not currently loaded in the device, a control-panel message appears that prompts you to load the media type or select another tray.

Use Different Paper/Covers

Print books that include different media types by using the **Use Different Paper/Covers** options.

When the **Use Different Paper/Covers** check box is selected, 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 When you change the **Source Is** and **Type is** settings for any of the covers or pages, the settings remain configured until you close the software program from which you are printing. For example, if you select **First Page** and change the media source or type, and then select **Back Cover** to change the media source or type, the check mark remains beside **Front Cover** and the selected source and type settings remain in effect. The settings are cleared only when you close the software program.

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.

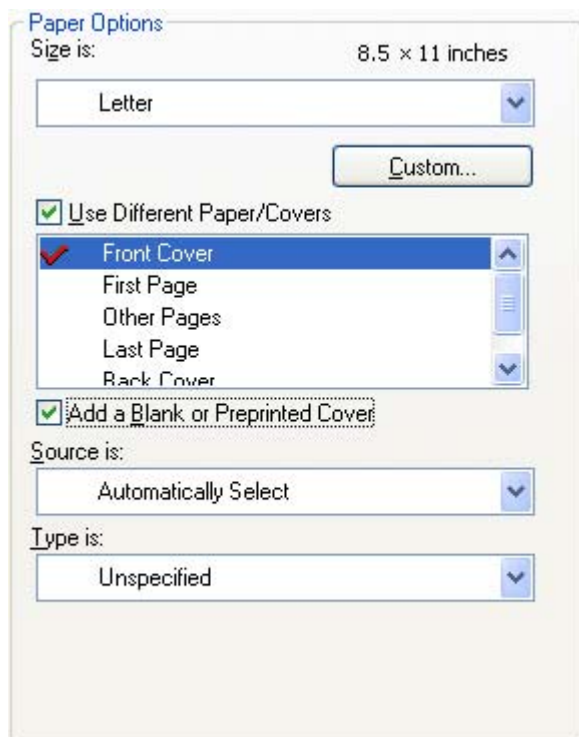


Figure 5-6 Front Cover options

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 device accessories that are installed. Any optional 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 device 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 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 the **Use Different Paper/Covers** check box is selected.



Figure 5-7 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 device accessories that are installed. Any optional 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 device supports.



NOTE Use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting selected in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings 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 the **Use Different Paper/Covers** check box is selected.

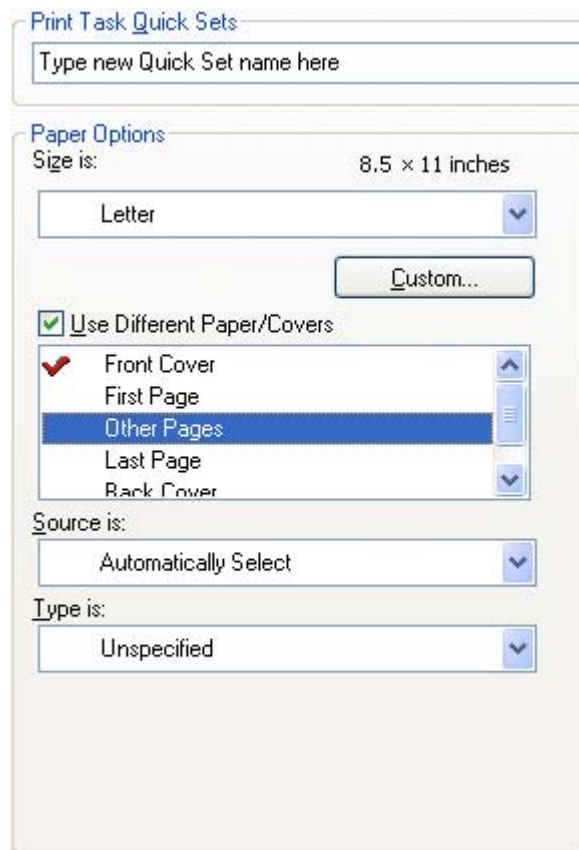


Figure 5-8 Other Pages options

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 device accessories that are installed. Any optional 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 device supports.



NOTE Use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting selected in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings 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 the **Use Different Paper/Covers** check box is selected.

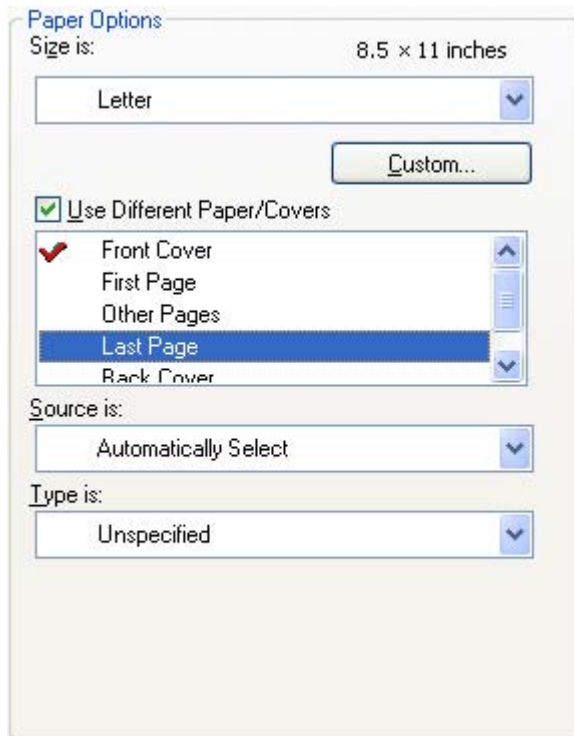


Figure 5-9 Last Page options

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 device supports.



NOTE Use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting selected in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings 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.

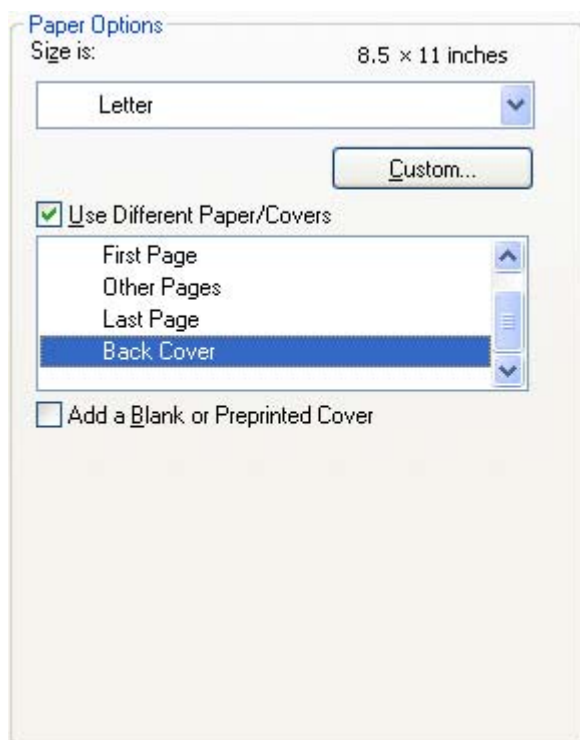


Figure 5-10 Back Cover options

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

- **Size is:** drop-down menu
- **Add a Blank or Preprinted Cover** check box (not selected by default)
- **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**, also select the **Add a Blank or Preprinted Cover** check box to enable the setting. 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 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 device accessories that are installed. Any optional 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 device supports.



NOTE Use the same size of media for the entire print job. All **Use Different Paper/Covers** options use the last **Size is:** setting selected in *any one* of the **Use Different Paper/Covers** options.

When you change the type and source of the media and covers, the settings 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.

Move the cursor over the document preview image to change the cursor from an arrow to a gloved hand. Toggle between portrait and landscape page orientation by clicking the image.



Figure 5-11 Document preview image

Print Quality

The **Print Quality** group box is shown in the following figure.



Figure 5-12 Print Quality group box

The **Print Quality** group box contains the following controls:

- [Print Quality drop-down menu](#)
- [EconoMode](#)

Print Quality drop-down menu

The **Print Quality** drop-down menu contains the following controls in the HP PCL 6 driver:

- **ProRes 1200 (170 lpi).** Prints using a resolution of 1200 x 1200 with 170 lines per inch (lpi). This prints slower than other resolutions but has better print quality.
- **ProRes 1200 (141 lpi).** Prints using a resolution of 1200 x 1200 with 141 lpi. This prints slower than other resolutions, but has better printer quality.
- **FastRes 1200.** Prints using a resolution of 1200 x 600. This prints faster than full 1200 x 1200 resolution, but has a slightly lower print quality.
- **600 dpi.** Prints using standard 600 dpi resolution.



NOTE When a **ProRes1200** setting is selected, documents are printed using a resolution of 1200 x 1200 dpi. This is the best print quality, but printing speed is slower than for documents printed on the FastRes 1200, which uses a resolution of 1200 x 600 dpi.

The **Print Quality** drop-down menu contains the following controls in the HP PCL 5 driver:

- **600 dpi.** Prints using standard 600 dpi resolution.
- **300 dpi.** Prints using 300 dpi resolution.

The **Print Quality** drop-down menu contains the following controls in the PS Emulation driver:

- **1200 dpi.** Prints using 1200 dpi resolution.
- **FastRes 1200.** Prints using a resolution of 1200 x 600. This prints faster than full 1200 x 1200 resolution, but has a slightly lower print quality.
- **600 dpi.** Prints using standard 600 dpi resolution.
- **300 dpi.** Prints using 300 dpi resolution.



NOTE When a “ProRes” setting is selected, documents are printed using a resolution of 1200 x 1200 dpi. This is the best print quality, but printing speed is slower than for documents printed on a “FastRes” setting. The “FastRes” setting emulates 1200-dpi printing, but places fewer dots on the page and uses less toner, and printing speed is faster than for documents printed on a “ProRes” setting.

EconoMode

Select the **EconoMode** check box to reduce the amount of toner on each printed page.

Selecting this option extends the life of the toner supply and reduces cost per page. However, it also reduces print quality. The printed image is lighter, but it is adequate for printing drafts or proofs.

HP does not recommend the full-time use of EconoMode. If EconoMode is used full-time when the average toner coverage is significantly less than 5%, it is possible that the toner supply will outlast the mechanical parts in the print cartridge. If print quality begins to degrade under these circumstances, install a new print cartridge, even if toner remains in the cartridge.



NOTE The **EconoMode** setting only works if a genuine HP print cartridge is installed. HP print cartridges can measure the life of the mechanical parts and the quantity of toner. If the **EconoMode** setting is used frequently, the mechanical parts can wear out before the supply of toner is depleted, increasing the risk of toner leaking.

The **EconoMode** option can be activated from the device control panel, from the **Print Quality** tab in the software program properties, or from the **Print Quality** dialog box on the **Paper-Quality** tab in the driver. If the **EconoMode** option is selected from the control panel, and if the device has a genuine HP cartridge, the ON setting overrides any setting made in the program or driver, as shown in the following table.

Driver EconoMode setting for print job	HP Cartridge	Device control panel reports	EconoMode setting takes effect
Selected	Yes	On	Yes
Selected	No	Off	No
Not selected	Yes	On	Yes
Not selected	No	Off	No
Selected	Yes	Off	Yes
Selected	No	Off	No
Not selected	Yes	Off	No
Not selected	No	Off	No

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 device 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.

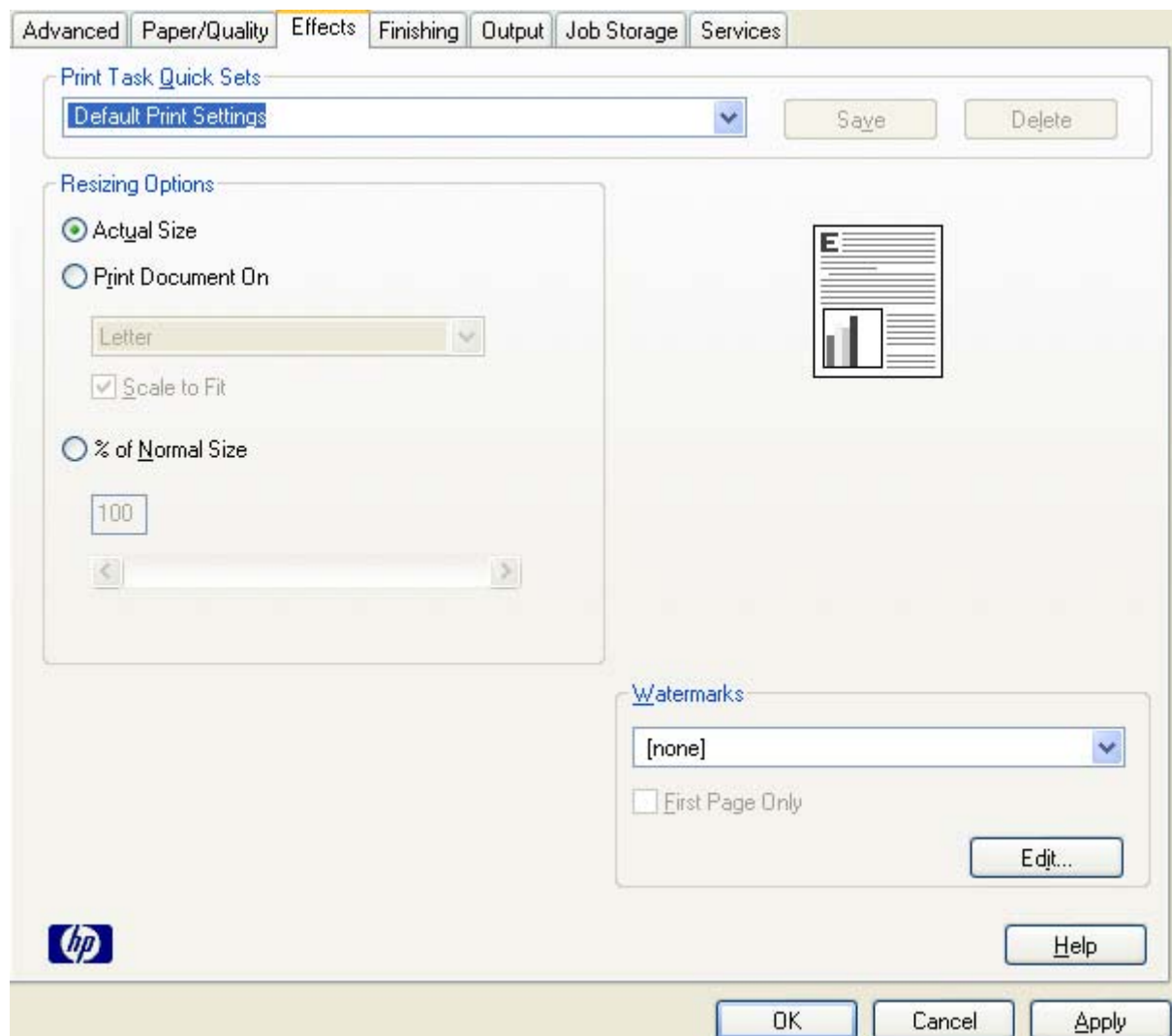


Figure 5-13 Effects tab

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

- [Print Task Quick Sets](#)
- [Resizing Options](#)
- [Document preview image](#)
- [Watermarks](#)

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.

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

Click the **Print Document On** option 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 the selected media source supports and any custom sizes that have been created. When **Print Document On** is selected, **Scale to Fit** is automatically selected. Clear this check box if you do not want the 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**.

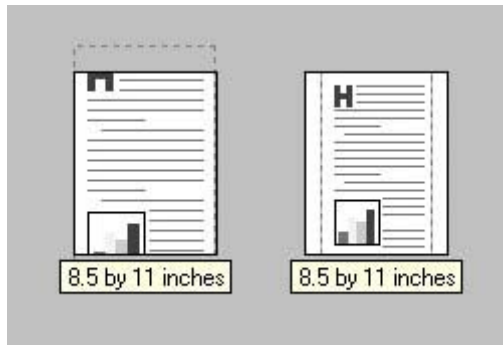


Figure 5-14 Preview images – Legal on Letter; **Scale to Fit** off (left) and on (right)

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 device.

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 slider-bar indicator is dragged, and the document preview image is updated to the new image scale. Each click on the 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 slider-bar indicator. Instead, either use the slider-bar indicator to approximate the value and then use the 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

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.

Move the cursor over the document preview image to change the cursor from an arrow to a gloved hand. Toggle between portrait and landscape page orientation by clicking the image.



Figure 5-15 Document preview image

Watermarks

Use the **Watermarks** feature to select a watermark, create a custom watermark (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.

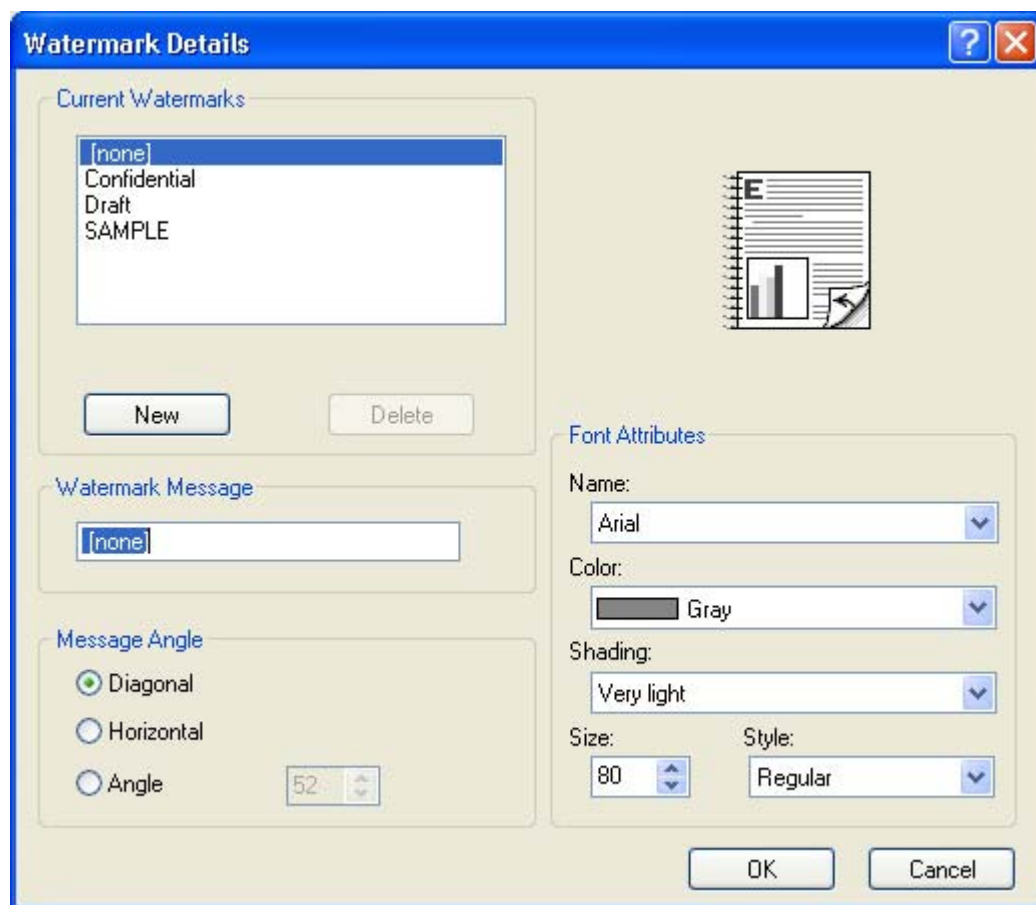


Figure 5-16 Watermark Details dialog box

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 the predefined watermarks that are available in the driver and any new watermarks that have been 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 typed 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 No more than 30 watermarks can exist in the **Current Watermarks** list at one time. When the limit of 30 watermarks is reached, 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, in effect creates 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 can contain 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. All settings center the watermark string within the page; the selection of a particular setting affects only the angle of the string placement. The following settings are available:

- **Diagonal.** This is the default setting. Select this setting to place the text along a line that spans the lower-left to upper-right corners of the page.
- **Horizontal.** Select this setting to place the text along a line that spans the mid-left and mid-right edges of the page.
- **Custom.** Select this setting to place the text at the specified angle across the page. Use the numeric spin box to select the angle.

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 fonts that are currently installed on the system. The default is language-dependent.
- **Color.** The **Color** drop-down menu contains only one option: **Gray**.
- **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**

These values represent the intensity of the gray that is used. Select **Light** to produce a lightly saturated gray watermark. Select **Lightest** to produce the lightest shade of watermark. Select **Darkest** to produce a black watermark.

- **Size.** Font sizes from 1 to 999 points are available from the **Size** menu. The default point size is language-dependent.
- **Style.** The following settings are available:
 - **Regular**
 - **Bold**
 - **Italic**
 - **Bold Italic**

The default **Style** setting for new and preset watermarks is **Regular**.

Default watermark settings

The following table shows **Font Attribute** settings for new and preset watermarks.

Table 5-3 Font Attribute settings for new and preset watermarks

Setting	New watermark	Preset watermark
Name	Arial	Varies by language
Color	Gray	Gray
Shading	Very Light	Very Light
Size	80	Varies by language
Style	Regular	Regular

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.

Finishing tab features



CAUTION Disabling **Mopier Mode** disrupts functionality for the **Output** and **Finishing** tab features.

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

1. Click **Start**.
2. Select **Settings**.
3. Click **Printers** (Windows XP) or **Printers and Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device 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.

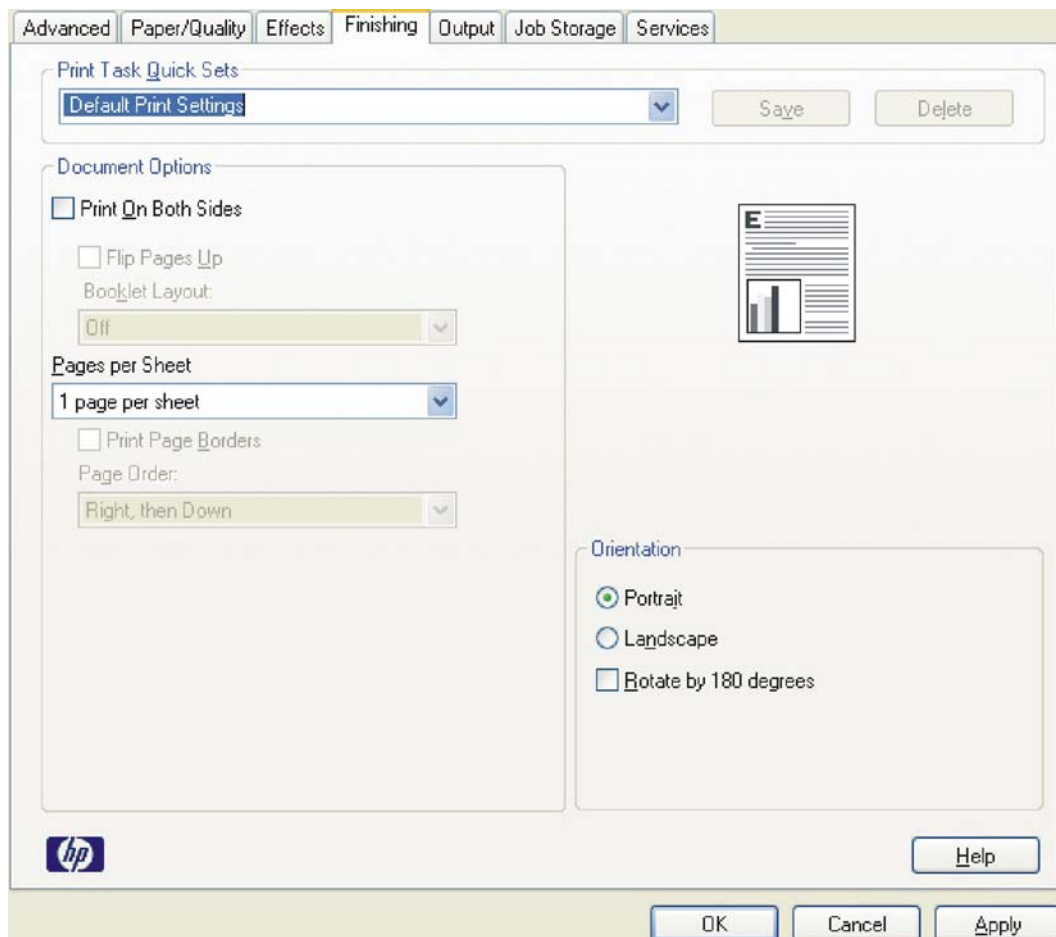


Figure 5-17 Finishing tab

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

- [Print Task Quick Sets](#)
- [Document options](#)
- [Document preview image](#)
- [Orientation](#)

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.

Document options

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

- [Print on Both Sides](#)
- [Flip Pages Up](#)
- [Booklet layout](#)
- [Pages per Sheet](#)
- [Print Page Borders](#)
- [Page Order](#)
- [Edge-to-edge printing](#)

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 media type *except for* the following types:
 - **Labels**
 - **Transparency**
 - **Envelope**
 - **Tough Paper**
- **Size is:** is set to any media size *except for* the following sizes:
 - **Statement**
 - **Envelope #10**
 - **Envelope DL**
 - **Envelope C5**
 - **Envelope B5**
 - **Envelope Monarch**

Topics:

- [Automatically print on both sides](#)
- [Manually print on both sides](#)

Automatically print on both sides

The duplexing unit in the device prints on two sides of a sheet of paper when the **Print on Both Sides** option is specified in the print job.

Models with a duplexer installed 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, transparencies, and envelopes) 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 device makes adjustments to its print modes. Selecting a media type, in effect instructs the MFP to use a group of settings (such as fuser temperature and print speed) to create an image that has the best possible quality for that media. 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 print on both sides

Select the **Print on Both Sides (Manually)** check box to print on the second side of the media for the HP LaserJet M4345 MFP models that do not have a duplexing unit installed. Use this setting on all HP LaserJet M4345 MFP models for media types that the automatic duplexing unit does not support, such as thick media.

Manually printing on the second side of a page is available in the HP PCL 6, PCL 5, or PS emulation drivers. If a duplexing unit is installed and manual duplexing is enabled in the driver, the device automatically prints on both sides of media types that are supported for automatic duplexing (Letter, A4, Legal, and 8.5 x 13 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** option on the **Device Settings** tab the **Properties** print-driver tabs.

To print on both sides manually while using media that is supported for automatic duplexing, select and apply the **Not Installed** setting on the **Duplex Unit (for 2-Sided Printing)** option on the **Device Settings** tab.

Select the media type that corresponds to the media that 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
- Color
- Rough

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.

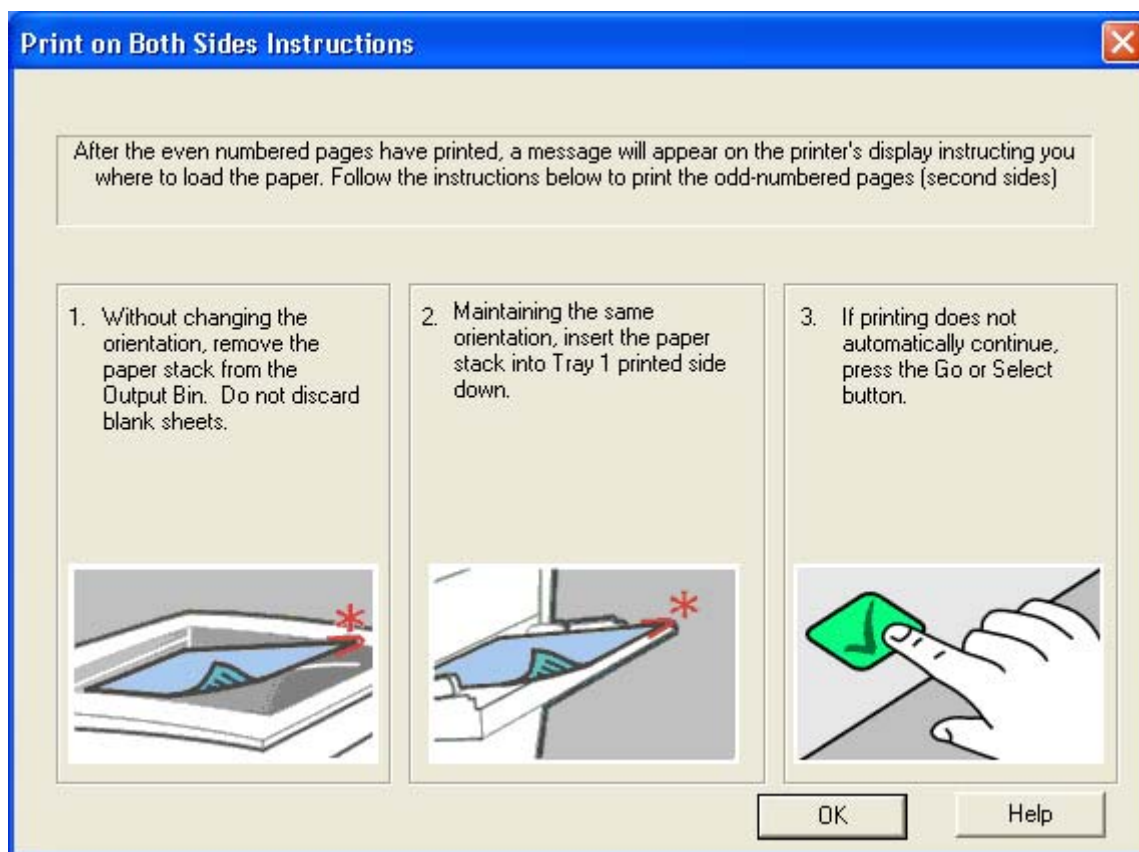


Figure 5-18 Print on Both Sides Instructions dialog box

When you have completed the steps in the dialog box, the second half of the print job prints on the back side of the sheets in 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

Use the **Flip Pages Up** check box is used to specify the duplex-binding option. By default, the **Flip Pages Up** check box is available only when **Print on Both Sides** is selected.

The following table demonstrates the results of selecting this check box, depending on the media orientation selected on the **Finishing** tab.

Table 5-4 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 calendar. 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**

Selecting **Left Edge Binding** or **Right Edge Binding** changes the document preview image 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**. Changing the **Pages per Sheet** setting manually to 4, 6, 9, or 16 pages per sheet disables the booklet setting.

Topics:

- [Book and Booklet Printing](#)
- [Print a booklet](#)

Book and Booklet Printing

The HP LaserJet M4345 MFP supports book and booklet printing.

A book is a print job that consists of at least two pages. It can have a different media type for the front cover, first page, other pages, last page, or back cover. Use the settings on the **Paper** tab (available when you select the **Use Different Paper/Covers** check box) to select the following printing options for the book:

- **Front Cover**
- **First Page**

- **Other Pages**
- **Last Page**
- **Back Cover**

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.

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 to print on a single sheet of media.

If you 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 Selecting an option other than **1 page per sheet** makes booklet printing 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.

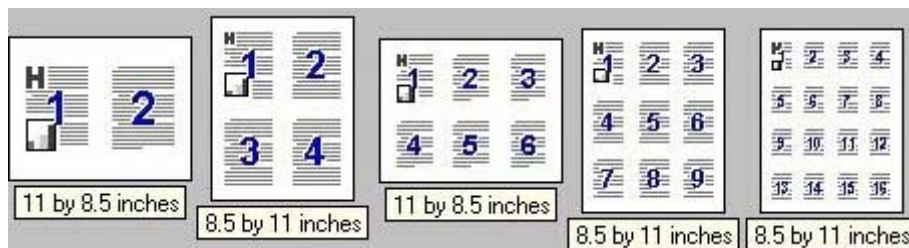


Figure 5-19 Page-order preview images

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

Edge-to-edge printing

By default, the device prints within approximately 5 millimeters of all edges of the print media. With edge-to-edge printing enabled, the device can print within approximately 2 millimeters of all edges of the print media.



NOTE With the edge-to-edge printing option enabled, a document might not print the same as it would with the option disabled. When the option is enabled, the amount of space available for the print job increases, which can affect printed layout and page count.

The edge-to-edge print option is set from the device driver.

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.

Move the cursor over the document preview image to change the cursor from an arrow to a gloved hand. Toggle between portrait and landscape page orientation by clicking the image.



Figure 5-20 Document preview image

Orientation

Orientation refers to the layout of the image on the page, and does not affect the way that media feeds into the device.



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 two options:

- **Portrait.** The top edge of the document is the shorter edge of the media. This is the default orientation.
- **Landscape.** The top edge of the document is the longer edge of the media.

In addition to the **Portrait** and **Landscape** orientation options, you can select the **Rotate by 180 degrees** check box. This creates a landscape or portrait orientation in which the image is rotated 180°. This setting is useful for printing prepunched media.

Toggle orientation between portrait and landscape by clicking the document preview image. Selecting the **Rotate by 180 degrees** check box does not change the document preview image.

Output tab features



CAUTION Disabling **Mopier Mode** disrupts functionality for the **Output** and **Finishing** 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 device name.
5. Click **Printing Preferences**.
6. Click the **Output** tab.

Use the **Output** tab to select where and how the media exits the device. The following figure shows the **Output** tab.

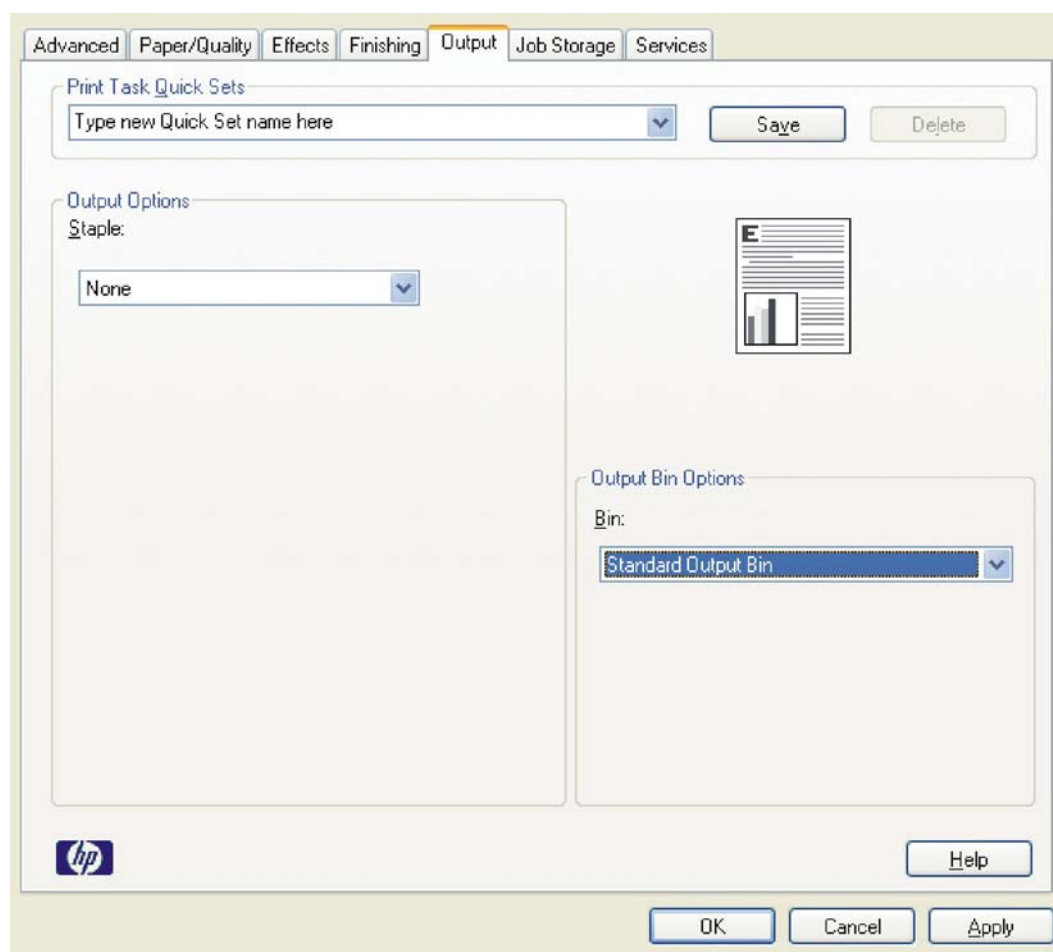


Figure 5-21 Output tab

The **Output** tab appears among the driver tabs only if an accessory output bin (such as the HP 500-Sheet Stapler/Stacker (30 sheet stapler)) is installed on the device.

After the accessory output bin is installed, the driver must be configured to reflect the changes in the device. If bidirectional communication is enabled in your environment, use the **Update Now** feature to update the drivers.

To configure the drivers manually after installing the accessory output bin, 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 device name.
5. Click **Properties**.
6. Click the **Device Settings** tab.
7. Click the plus sign next to **Installable Options** to open the folder.
8. Click **Accessory Output Bin** and select the installed output bin in the drop-down menu.
9. Click **OK** to make the Output tab available in the **Printing Properties**.

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

- [Print Task Quick Sets](#)
- [Document preview image](#)
- [Output Options](#)
- [Output Bin Options](#)

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.

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.

Move the cursor over the document preview image to change the cursor from an arrow to a gloved hand. Toggle between portrait and landscape page orientation by clicking the image.



Figure 5-22 Document preview image

Output Options

To use the **Output Options** control, an accessory output bin must be installed on the device.

Use the **Output Options** control to determine whether or not the print job should be stapled. Two options are available:

- **None**
- **One Staple Angled (Max 30 Sheets)**

Output Bin Options

To use the **Output Bin Options** control, an accessory output bin must be installed on the device.

Use the **Output Bin Options** to determine where the print job should exit the device. Three options are available:

- **Automatically Select**
- **Standard Output Bin**
- **Stacker Bin**

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 device name.
5. Click **Printing Preferences**.
6. Click the **Job Storage** tab.

Use the job-storage feature to store print jobs in the HP LaserJet M4345 MFP 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 feature is enabled, and a hard disk is installed and configured.

To disable the job-storage feature, 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 device name.
5. Click **Properties**.
6. Click the **Device Settings** tab.
7. Select **Job Storage**.
8. Select **Disabled** in the **Change 'Job Storage' Setting** dialog box that appears.



NOTE When the job-storage feature is disabled, the **Job Storage** driver tab is not visible.

If the job-storage feature is enabled, the **Job Storage Mode** settings are available on the **Job Storage** tab:

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

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

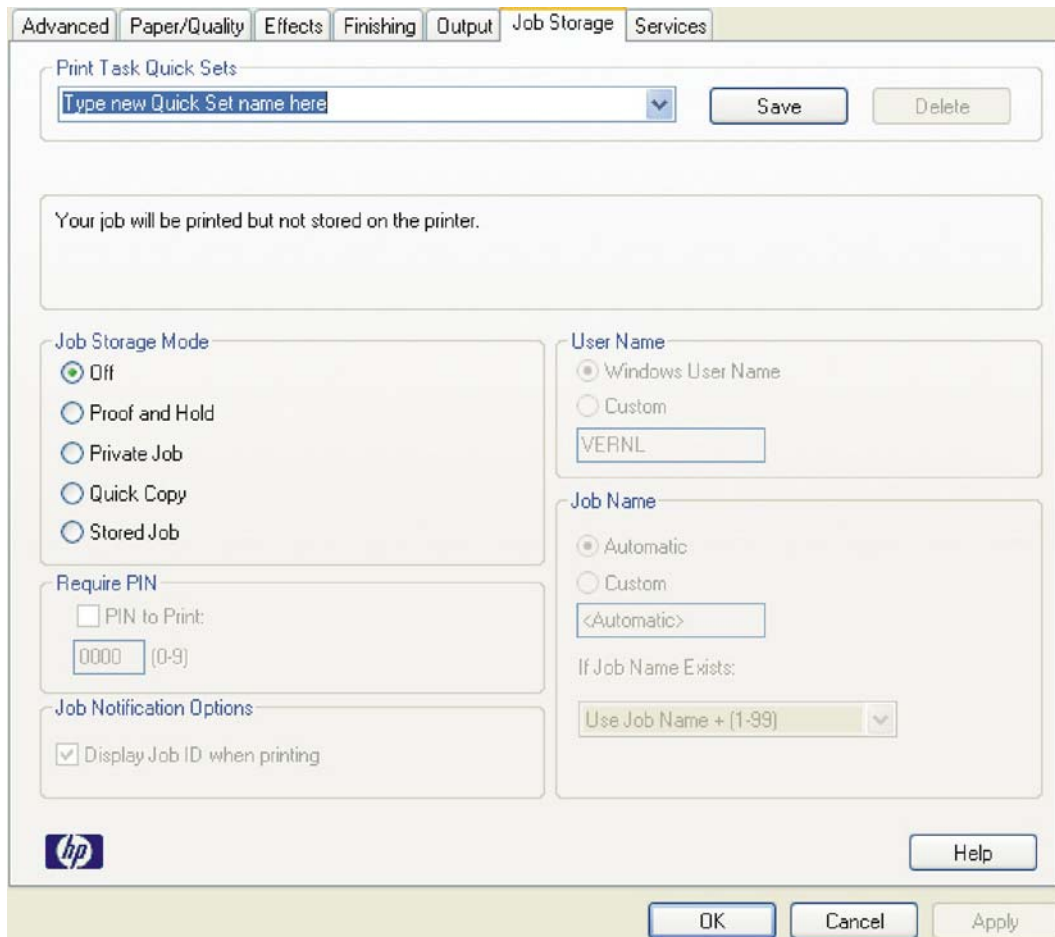


Figure 5-23 Job Storage tab

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

- [Print Task Quick Sets](#)
- [Status group box](#)
- [Job Storage Mode](#)
- [Require PIN](#)
- [Job Notification Options](#)
- [User Name](#)
- [Job Name](#)
- [Using job-storage features when printing](#)

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.

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 LaserJet M4345 MFP to store documents at the device and then control their printing at the device control panel.

The HP LaserJet M4345 MFP offers the following **Job Storage Mode** options:

- [Off](#)
- [Proof and Hold](#)
- [Private Job](#)
- [Quick Copy](#)
- [Stored Job](#)

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 device.

Proof and Hold

To use the **Proof and Hold** option, the job-storage feature 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, print the remaining copies of the print job at the control panel. Set the number of proof-and-hold print jobs that can be stored in the device at the control panel.

After it is released for printing, the proof-and-hold job is immediately deleted from the device. If more copies are needed, reprint the job from the software program. Sending a second proof-and-hold job that has the same user name and job name as an existing proof-and-hold job (when the original job has not been released for printing), overwrites the existing job. Proof-and-hold jobs are deleted when the device is turned off.

The device configuration holds a maximum of 50 quick-copy or proof-and-hold jobs. The number is set at the device 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, sending a document that has the same user name and job name as one that is already stored on the device memory overwrites the existing document.

Private Job

To use the **Private Job** option, the job-storage feature must be enabled.

When **Private Job** is selected, the print job is sent to the device but is not printed until a selection is made on the device control panel. Selecting **Private Job** activates the **PIN** group box. The print job can be printed only after the correct PIN is typed at the control panel. After the job is printed, the job is

immediately deleted from the device. This feature is useful when printing sensitive or confidential documents should not remain in an output bin after printing.

The Private Job/PIN coupling has a PIN restriction of four ASCII numeric characters (0 through 9). Any non-numeric characters are removed immediately. When more than four characters are typed, 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, 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 device. If more copies are needed, reprint the job from the software program. Sending a second private job that has the same user name and job name as an existing private job (when the original job has not been released for printing) overwrites the existing job, regardless of the PIN. Private jobs are deleted when the device is turned off.

Quick Copy

To use the **Quick Copy** option, the job-storage feature must be enabled.

After the job prints, use the device control panel to print more copies of the job.

Stored Job

To use the **Stored Job** option, the job-storage feature must be enabled.

The job will be stored in the device as if it is an electronic file cabinet. Nothing will be printed until the job is requested from the device control panel. Use this storage for forms and other common or shared documents.

Require PIN

Require PIN is available when **Stored Job** is selected. Select the **PIN to Print** box, then type a four-digit PIN number in the box provided. The stored job is sent to the device, where the user must type the four-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 four-digit PIN number in the box provided. The stored job is sent to the device, where the user must type the four-digit PIN on the control panel to retrieve the stored job.

Job Notification Options

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 opens a pop-up dialog box 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 device name, port, and location.

User Name

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

- **Windows User Name.** This option associates the MS Windows user name with the stored print job. The MS 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. Clicking **Custom** makes the text field below the option 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 device control-panel display. Any typed lowercase character automatically shifts to uppercase. Any typed character in an ASCII code of fewer than 32 or more than 126 characters is removed from the edit field, along with all of the characters that follow it. Any character beyond 16 is truncated.

Job Name

Use the **Job Name** options to specify a name to identify the job at the device control panel. The following are the **Job Name** settings:

- **<Automatic>.** This option, which is the default selection, 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. 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**, the text field below the option becomes available. 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 device control-panel display.

The **Job Name** field can contain no more than 16 characters, and is limited to A through Z (uppercase or lowercase) and 0 through 9 so that the name can appear on the device control-panel display. Any typed lowercase character automatically shifts to uppercase. Any typed character in an ASCII code of fewer than 32 or more than 126 characters is removed from the edit field, along with all of the characters that follow it. 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 device control-panel display.

If Job Name Exists. When storing a print job, create a print-job name or allow the device software to assign one automatically. If a print job that has the same name already exists, the new print job overwrites 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)**. When the print-job name exists, the device software assigns a number between 1 and 999 to the end of the print job name to make it unique. Select **Replace Existing File** to always have the device software overwrite an existing print job that has the same print job name.

Using job-storage features when printing

Clicking the print icon in the software program toolbar prints the job without using job-storage features.

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.
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**.

Topics:

- [Releasing a job-storage print job](#)
- [Deleting a job-storage print job](#)

Releasing a job-storage print job

After sending a print job that uses the job-storage feature, release the job to print from the device control panel.

1. Touch **Job Storage**.
2. In the **Retrieve** tab, touch the appropriate folder on the left of the screen. The folder that contains the stored jobs opens.
3. Touch the appropriate job.
If a PIN is set for the stored job, type the correct PIN. After the PIN is confirmed, the job is unlocked.
4. To print job, press the **Select** button.

Deleting a job-storage print job

Sometimes it is necessary to delete a print job from the device memory. Do this from the device control panel.

1. Touch **Job Storage**.
2. Touch the appropriate folder on the left of the screen.
3. Touch appropriate document.
If a PIN is set for the stored job, type the correct PIN. Once PIN is confirmed, the job is unlocked.
4. Touch **Delete**.
5. A message appears: **Do you want to delete this stored job?**
Touch **Yes**. The document is deleted.

Or, do the following:

1. Touch **Job Storage**.
2. Touch appropriate folder on the left of the screen.

3. Touch appropriate document.
4. Touch **Delete**.

If a PIN for the stored job, type the correct PIN. Once the PIN is confirmed, the job is deleted.

Services tab features

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 device name.
5. Click **Printing Preferences**.
6. Click the **Services** tab.

The **Services** tab is shown in the following figure.

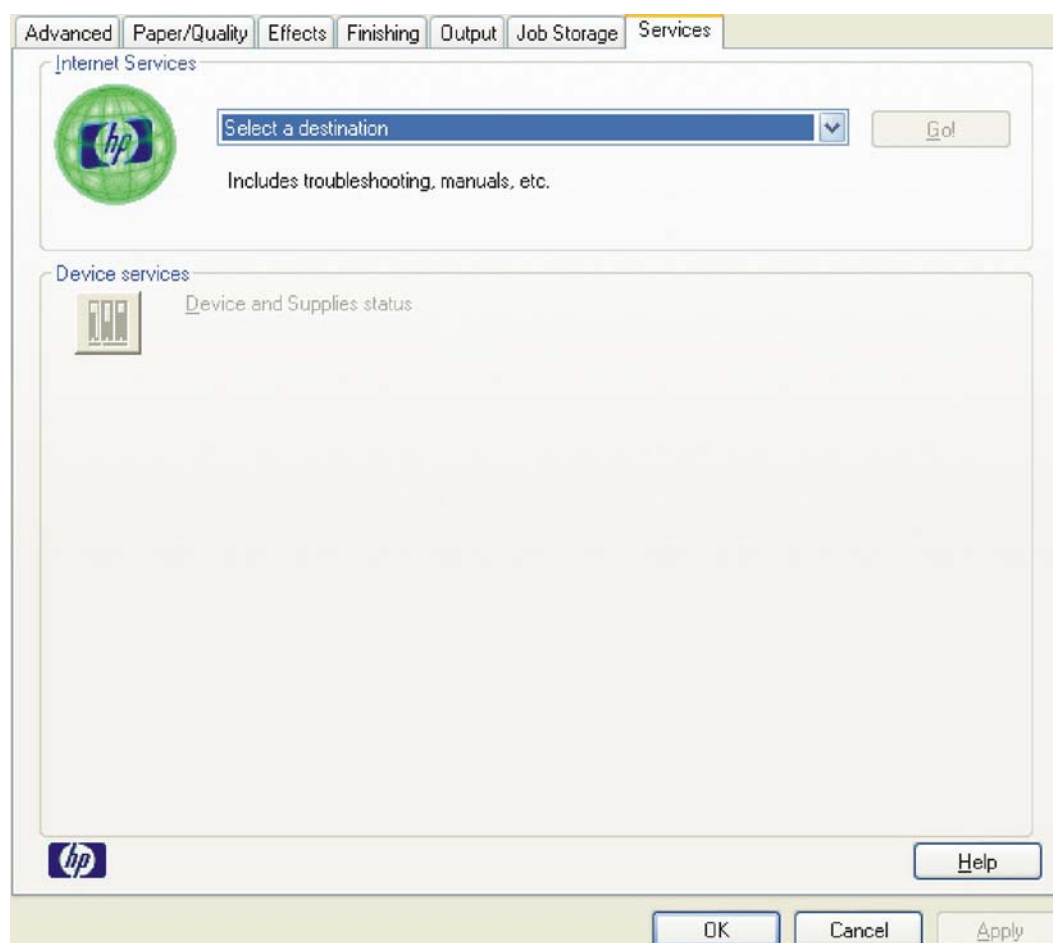


Figure 5-24 Services tab

The **Services** tab contains the following features:

- [Internet Services](#)
- [Device services](#)

Internet Services

The **Internet Services** group box contains the **Select a destination** drop-down menu with the following selections:

- **Online diagnostic tools.** Open the HP Instant Support Web site, which contains interactive tools and contacts for troubleshooting.
- **Support and troubleshooting.** Open the product page for the HP Business Center.
- **Product manuals.** Open a Web page to view or download HP LaserJet M4345 MFP manuals.
- **Check for driver updates.** Automatically check the print drivers to see whether the correct and most up-to-date print drivers are installed.
- **Order supplies.** Open the HP SureSupply Web page and shop online for HP LaserJet M4345 MFP supplies.
- **Show me how.** Connect to a Web page that provides step-by-step instructions for performing specific tasks. The following information is available:
 - Clear jams
 - Load trays
 - Load special media
 - Print both sides
 - Supported paper
 - More Help

If you have Internet access, select any of these items and click **Go!** to open the corresponding HP Web page.

Device services

Click the **Device and Supplies** status icon to open the **Device Status** screen of the HP EWS.

Device Settings tab features

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 device name.
5. Click **Properties**.
6. Click the **Device Settings** tab.

The **Device Settings** tab contains controls for media-handling devices and controls for managing the HP LaserJet M4345 MFP.

Available options depend on the driver and the particular feature. The following figure shows the **Device Settings** tab for the HP PCL 6 driver.

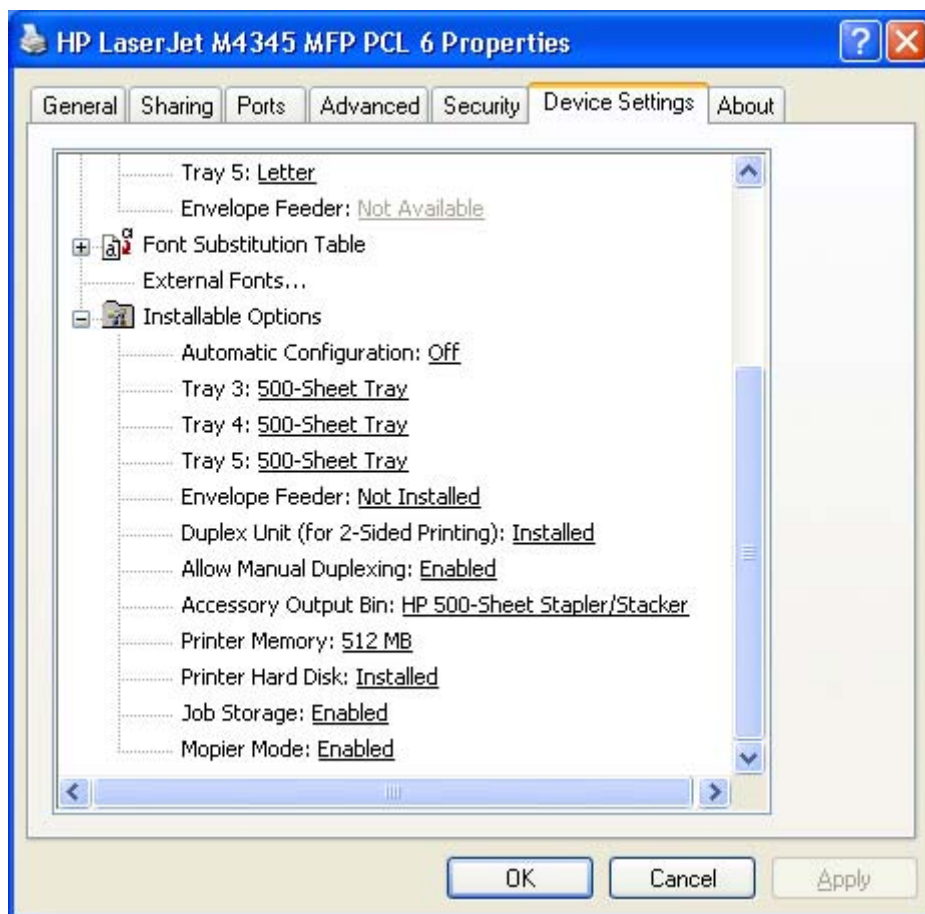


Figure 5-25 HP PCL 6 driver Device Settings tab

The following figure shows the **Device Settings** tab for the PS Emulation driver.

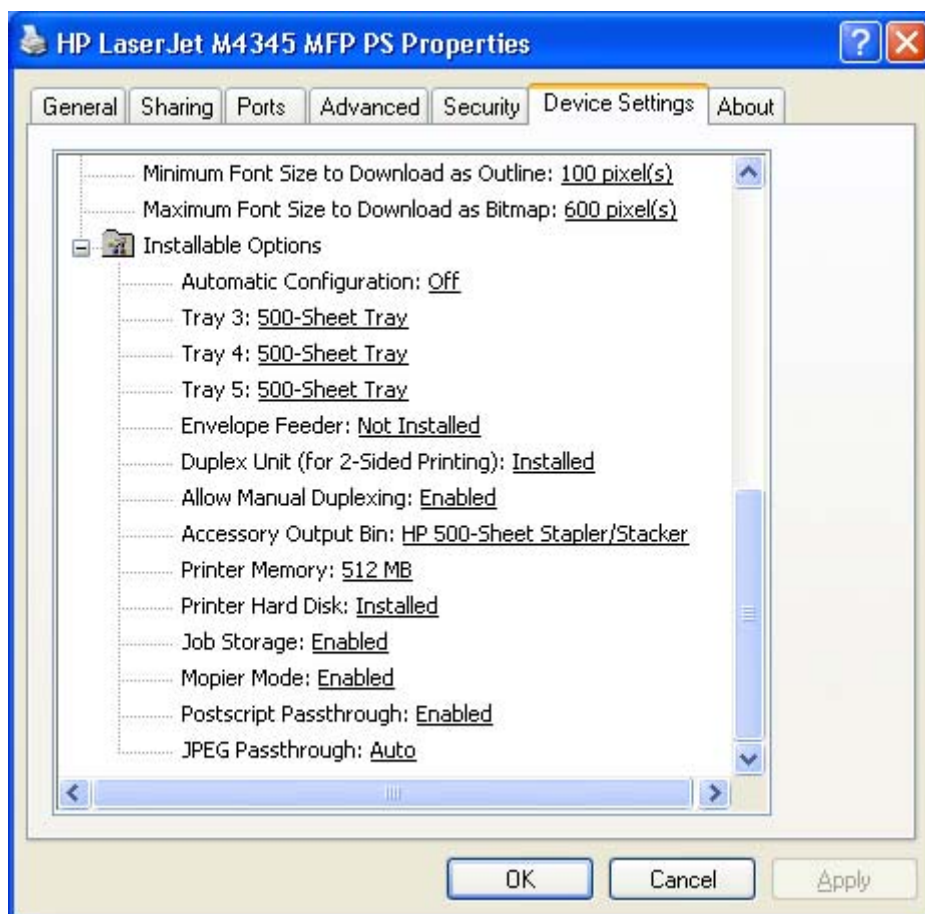


Figure 5-26 PS Emulation driver **Device Settings** tab

The **Device Settings** tab contains the following controls:

- [Form to Tray Assignment](#)
- [Font Substitution Table](#)
- [External Fonts](#)
- [PS Emulation driver Device Settings](#)
- [Installable 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 LaserJet M4345 MFP supports more than one source of media. Assign a form (which defines the media size and margins) to each media source. When a form is matched to a source, select the form to print. The device 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 device 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 the settings, or, if necessary, click **Cancel** to reconfigure all the trays and remove the size and type constraints that have been imposed on the **Paper/Quality** tab.

Font Substitution Table

Use the **Font Substitution Table** settings to install and remove external fonts for the device. External fonts can be soft fonts or DIMM fonts.

Click the **Font Substitution Table** option to open a list of fonts, as show in the following figure. Use the settings to change the TrueType-to-printer font mappings.

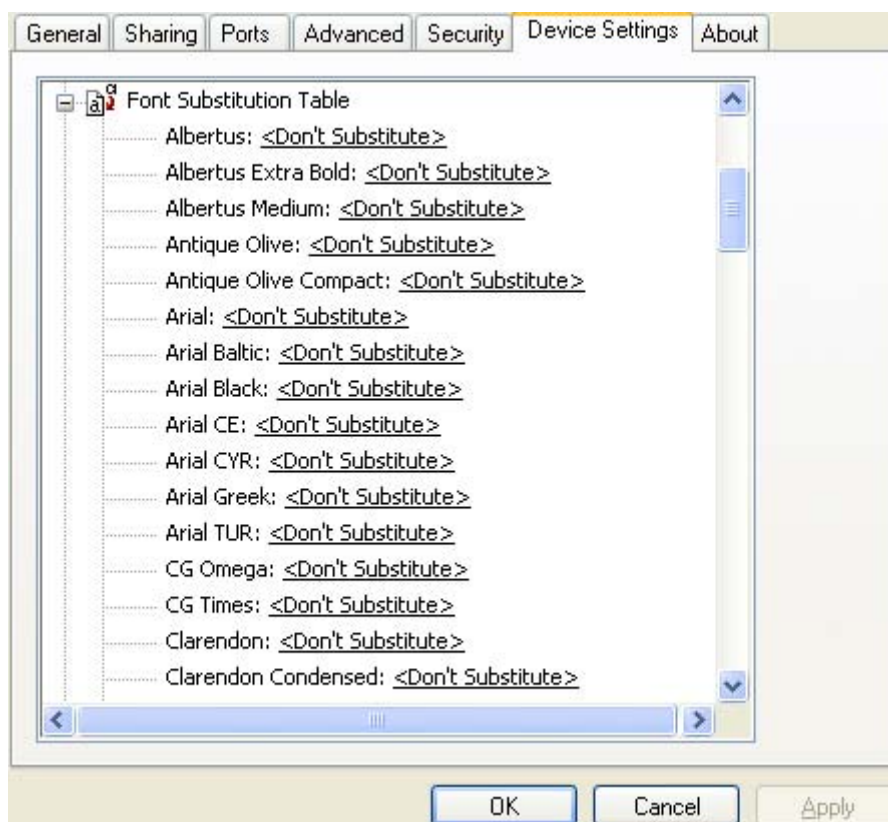


Figure 5-27 Font Substitution Table

External Fonts



NOTE The External Fonts option is available only in the HP PCL 6 and PCL 5 drivers. It is not available in the PS Emulation driver.

Use the **External Fonts** option to install and remove external fonts for the device. External fonts can be soft fonts or DIMM fonts.

Click the **External Fonts** option to make the **Properties** button available. Click **Properties** to open the **HP Font Installer** dialog box, which is shown in the following figure.

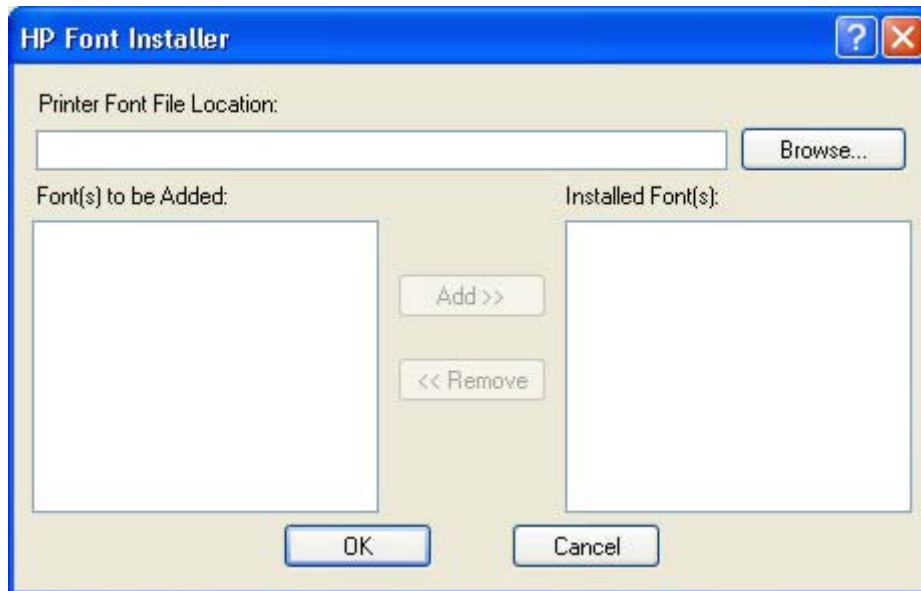


Figure 5-28 HP Font Installer dialog box

Topics:

- [Installing external fonts](#)
- [Removing external fonts](#)

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 device.
5. Click **Properties**.
6. Click the **Device Settings** tab.
7. Click the **External Fonts** option. The **Properties** button appears.
8. Click **Properties**. 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 the computer. The font file names appear in the **Font(s) to be Added** window.

10. Select the fonts 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 device.
5. Click **Properties**.
6. Click the **Device Settings** tab.
7. Click the **External Fonts** option. The **Properties** button appears.
8. Click **Properties**. The **HP Font Installer** dialog box appears. The external fonts that are installed appear in the **Installed Fonts** window.
9. Select the fonts to remove, and then click **Remove**. The fonts are removed.
10. Click **OK** to close the **HP Font Installer** dialog box.

PS Emulation driver Device Settings

The following controls are available and appear only in the PS Emulation driver **Device Settings** tab:

- [Available PostScript Memory](#)
- [Output Protocol](#)
- [Send Ctrl-D Before Each Job](#)
- [Send Ctrl-D After Each Job](#)
- [Convert Gray Text to PostScript Gray](#)
- [Convert Gray Graphics to PostScript Gray](#)
- [Add Euro Currency Symbol to PostScript Fonts](#)
- [Job Timeout](#)
- [Wait Timeout](#)
- [Minimum Font Size to Download as Outline](#)
- [Maximum Font Size to Download as Outline](#)

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 device total physical memory. It is usually

best to set the postscript memory to match the total RAM that appears on the configuration page. To print a configuration page from the device control panel, follow these steps:

1. Touch **Administration**.
2. Touch **Information**.
3. Touch **Configuration/Status Pages**.
4. Touch **Configuration Page**.
5. Touch **Print**.

Output Protocol

This control specifies the protocol that the device uses for print jobs. The following options are available:

- **ASCII** (default)
- **TBCP**
- **Binary**

Click **ASCII** to send data in ASCII format (7-bit), which might take longer to print but can be sent through any I/O channel, such as a serial or network port.

Click **TBCP** (Tagged Binary Communications Protocol) to send all data except special control characters in binary (8-bit) format. The binary formats can be sent over serial communications ports and are faster than sending data in ASCII format.

Click **Binary** to send all data except special control characters in binary (8-bit) format. The binary formats can be sent over serial communications ports and are faster than sending data in ASCII format.

Send Ctrl-D Before Each Job

This control specifies whether the device is reset at the beginning of every postscript document. The default setting is **No**. Pressing **Ctrl-D** resets the device 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 device is connected through a network. If the document fails to print when sent to a device connected through serial ports, change **No** to **Yes**.

Send Ctrl-D After Each Job

This control specifies whether the device is reset at the end of every postscript document. The default setting is **Yes**. Pressing **Ctrl-D** resets the device 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 device is connected through a network. If the document fails to print when sent to a network device, change **Yes** to **No**.

Convert Gray Text to PostScript Gray

This control specifies whether to convert the true gray value (RGB) in text to the gray that the driver provides. The following settings are available:

- **Yes**
- **No** (This is the default setting.)

Convert Gray Graphics to PostScript Gray

This control specifies whether to convert the true gray value (RGB) in graphics to the gray provided by the driver. The following settings are available:

- **Yes**
- **No** (This is the default setting.)

Add Euro Currency Symbol to PostScript Fonts

This control specifies whether to add the euro symbol to the device fonts. The following settings are available:

- **Yes** (This is the default setting.)
- **No**

Job Timeout

This control specifies how long the document can take to get from the computer to the device before the device stops trying to print the document. If you specify **0 seconds**, the device continues trying to print indefinitely. The default setting is **0 seconds**. Use the spin box to change this value, up to a maximum of **32,767 seconds**.

Wait Timeout

This control specifies how long the device waits to get more postscript information from the computer. After the specified time passes, the device stops trying to print the document and prints an error message. When printing a very complicated document, increase this value. If you specify **0 seconds**, the device waits indefinitely. The default setting is **300 seconds**. Use the spin box to change this value, up 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. Any 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 pixel(s)**. Use the spin box to change this value, up 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. Any 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 pixel(s)**. Use the spin box to change this value, up to a maximum of **32,767 pixels**.

Installable Options

Topics:

- [Automatic Configuration](#)
- [Tray 4 and Tray 5](#)

- [Duplex Unit \(for 2-Sided Printing\)](#)
- [Allow Manual Duplexing](#)
- [Printer Memory](#)
- [Accessory Output Bin](#)
- [Printer Hard Disk](#)
- [Job Storage](#)
- [Mopier Mode](#)
- [Mopier mode and collation](#)
- [Postscript Passthrough \(PS Emulation driver only\)](#)
- [JPEG Passthrough \(PS Emulation driver only\)](#)

Automatic Configuration

Use the **Device Settings** tab to tell the driver about the hardware configuration of the device. 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 the computer environment does not support bidirectional communication, the **Update Now** setting is unavailable, the options on this tab must be manually configured.

If more than one driver is installed for the device (for example, the default HP PCL 6 and PCL 5 drivers), 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 the specific device model.

Tray 4 and Tray 5

This control specifies whether tray 4 or tray 5 is installed on the device. The default setting is **Not Installed**.

Duplex Unit (for 2-Sided Printing)

The HP LaserJet M4345 MFP base model has an optional duplexing unit. The duplexing unit is standard on the HP LaserJet M4345x MFP, HP LaserJet M4345xm MFP, and HP LaserJet M4345xs MFP models. For the standard models, this setting is **Installed** by default.

The HP LaserJet M4345 MFP supports smart duplexing. The device 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, reinsert the media stack into the input tray to print the second side. The device pauses while the user makes 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 device. The driver generates ranges of memory that can be selected, up to the maximum that the device can accept. The driver can use this information to manage how the print driver uses the device memory.

Accessory Output Bin

This control specifies whether tray 4 or tray 5 is installed on the device. The default setting is **Not Installed**.

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.



NOTE A hard disk is required for the MFP to perform most tasks. The check box is available only for troubleshooting purposes.

Job Storage

When **Job Storage** is enabled, the device can store print jobs so that you can gain access to those print jobs later at the control panel.

Mopier Mode



CAUTION Disabling **Mopier Mode** disrupts functionality for the **Output** and **Finishing** tab features.

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 device once, and then storing it in memory. 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 LaserJet M4345 MFP supports the transmit-once mopying feature when the **Mopier Mode** setting on the **Device Settings** tab is **Enabled**.

Use the HP PCL 6, PCL 5, or PS emulation driver to perform mopying in one of two ways: either through the software or through the device hardware. When the mopier is enabled, mopying takes place through the device hardware by default. One copy of a multiple-page print job is transmitted once through the network to the device, together with a printer job language (PJM) command directing the device to make the specified number of copies.

When the mopier is disabled, mopying is not necessarily disabled. The driver can perform through the software rather than the device hardware (the mopying path that is disabled when you change the **Mopy Mode** setting to **Disabled**). However, sending a multiple-copy print job when the mopier is disabled eliminates the advantage of transmitting the print job once, because the job is sent through the network for each copy.

Mopier mode and collation



CAUTION Disabling **Mopier Mode** disrupts functionality for the **Output** and **Finishing** tab features.

Mopying and collating print jobs are independent but closely related functions. The print driver performs mopying, sending original print jobs to the device. The print driver or the document software program control collation. 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**.

Control collation through the print driver by selecting or clearing the **Collated** check box on the **Advanced** tab. 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 5-5 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 driver only)

Postscript Passthrough is enabled by default, and must be enabled for most print jobs. Postscript passthrough 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 software programs with **Postscript Passthrough** enabled, because such programs send postscript information that the driver cannot control. Other programs might print using these options without problems. Select **Disabled** and print the document again if you encounter problems.



NOTE In some cases, disabling **Postscript Passthrough** can cause unexpected results within a software program.

JPEG Passthrough (PS Emulation driver only)

The JPEG Passthrough setting contains the following options:

- **Disable.** When this option is selected, images sent as JPEG are printed as bitmaps, resulting in faster printing.
- **Enable.** When this option is selected, images sent as JPEG are printed as JPEG (JPEG passthrough).
- **Auto.** When this option is selected, the device connection type is automatically detected. For network (TCP/IP) connections, JPEG passthrough is disabled. For DOT4 and USB connections, JPEG passthrough is enabled.

About tab features

The **About** tab is in the **Properties** for the print driver. To gain access to the print driver **Properties**, click **Start** on the MS 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).

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 device 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 LaserJet M4345 MFP model number, driver, date, and versions. The **About** tab is shown in the following figure.

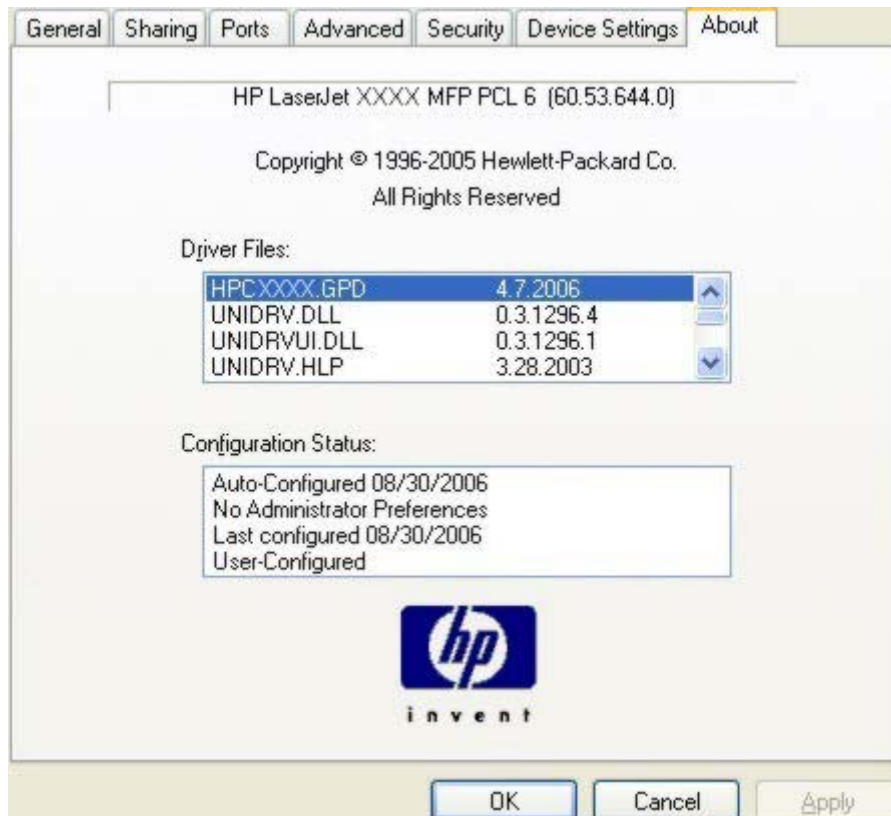


Figure 5-29 About tab

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.

To determine the latest version, compare the overall build number (in parenthesis after the model name) and the GPD number (in the Driver Files: field). If the overall build number has increased, this is the latest version of the driver.

If the overall build number is the same, check the version number of the GPD file. The driver that has the highest GPD version number is the latest driver.

6 Macintosh

Introduction

The HP LaserJet M4345 MFP comes with printing software and installers for Apple Computer, Inc., Macintosh operating systems.

Topics:

- [Macintosh printing-system software](#)
- [Macintosh install and uninstall instructions](#)
- [Macintosh HP Printer Utility](#)
- [HP Embedded Web Server \(EWS\)](#)

Macintosh printing-system software

The HP LaserJet M4345 MFP printing system for Macintosh is composed of an HP-created postscript printer definition file (PPD) and a printer dialog extension (PDE) file that work together with the Macintosh OS print system. These files are used by the Macintosh OS print system to determine default print settings and also allows the user to select between the various print options and settings and are installed by the provided HP LaserJet Installer. Additionally, an HP-supplied Macintosh printer device configuration utility is provided, which allows the user to access the device's embedded Web server (EWS) to allow for additional configuration and device status monitoring. The following are provided on the installation CD:

- The HP LaserJet Installer for Macintosh
- Install notes (Readme file)

The following major components are installed by the HP LaserJet Installer for Mac:

- HP LaserJet M4345 PPD
- HP LaserJet M4345 PDE
- HP USB EWS Gateway
- HP Device Configuration Utility
- HP Uninstaller for the HP Device Configuration Utility and HP USB EWS Gateway

Topics:

- [Hardware requirements](#)
- [Operating-system support](#)
- [Availability](#)

Hardware requirements

- PowerPC G3, G4, G5 or Intel Core processor
- 256 MB RAM
- 32 MB of available hard-disk space
- CD-ROM drive or internet connection

Operating-system support

- Mac OS X v10.2.8, v10.3, v10.4 and later are supported.
- Mac OS 9 and Mac OS X classic are not supported.

Availability

This document provides information about the availability of the HP LaserJet M4345 MFP printing-system software and related software and firmware. Printing-system software on a CD is available from HP fulfillment centers.

Topics:

- [Printing-system software on the Web](#)
- [In-box printing-system software CDs](#)

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

Topics:

- [Printing-system software](#)
- [Software component availability](#)

Printing-system software

The HP LaserJet M4345 MFP printing-system software is available for download at the following Web site:

www.hp.com/support/ljm4345mfp

Software component availability

The following HP LaserJet software components are installed:

- HP LaserJet M4345 PPD
- HP LaserJet M4345 PDE
- HP USB EWS Gateway
- HP Device Configuration Utility
- HP Uninstaller for the HP Device Configuration Utility and HP USB EWS Gateway

In-box printing-system software CDs

The software CD for the HP LaserJet M4345 MFP contains the files for installing the printing-system software on the computer.

Topics:

- [Macintosh partition](#)
- [CD versions](#)

Macintosh partition

The HP LaserJet M4345 MFP printing-system software CD is divided into two partitions, one for each of the following operating systems:

- MS Windows
- Macintosh

The HP Macintosh printing-system software files all reside in the Macintosh partition. The HP LaserJet Installer for Macintosh is at the root of the Macintosh CD Partition. The user manuals (in PDF format) are grouped by language and are in the Manuals directory on the Macintosh partition of the printing-system software CD.

CD versions

The software CD for the HP LaserJet M4345 MFP contains the files for installing the printing-system software on the computer.

The HP LaserJet M4345 MFP printing-system software CD is available in two versions, each of which contains printing-system documentation in various languages, as follows:

- **CD ROW – Americas and Europe (part number CB425-60135):**

- AR = Arabic
- CA = Catalan (Català)
- HR = Croatian
- CS = Czech (Česky)
- DA = Danish (Dansk)
- NL = Dutch (Nederland)
- EN = English
- FI = Finnish (Suomi)
- FR = French (Français)
- DE = German (Deutsch)
- EL = Greek
- HE = Hebrew
- HU = Hungarian (Magyar)
- IT = Italian (Italiano)
- NO = Norwegian (Norsk)
- PL = Polish (Polski)
- PT = Brazilian Portuguese (Português)
- RO = Romanian
- RU = Russian (Русский)

- SK = Slovak
- SL = Slovenian
- ES = Spanish (Español)
- SV = Swedish (Svenska)
- TR = Turkish (Türkçe)
- **CD AS – Asian (part number CB425-60136):**
 - AR = Arabic
 - ZHCN = Simplified Chinese
 - ZHTW = Traditional Chinese
 - EN = English
 - ID = Indonesia (Bahasa)
 - JA = Japanese
 - KO = Korean
 - TH = Thai

Macintosh install and uninstall instructions

The HP LaserJet M4345 MFP comes with software and installers for MS Windows and Apple Computer, Inc., Macintosh systems. This document provides procedures for installing and removing the HP LaserJet M4345 MFP printing-system software for Macintosh operating systems.

Topics:

- [Macintosh component descriptions](#)
- [Install the Macintosh printing system](#)
- [Uninstall the Macintosh printing system](#)

Macintosh component descriptions

The device includes the following software for Macintosh computers:

- HP LaserJet M4345 PPD
- HP LaserJet M4345 PDE
- HP USB EWS Gateway
- HP Device Configuration Utility
- HP Printer Utility
- HP Uninstaller for the HP Device Configuration Utility and HP USB EWS Gateway

Topics:

- [HP LaserJet PPDs](#)
- [PDEs](#)
- [HP Embedded Web Server](#)
- [Install notes \(Readme file\)](#)
- [Online help](#)

HP LaserJet PPDs

In Mac OS X V10.2.8 or later, the PPDs are installed in **Library/Printers/PPDs/Contents/Resources:<lang>.lproj**, where **<lang>** is the appropriate localized folder.

The PPDs, in combination with the driver, provide access to the device configuration settings and installable options. These settings are usually configured during the installation process by using Apple Mac OS X tools such as Print Center, Printer Setup Utility, and Print & Fax. For more information, see [Table 6-1 Adding a device in Macintosh operating systems](#).

PDEs

Printer Dialog Extensions (PDEs) are code plug-ins (for Mac OS X V10.2.8 or later only) that provide access to device features, such as number of copies, duplexing, and quality settings.

HP Embedded Web Server

Mac OS X supports the HP Embedded Web Server (HP EWS). Use the HP EWS to perform the following tasks:

- View the device status and change device settings.
- View and change network settings for the device.
- Print information pages for the device.
- View the device event log.

The HP EWS is accessed by using a Web browser such as Safari. The HP USB EWS Gateway software allows the Web browser access to the device if the device is connected using a USB cable. The HP EWS can also be opened by choosing the **Utility** button in the Macintosh Print Center or Printer Setup Utility, or through the HP Device Configuration utility.

Install notes (Readme file)

This text file contains information about basic device installation and OS support.

Online help

The help system is in English only, and can be viewed through a browser or in the Macintosh OS Help Center.

Install the Macintosh printing system

On a Macintosh computer, the installation procedures are basically 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 device. The computer user must also have administrative rights on the computer in order to install the software.

Topics:

- [General installation for Macintosh operating systems](#)
- [Detailed Mac OS X installation](#)
- [Printer setup](#)

General installation for Macintosh operating systems

1. If you are connecting the device to a network, connect the network cable to the device network port. If you are connecting the device to a computer using the USB cable, install the software *before* connecting the USB cable.
2. 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 LaserJet M4345** CD-ROM icon on the desktop to open the CD-ROM window.

3. Double-click the **HP LaserJet v... .app** icon.



NOTE The **Continue** button appears only after you type the "admin" password in the **Authenticate** dialog.

- The main **Installer** dialog appears. Click **Install** and then follow the onscreen instructions to complete the software installation.



NOTE When you are installing the printing-system software, 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.

- When software installation is complete, click **Quit**.
- Continue with the steps for setting up a device.

The software program that you use to finish setting up the device varies by operating system. The following table shows the print setup tools that are available.

Table 6-1 Adding a device in Macintosh operating systems

Operating System	Print Center	Printer Setup Utility	Print & Fax
Mac OS X V10.2.8	x		
Mac OS X V10.3		x	x
Mac OS X V10.4		x	x

Detailed Mac OS X installation

Topics:

- [Main Install dialog sequence](#)

Main Install dialog sequence

This section provides information about the Macintosh installation dialog-box sequence for the Easy Install (the typical installation option).



NOTE If you are installing the device using a network connection, you can connect the device to the network before installing the software, but if you are installing the device using a USB connection, install the software *before* connecting the USB cable.

Insert the HP LaserJet M4345 MFP printing-system software CD in the CD-ROM drive.

If the CD screen does not open automatically when the CD is put into the CD-ROM drive, double-click the **HP LJ M4345 MFP** CD-ROM icon on the desktop to open the installer folder.



Figure 6-1 HP LJ M4345 MFP CD-ROM icon

The **hp LaserJet** dialog opens.



Figure 6-2 hp LaserJet Software screen

In the HP LaserJet Software screen, double-click the **HP LaserJet v6.8.0.42C.app** icon. This begins the install process.



HP LaserJet v6.8.0.420.app

Figure 6-3 HP LaserJet v.6.8.0.42C.app icon

The **Authenticate** dialog appears.



Figure 6-4 Authenticate dialog

Type the correct “admin” name and password and click **OK** to continue. The installer startup screen appears.

Click **Cancel** to exit the installation.



Figure 6-5 HP LaserJet for Macintosh installer startup-screen

Click **Go Back** to return to the previous screen.

Click **Continue**. The **Read Me** dialog appears, as shown in the following figure.

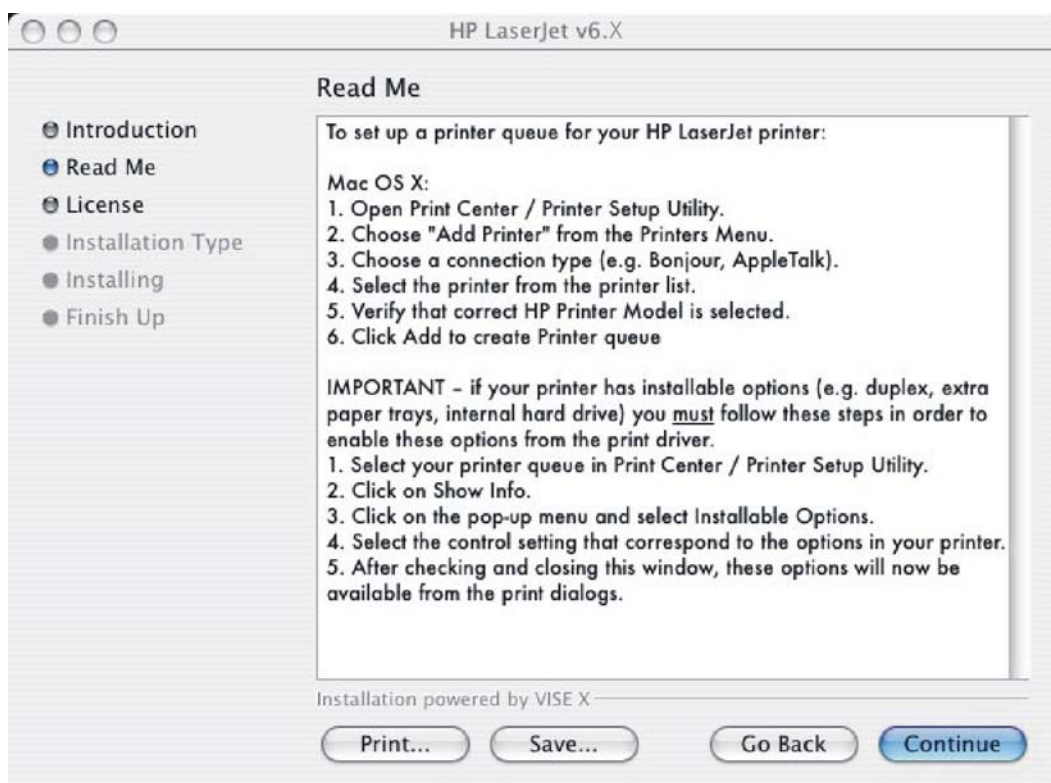


Figure 6-6 HP LaserJet Installer Read Me dialog

Click **Print...** to open the **Page Setup** dialog for the default device and print a copy of the readme.

Click **Save...** to open the system **Save** dialog and save the readme to disk.

Click **Continue** to continue the installation. The **License** dialog appears.



Figure 6-7 License dialog

Click **Print...** to open the **Page Setup** dialog for the default device and print a copy of the license agreement.

Click **Save...** to open the system **Save** dialog and save the license agreement to disk.

Read the software-license agreement and then click **Continue** to continue the installation. A dialog appears, asking you to accept the license agreement, as shown in the following figure.



Figure 6-8 Agree dialog

Click **Disagree** to decline the agreement, end the installation process, and close the installer.

Click **Agree** to accept the agreement. The **Easy Install** dialog appears, as shown in the following figure.

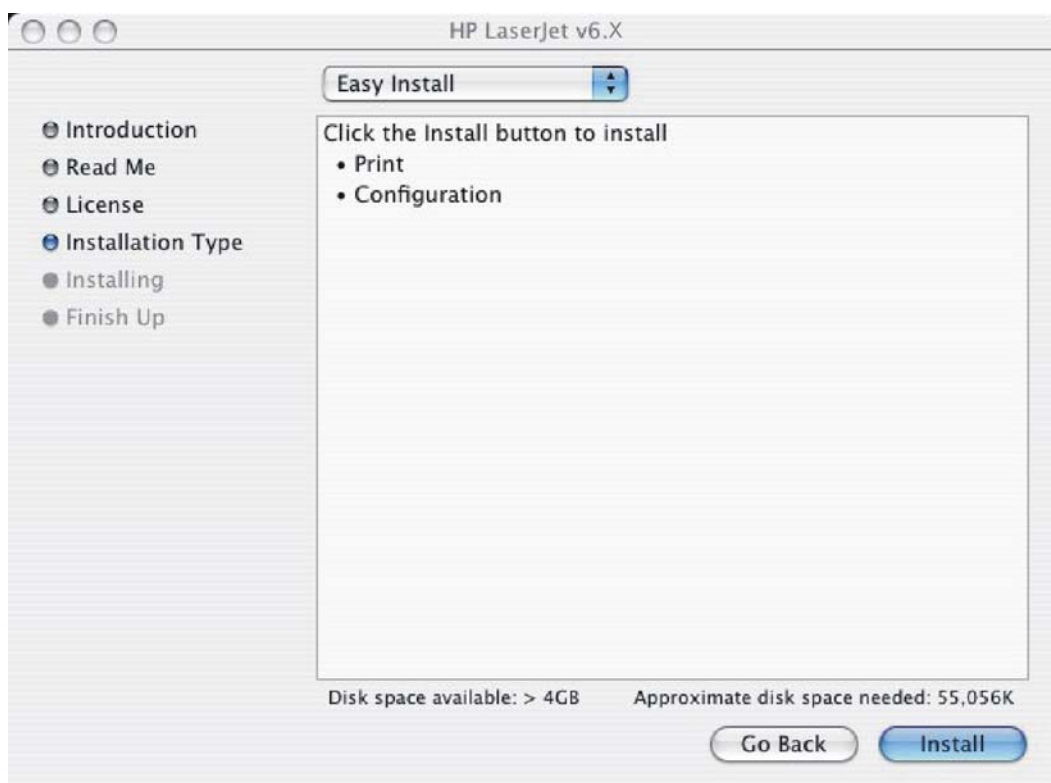


Figure 6-9 Easy Install dialog

The default option in the drop-down menu at the top of the screen is **Easy Install**. You can also choose **Custom Install** in the same menu, as shown in the following figure.

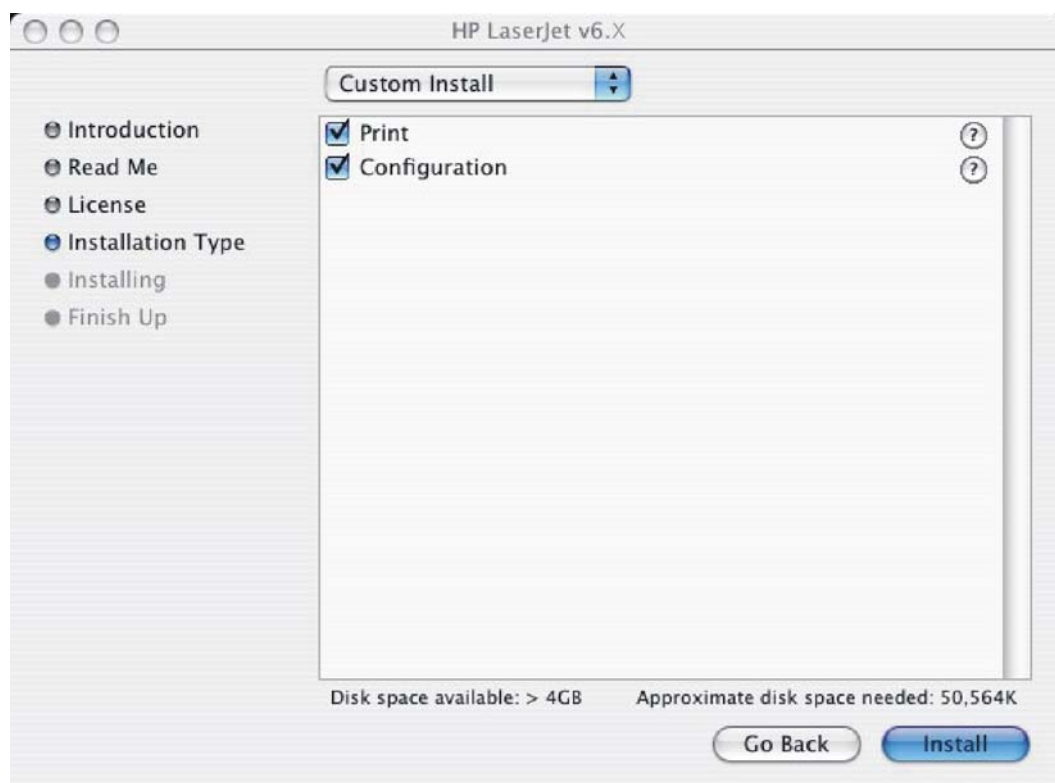


Figure 6-10 HP LaserJet Installer dialog (custom install)

The **Custom Install** screen displays all of the options that are available on the printing-system software CD. Use the check boxes on the list to install the components that you want to install.

The **Configuration** installation option installs the HP EWS Configuration Utility, which is used to access the HP EWS program. For more information, see [HP Embedded Web Server \(EWS\)](#).

The **Print** installation option installs the print-system files. The printing-system files are installed in the System/Library folder on the Macintosh hard drive.

Click **Go Back** to return to the previous screen.

Click the ? icon to the right of each item in the list to open a screen that describes the component.

Click **Install** to start the installation on the selected disk. The **Installing** screen appears, as shown in the following figure. If installed, the HP Device Configuration Utility is installed under the Application directory in a directory labeled **HP EWS Device Configuration**. An uninstaller utility for the HP Device Configuration Utility is also installed in this directory.

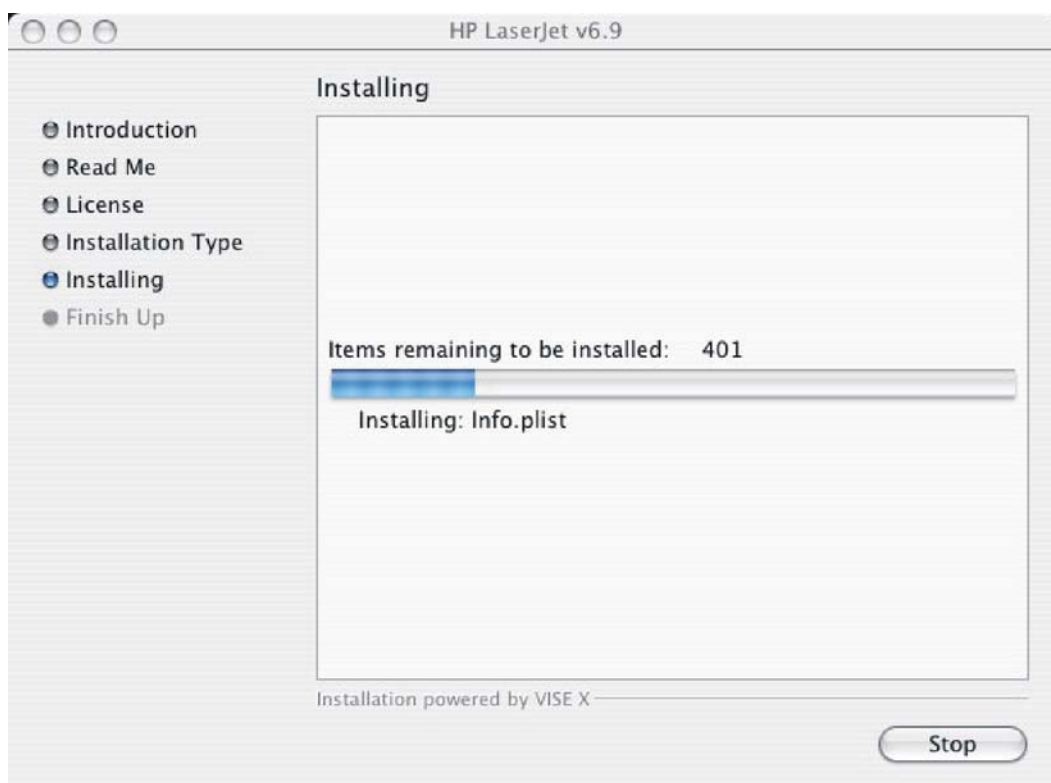


Figure 6-11 Installing dialog

The **Installing** dialog 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** icon appears on the desktop. Follow these instructions to set up a printer queue for the HP LaserJet M4345 MFP.



Figure 6-12 LaserJet ReadMe icon

The **Finish Up** dialog appears, stating that the installation was successful, as shown in the following figure.



Figure 6-13 Finish Up dialog

Click **Quit** to exit the installer.

Click **Continue** to return to the HP LaserJet Installer.

Printer setup

After installing the printing-system software in Macintosh operating systems, the device must be set up.

Topics:

- [Set up a printer with Mac OS X V10.4 or later\)](#)
- [Set up a printer with Mac OS X V10.3](#)
- [Set up a printer with Mac OS X V10.2.8](#)
- [Troubleshooting the printer setup](#)

Set up a printer with Mac OS X V10.4 or later)

Carry out these steps *after* the software installation is complete.

1. If you are installing the device using a USB connection, connect the USB cable between the HP LaserJet M4345 MFP and the computer. Turn on the device. If you are installing using a network connection, verify that the network cable is connected to the device and the device is on.

2. In the **Applications** folder, open the **Utilities** folder, and then run the **Printer Setup Utility**. The **Printer List** appears. It looks similar to the one shown in the following figure.

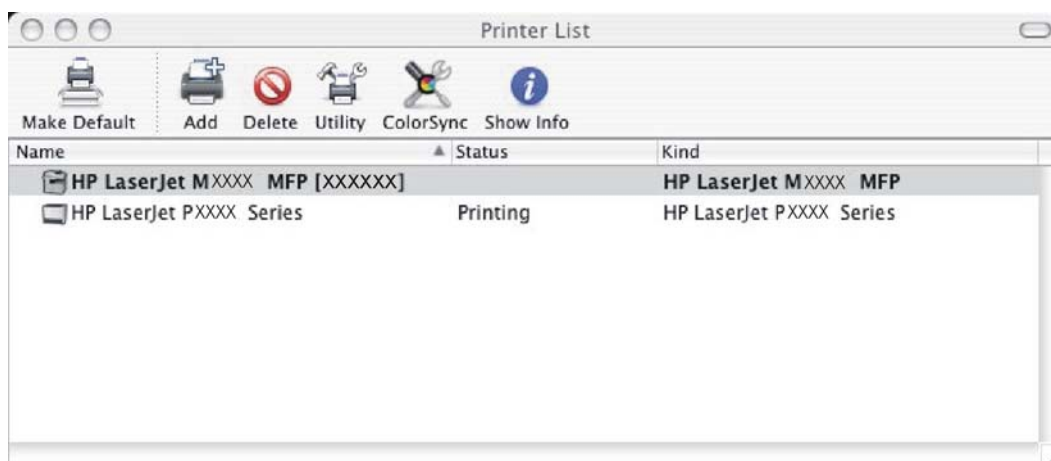


Figure 6-14 Printer list screen

You can also configure the device using the **Print & Fax** pane of **System Preferences** (from the Apple menu, choose **System Preferences...**, then choose **Print & Fax**).

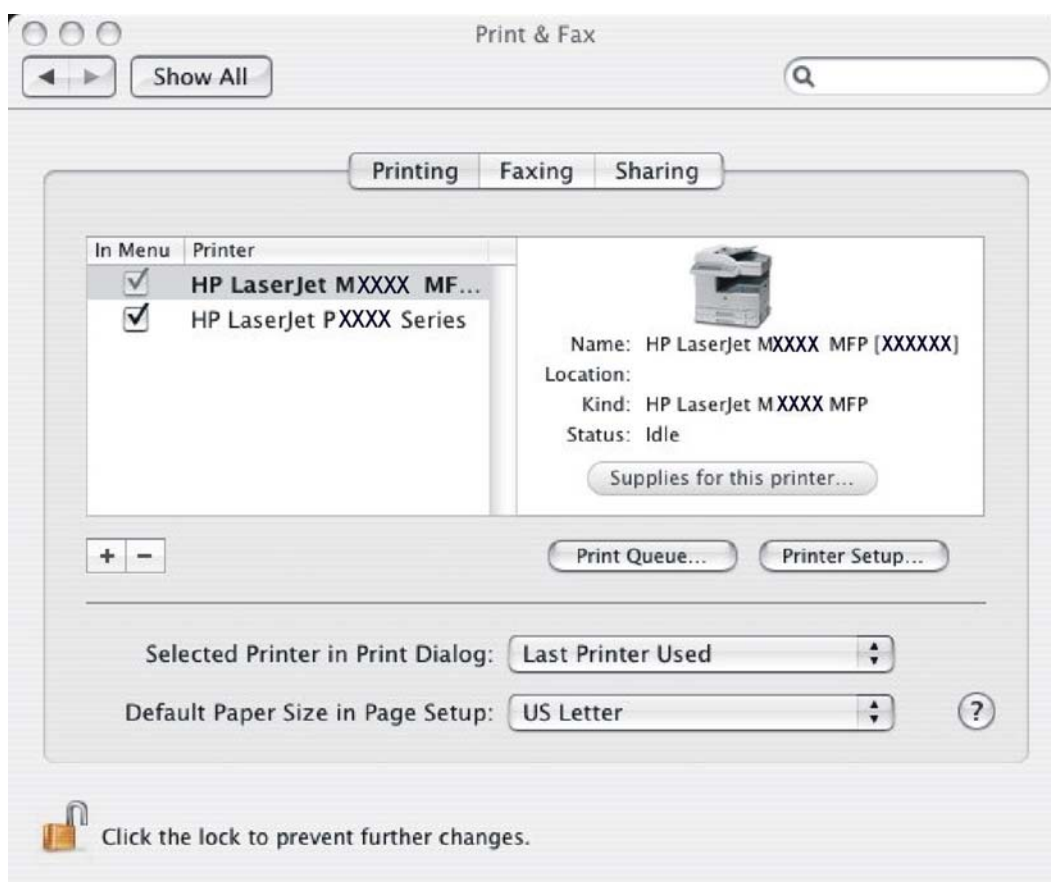


Figure 6-15 Print & Fax dialog

3. If you are installing the device using a USB connection, verify that the device appears on the device list. The **Kind** column in the device list, or the **Kind** field in the **Print & Fax** screen, should display **HP LaserJet M4345 MFP**. If this is the case, the setup is complete.

If the device does not appear, or if the correct information does not appear in the **Kind** field, see [Troubleshooting the printer setup](#).

If you are installing the device using a network connection, continue with the following steps.

4. Click **Add** in the **Printer List** (or the + button in the Print & Fax utility) to open the **Printer Browser** screen.
5. You can use either Bonjour or IP Printing for the network connection.



NOTE Bonjour is the easiest method and is the best method to use if the device is installed on your local network.

IP Printing *must* be used if you are installing the device on a different network.

If you are using Bonjour, carry out the following steps:

- a. Click the **Default Browser** tab.

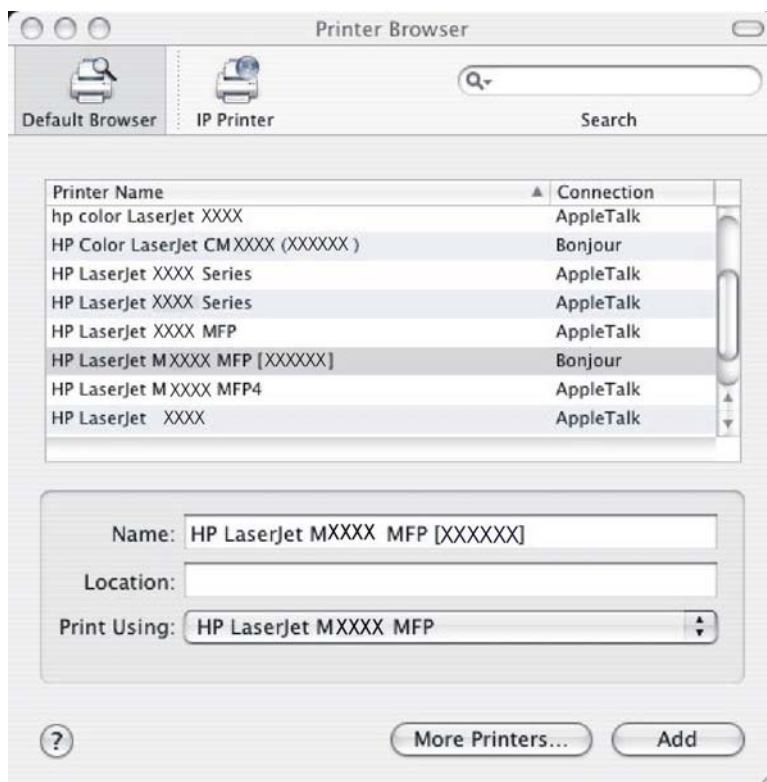


Figure 6-16 Default Browser tab

- b. Select the HP LaserJet M4345 MFP from the list. The software verifies that the device is connected to the network and the **Print Using** field is automatically populated with the correct PPD for the device.



NOTE If you are on a network that has more than one HP LaserJet M4345 MFP, print a configuration page and match the Bonjour Printer Name to the name on the list to identify the device you are installing. (See [Print the configuration page](#).)

NOTE If the HP LaserJet M4345 MFP does not appear in the list, verify that the device is on and connected to the network, then try turning the device off and then on again. If the **HP LaserJet M4345 MFP** PPD does not appear in the **Print Using** pull-down list, turn the computer off and then on again, then restart the setup process. For more troubleshooting information, see [Troubleshooting the printer setup](#).

If you want to use the IP Printing method, carry out the following steps:

- a. Click the **IP Printer** tab.

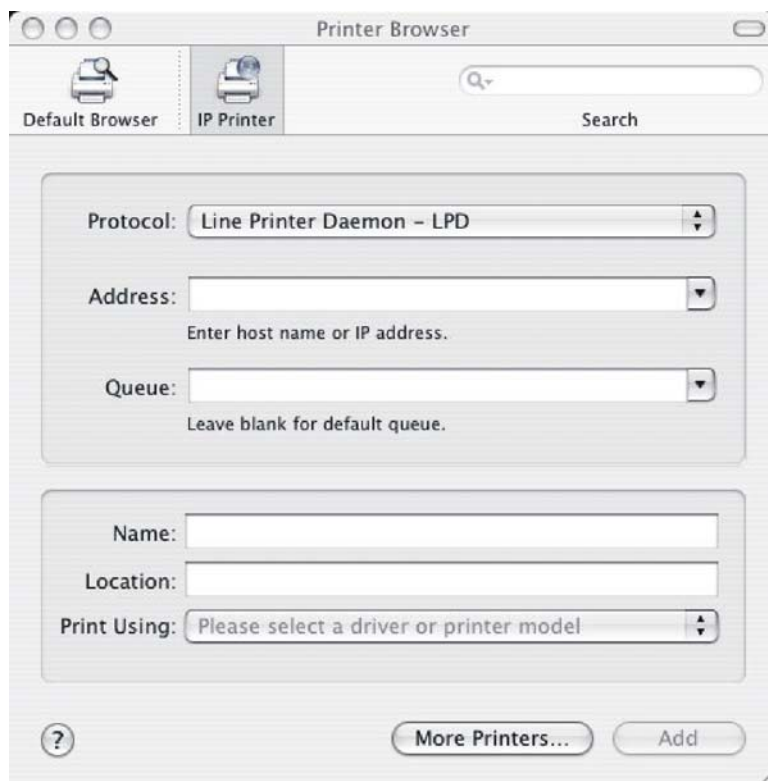


Figure 6-17 Printer Browser – IP Printer tab

- b. Choose **HP Jet Direct – Socket** from the **Protocol** pull-down menu. This is the recommended setting for HP device.
- c. Print the configuration pages.

To print a configuration page, follow these instructions.

- i. Touch **Administration**.
- ii. Touch **Information**.
- iii. Touch **Configuration/Status Pages**.
- iv. Touch **Configuration Page**.
- v. Touch **Print**.

The device prints the configuration page.

- d. On the first configuration page, under **Product Settings**, find the IP Address. Type this address into the **Address** field on the add printer screen.
 - e. The **Name**, **Location**, and **Print Using** information will automatically be filled in. If the **HP LaserJet M4345 MFP Series** PPD does not appear in the **Print Using** field, turn the computer off and then on again and restart the setup process.
6. Click **Add**. The **Installable Options** screen appears.

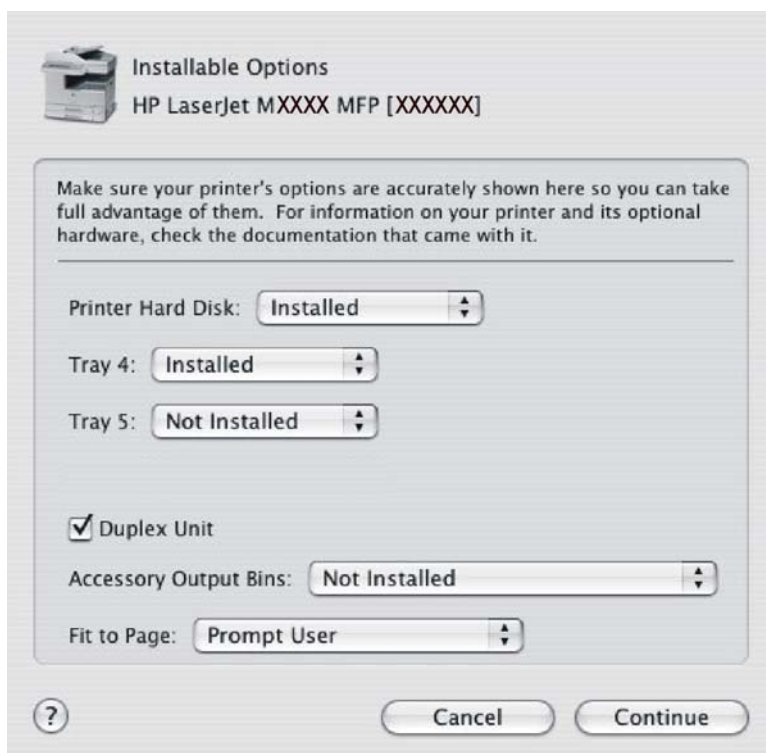


Figure 6-18 Installable Options screen

7. A device hard disk is installed by default. Do not change the **Printer Hard Disk** setting.
8. If the device has trays 3, 4, or 5, change the appropriate setting for each tray from **Not Installed** to **Installed**.
9. If the device has a duplex unit, select the **Duplex Unit** check box.

10. After selecting the installable options, click **Continue**. The device name appears in the **Printer List** and the setup is complete.

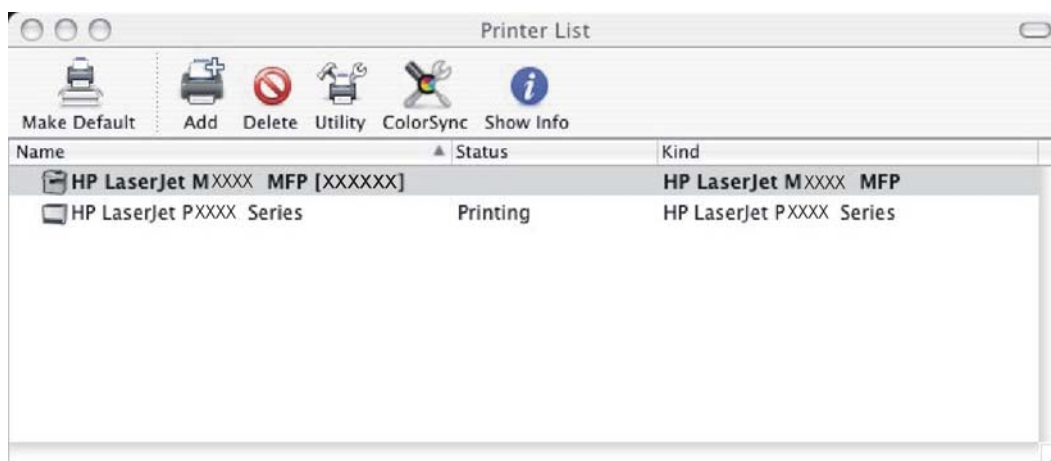


Figure 6-19 Printer List screen

Set up a printer with Mac OS X V10.3

1. If you are installing the device using a USB connection, connect the USB cable between the HP LaserJet M4345 MFP and the computer. Turn on the device. If you are installing using a network connection, verify that the network cable is connected to the device and the device is on.

2. In the **Applications** folder, open the **Utilities** folder, and then run the **Printer Setup Utility**.

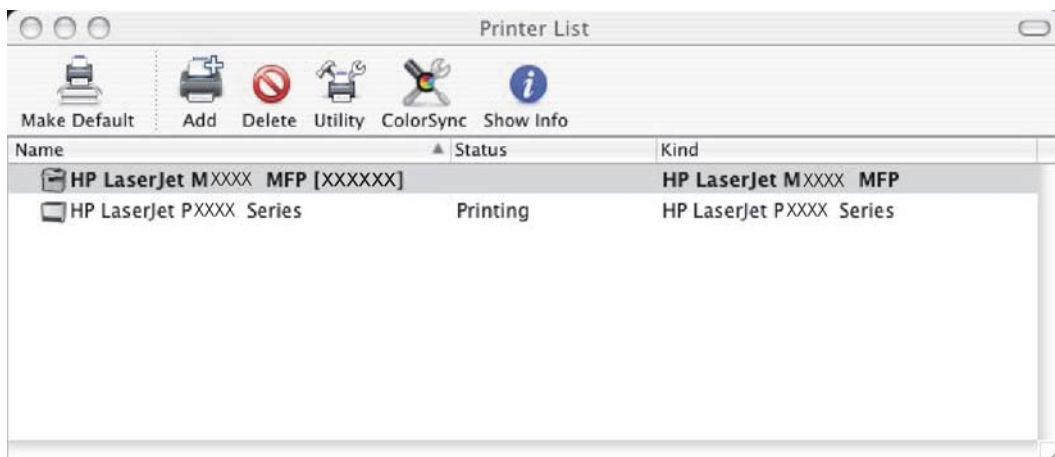


Figure 6-20 Printer List screen

You can also configure the device using the **Print & Fax** pane of **System Preferences** (from the Apple menu, choose **System Preferences...**, then choose **Print & Fax**).

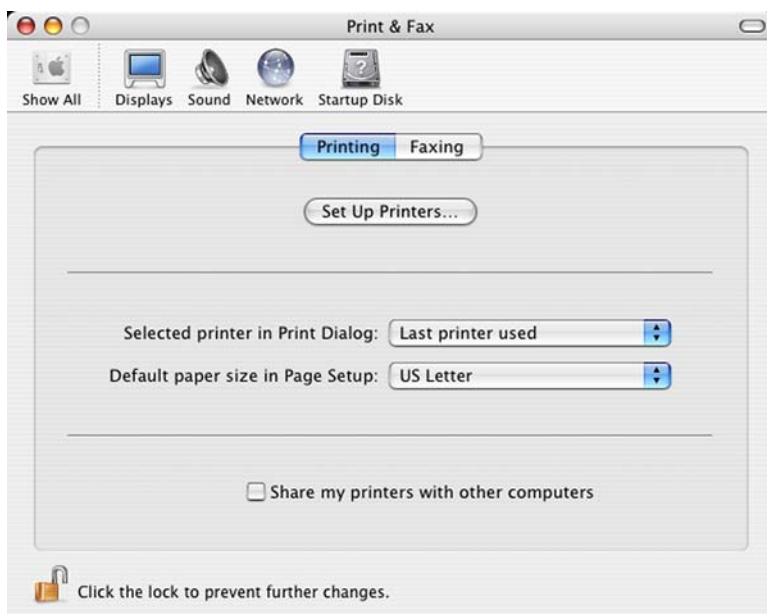


Figure 6-21 Print & Fax screen

3. If you are installing the device using a USB connection, verify that the device appears on the device list. (In the Print & Fax screen, click the **Set Up Printers...** button to see the device list.) The **Kind** column in the device list same change as before should display **HP LaserJet M4345 MFP Series**. If this is the case, the setup is complete.

If the device does not appear, or if the correct information does not appear in the **Kind** field, see [Troubleshooting the printer setup](#).

If you are installing the device using a network connection, continue with the following steps.

4. Click **Add** (or the **Set Up Printers...** button in the Print & Fax screen, and then **Add**) to open the add printer screen.

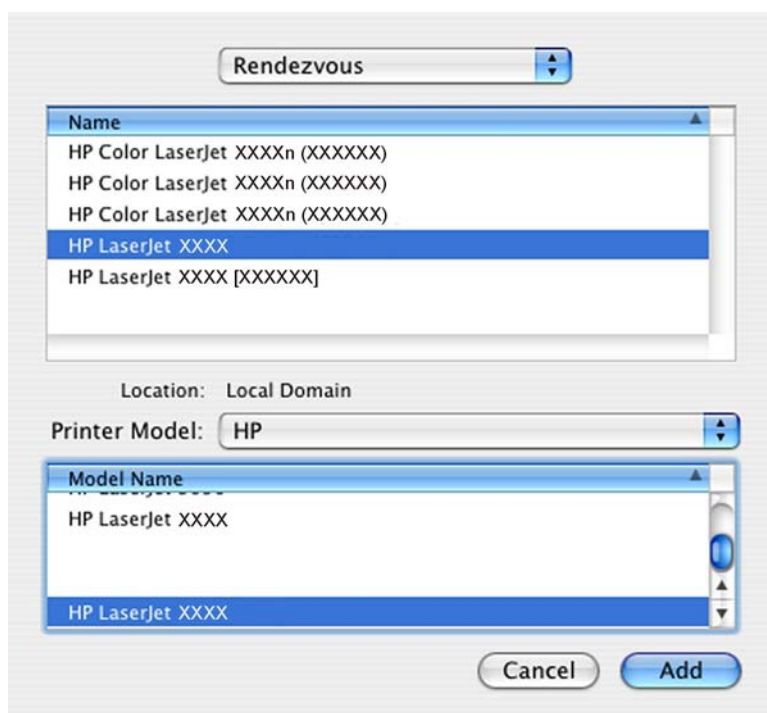


Figure 6-22 Add printer screen

5. Select the network connection protocol in the top pull-down menu. The two supported protocols are **Rendezvous** and **IP Printing**.



NOTE Rendezvous is the easiest method and is the best method to use if the device is installed on your local network.

IP Printing *must* be used if you are installing the device on a different network.

If you are using Rendezvous, carry out the following step:

Select the HP LaserJet M4345 MFP in the **Name** list. The **Printer Model** and **Model Name** are selected automatically.



NOTE If you are on a network that has more than one HP LaserJet M4345 MFP, print a configuration page and match the Rendezvous Printer Name to the name on the list to identify the device you are installing. (See [Print the configuration page.](#))



NOTE If the HP LaserJet M4345 MFP does not appear in the list, verify that the device is powered on and connected to the network. If it still does not appear, try turning the device off and then on again. Finally, turn the computer off and then on again, then restart the setup process. For more troubleshooting information, see [Troubleshooting the printer setup.](#)



NOTE If the automatic selection fails, or if you want to manually select a .PPD file, click the **Printer Model** pull-down menu, select **HP**, and then select the .PPD file that you want to add. If the **HP LaserJet M4345 MFP Series** PPD does not appear in the **Model Name** list, turn the computer off and then on again and restart the setup process.

If you are using IP Printing, carry out the following steps:

- a. Choose **Socket/HP Jet Direct** from the **Printer Type** pull-down menu. This is the recommended setting for HP devices.
 - b. Print out the device configuration pages.
To print a configuration page, follow these instructions.
 - i. Touch **Administration**.
 - ii. Touch **Information**.
 - iii. Touch **Configuration/Status Pages**.
 - iv. Touch **Configuration Page**.
 - v. Touch **Print**.

The device prints the configuration page.
 - c. On the first configuration page, under **Product Settings**, find the IP Address. Type this address into the **Printer Address** field on the add printer screen.
 - d. Select the **Printer Model** and select HP LaserJet M4345 MFP in the **Model Name** list. If the **HP LaserJet M4345 MFP Series** PPD does not appear in the **Model Name** list, turn the computer off and then on again and restart the setup process.
6. Click **Add**. The HP LaserJet M4345 MFP appears in the **Printer List**.
 7. To configure installable options such as a duplexing unit or optional paper tray, click **Show Info?** on the device list and choose **Installable Options** in the pull-down menu.
 8. In the **Collation in Printer** drop-down menu, select one of the following options, depending on the device configuration:
 - Yes – Total RAM > 96 MB or Hard Disk
 - No – Total RAM < 96 MB and No Hard Disk
 9. If the device has the optional 500-sheet tray 3, 4, or 5, select the appropriate tray.
 10. If the device has a duplex unit, select the **Duplex Unit** check box.
 11. Click **Apply Changes**, and then close the **Printer List** dialog.

Set up a printer with Mac OS X V10.2.8

1. If you are installing the device using a USB connection, connect the USB cable between the HP LaserJet M4345 MFP and the computer. Turn on the device. If you are installing using a network connection, verify that the network cable is connected to the device and the device is on.

2. In the **Applications** folder, open the **Utilities** folder, and then run the **Print Center**. The **Printer List** screen appears.



Figure 6-23 Printer List screen

3. If you are installing the device using a USB connection, verify that the device appears on the device list. The **Kind** column in the device list should display **HP LaserJet M4345 MFP Series**. If this is the case, the setup is complete.



NOTE If the **Kind** column does not appear in the device list, go to the **View** menu, and choose **Columns** and then **Kind**.

If the device does not appear, or if the correct information does not appear in the **Kind** column, see [Troubleshooting the printer setup](#).

If you are installing the device using a network connection, continue with the following steps.

- Click **Add** to open the add device screen.

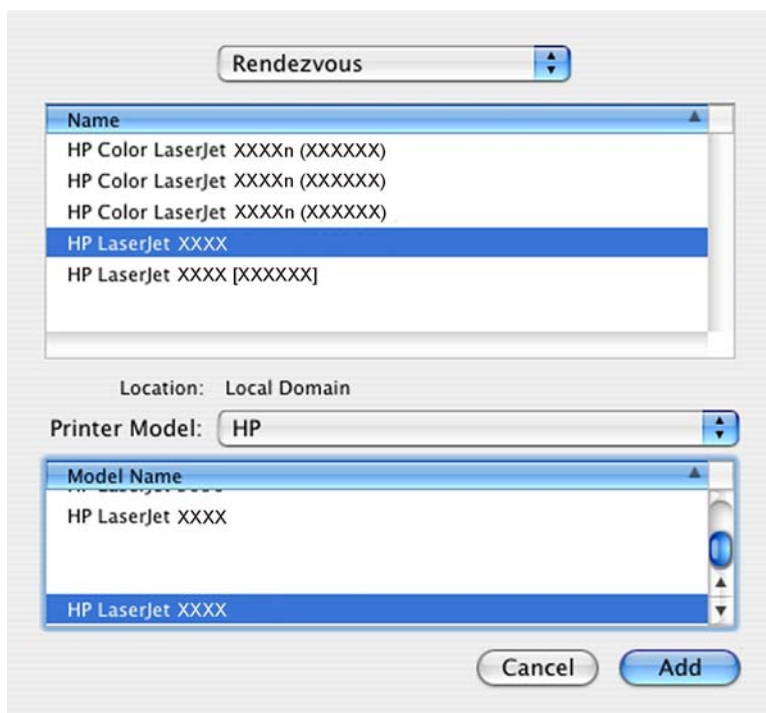


Figure 6-24 Add printer screen

- Choose the network connection protocol in the top drop-down menu. The two supported protocols are **Rendezvous** and **IP Printing**.

If you are using Rendezvous, carry out the following step:



NOTE Rendezvous is the easiest method and is the best method to use if the device is installed on your local network.

IP Printing *must* be used if you are installing the device on a different network.

If you are using Rendezvous, carry out the following step:

Select the HP LaserJet M4345 MFP in the **Name** list. The **Printer Model** and **Model Name** are selected automatically.



NOTE If you are on a network that has more than one HP LaserJet M4345 MFP, print a configuration page and match the Rendezvous Printer Name to the name on the list to identify the device you are installing. (See [Print the configuration page](#).)

NOTE If the HP LaserJet M4345 MFP does not appear in the list, verify that the device is powered on and connected to the network. If it still does not appear, try turning the device off and then on again. Finally, turn the computer off and then on again, then restart the setup process. For more troubleshooting information, see [Troubleshooting the printer setup](#).



NOTE If the automatic selection fails, or if you want to manually select a PPD file, click the **Printer Model** drop-down menu, choose **HP**, and then choose the PPD file that you want to add. If the **HP LaserJet M4345 MFP Series** PPD does not appear in the **Model Name** list, turn the computer off and then on again and restart the setup process.

If you are using IP Printing, carry out the following steps:

- a. Print out the device configuration pages.

To print a configuration page, follow these instructions.

- i. Touch **Administration**.
- ii. Touch **Information**.
- iii. Touch **Configuration/Status Pages**.
- iv. Touch **Configuration Page**.
- v. Touch **Print**.

The device prints the configuration page.

- b. On the first configuration page, under **Product Settings**, find the IP Address. Type this address into the **Printer's Address** field.
 - c. Choose **Printer Model** and then choose the HP LaserJet M4345 MFP in the **Model Name** list.
6. Click **Add**. The HP LaserJet M4345 MFP appears in the **Printer List**.
 7. Select the HP LaserJet M4345 MFP, go to the **Printers** menu, and choose **Show Info**.
 8. Choose **Installable Options** from the top drop-down menu.

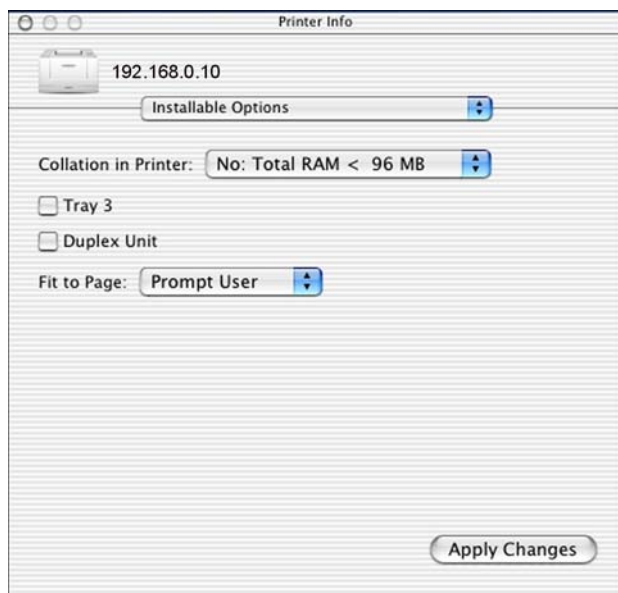


Figure 6-25 Printer Info — **Installable Options** dialog (sample)

9. In the **Collation in Printer** drop-down menu, choose one of the following options, depending on the device configuration:
 - Yes – Total RAM > 96 MB or Hard Disk
 - No – Total RAM < 96 MB and No Hard Disk
10. If the device has the optional 250-sheet tray 3, choose **Tray 3**.

11. If the device has a duplex unit, select the **Duplex Unit** check box.
12. Click **Apply Changes**, and then close the **Printer List** dialog.

Troubleshooting the printer setup

If the printer does not appear in the printer list after an installation:

Carry out each one of these solutions in the order given, and restart the setup process after each one to see if the issue has been resolved.

- Verify that the USB or network cable is connected between the device and the computer and that the device is powered on.
- Try disconnecting and reconnecting the cable. If the computer has more than one USB port, try a different USB port.
- Turn the device off and then back on again.
- Turn the computer off and then back on again.
- If you are using a USB hub on the computer, disconnect the other USB devices from the hub.

If the wrong PPD appears in the Kind column in the printer list after an installation:

1. Unplug USB cable.
2. Delete the print queue with the incorrect type (for example, Generic PostScript Printer).
3. Reinstall the device software.
4. Turn the computer off and then on again.
5. Reconnect the USB cable from the computer to the device.

If these steps do not resolve the problem, delete the incorrect print queue, click **Add**, choose the device from the list, and then browse manually for the **HP LaserJet M4345 MFP Series** PPD.

Uninstall the Macintosh printing system

Follow these instructions to uninstall the Macintosh Printing System.

1. Browse to the folder containing the PPDs. In Mac OS X V10.2.8 or later, the PPDs are installed in **System/Library/Printers/PPDs/Contents/Resources:<lang>.lproj**, where **<lang>** is the appropriate language.
2. Choose the **HP LaserJet M4345 MFP.gz** file and drag it to **Trash**.
3. Empty the **Trash**.
4. To uninstall the HP Device Configuration application and supporting files, go to Applications/HP EWS Device Configuration and run the HP Uninstaller application.

Macintosh HP Printer Utility

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

The HP Printer Utility is available only in Mac OS X V10.2.8 or later. The HP Printer Utility does not work when it is installed by using the AppleTalk protocol. Use IP, Bonjour, Rendezvous, or USB to enable the HP Printer Utility.

Topics:

- [Access to the HP Printer Utility](#)
- [Supplies Status](#)
- [Device Information](#)
- [File Upload](#)
- [Update Firmware](#)
- [Upload Fonts](#)
- [HP Support](#)
- [Duplex mode](#)
- [Economode](#)
- [Resolution](#)
- [Trays Configuration](#)
- [Lock Resources](#)
- [Stored Jobs](#)
- [E-mail Alerts](#)
- [Network Settings](#)
- [Bonjour Settings](#)
- [Additional Settings](#)

Access to the HP Printer Utility

In Mac OS X V10.3, follow these steps to gain access to the HP Printer Utility:

1. Open the Finder.
2. Find and double-click **Printers**. The **Select Printer** screen appears.

In Mac OS X V10.4, follow these steps to gain access to the HP Printer Utility:

1. Click **Go**.
2. Click **Utilities**.
3. Double-click **HP Printer Selector**. The **Select Printer** screen appears.

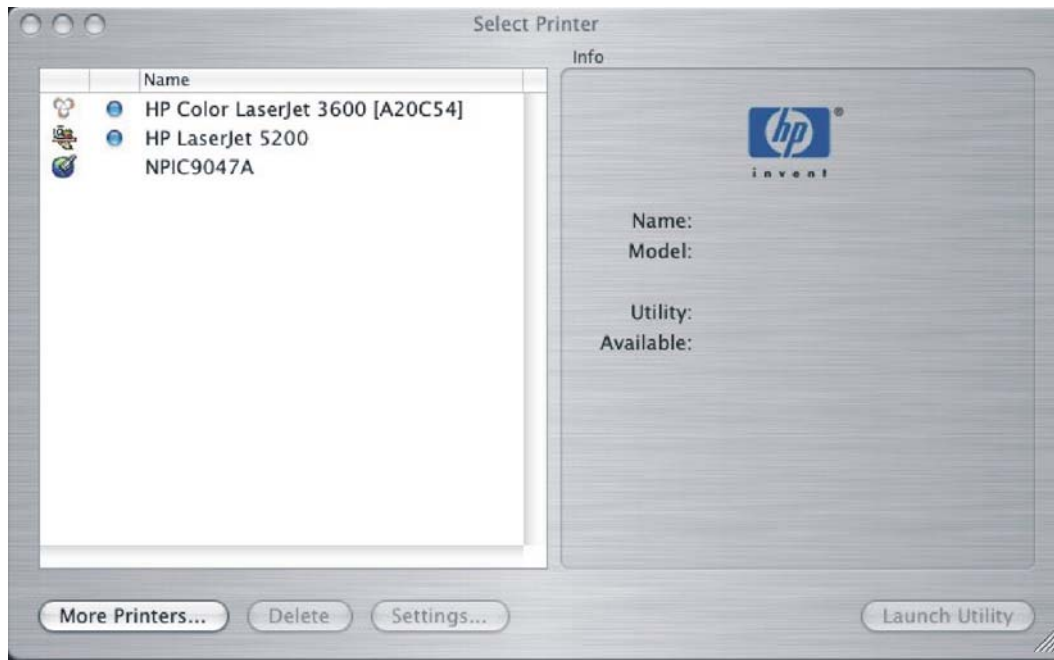


Figure 6-26 Select Printer screen – printer not selected

If the device does not appear, click **More Printers....** The **Connection Type** screen appears, as shown in the following figure.

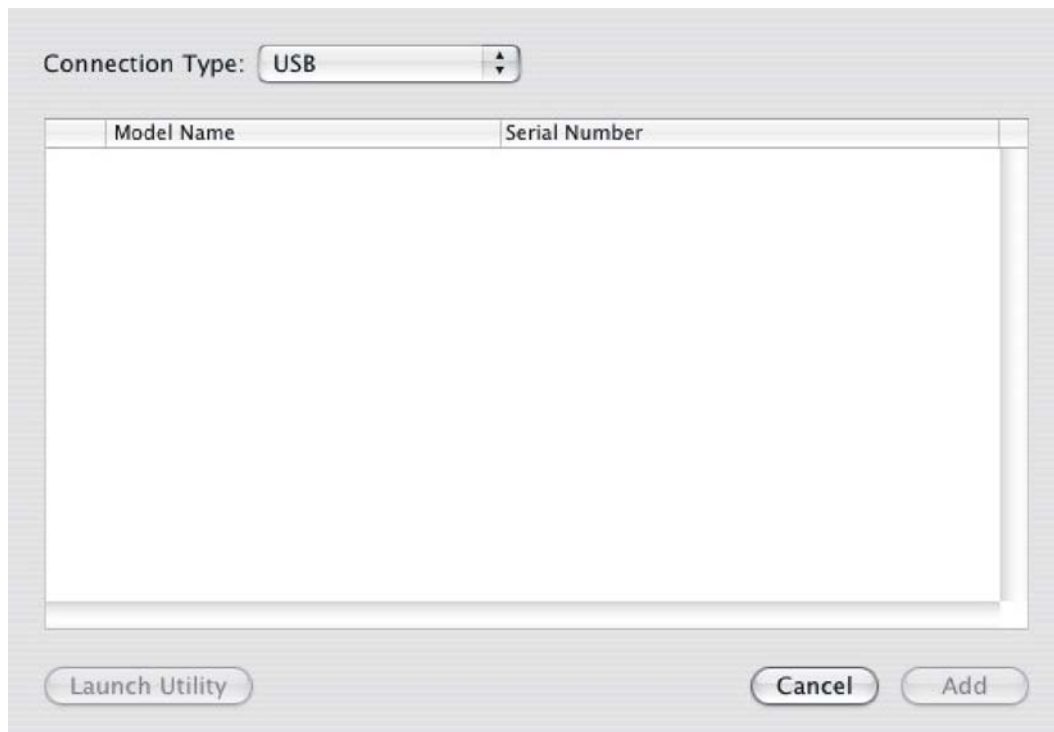


Figure 6-27 Connection Type screen

Choose the connection type (**USB**, **TCP/IP**, or **AppleTalk**). The device name appears under **Model Name**, as shown in the preceding figure.

On the **Connection Type** screen, click **Add**. The **Select Printer** screen appears, showing device information.

To open the HP Printer Utility directly, select the device and click **Launch Utility**.

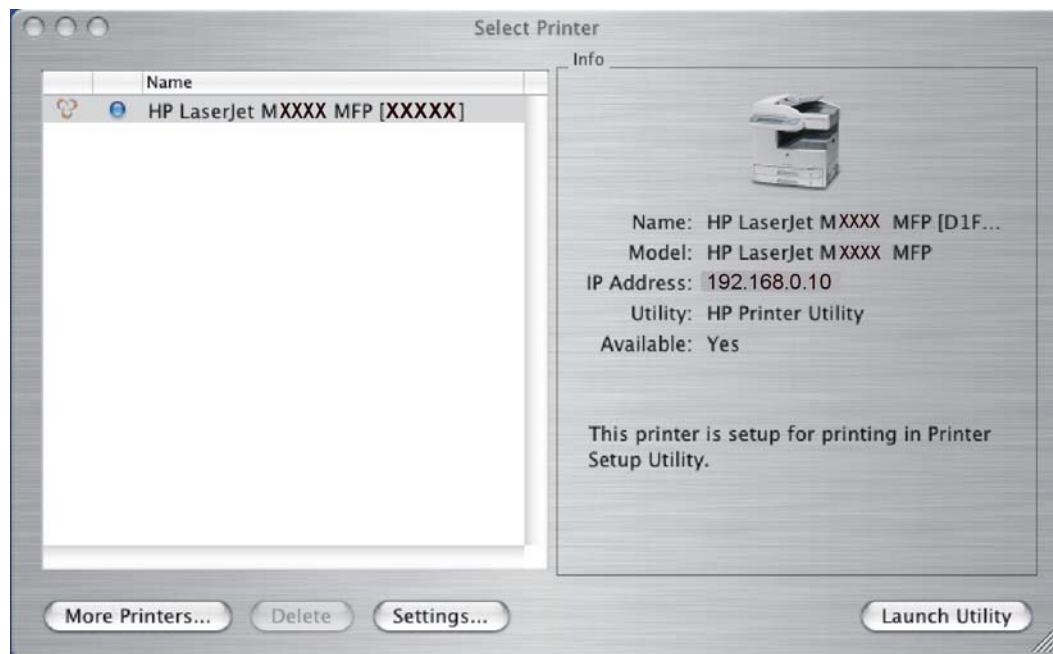


Figure 6-28 Select Printer screen – printer selected

On the **Select Printer** screen, click **Settings...** to open the **Device Status** screen in the HP EWS.

To open the HP Printer Utility, select the device and click **Launch Utility**.

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

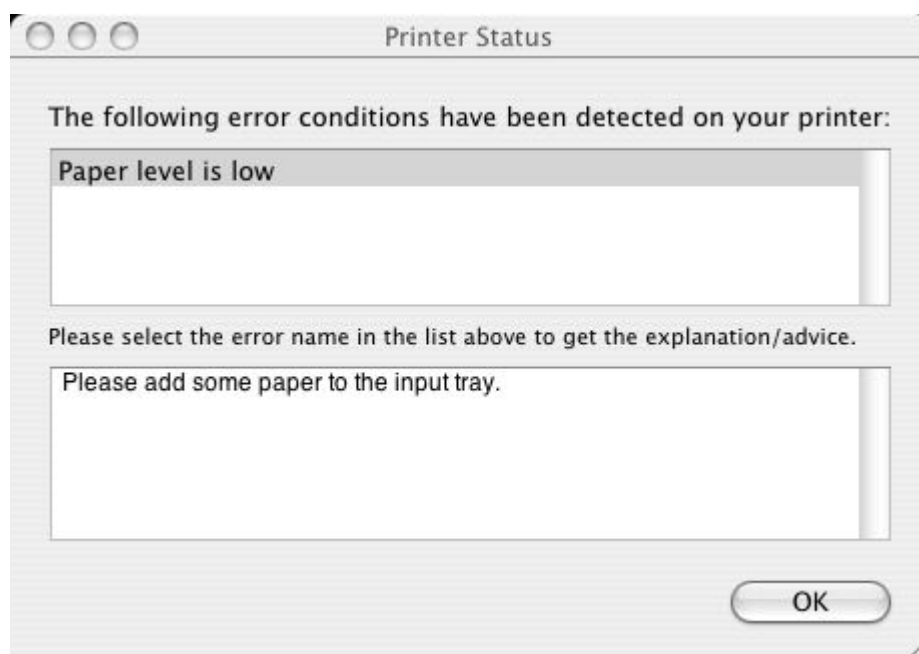


Figure 6-29 Printer Status screen

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 to the **Current Supplies Levels** screen.

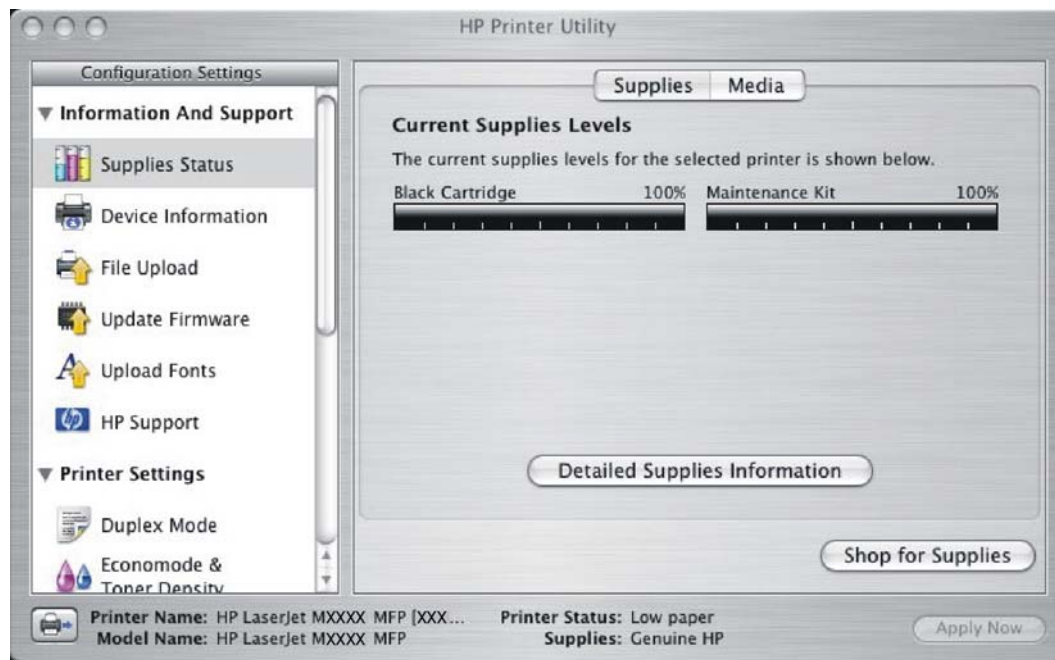


Figure 6-30 Current Supplies Levels screen

Click **Detailed Supplies Information...** to open the **Supplies Information** screen.

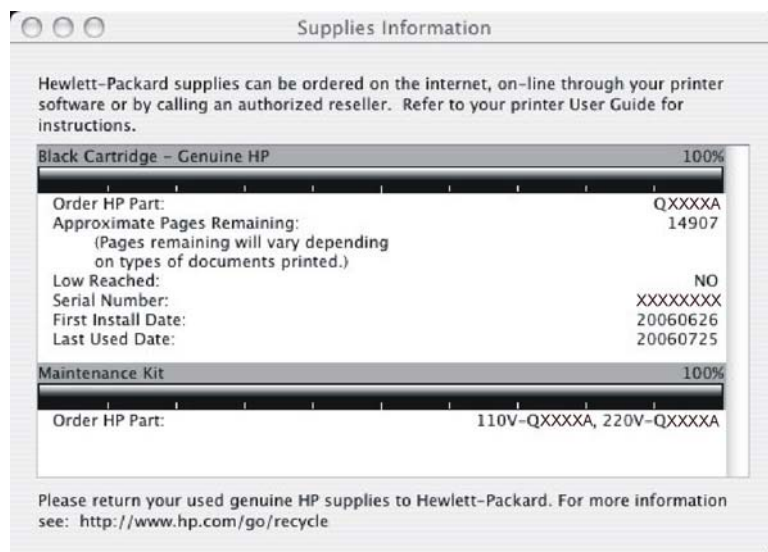


Figure 6-31 Supplies Information screen

Use the scroll button to see information about the print cartridges.

If you have Internet access and click **Shop for Supplies** (see [Figure 6-30 Current Supplies Levels screen](#)), a screen appears that explains the ordering process and describes the kind of information that can be sent about your device to facilitate the ordering of supplies.

Transfer printer information to HP SureSupply?

The fastest way to order supplies online is to transmit information about your printer to HP. Or if you prefer, you can enter this information on your own.

Do you want to send printer information to SureSupply?

[Learn more about HP SureSupply](#)

HP respects your privacy. Only information and status about your printer will be sent; no personal information will be shared. Please refer to the [Shared Information](#) page to know more about the data that will be transmitted.

[Privacy Statement](#) [Using this site means you accept its terms](#)

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Figure 6-32 Transfer printer information to HP SureSupply? screen

After either option is selected (**Send** or **Don't Send**), the Welcome to HP SureSupply Web page opens, as shown in the following figure.

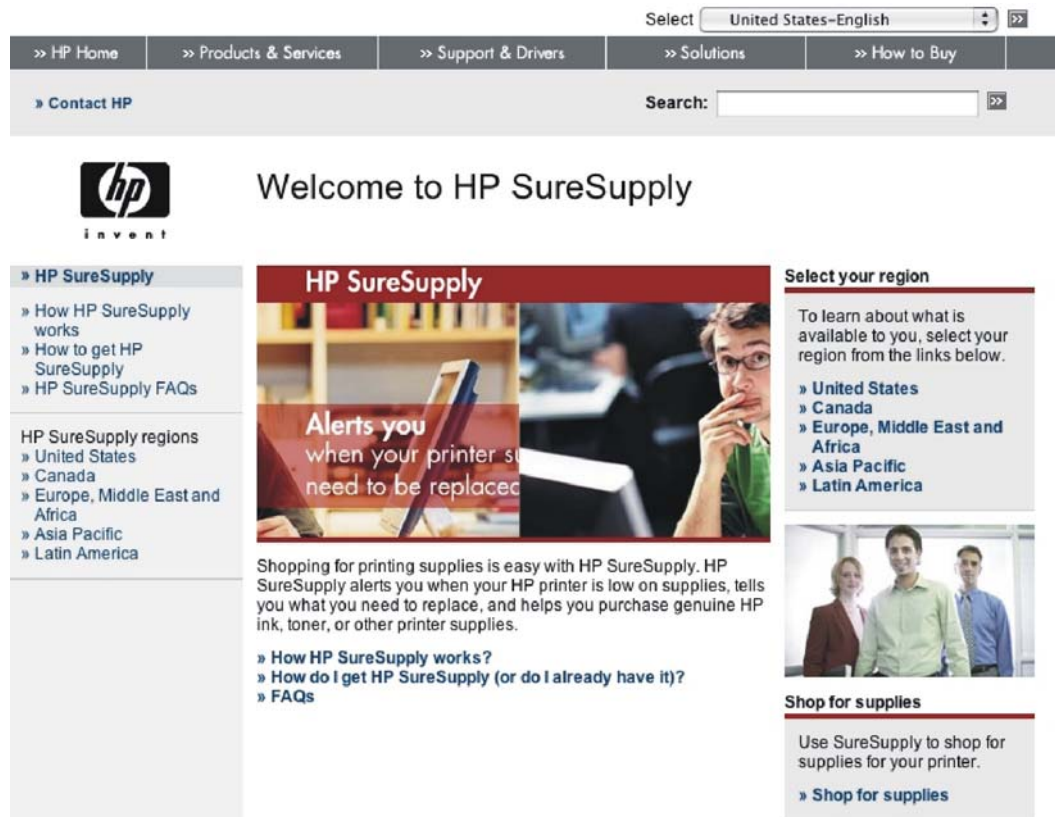


Figure 6-33 Welcome to HP SureSupply screen

On the **Transfer printer information to HP SureSupply?** page, click the **Shared Information** link to open a screen that shows the HP privacy statement, as shown in the following figure.

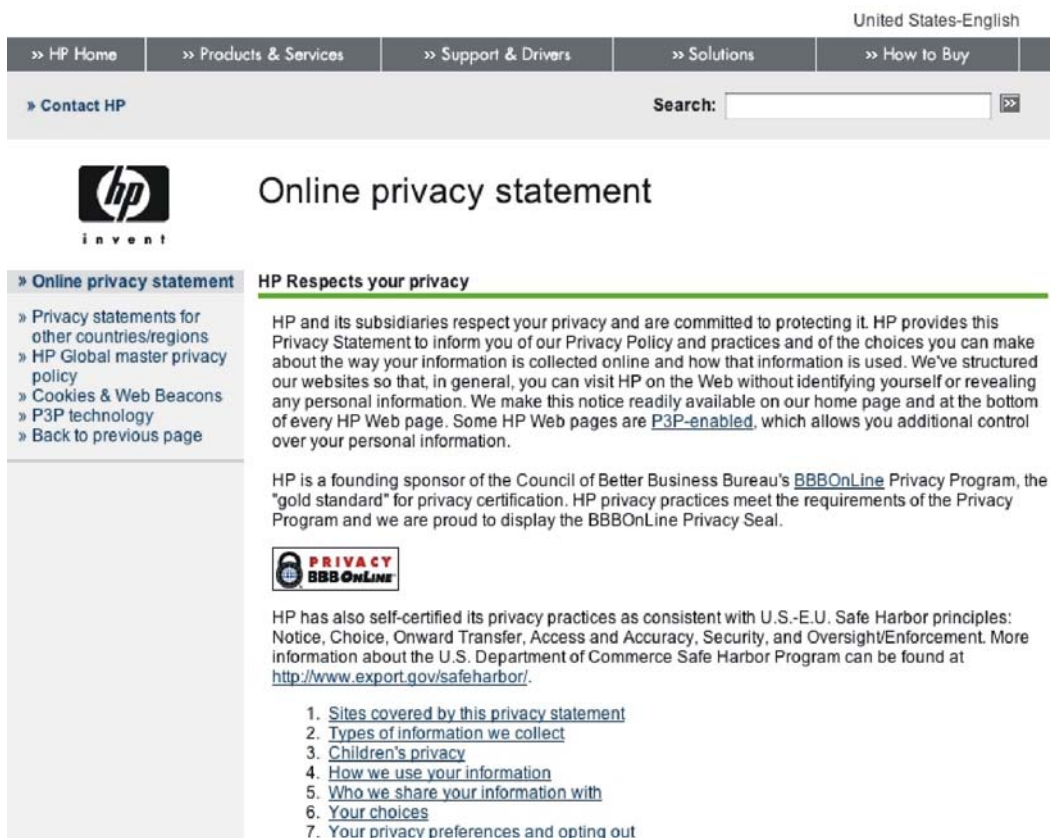


Figure 6-34 Online privacy statement screen

You can continue ordering supplies without sending device information by clicking the **Don't Send** link.

On the **Supplies Status** screen, click **Media** to see the status of the trays. The

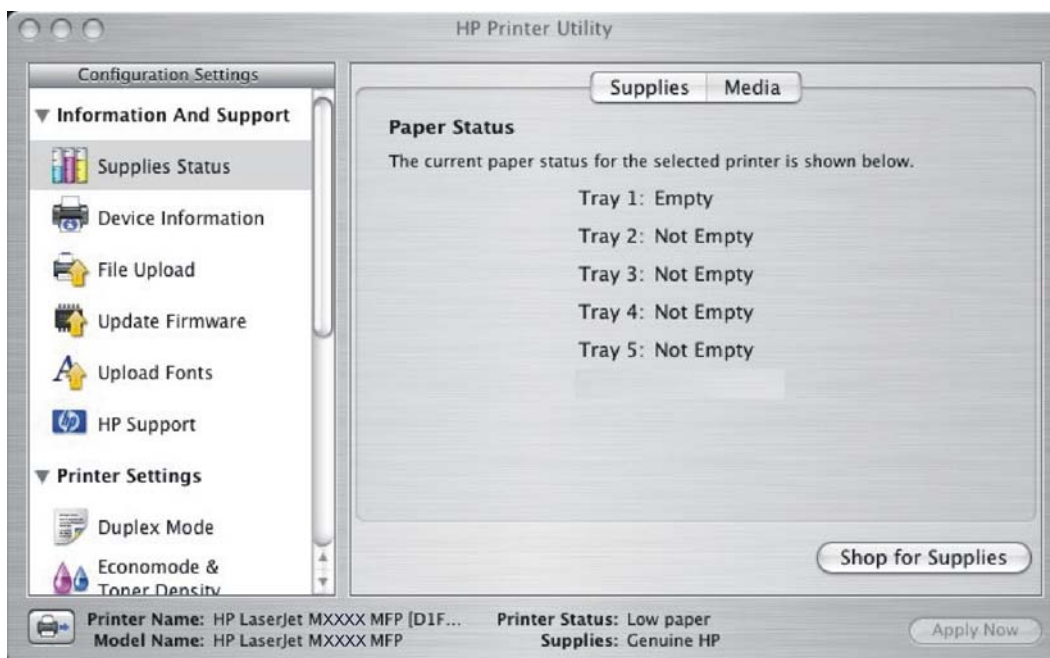


Figure 6-35 Paper Status screen

You can also order supplies from this screen by clicking **Shop for Supplies**.

Device Information

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

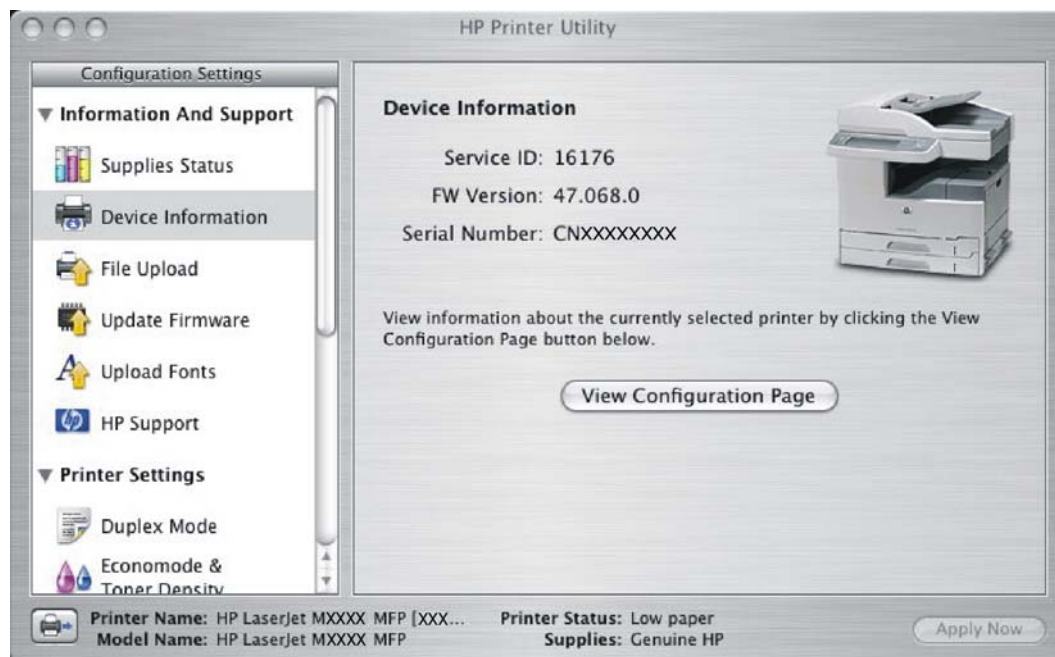


Figure 6-36 Device Information screen

The device configuration page shows other settings; click **View Configuration Page** to see it.

Click the device icon in the lower-left corner to see information about another installed device. This action relaunches the HP Printer Utility so that you can select another device (see [Figure 6-55 Device Status screen](#)).

File Upload

On the **Configuration Settings** menu, click **File Upload** to open the **File Upload** screen.

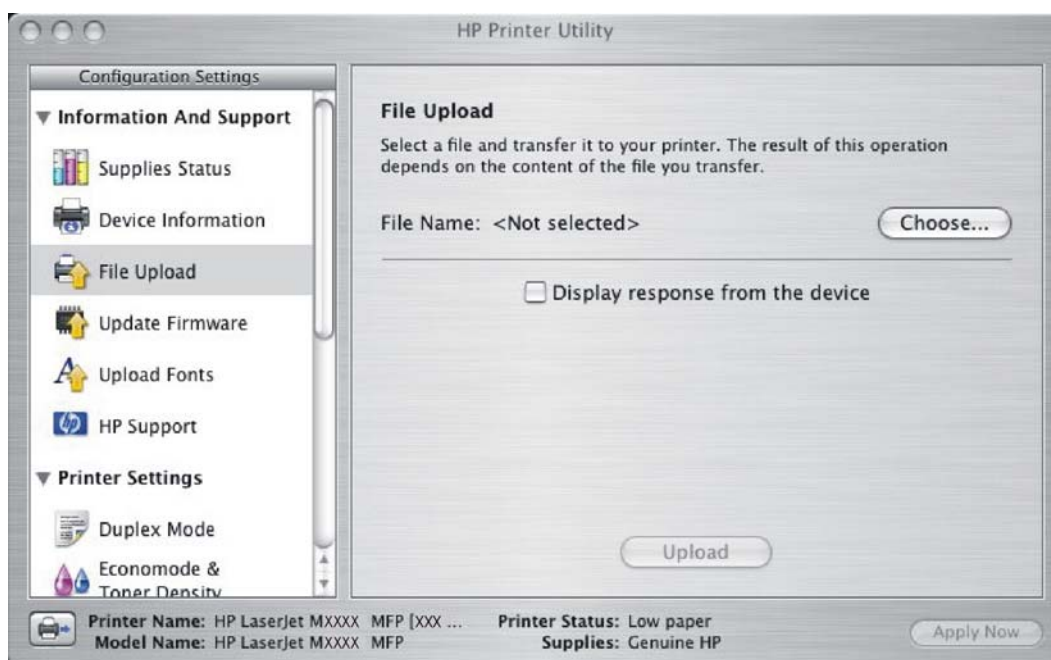


Figure 6-37 File Upload screen

The **File Upload** command is supported for file types that can be sent directly to the device without first being opened through a software program. Some files can be uploaded to the device, but 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 device by using the **File Upload** command.

- HP LaserJet printer command language (.PCL)
- Portable document format (.PDF)
- Postscript (.PS)
- Text (.TXT)

On the **File Upload** screen, click **Choose...** to open a navigation screen. Locate the file you want to upload and click **Open**.

On the **File Upload** screen, click **Display response from the device** to see whether the upload was successful. If the file loads successfully, no message appears.

On the navigation screen, select the file and click **Open**. The file name appears in the **File Upload** screen of the HP Printer Utility. Click **Upload**.

Update Firmware

Choose **Update Firmware** to locate a firmware upgrade file and install it on the device. The **Update Firmware** screen is shown in the following figure.

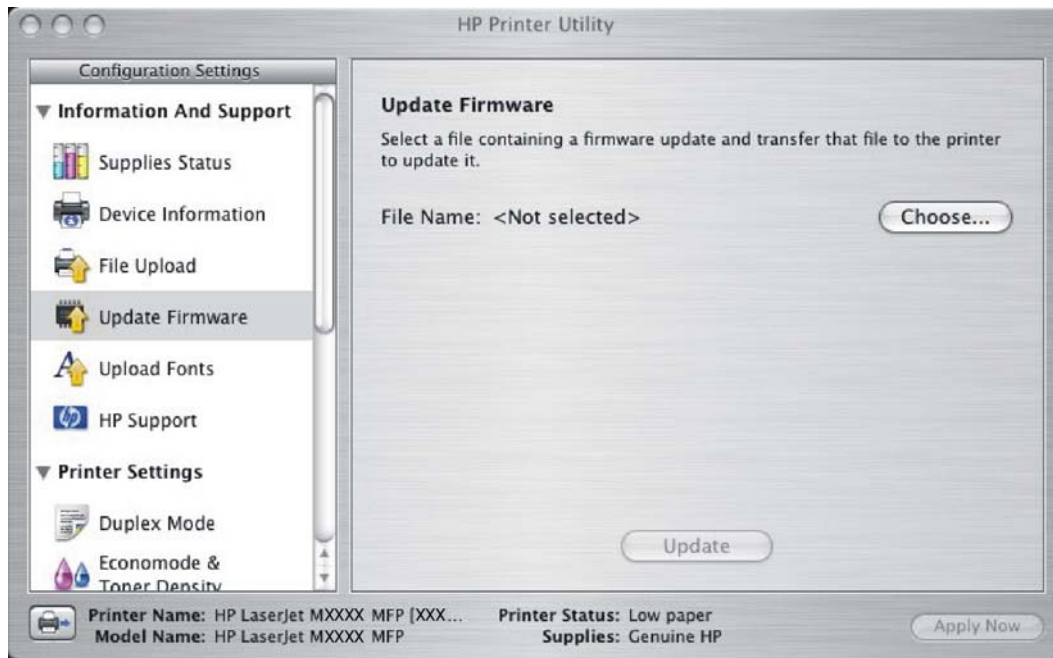


Figure 6-38 Update Firmware screen

Click **Choose** to open a navigation screen. Browse to the firmware file and click **Open**. The **Update Firmware** screen shows the file name. Click **Update**.

Upload Fonts

In the **Information and Support** menu, click **Upload Fonts** to gain access to fonts that you can upload to the HP LaserJet M4345 MFP.

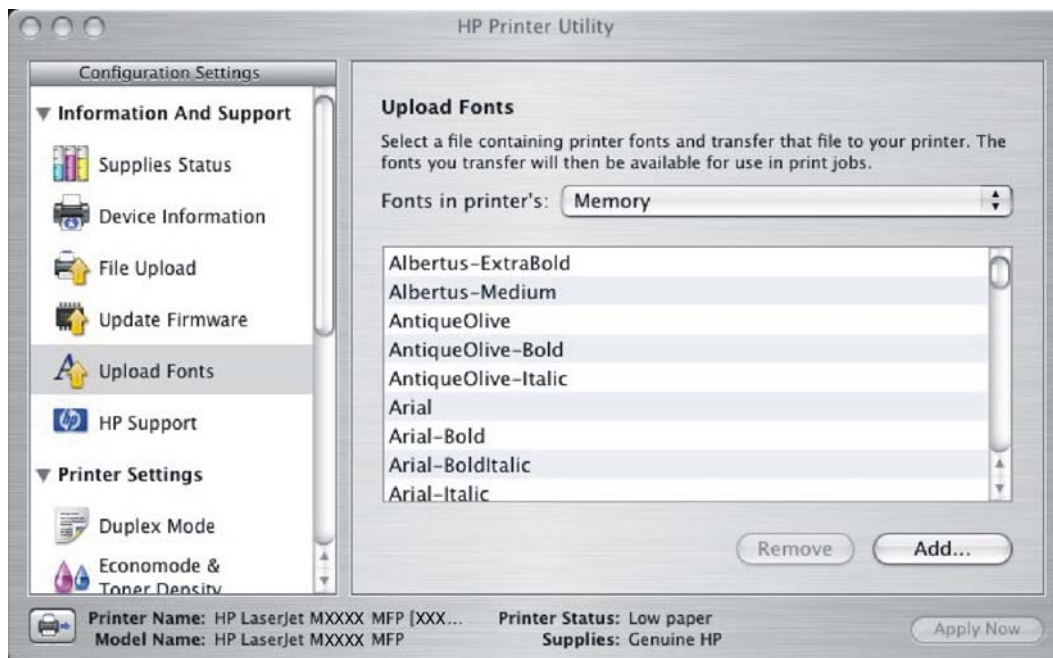


Figure 6-39 Upload Fonts screen

The drop-down menu in the **Upload Fonts** pane has the following option:

- **Memory.** Fonts that are available in the device memory are listed.

To remove a font, choose it and click **Remove**.

To add a font, click **Add....** The **Upload Fonts** screen appears, as shown in the following figure.

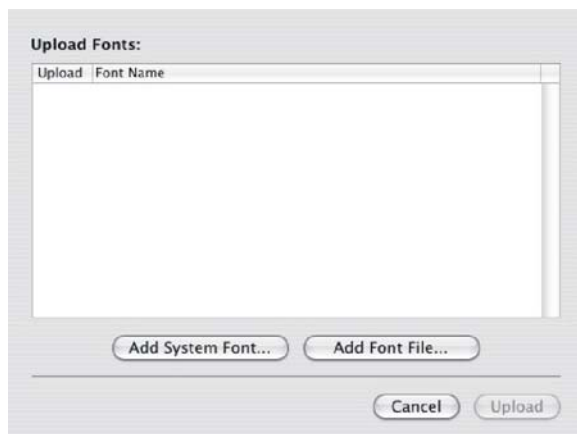


Figure 6-40 Upload Fonts dialog

To add a system font, click **Add System Font....** The Add System Fonts screen appears, as shown in the following figure.

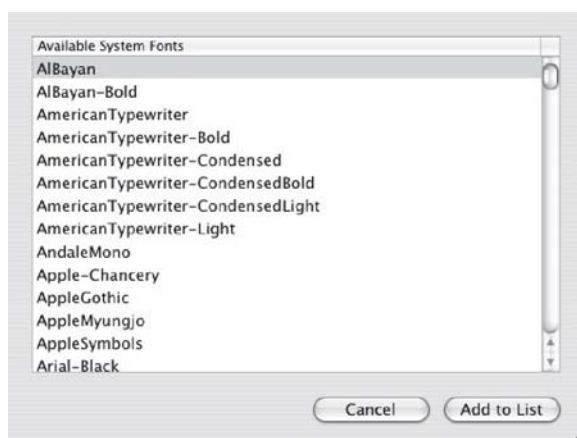


Figure 6-41 Add System Fonts screen

To add a font, click **Add to List**. To close the screen, click **Cancel**.

To add a font file, click **Add Font File** in the **Upload Fonts** screen. A navigation screen opens. Navigate to the font file and click **Open**. To close the screen, click **Cancel**.

HP Support

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

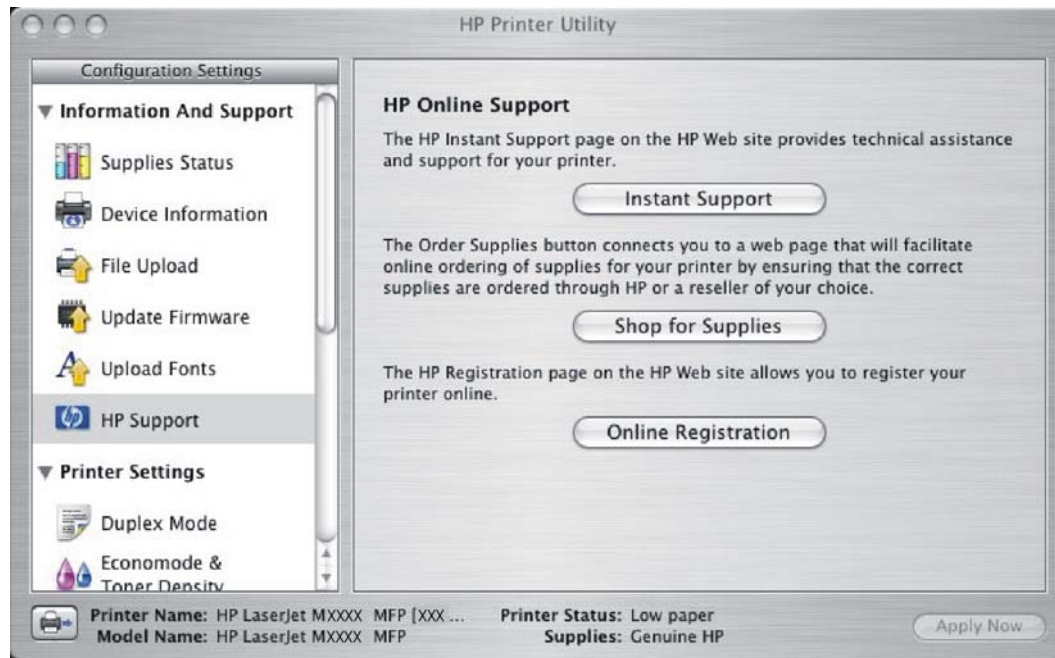


Figure 6-42 HP Online Support screen

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

Click the **Instant Support** link to open the HP Instant Support Web page.

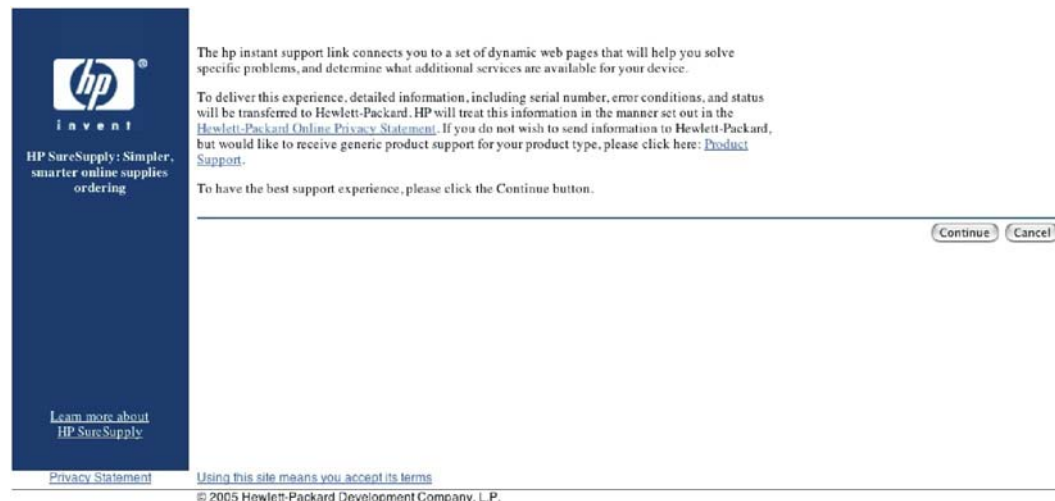


Figure 6-43 HP Instant Support link

Click the **Hewlett-Packard Online Privacy Statement** link to open a screen that shows the HP privacy statement.

Click the **Product Support** link if you do not want to send information to HP but would like to receive generic product support.

Click **Continue** to open a page where you can select the device and find further information about product support.

Click **Cancel** to return to the **HP Online Support** screen in the HP Printer Utility.

Click **Shop for Supplies** to open the Order Supplies Web page (see [Figure 6-32 Transfer printer information to HP SureSupply? screen](#)).

Click **Online Registration** to open the HP Registration Web page and register the device.

Figure 6-44 HP Registration Web page

Duplex mode

If a duplex unit (a standard feature of the HP LaserJet M4345x MFP, HP LaserJet M4345xm MFP, and HP LaserJet M4345xs MFP models) is installed, the **Configuration Settings** menu includes a **Duplex Mode** setting. Click this setting to open the **Duplex Mode** screen, as shown in the following figure.

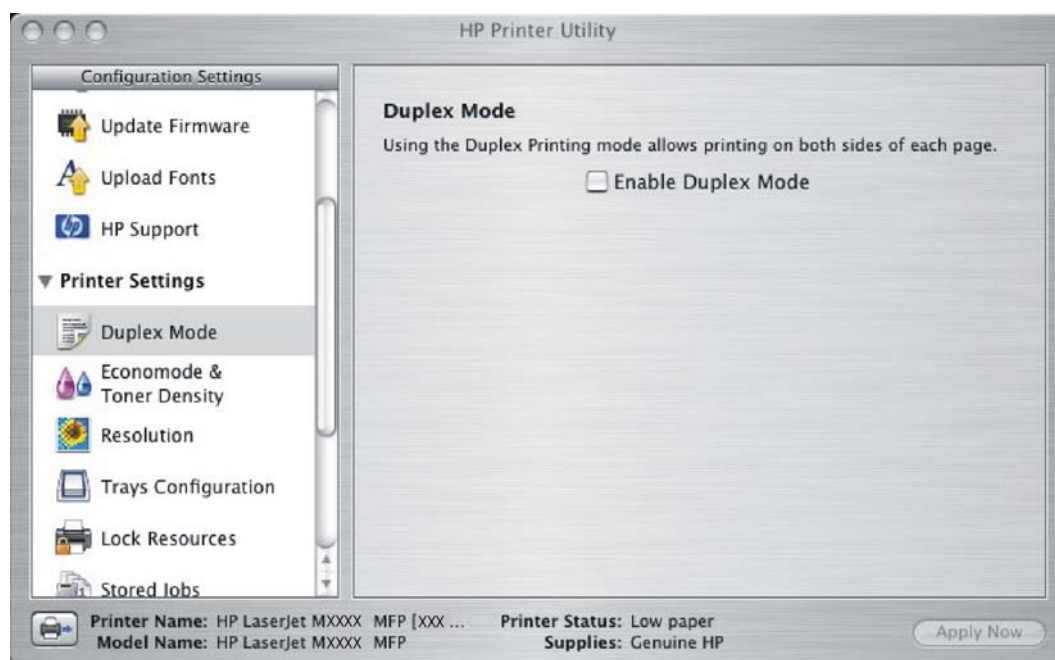


Figure 6-45 Duplex Mode screen

1. Choose **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.

Economode

Under **Printer Settings**, choose the **Economode and Toner Density** menu item to open the Economode screen, as shown in the following figure.

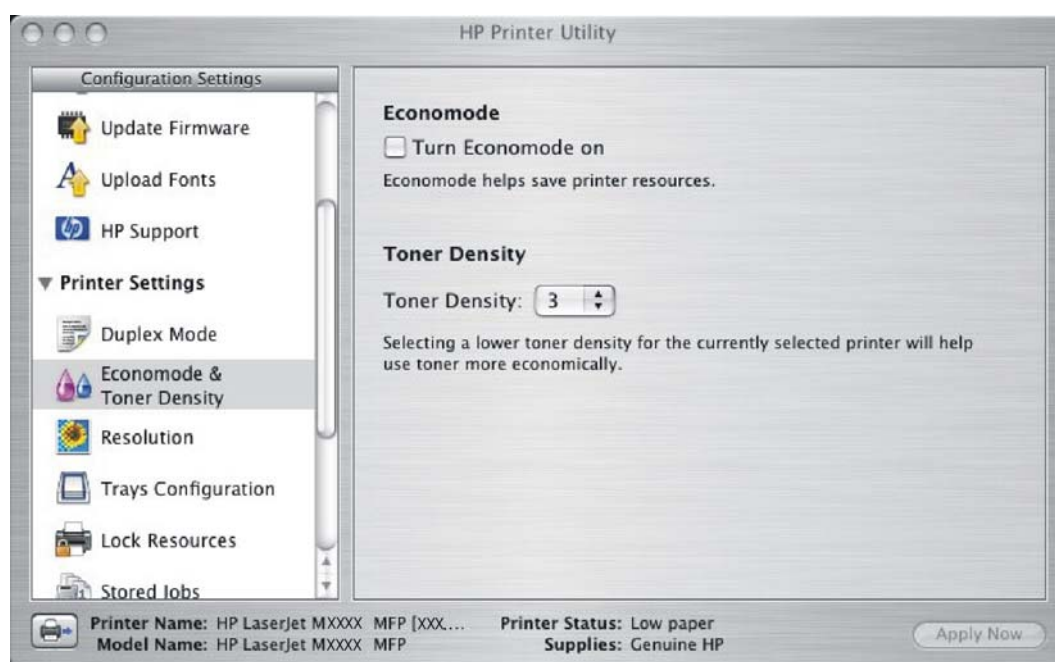


Figure 6-46 Economode & Toner Density screen

Selecting this option extends the life of the toner supply and reduces cost per page. However, it also reduces print quality. The printed image is lighter, but it is adequate for printing drafts or proofs.

HP does not recommend the full-time use of Economode. If Economode is used full-time when the average toner coverage is significantly less than 5%, it is possible that the toner supply will outlast the mechanical parts in the print cartridge. If print quality begins to degrade under these circumstances, you must install a new print cartridge, even if toner remains in the cartridge.



NOTE The **Turn Economode On** setting might work only if a genuine HP print cartridge is installed. HP print cartridges can measure the life of the mechanical parts as well as the quantity of toner. If the **Turn Economode On** setting is used frequently, the mechanical parts can wear out before the supply of toner is depleted, increasing the risk of toner leaking. Use genuine HP parts to avoid this problem.

Change the settings in the **Toner Density** drop-down menu to save on toner use. The following settings are available:

- 1
- 2
- 3
- 4
- 5

Lower settings result in slightly reduced printing quality, but save on toner usage.

Resolution

Under **Printer Settings**, choose **Resolution** to open the **Default Resolution** screen, as shown in the following figure.

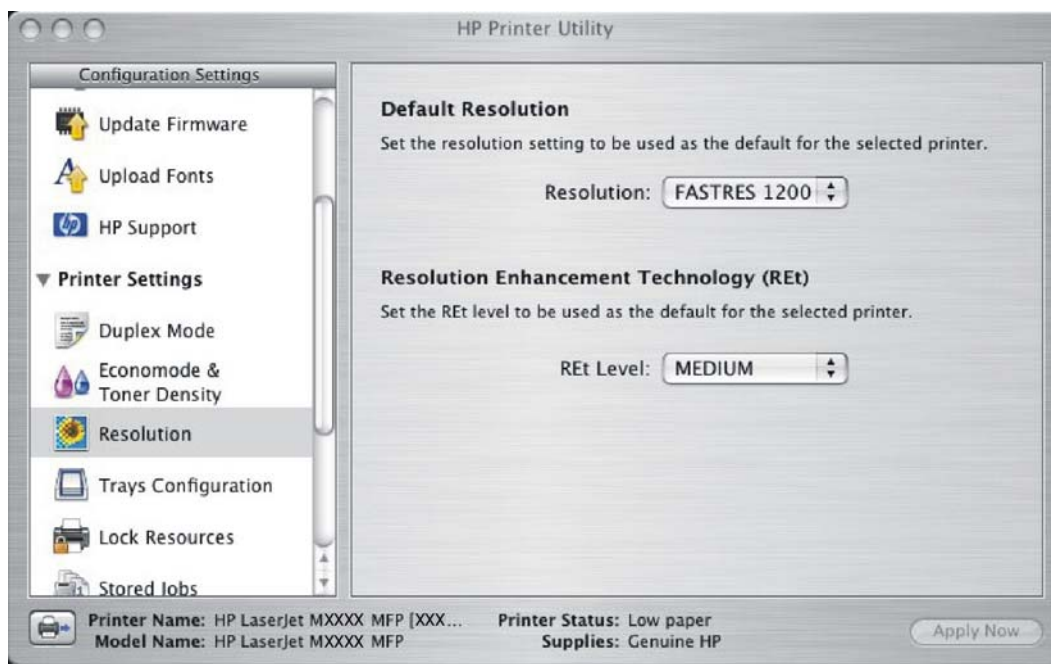


Figure 6-47 Default Resolution screen

The following dots-per-inch (dpi) settings are available in the **Default Resolution** drop-down menu:

- **300**
- **600**
- **FASTRES 1200**
- **PRORES 1200**



NOTE When a **PRORES1200** setting is selected, documents are printed using a resolution of 1200 x 1200 dpi. This is the best print quality, but printing speed is slower than for documents printed on the **FASTRES 1200** setting, which uses a resolution of 1200 x 600 dpi.

When the **PRORES 1200** setting is selected, documents are printed using a resolution of 1200 x 1200 dpi. This is the best print quality, but printing speed is slower than for documents printed on the **FASTRES 1200** setting, which uses a resolution of 1200 x 600 dpi

The following settings are available in the **Resolution Enhancement Technology (REt)** drop-down menu:

- **OFF**
- **LIGHT**
- **MEDIUM**
- **DARK**

Trays Configuration

Under **Printer Settings**, choose **Trays Configuration** to open the **Trays Configuration** screen, as shown in the following figure.

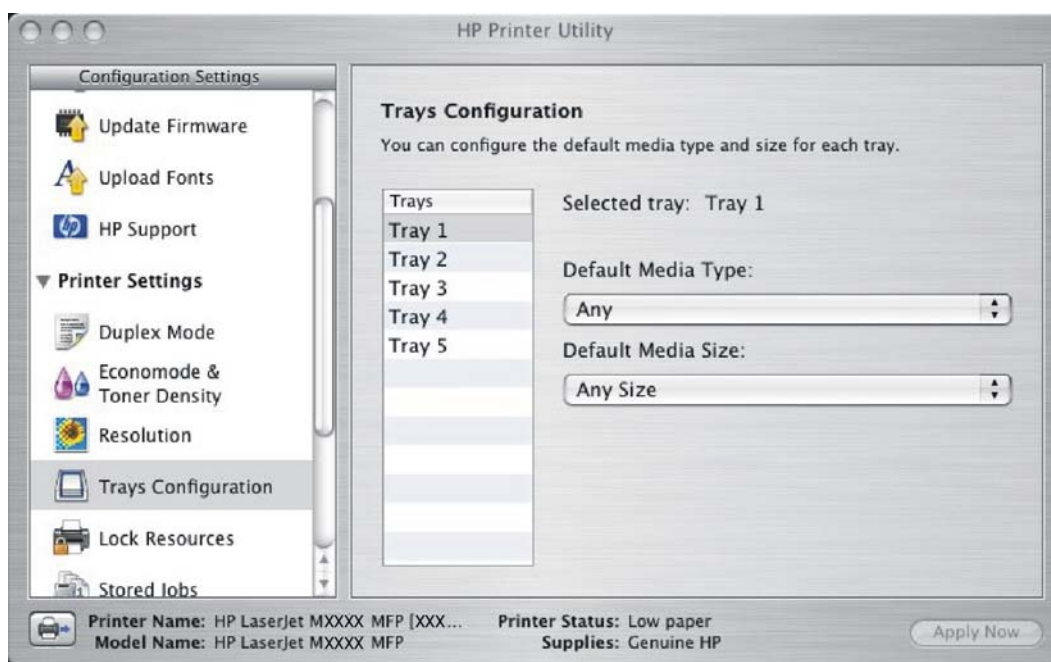


Figure 6-48 Trays Configuration screen

1. Choose **Trays Configuration** to change media size and type for each of the trays installed on your device.
2. To change the media size, select a tray and then choose a different media size in the **Default Media Size** drop-down menu.
3. To change the media type, select a tray and then choose 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 LaserJet M4345 MFP. The **Lock Resources** screen is shown in the following figure.

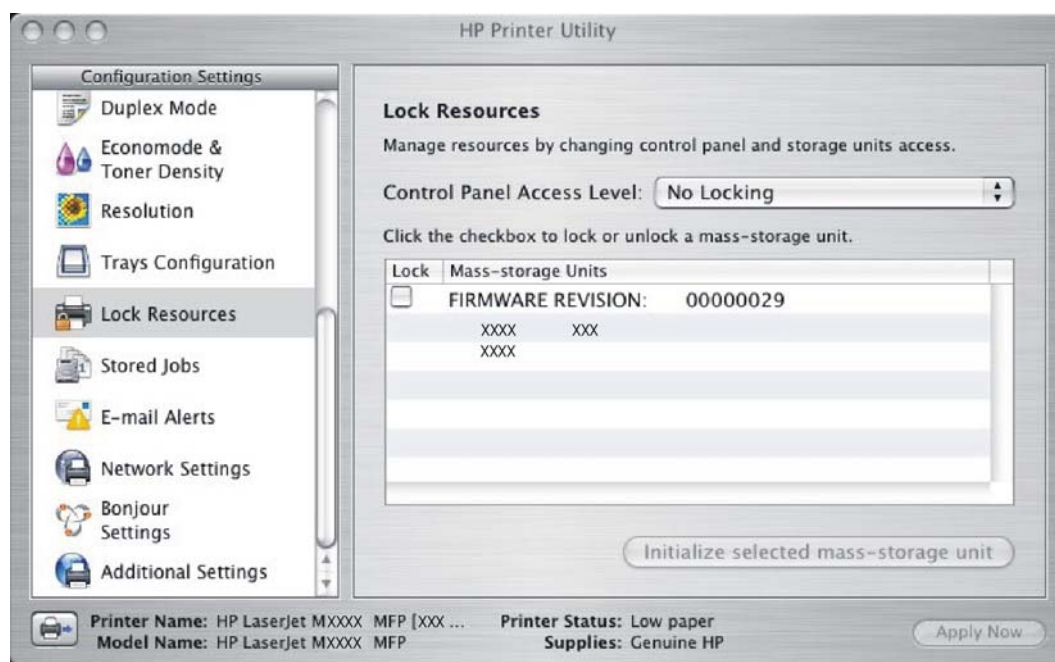


Figure 6-49 Lock Resources screen

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

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

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



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

Stored Jobs

Choose **Stored Jobs** to change the **Enable Job Storing** setting. This setting is selected by default. Click to clear the check box to disable the job-storing feature.

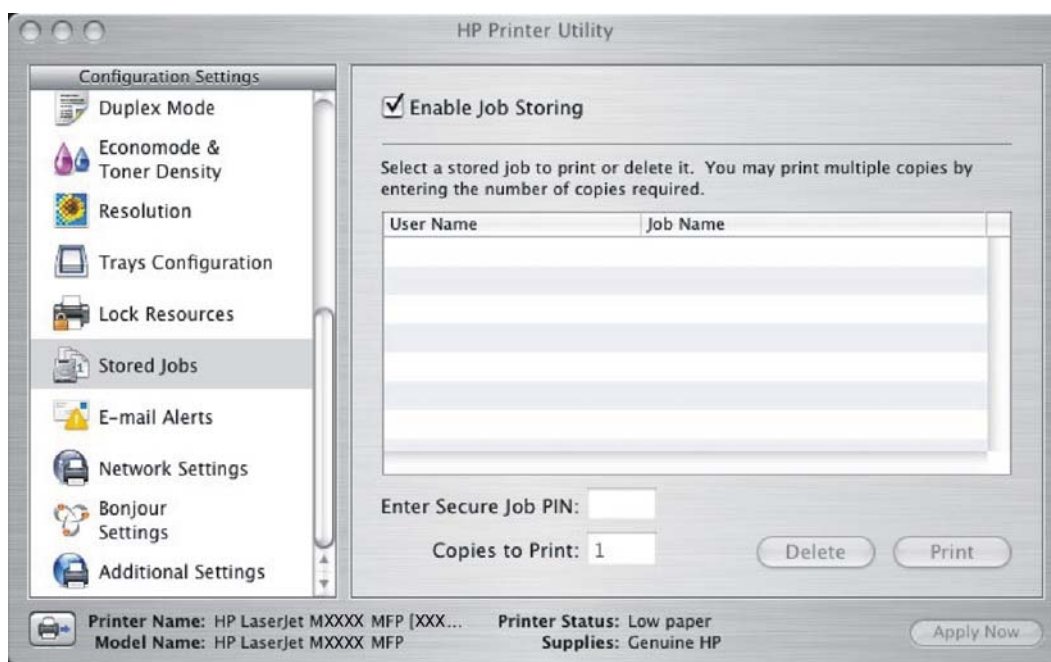


Figure 6-50 Enable Job Storing screen

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.

Select a stored job and click **Print** to print the job.

Select a stored job and click **Delete** to delete the job.

Job-storage print jobs can also be released or deleted at the device control panel.

Topics:

- [Releasing a job-storage print job](#)
- [Deleting a job-storage print job](#)

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 device control panel.

1. Touch **Job Storage**.
2. In the **Retrieve** tab, touch the desired folder on the left. The folder opens revealing stored jobs.
3. Touch desired job.

If you have set a PIN for the job stored, you will be asked to enter the correct PIN. Once PIN is confirmed, the job will be unlocked.

4. To print job, press the **Select** button.

Deleting a job-storage print job

Sometimes it is necessary to delete a print job from the device memory. You can do this from the device control panel.

1. Touch **Job Storage**.
2. Touch desired folder on the left.
3. Touch desired document.

If you have set a PIN for the job stored, you will be asked to enter the correct PIN. Once PIN is confirmed, the job will be unlocked.

4. Touch **Delete**.
5. A message will appear asking **Do you want to delete this stored job?** Touch **Yes**. The document will be deleted.

Or, do the following:

1. Touch **Job Storage**.
2. Touch desired folder on the left.
3. Touch desired document.
4. Touch **Delete**.

If you have set a PIN for the job stored, you will be asked to enter the correct PIN. Once PIN is confirmed, the job will be deleted without a verification screen.

E-mail Alerts

The **E-mail Alerts** screen is available if the HP LaserJet M4345 MFP is installed over a network connection. It is not available when the MFP is installed over a USB connection.

Choose **E-mail Alerts** to configure the HP LaserJet M4345 MFP to send e-mail notifications to users.

If a user name and password have been set, you might need to obtain them from the IT administrator. For more information, see the *HP Embedded Web Server User Guide*.

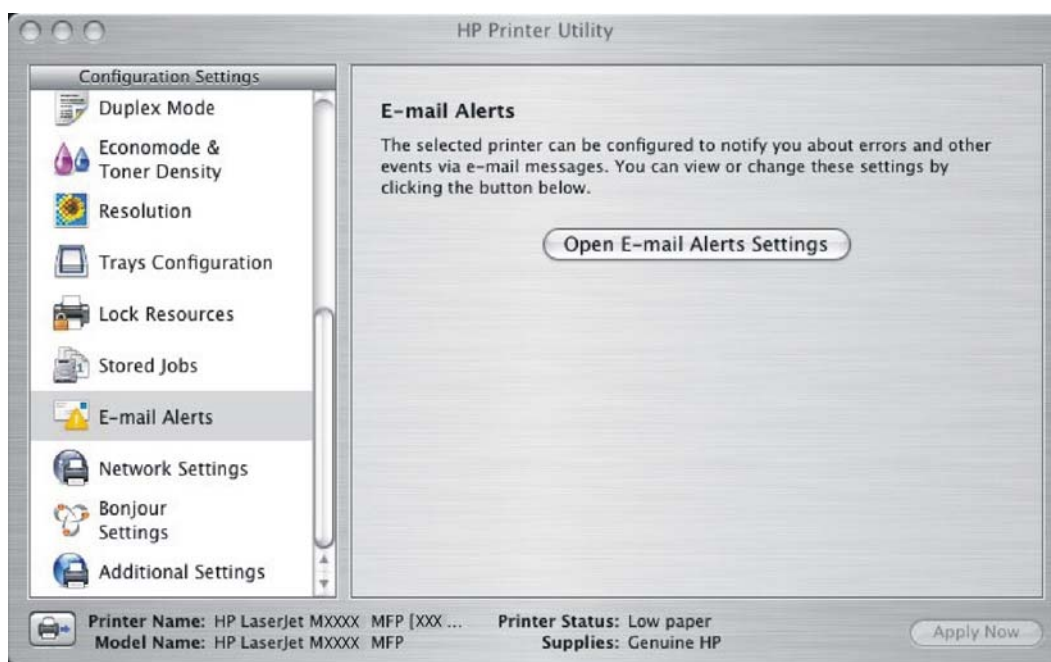


Figure 6-51 E-mail Alerts screen

Click **Open E-mail Alerts Settings** to open the HP EWS. The HP EWS opens to the **Alerts** screen on the **Settings** tab, where you can set notifications to manage the HP LaserJet M4345 MFP.

Network Settings

The **Network Settings** screen is available if the HP LaserJet M4345 MFP is installed over a network connection. It is not available when the MFP is installed over a USB connection.

Choose **Network Settings** to open the **TCP/IP Settings** page of the HP Embedded Web Server **Networking** screen.



Figure 6-52 Networking screen

Choose 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 save new settings, click **Apply Now**.

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

If a user name and password have been set, you might need to obtain them from your IT administrator. For more information, see the *HP Embedded Web Server User Guide*.

The HP EWS opens to the **Network Settings** screen. For information about this screen, see [Networking tab](#).

Bonjour Settings

The **Bonjour Settings** screen is available if the HP LaserJet M4345 MFP is installed over a network connection. It is not available when the MFP is installed over a USB connection.

Choose **Bonjour Settings** to open the **Bonjour Settings** screen. Bonjour is enabled by default.

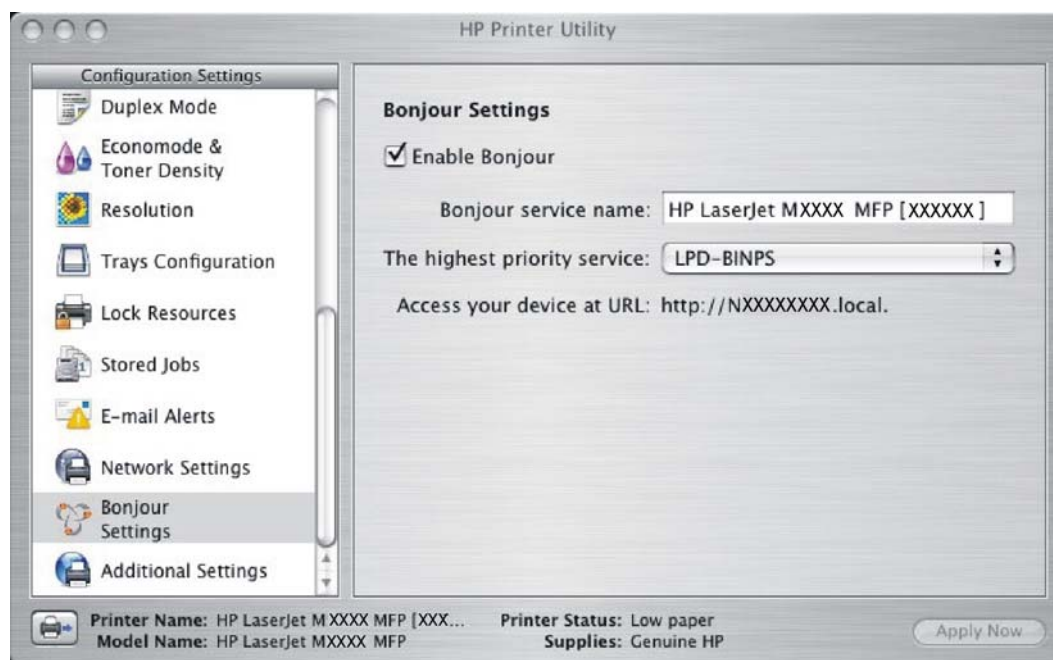


Figure 6-53 Bonjour Settings screen

To disable Bonjour, click to clear the **Enable Bonjour** check box and then click **Apply Now**.

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**

After you select a new setting, click **Apply Now** to save it.

Additional Settings

Choose **Additional Settings** to gain access to the HP EWS.

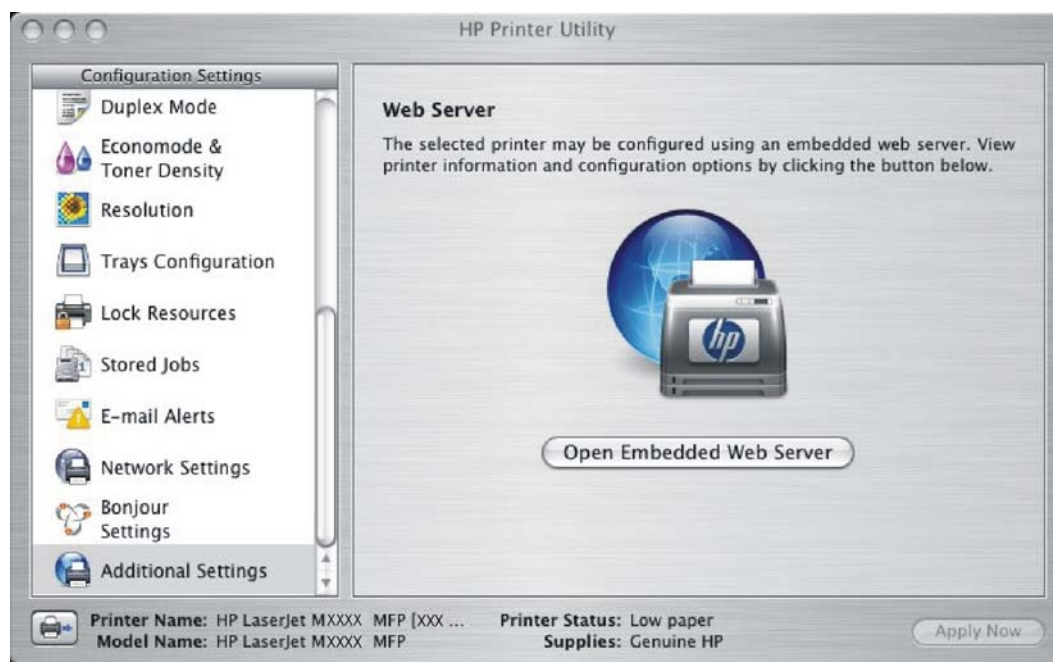


Figure 6-54 Additional Settings screen

To open the HP EWS, click **Open Embedded Web Server**.

For information about HP EWS settings, see [HP Embedded Web Server](#) or consult the *HP Embedded Web Server User Guide*.

HP Embedded Web Server (EWS)

HP EWS is embedded in the device firmware. It is a series of Web pages that provide access to additional device status and configuration options.

Topics:

- [Access to the HP EWS](#)
- [Information tab](#)
- [Settings tab](#)
- [Digital Sending tab](#)
- [Networking tab](#)

Access to the HP EWS

Use any one of the following methods to gain access to the HP EWS:

Using the Mac OS Print Center, Printer Setup Utility, or Print & Fax screen:

1. In the **Applications** folder, open the **Utilities** folder, and then run the **Printer Setup Utility** or the **Print Center** utility. You can also access the HP EWS using the **Print & Fax** pane of **System Preferences** (from the Apple menu, choose **System Preferences...**, then choose **Print & Fax**).
2. Select the HP LaserJet M4345 MFP, and then click **Utility** (Mac OS X V10.3 or later). The Web browser opens and the **Device Status** screen appears. In the **Print & Fax** screen, select the HP LaserJet M4345 MFP, click the **Print Queue...** button, then click **Utility**.

Using a Web browser:



NOTE This method can only be used if the device is using a network connection.

1. On the device control panel, print a configuration page.
To print a configuration page, follow these instructions.
 - a. Touch **Administration**.
 - b. Touch **Information**.
 - c. Touch **Configuration/Status Pages**.
 - d. Touch **Configuration Page**.
 - e. Touch **Print**.

The device prints the configuration page.
2. On the first configuration page, under **Product Settings**, find the IP Address. Type this address into a Web browser such as Safari. The **Device Status** screen appears.

Using the HP Device Configuration application:

1. In the Applications folder, open the HP EWS Device Configuration folder. Run the HP Device Configuration application.
2. Choose the HP LaserJet M4345 MFP from the list of devices. The Web browser opens and the **Device Status** screen appears.

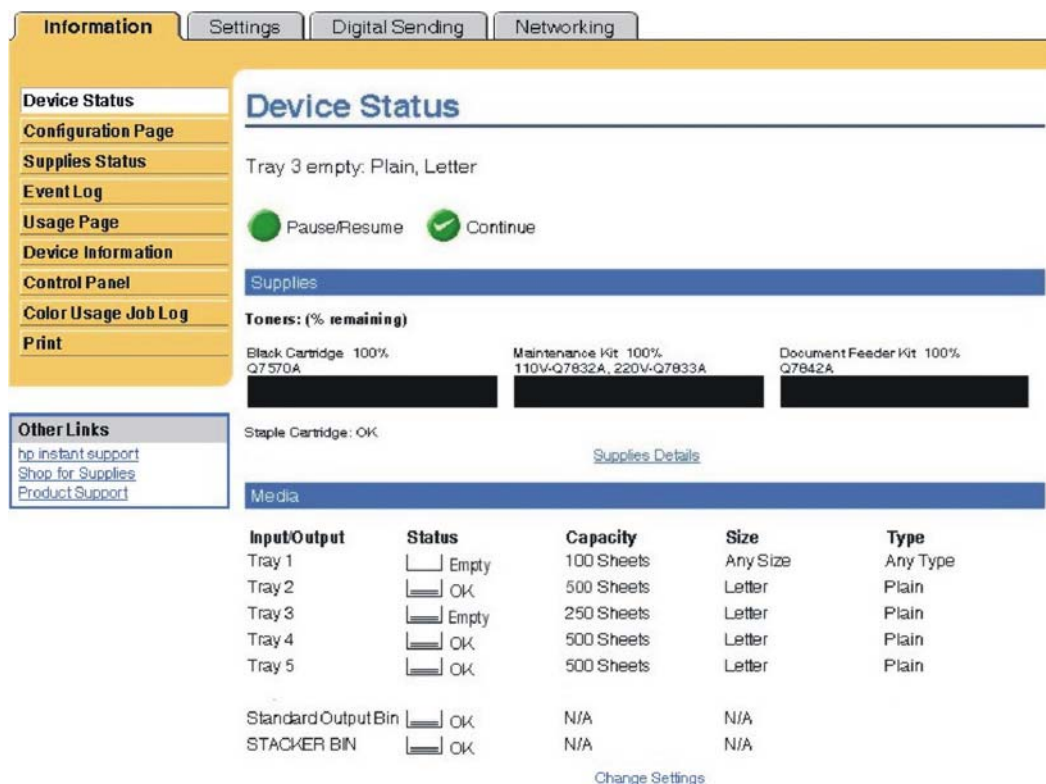


Figure 6-55 Device Status screen

Click the **Supplies Status** link to open the **Supplies Status** screen.

Click the **Change Settings** link to open the **Configure Device** screen on the **Settings** tab.

The following sections describe the screens and features that are available in the HP EWS.

Information tab

The **Information** tab allows you to access and print out detailed information regarding device and supply status, device configuration, network configuration, and usage.

The **Status** tab contains the following pages:

- [Device Status](#)
- [Configuration page](#)
- [Supplies Status page](#)
- [Event Log](#)
- [Usage Page](#)

- [Device Information](#)
- [Control Panel](#)
- [Print](#)

Device Status

The **Device Status** page shows device status messages from the device. The **Device Status** page also displays some pertinent device information and device settings.

Input/Output	Status	Capacity	Size	Type
Tray 1	Empty	100 Sheets	Any Size	Any Type
Tray 2	OK	500 Sheets	Letter	Plain
Tray 3	Empty	250 Sheets	Letter	Plain
Tray 4	OK	500 Sheets	Letter	Plain
Tray 5	OK	500 Sheets	Letter	Plain
Standard Output Bin	OK	N/A	N/A	
STACKER BIN	OK	N/A	N/A	

Figure 6-56 HP EWS – **Device Status** page

Configuration page

The **Configuration Page** displays the values of all of the settings available to be set in the device. The contents of this screen are consistent with the configuration page generated by the firmware.

The screenshot displays the HP Embedded Web Server (EWS) Configuration Page. The interface includes a top navigation bar with tabs for Information, Settings, Digital Sending, and Networking. A left sidebar contains a menu with options: Device Status, Configuration Page (selected), Supplies Status, Event Log, Usage Page, Device Information, Control Panel, Color Usage Job Log, and Print. Below the menu is an 'Other Links' section with links to 'hp instant support', 'Shop for Supplies', and 'Product Support'.

Configuration Page

Device Information

Product Name:	HP LaserJet MXXXXMFP
Device Name:	HP LaserJet MXXXXMFP
Model Number:	CXXXXA
Device Serial Number:	XXXXXXXXXX
Formatter Number:	formatter00
DC Controller:	F
CPB:	2.053 (0.0)
SCB:	XXX 002 3.1
Firmware Datecode:	20060502 47.059.A
Service ID:	00000
PS Wait Time-out:	300 seconds
Engine Cycles:	2
Preventive Maintenance Interval:	200000
Pages Since Last Maintenance:	2
Document Feeder Kit Interval:	60000
Pages Since Last Doc Feeder Maintenance:	0

Installed Personalities and Options

PCL	(20010402)
PCLXL	(20010402)
POSTSCRIPT	(20010402)
PDF	(20050131)
DIMM Slot 1:	Empty
DIMM Slot 2:	Side 1: Unsupported
Card Slot 1:	Empty
Card Slot 2:	Empty
EIO 1:	Empty
EIO 2:	HP Scanner Processor Card
Embedded Jetdirect	HP JetDirect J7974E 63.230.114.145
Internal Disk:	FUJITSU MH: 37 GB
Internal Fax:	
Disk Storage:	38154 MB Capacity
LDAP Gateway	Not Configured
SMTP Gateway	Not Configured
hp MFP Digital Sending Server	Not Configured

Figure 6-57 HP EWS – Configuration Page screen (1 of 3)

Memory	
Installed DIMM Memory:	0 MB
On Board Memory:	
System:	256 MB
Imaging:	0 MB
Total RAM:	256 MB
DWS:	6.00
Automatic resource saving enabled	
Security	
Control Panel Lock:	None
Control Panel Password:	Disabled
Device Type: Disk	Write Protect: Disabled
File System Access:	
PJL:	Enabled
PML:	Enabled
NFS:	Enabled
PostScript:	Enabled
Secure Disk Erase Mode:	Non-secure fast erase
Direct Ports (USB/IEEE 1284):	Enabled

Figure 6-58 HP EWS – Configuration page (2 of 3)

Paper Trays and Options	
Default Paper Size:	Letter
Tray 1 Size:	Any Size
Tray 1 Type:	Any Type
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:	Letter
Tray 5 Type:	Plain

Duplex Unit

Internal

Input Trays:

- 1: TRAY 1, 100 Sheets
- 2: TRAY 2, 500 Sheets
- 3: TRAY 3, 250 Sheets
- 4: TRAY 4, 500 Sheets
- 5: TRAY 5, 500 Sheets

Output Bins:

- 1: Standard Output B, 250 Sheets, Face Down

Device 1:

HEWLETT-PACKARD
 HP 500-Sheet Stapler/Stacker [MT01.26] Q7604A

Output Bins:

- 1: STACKER BIN, 500 Sheets, Face Down, Stapler

Figure 6-59 HP EWS – **Configuration** page (3 of 3)

Supplies Status page

The **Supplies Status** page displays the status of all of the supplies used by the device, including the black, cyan, magenta, and yellow print cartridges.

Supplies Status

Ordering Information
Hewlett-Packard supplies can be ordered on the Internet, on-line through your device software, or by calling an authorized reseller. Refer to your User Guide for instructions.

Supply	Order HP Part	Status
Black Cartridge	Q5945A	100%
Maintenance Kit	110V-Q5998A, 220V-Q5999A	100%
Staple Cartridge	C8091A	OK
Document Feeder Kit	Q5997A	100%

Approximate Pages Remaining: 17958
(Will vary depending on types of documents printed.)

Low Reached: No
Out Reached: No
Serial Number: 11617125
Pages printed with this supply: 42
Page Count by Paper Size:

Paper Size	Count
Legal:	0
A4/Letter:	42
A5/B5/Executive:	0
Custom/Other:	0

Number of Jobs Processed: 42
First Install Date: 20060523
Last Used Date: 20060705

Return & Recycling
Please return your genuine HP supplies for recycling to Hewlett-Packard. For more information, please visit us at <http://www.hp.com/go/recycle>

Figure 6-60 HP EWS – Supplies Status page

Event Log

Use the **Event Log** screen to track the events that occur on the HP LaserJet M4345 MFP.

Event Log

Current Engine Cycles: 15
Serial Number: CXXXX00000
Number of Entries in Use: 4
Maximum Number of Entries: 50

Number	Date and Time	Engine Cycles	Event	Description or Personality
4	Jun-28-2006 12:21 PM	10	30.01.34	
3	Jun-26-2006 05:11 PM	0	60.06	Device Error
2	Jun-26-2006 05:11 PM	0	68.8005	Perm store data and engine match again
1	Jun-16-2006 02:18 PM	0	10.50.09	

Figure 6-61 HP EWS – Event Log screen

Usage Page

The **Usage Page** screen gives a page count for each size of media that has passed through the product, as well as the number of duplexed pages. The total is calculated by multiplying the sum of the print count values by the Units value.

The information on this screen can be used to determine how much toner or paper to keep on hand. The **Usage Page** is shown in the following figures.

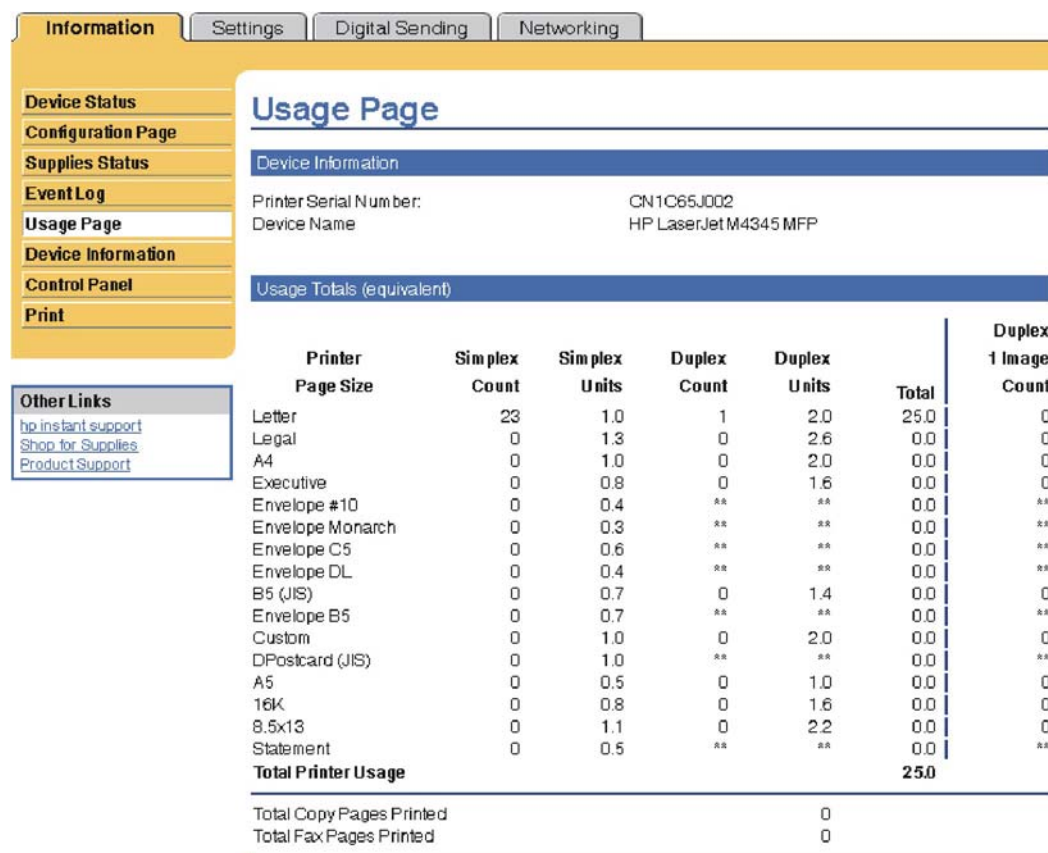


Figure 6-62 Usage Page screen (1 of 2)

Scanned (Copy, Send, & Fax)					
Page Size	Simplex Count	Simplex Units	Duplex Count	Duplex Units	Total
Letter	1	1.0	0	2.0	1.0
Legal	0	1.3	0	2.6	0.0
A4	0	1.0	0	2.0	0.0
Executive	0	0.8	0	1.6	0.0
B5 (JIS)	0	0.7	0	1.4	0.0
Custom	0	1.0	0	2.0	0.0
A5	0	0.5	0	1.0	0.0
8.5x13	0	1.1	0	2.2	0.0
Statement	0	0.5	0	1.0	0.0
Total Scanner Usage					1.0
Copy Job Scan Count			0		
Send Job Scan Count			0		
ADF Simplex Pages:			0		
ADF Duplex Pages:			0		
ADF Total Pages:			0		
Flatbed Scan Count			0		
Print Modes & Paper Path Usage (actual)					
Print Modes Usage					
Print Mode					Total
Normal					25
High1					0
High2					0
Low1					0
Low2					0
Total					25
Paper Path Usage					
Source	Count	Destination		Count	
Envelope Feeder	0	Face Up		0	
Manual Feed Tray	0	Face Down		2	
Tray 1	4	External Bin		15	
Tray 2	6	Other		8	
Tray 3	15	Total		25	
External Tray	0				
Other	0				
Total	25				
Historical Device Coverage					

Coverage 12.819%

Figure 6-63 HP EWS – Usage Page screen (2 of 2)

Device Information

The **Device Information** screen shows the following information:

- Device name
- Device location
- Asset number
- Company name
- Contact person
- Product name
- Device model
- Device serial number

The product name, device model, and device serial number are generated automatically. You can configure the other information on this screen from the **Device Information** screen on the **Settings** tab.

Figure 6-64 HP EWS – Device Information screen

Control Panel

The **Control Panel** screen shows the product control-panel display as if you were standing at the product. Because this view shows the product status, it can help you troubleshoot problems with the product.



NOTE The appearance of the screen might vary, depending on your product.

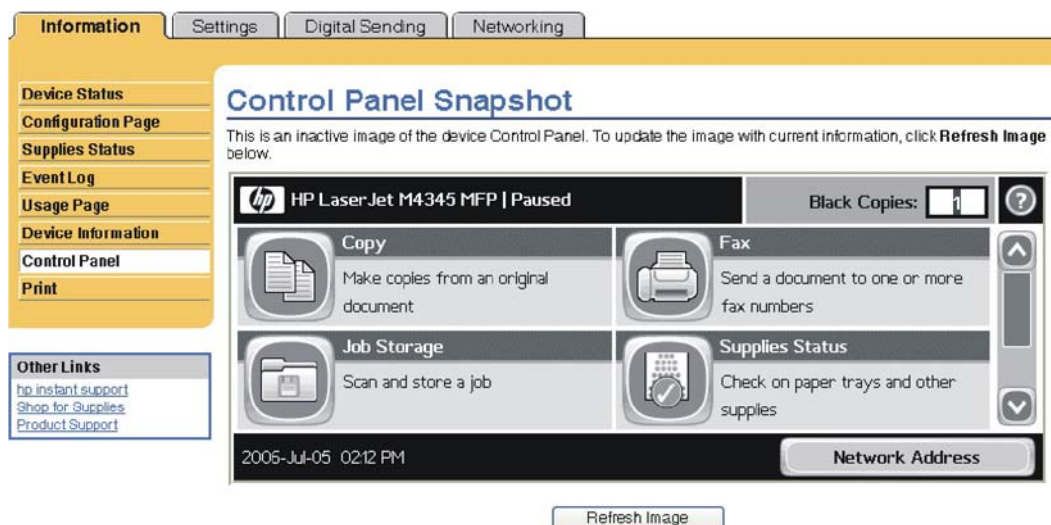


Figure 6-65 HP EWS – Control Panel Screen

Print



NOTE The **Print** screen (and the **Print** menu on the left) is available only if it has been configured to appear on the **Security** screen under the **Settings** tab. Use the **Security** screen to disable the **Print** screen if you do not want it to appear for security reasons. For more information, see [Security](#).

Use the **Print** screen to print print-ready files or to update your product firmware remotely.

You can use the **Print** screen to print one file at a time from a product that supports the HP EWS. This feature is especially useful if you are a mobile user, because you do not have to install the product's print driver in order to print; you can print anywhere at any time.

You can print print-ready files, such as documents that have been generated by using a "print to file" driver option. Print-ready files commonly have file name extensions such as .PS (postscript), .PDF (Adobe Portable Document Format), and .PRN (Windows print-ready File).

You can also use the **Print** screen to update your product firmware. This feature is especially useful because you do not have to install additional software in order to update the product firmware. When updated firmware files are available for your product, you can download them your product support Web site:

www.hp.com/go/ljm4345mfp_firmware

The Print screen is shown in the following figure.

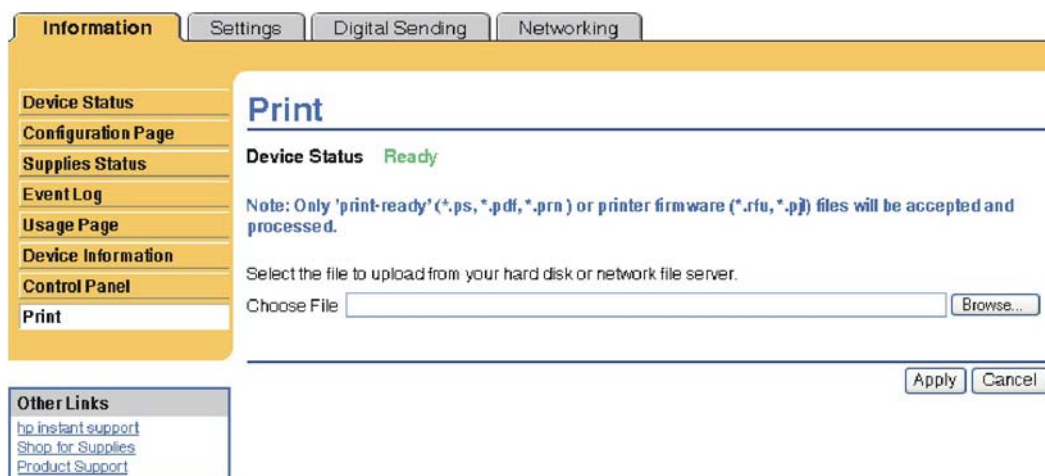


Figure 6-66 HP EWS – **Print** screen

Printing a file or updating firmware from the **Print** screen

Use the following procedure to print a file or update product firmware from the **Print** screen.

1. Select a file that resides on your machine or on your network by clicking **Browse** to browse to a file that you want to print.
2. Click **Apply**.

Settings tab

The **Settings** tab allows you to view and change settings for the following features:

- [Configure Device](#)
- [E-mail Server](#)
- [Alerts](#)
- [AutoSend](#)
- [Security](#)
- [Authentication Manager](#)
- [LDAP Authentication](#)
- [Edit Other Links](#)
- [Device Information](#)
- [Language](#)
- [Date & Time](#)
- [Wake Time](#)

Configure Device

You can use the **Configure Device** screen to print device information pages and configure the device remotely.

The menus on this screen are similar to the menus that are available at your device control panel. Some of the device control-panel menus are not available from the HP EWS. See the documentation that came with your device for more information about the different menus that your device supports.

The **Configure Device** screen is shown in the following figure.

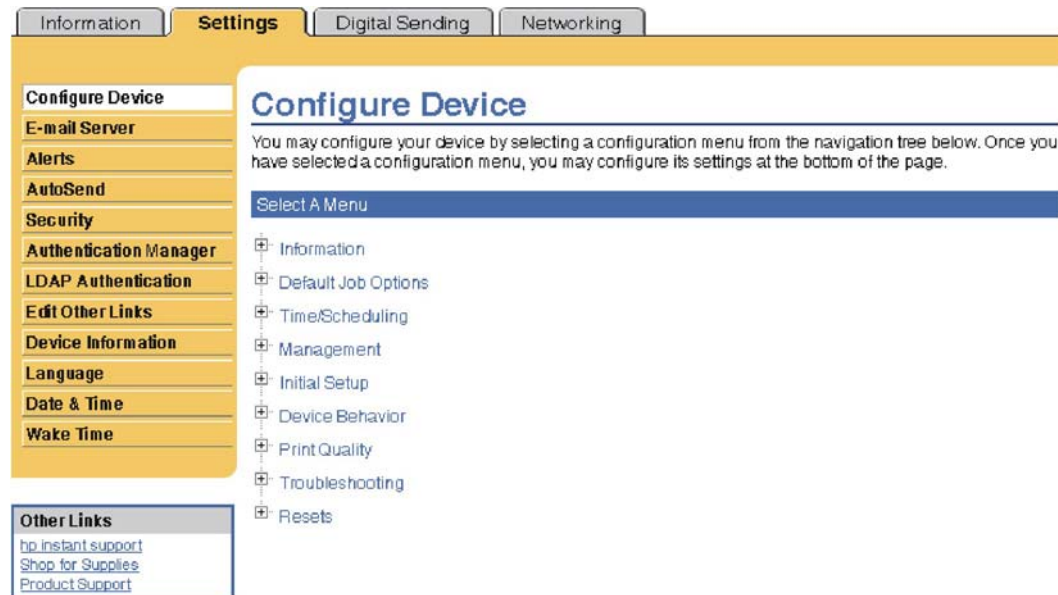


Figure 6-67 HP EWS – **Configure Device** screen

Using the menus on the **Configure Device** screen

The following procedure is provided *only* as an example. Similar procedures can be used to set other menu items.

Follow these steps to print a configuration page (example procedure).

1. Click **INFORMATION**.
2. Select the check box for the information page that you want to view or print, and then click **Apply**.

E-mail Server

Use the **E-mail Server** screen to configure e-mail settings for outgoing e-mail. Use the settings on this screen to send and receive e-mail messages, including product alerts. The **E-mail Server** screen is shown in the following figure.

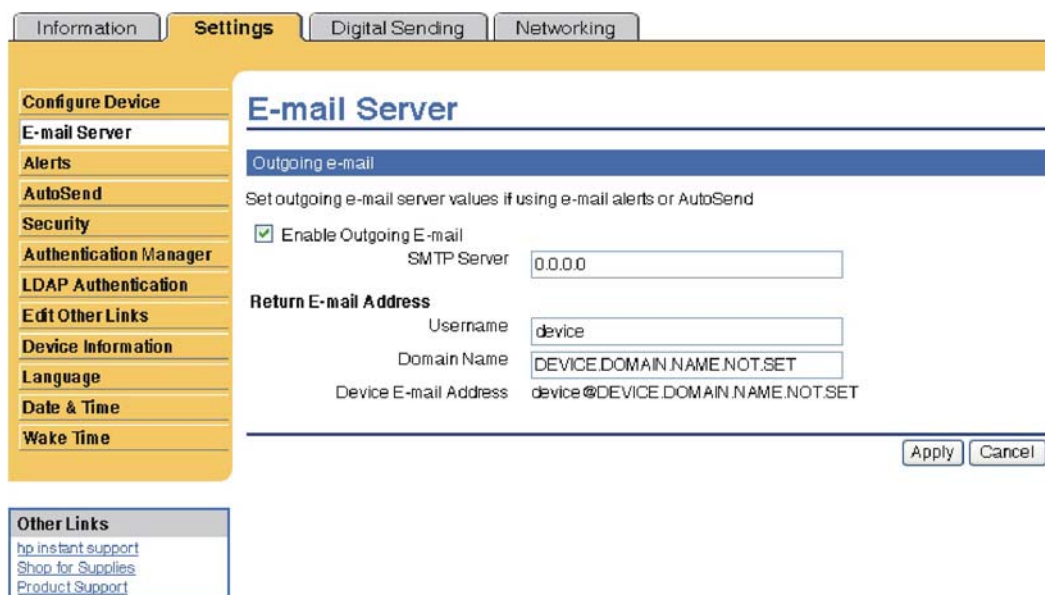


Figure 6-68 HP EWS – E-mail Server screen

Configuring outgoing e-mail

You must configure outgoing e-mail if you intend to use the Alerts or AutoSend features.

1. Gather the following information. (Your organization's network or e-mail administrator typically provides the information that is required to configure outgoing mail.)
 - The TCP/IP address of the simple mail transfer protocol (SMTP) mail server on your network. The EWS uses the SMTP server TCP/IP address to relay e-mail messages to other computers.
 - The e-mail domain name suffix that is used to address e-mail messages within your organization.
2. Select the **Enable Outgoing E-mail** check box.
3. Type the SMTP server TCP/IP address in the **SMTP Server** text box.
4. Type the domain name in the **Domain Name** text box.
5. Click **Apply** to save the changes.

Configuring the return e-mail address

When you configure the return e-mail address on the **E-mail Server** page, you are configuring the identity of the product. For example, if you type *anyone* in the **Username** field and *your . company . com* in the **Domain Name** field, all e-mails sent out by the product will come from *anyone@your . company . com*. In this example, *anyone@your . company . com* is the identity of the product.

Alerts

From the **Alerts** screen, IT administrators can set up the product to send problem and status alerts to anyone through e-mail messages. When this function is configured, alerts are automatically triggered about supplies, paper-path status, and other service and advisory information. More than one individual can receive alerts, with each person receiving only specific alerts. For example, an administrative

assistant might be responsible for ordering print cartridges or fixing jams, and could receive advanced warning when toner is low or a jam occurs. Similarly, the long-life supplies might be handled by an external service provider, who could receive alerts about performing product maintenance, loading the front or rear stapler, and similar needs.



NOTE A user can create up to four different destination lists, with up to 20 recipients on each list.

By selecting the **Remove Control Panel Supplies Status Messages** option (available on the **Alerts - setup** screen that appears when you press the **New Destination List** button), you can suppress the **Cartridge low** or **Cartridge out** supplies status messages on the control panel. The message is suppressed at the control panel only if one or both of these alerts has first been selected to be received.

The **Alerts** screen is shown in the following figure.



NOTE In order for alerts to function, outgoing e-mail must be enabled. To enable outgoing mail, see [Configuring outgoing e-mail](#).

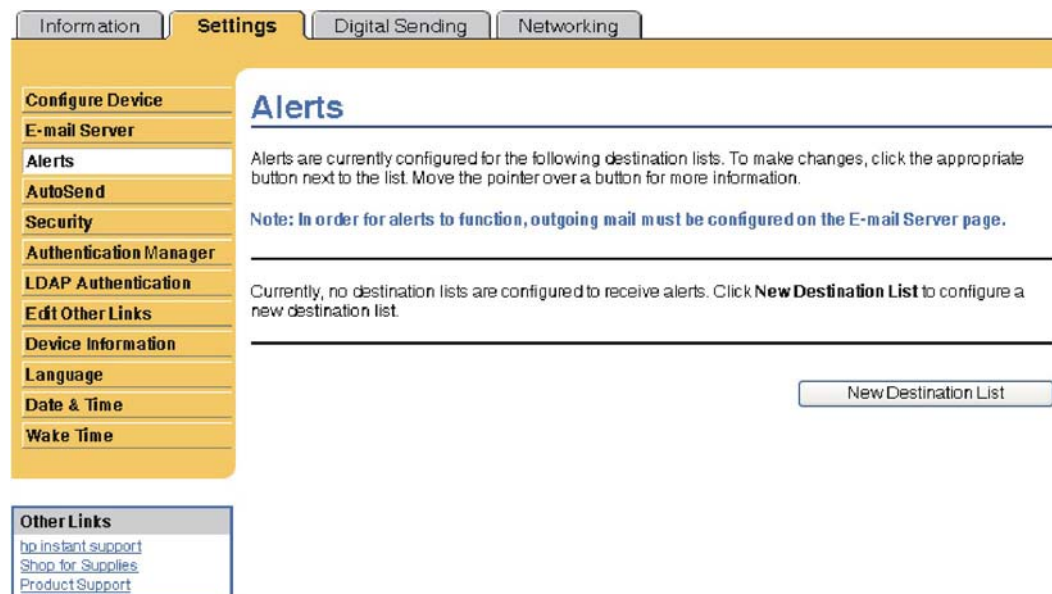


Figure 6-69 HP EWS – **Alerts** screen

For information about using the **Alerts** screen, see the *HP Embedded Web Server User Guide*.

AutoSend

Use the **AutoSend** screen to send product-configuration and supplies-usage information periodically to e-mail destinations of your choice, such as service providers. This feature establishes a relationship with Hewlett-Packard Company or another service provider to provide you with services that include, but are not limited to, print-cartridge replacement, pay-per-page contracts, support agreements, and usage tracking. A user can add up to twenty AutoSend destinations. The **AutoSend** screen is shown in the following figure.

Figure 6-70 HP EWS – **AutoSend** screen

Turn on the AutoSend feature

Use the following procedure to make the AutoSend feature available.

1. Make outgoing e-mail functions available by following the instructions that are listed in this chapter. (For more information, see [E-mail Server](#).)
2. Select the **Enable AutoSend** check box.
3. Click an option to specify the interval at which you want the product to send the product-configuration and supplies-usage information to the e-mail recipients (determined in the next step), and then type the number of days, weeks, months, or pages printed.
4. Configure up to 20 destinations using the format that appears on the screen.
5. To send device configuration and supplies status information to HP, select the **Send to HP** check box.
6. Click **Apply**.

Security

The Security screen is shown in the following figure.

Figure 6-71 HP EWS – Security screen

Authentication Manager

Use the **Authentication Manager** screen, shown in the following figure, to set the device functions that require users to successfully log in before use.

Figure 6-72 HP EWS – Authentication Manager screen

LDAP Authentication

Use the **LDAP Authentication** screen to configure a Lightweight Directory Access Protocol (LDAP) server to authenticate device users. When LDAP authentication is selected as the Log In Method for one or more Device Functions on the Authentication Manager page, the user at the device must enter valid credentials (username and password) to gain access to those functions.

Authentication consists of two interdependent parts. First, the device verifies the user's credentials with the LDAP server. After the device user has supplied valid credentials and has been authenticated, the device searches for the user's e-mail address and name. If either step fails, the user is denied access to the functions that have been configured to require LDAP authentication.

Use the **LDAP Authentication** screen to set up the parameters that are used to access the LDAP server and searches for the user's information. Note that this page only applies when LDAP is selected as a Log In Method on the **Authentication Manager** page. The **LDAP Authentication** screen is shown in the following figure.

Figure 6-73 HP EWS – LDAP Authentication screen

Edit Other Links

Use the **Edit Other Links** screen to add or customize up to five links to the Web sites of your choice (see the following note). These links appear throughout the HP EWS screens in the **Other Links** box beneath the left navigational bar. Three permanent links (**hp instant support**, **Shop for Supplies**, and **Product Support**) have already been established. The **Edit Other Links** screen is shown in the following figure.

Figure 6-74 HP EWS – **Edit Other Links** screen

Adding a link

Use this procedure to add a link.

1. Under **Add Link**, type the URL and the name of the link as you would like it to appear in the HP EWS.
2. Click **Add Link**.

Removing a link

Use this procedure to remove a link.

1. Under **User-defined Links**, select the link or links that you would like to remove.
2. Click **Remove Selected Link**.

Device Information

Use the **Device Information** screen to provide a name of your choice for the device, assign an asset number, and configure the company name, the person to contact about the device, and the physical location of the device. The device TCP/IP address, device name, device model, and serial number are also available on this screen.

Figure 6-75 HP EWS – Device Information screen

If you make any changes on the Device Information screen, click **Apply** to save the changes.

The information that is typed here appears on the Device Information screen that can be opened from the **Information** tab. It also appears in e-mail messages that are sent from the product. This might be useful if you need to locate the product to replace supplies or fix a problem.

Language

Use the **Language** screen to select the language in which the HP EWS screens appear. The Language screen is shown in the following figure.

Figure 6-76 HP EWS – Language screen



CAUTION Selecting **View Pages in Device Language** or **Select A Language** changes the language for everyone who uses the HP EWS.

The default language is the language that the Web browser is currently using. If your browser and control panel both use a language that is not available for the HP EWS, English is selected as the default. If you make any changes on the Language screen, click **Apply** to save your changes.

Date & Time

Use the **Date & Time** screen to update the product time. The **Date & Time** screen is shown in the following figure.

The screenshot displays the HP EWS 'Date & Time' configuration screen. At the top, there are tabs for 'Information', 'Settings' (which is active), 'Digital Sending', and 'Networking'. On the left, a vertical menu lists various system settings: 'Configure Device', 'E-mail Server', 'Alerts', 'AutoSend', 'Security', 'Authentication Manager', 'LDAP Authentication', 'Edit Other Links', 'Device Information', 'Language', 'Date & Time' (highlighted), and 'Wake Time'. The main content area is titled 'Date & Time' and includes two input fields: 'Current Date' set to 'JUL / 05 / 2006' and 'Current Time' set to '12 : 07 PM'. To the right of these fields is a 'Refresh' button. Below the date and time fields are two buttons: 'Date/Time Format' and 'Clock Drift Correction'. At the bottom right of the main area are 'Apply' and 'Cancel' buttons. In the bottom left corner, there is an 'Other Links' section with three links: 'hp instant support', 'Shop for Supplies', and 'Product Support'.

Figure 6-77 HP EWS – **Date & Time** screen

Date/Time Format

Use the **Date/Time Format** screen to select the formats you prefer for displaying the date (under **Date Format**) and time (under **Time Format**). The following figure shows the **Date/Time Format** screen.

Figure 6-78 HP EWS – **Date/Time Format** screen

Clock Drift Correction

Use the **Date & Time - clock drift correction** screen to enable clock drift correction. The following figure shows the screen.

Figure 6-79 HP EWS – **Date & Time - clock drift correction** screen

To configure a network time server to correct the product clock drift, use the following procedure.



NOTE This process keeps the clock from drifting (losing or gaining time), but does **not** synchronize the clock with the network time server clock.

1. Select the **Enable Clock Drift Correction** check box.
2. In the **Network Time Server Address** field, type the TCP/IP address of the clock which you want to use for correction of the product clock drift.



NOTE Alternatively, you can click the **Automatically Find Server** button to find a time server on your network and automatically fill in this field.

3. In the **Local Port to Receive Time from Server** field, type the number of the appropriate port.
4. Click **OK**.



NOTE Use this screen only to configure the time server for clock drift correction, not to set the clock. To set the clock, use the main **Date & Time** screen. For further information, see [Date & Time](#).

Wake Time

An IT administrator can use the **Wake Time** screen to schedule product wakeups on a daily basis. For example, the product can be set to wake up at 07:30, so the product has finished initializing and calibrating and is ready to use by 08:00. The administrator sets only one wakeup setting per day; however, each day can have a different wakeup setting. Additionally, to save energy, the sleep delay can be set to turn the product off after a specific period of inactivity.

Information Settings Digital Sending Networking

Configure Device
E-mail Server
Alerts
AutoSend
Security
Authentication Manager
LDAP Authentication
Edit Other Links
Device Information
Language
Date & Time
Wake Time

Wake Time

Setting a Wake Time is useful for ensuring the product is Ready at a certain time and not in Sleep Mode. For example, to make sure the product is Ready at 7:45, set the Wake Time for 7:30, then set a Sleep Delay of 30 minutes or longer so people have time to use the product before it re-enters Sleep Mode.

Wake Time

Select one or more days below, then set the Wake Time for each day selected.

Week Day	Wake Time
<input type="checkbox"/> Sunday	07 : 30 AM
<input type="checkbox"/> Monday	07 : 30 AM
<input type="checkbox"/> Tuesday	07 : 30 AM
<input type="checkbox"/> Wednesday	07 : 30 AM
<input type="checkbox"/> Thursday	07 : 30 AM
<input type="checkbox"/> Friday	07 : 30 AM
<input type="checkbox"/> Saturday	07 : 30 AM

Sleep Delay

The product will enter Sleep Mode to save energy if not in use for the period of time set below.

SLEEP DELAY 30 minutes

Note: Once a Sleep Delay is applied, Sleep Mode will be automatically enabled. It may take a while for the product to return to Ready once it is in Sleep Mode.

Apply Cancel

Figure 6-80 HP EWS – **Wake Time** screen

Digital Sending tab

Use the screens available on the HP EWS **Digital Sending** tab to control the digital-sending features of the device.

An example of the HP EWS **Digital Sending** tab is shown in the following figure.

Figure 6-81 HP Digital Sending tab — General Settings screen

For more information, see the *HP Embedded Web Server User Guide*.

Networking tab

The HP EWS **Networking** tab is shown in the following figure.



NOTE Not all of the screens on the tab are shown in this document. For more information, see the *HP Jetdirect Administrator's Guide*.

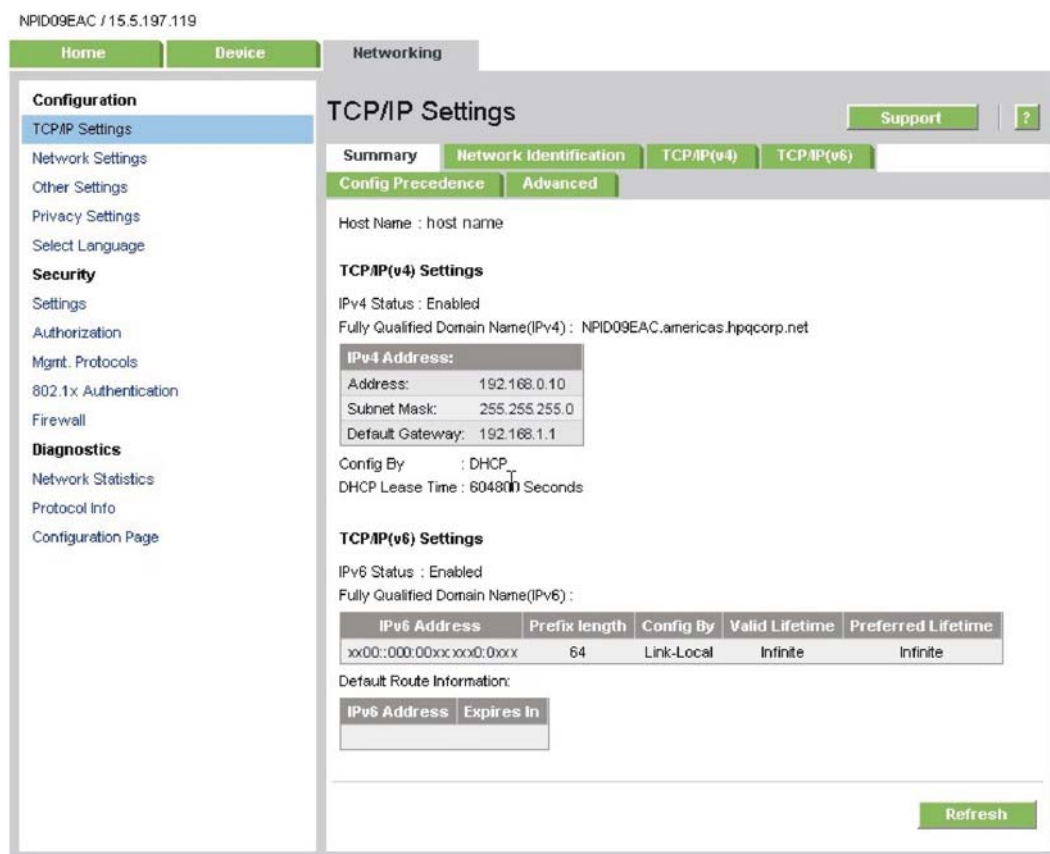


Figure 6-82 HP EWS **Networking** tab – **Network Settings** screen

The menu on the left side of the screen contains other networking options under three categories:

- [Configuration](#)
- [Security section](#)
- [Diagnostics section](#)

Configuration

- **Network Setting.** From the **Networking** screen, enable and configure the following network protocols:
 - TCP/IP settings
 - Network settings:
 - Internetwork packet exchange/Sequenced packet exchange (IPX/SPX)
 - AppleTalk
 - Data link control/logical link control (DLC/LLC)
 - Simple network management protocol (SNMP)
- **Other Settings**

- **Privacy Settings**
- **Select Language**

Security section

- Settings
- Authorization
- Mgmt. Protocols
- 802.1x authentication
- Firewall

Diagnostics section

- Network Statistics
- Protocol Info
- Configuration Page

Refer to the *HP Jetdirect Administrator's Guide* on the printing-system CD for more information.

7 Engineering Details

Introduction

Topics:

- [Remote firmware updates](#)
- [Printing print-ready documents](#)
- [Media attributes](#)
- [Uninstall](#)

Remote firmware updates

The HP LaserJet M4345 MFP 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. Print a configuration page to see what version of firmware is currently installed on the device. (Also, print a menu map to see what user settings have been configured.)
2. Go to the HP Web site and download the latest firmware to the computer.
3. Download the new firmware to the device. (Print a new menu map to compare user settings between the previous firmware and upgraded firmware.)

Table 7-1 Version Checking

Primary/Location	Version Checking
JetDirect inside (JDI)	<p>Does version checking.</p> <p>Upgrades if the firmware version is newer; this means it will not rewrite or upgrade if the firmware is the same or older.</p> <p>This becomes an issue if the current firmware is corrupt. Because the firmware version may be the same even though it may be corrupt, the firmware will not rewrite because it is the same version.</p> <p>To update corrupt firmware with the same RFU version, use the nodebug bundle of firmware, then update using the correct firmware bundle.</p>
Fax Modem	<p>Does version checking.</p> <p>The firmware updates if the RFU is different from what is currently on the component. The firmware can be updated if the RFU is older or newer than the current firmware version.</p> <p>Will not upgrade if firmware version is the same. The same version does not rewrite because of speed.</p> <p>This becomes an issue if the current firmware is corrupt. Because the firmware version may be the same even though it may be corrupt, the firmware will not rewrite because it is the same version.</p>
Formatter	<p>No version checking.</p> <p>The formatter firmware updates if there is a formatter bundle on the RFU, and is not dependant on what version of firmware the formatter is currently using.</p>
Copy control board (CPB)	No version checking.
Scan control board (SCB)	<p>Does version checking.</p> <p>Upgrades if the firmware version is newer; this means it will not rewrite or upgrade if the firmware is the same or older.</p> <p>This becomes an issue if the current firmware is corrupt. Because the firmware version may be the same even though</p>

Table 7-1 Version Checking (continued)

	<p>it may be corrupt, the firmware will not rewrite because it is the same version.</p> <p>To update corrupt firmware with the same RFU version, use the nodebug bundle of firmware, then update using the correct firmware bundle.</p>
Jetlink protocol (interface used to hook up output devices; external to MFP)	No version checking.
DC controller (internal to MFP)	Does version checking.
<ul style="list-style-type: none"> • duplexer • input external trays • output external bins 	<p>The firmware updates if the RFU is different from what is currently on the component. The firmware can be updated if the RFU is older or newer than the current firmware version.</p> <p>Will not upgrade if firmware version is the same.</p> <p>This becomes an issue if the current firmware is corrupt. Because the firmware version may be the same even though it may be corrupt, the firmware will not rewrite because it is the same version.</p>

Topics:

- [Print the configuration page](#)
- [Downloading the new firmware from the HP Web site](#)
- [Downloading the new firmware to the device](#)
- [Printer messages during the firmware update](#)
- [Remote firmware update by using FTP through a browser](#)
- [Remote firmware update by using FTP on a direct network connection](#)
- [Remote firmware update through an optional parallel port](#)
- [Remote firmware update through an MS Windows network](#)
- [Remote firmware update for UNIX systems](#)
- [Remote firmware update by using the LPR command](#)
- [Remote firmware update through HP Web Jetadmin](#)
- [Remote firmware update through the HP Embedded Web Server](#)

Print the configuration page

To determine the current level of firmware, view the configuration page.

To print a configuration page, follow these instructions.

1. Touch **Administration**.
2. Touch **Information**.

3. Touch **Configuration/Status Pages**.
4. Touch **Configuration Page**.
5. Touch **Print**.

Print a menu map

Print a menu map before updating the firmware to see what user settings have been configured in the current firmware. This menu map can be compared with a menu map printed after the firmware update to determine what user settings have been added or changed in the new firmware.

To print a menu map from the device control panel:

1. Touch **Administration**.
2. Touch **Information**.
3. Touch **Configuration/Status Pages**.
4. Touch **Administration Menu Map**.
5. Touch **Print**.

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/ljm4345mfp_firmware

The .EXE file consists of a readme file and the .RFU file.

For UNIX systems, the remote firmware update file is a .TAR file.

For firmware upgrades on Macintosh systems, see [Update Firmware](#).

Downloading the new firmware to the device

For support information about downloading new firmware from the Web, go to the following URL:

www.hp.com/go/ljm4345mfp_firmware

The device can receive an RFU update when in the **READY** state. The device 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 device 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 (network). The reinitialization time depends on the specific hardware configuration of the device, 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 the device firmware.

Printer messages during the firmware update

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

Table 7-2 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 network 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 USB port.
A power cycle occurred during the INITIALIZING process.	The update has been completed.

Print jobs that are sent to the device while an update is in process do not interrupt the update.

All HP LaserJet devices leave the factory with the most recent firmware version installed. If a remote firmware update fails for the component, the .RFU file must be resent. The only component exception is the formatter. See [Table 7-3 Update messages](#) for information regarding a formatter update error.

Because a firmware update cannot be resent over a USB for Mac, contact an HP Customer Care Center if a remote update fails in a Macintosh operating system.

Three messages appear during a normal update process; others appear only if the update process does not succeed.

Table 7-3 Update messages



Device message	Explanation
RECEIVING UPGRADE	<p>This message appears from the time the device recognizes the beginning of an .RFU update until the time the device has verified the validity and integrity of the .RFU update.</p> <div>  <p>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 device control panel to indicate that the update was interrupted.</p> </div>
PERFORMING UPGRADE	<p>This message appears while the device is actually reprogramming the firmware.</p> <div>  <p>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.</p> </div>

Table 7-3 Update messages (continued)

Device message	Explanation
INITIALIZING	This message appears from the time the device has finished reprogramming the flash until the device 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 device, regardless of the connection (network or USB).
RFU LOAD ERROR	This message appears (in English only) if the firmware update of the formatter fails because the print-engine firmware is corrupted.
SEND RFU UPGRADE	If this message appears, the update must now be sent only by a computer that is attached to the USB port of the device.
ON USB PORT	



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.

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

Table 7-4 Troubleshooting a firmware update failure

Reason for firmware update failure	Corrective action
The .RFU file is corrupted.	The device recognizes that the file is corrupted and rejects the update. Download the file again and send the new file to the device. Download the file from the following Web site: www.hp.com/go/ljm4345mfp_firmware
The wrong device is contained in the .RFU file.	The device recognizes the device mismatch and rejects the update. Download the correct file and send it to the device. Download the file from the following Web site: www.hp.com/go/ljm4345mfp_firmware
The upgrade was interrupted.	See Table 7-3 Update messages .
A flash hardware failure occurred.	Although it is extremely unlikely, the device might have a hardware failure. Call technical support to address the problem (see the flyer that came with the device for a local telephone support list).

Remote firmware update by using FTP through a browser

Complete the following steps to update the device firmware by using file transfer protocol (FTP) through a browser on MS Windows or Macintosh operating systems.

1. Make note of the TCP/IP address of the device on the HP Embedded Jetdirect page. The HP Embedded Jetdirect page is the second page of the configuration page printout. To print a configuration page, see [Print the configuration page](#).
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 device. For example, if the TCP/IP address is 192.168.0.90, type `FTP://192.168.0.90`

4. Press **Enter**.
5. Locate the downloaded .RFU file for the device.
6. Drag and drop the .RFU file onto the **PORT** icon or onto any open space in the browser window.
If the **PORT1** icon does not appear as a folder name, use a Web browser to enable folder viewing for FTP sites. 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.
7. The download process begins and the firmware is updated on the device. This can take several minutes. Let the process finish without further interaction with the device or the computer. The messages described in the section [Printer messages during the firmware update](#) appear on the control panel.



NOTE The device 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 device or interfere with the update until you see this message.

8. Print a configuration page and verify that the firmware version number matches the revision of the current update.



NOTE Print a menu map to see user settings are configured in the current firmware. This menu map can be compared with a menu map printed before the firmware update to determine what user settings have been added or changed in the new firmware.

To print a menu map from the device control panel, see [Print a menu map](#).

Remote firmware update by using FTP on a direct network connection

If the HP LaserJet M4345 MFP uses a direct network connection, use file transfer protocol (FTP) to update the firmware. Complete the following steps:

1. Make note of the TCP/IP address on the HP Embedded Jetdirect page. The HP Embedded Jetdirect page is the second page of the configuration page printout. To print a configuration page, see [Print the configuration page](#).



NOTE Before connecting to the device, make sure that the device 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 the 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\xxxxFW.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 the following path:

```
put "c:\My Documents\LJ\xxxxfw.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 device. This can take several minutes. Let the process finish without further interaction with the device or the computer. The messages described in the section [Printer messages during the firmware update](#) appear on the control panel.



NOTE The device 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 device 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 MS Windows interface.



NOTE Print a menu map to see what user settings are configured in the current firmware. This menu map can be compared with a menu map printed before the firmware update to determine what user settings have been added or changed in the new firmware.

To print a menu map from the device control panel, see [Print a menu map](#).

Remote firmware update through an optional parallel port

If the device is connected through an optional parallel connection, then you can send the .RFU file directly to the device by using a `COPY` command from a command prompt or an MS-DOS window.

Windows NT 4.0, Windows 2000, Windows XP, or Windows Server 2003

The .RFU file can be sent directly to the device by typing a **copy** command at a command prompt or in an MS-DOS window.

Windows NT 4.0 does not support the HP LaserJet M4345 MFP *drivers*, but it is possible to update the device 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 device port (such as LPT1). For example, type the following:

```
C:\>copy /b c:\xxxxfw.rfu LPT1
```



NOTE If the file name or path includes a space, enclose the file name or path in quotation marks. For example, type `C:\>copy /b "c:\My Documents\xxxxfw.rfu" LPT1`.

2. Press **Enter** on the keyboard.
3. The download process begins and the firmware is updated on the device. This can take several minutes. Let the process finish without further interaction with the device or the computer. The messages described in the section [Printer messages during the firmware update](#) appear on the control panel.



NOTE The device 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 device 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.



NOTE Print a menu map to see what user settings are configured in the current firmware. This menu map can be compared with a menu map printed before the firmware update to determine what user settings have been added or changed in the new firmware.

To print a menu map from the device control panel, see [Print a menu map](#).

Remote firmware update through an MS Windows network

If the device is shared on an MS 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 (connected to the device by a USB) from which the device is being shared, and <SHARENAME> is the device share name. For example, type the following:

```
C:\>copy /b c:\xxxxfw.rfu \\COMPUTERNAME\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\xxxxfw.rfu" \\COMPUTERNAME\SHARENAME`

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 device. This can take several minutes. Let the process finish without further interaction with the device or the computer. The messages described in the section [Printer messages during the firmware update](#) appear on the control panel.



NOTE The device 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 device 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.



NOTE Print a menu map to see what user settings are configured in the current firmware. This menu map can be compared with a menu map printed before the firmware update to determine what user settings have been added or changed in the new firmware.

To print a menu map from the device control panel, see [Print a menu map](#).

To share the device, do the following:

1. Click **Start**.
2. Click **Settings**.
3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click the **Sharing** tab.
7. Click the **Share this printer** button.

8. Enter a share name.
9. Click **Apply**. Then, click **OK** to close.

Remote firmware update for UNIX systems

For UNIX systems, any command method that delivers the .TAR file to the device 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 device. This can take several minutes. Let the process finish without further interaction with the device or the computer. The messages described in the section [Printer messages during the firmware update](#) appear on the control panel.



NOTE The device 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 device or interfere with the update until this message appears.

3. Print a configuration page and verify that the firmware revision number matches the revision of the current update.



NOTE Print a menu map to see what user settings are configured in the current firmware. This menu map can be compared with a menu map printed before the firmware update to determine what user settings have been added or changed in the new firmware.

To print a menu map from the device control panel, see [Print a menu map](#).

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 device, 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 device. This can take several minutes. Let the process finish without further interaction with the device or the computer.



NOTE The device 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 device 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.



NOTE Print a menu map to see what user settings are configured in the current firmware. This menu map can be compared with a menu map printed before the firmware update to determine what user settings have been added or changed in the new firmware.

To print a menu map from the device control panel, see [Print a menu map](#).

Remote firmware update through HP Web Jetadmin

This procedure requires that HP Web Jetadmin V7.8 or later is installed on the computer. Complete the following steps to update a single device 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 device in the **Quick Device Find** field, and then click **Go**. The device 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 device that you want to update in the list of devices, 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. 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 device.
11. The download process begins and the firmware is updated on the device. This can take several minutes. Let the process finish without further interaction with the device or the computer. The messages described in the section [Printer messages during the firmware update](#) appear on the control panel.



NOTE The device 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 device 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.



NOTE Print a menu map to see what user settings are configured in the current firmware. This menu map can be compared with a menu map printed before the firmware update to determine what features have been added or changed in the new firmware.

To print a menu map from the device control panel, see [Print a menu map](#).

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**.
 - b. Shift-click to select devices that are to be included in the group, and then click **OK**.
 - 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.

Remote firmware update through the HP Embedded Web Server



CAUTION Use extreme caution when using this method. Only use this method as a last resort.

CAUTION When trying to install or update RFU, do NOT use any buttons, browse to another site, close or touch the browser page in anyway until the device has reset and displays **READY**.

1. Open the HP Embedded Web Server (HP EWS).
2. In the Information tab, click the **Print** menu item.
3. Click **Browse** and navigate to the RFU file.
4. Click **Apply**.
5. After the device automatically reboots, the device may ask you to reboot the device manually. Turn the device off, then on.

Wait until the device reboots and displays **Ready**.



NOTE Print a menu map to see what user settings are configured in the current firmware. This menu map can be compared with a menu map printed before the firmware update to determine what user settings have been added or changed in the new firmware.

To print a menu map from the device control panel, see [Print a menu map](#).

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 through a distribution method such as Internet downloading. The following print-ready file formats can be sent directly to the HP LaserJet M4345 MFP without opening the original software program:

- HP LaserJet printer control language (.PCL)
- Portable document format (.PDF)
- Postscript (.PS)
- Text (.TXT)
- Print file (.PRN)

The examples that are used in this section are for printing .PDF documents. However, any print-ready file type can be substituted.

Use one of the following methods to send print-ready files to your product.

Topics:

- [Print-ready file printing by using FTP through a browser](#)
- [Print-ready file printing by using FTP on a direct network connection](#)
- [Print-ready printing by using an optional parallel port](#)
- [Print-ready file printing in an MS Windows network](#)
- [Print-ready file printing in UNIX systems](#)
- [Print-ready file printing by using the LPR command](#)

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 on MS Windows or Macintosh operating systems.

1. Make note of the TCP/IP address on the HP Embedded Jetdirect page. The HP Embedded Jetdirect page is the second page of the configuration page printout. To print a configuration page, see [Print the configuration page](#).
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.

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**, select **Internet Options**, and then click the **Advanced** tab.
- b. Select the **Enable folder view for FTP sites**.
- c. Click **OK** to save the setting.

Print-ready file printing by using FTP on a direct network connection

If the HP LaserJet M4345 MFP uses a direct network connection, use file transfer protocol (FTP) to print a print-ready file. Complete the following steps:

1. Take note of the TCP/IP address on the HP Embedded Jetdirect page. The HP Embedded Jetdirect page is the second page of the configuration page printout. To print a configuration page, see [Print the configuration page](#).
2. Open a command window on the 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\<file name>.PDF
```



NOTE If the file name or path includes a space, enclose the file name or path in quotation marks. For example, type `put "c:\My Documents\LJ\<file name>.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 MS Windows interface.

Print-ready printing by using an optional parallel port

The procedure for printing directly by using an optional parallel port depends on the operating system.

Topics:

- [Windows NT 4.0, Windows 2000, Windows XP, or Windows Server 2003](#)

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 device port (such as LPT1). For example, type the following:

```
C:\>copy /b c:\<file name>.PDF lpt1
```

2. Press **Enter** on the keyboard. The message **PROCESSING JOB** appears on the control panel, and the job prints.



NOTE If the file name or path includes a space, enclose the file name or path in quotation marks. For example, type `C:\>copy /b "c:\My Documents\<file name>.PDF"`.

3. At the command prompt, type `exit` to close the command window.

Print-ready file printing in an MS Windows network

If the product is shared on an MS 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 (connected to the device by a USB) from which the device is being shared, and `<SHARENAME>` is the product share name. For example, type the following:

```
C:\>copy /b c:\xxxxFW.PDF \\COMPUTERNAME\SHARENAME
```



NOTE If the file name or path includes a space, enclose the file name or path in quotation marks. For example, type `C:\>copy /b "c:\My Documents\<file name>.PDF" \\COMPUTERNAME\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.

To share the device, do the following:

1. Click **Start**.
2. Click **Settings**.

3. Click **Properties** (Windows 2000) or **Printers or Faxes** (Windows XP Professional and Windows Server 2003) or **Printers and Other Hardware Devices** (Windows XP Home).
4. Right-click the device name.
5. Click **Properties**.
6. Click the **Sharing** tab.
7. Click the **Share this printer** button.
8. Enter a share name.
9. Click **Apply**. Then, click **OK** to close.

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

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 [Print the configuration page](#).
2. From a command window, type the following:

```
lpr -P IPADDRESS -S IPADDRESS -o l FILENAME lpr -S <IPADDRESS> -Pbins  
<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.

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.

Media attributes

Topics:

- [Media sources and destinations](#)
- [Media-source commands](#)
- [Driver-supported media sizes](#)
- [Driver-supported media types](#)
- [Custom paper sizes](#)
- [Media-type commands](#)

Media sources and destinations

The following table indicates the standard and optional media sources and destinations for the HP LaserJet M4345 MFP.

Table 7-5 HP LaserJet M4345 MFP – Media sources and destinations

Media sources	100-sheet multipurpose tray (tray 1)	Standard
	500-sheet paper tray 2	Standard
	500-sheet paper tray (trays 3–5)	Optional
	75-sheet envelope feeder	Optional
Media destinations	250-sheet top bin	Standard
	HP 500-Sheet Stapler/Stacker	Standard for the HP LaserJet M4345xs MFP
	HP 3-Bin Mailbox	Optional; standard for the HP LaserJet M4345xm MFP

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 for tray 2.

Table 7-6 HP LaserJet M4345 MFP – Media-source commands

Media source	PCL 6	PCL 5	PostScript
	<code>ubyte # MediaSource</code> or <code>ubyte_array "string" MediaSource¹</code>	<code>Esc&l#H</code>	<code>/MediaPosition # / ManualFeed true false or null</code>
Manual feed in tray 1	2	2	3 true
Tray 1 (100-sheet)	3	4	3 false

Table 7-6 HP LaserJet M4345 MFP – Media-source commands (continued)

Media source	PCL 6	PCL 5	PostScript
	ubyte # MediaSource or ubyte_array "string" MediaSource ¹	Esc&l#H	/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)	5	9	38 false
Envelope feeder (75-sheet)	6	6	2 false
Automatically Select	NA	NA	NA
Printer Auto Select	1	7	null false

¹ For the string value, include the quotation marks around the variable. For example, ubyte_array "TRAY2" MediaSource is the PCL 6 command for tray 2.

Driver-supported media sizes

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 device and operating system. The list contains all of the following sizes, and might contain sizes from other drivers.

Table 7-7 HP LaserJet M4345 MFP – 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	140 mm (5.5 inches)	216 mm (8.5 inches)	"STATEMENT"
16K	273 mm (10.75 inches)	197 mm (7.75 inches)	"ROC16K"
8.5 x 13	216 mm (8.5 inches)	330 mm (13 inches)	"8.5x13"
A4	211 mm (8.3 inches)	297 mm (11.69 inches)	"A4"
A5	147 mm (5.8 inches)	211 mm (8.3 inches)	"A5"
B5 (JIS)	183 mm	257 mm	"JIS B5"

Table 7-7 HP LaserJet M4345 MFP – Supported media sizes and attributes (continued)

Paper sizes ¹	Width	Height	PCL 6 ²
	(7.2 inches)	(10.1 inches)	
Double Japan Postcard Rotated	148 mm	200 mm	"Double Postcard (JIS)"
	(5.83 inches)	(7.87 inches)	
Envelope #10	105 mm	241 mm	"COM10"
	(4.13 inches)	(9.5 inches)	
Envelope B5	176 mm	250 mm	"B5 ENV"
	(6.93 inches)	(9.84 inches)	
Envelope C5	162 mm	229 mm	"C5"
	(6.38 inches)	(9.02 inches)	
Envelope DL	110 mm	220 mm	"DL"
	(4.33 inches)	(8.66 inches)	
Envelope Monarch	99 mm	190 mm	"MONARCH"
	(3.88 inches)	(7.5 inches)	
Executive	185 mm	267 mm	"EXEC"
	(7.3 inches)	(10.5 inches)	
Legal	216 mm	356 mm	"LEGAL"
	(8.5 inches)	(14.0 inches)	
Custom	Minimum:	Minimum:	³
	127 mm	76.2 mm	
	(5.0 inches)	(3.0 inches)	
	Maximum:	Maximum:	
	216 mm	356 mm	
	(8.5 inches)	(14.0 inches)	

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."

³ For custom sizes, the HP PCL 6 driver specifies actual dimensions, for example, for 8 x 9-inch custom size, `"real32_xy 8.0 9.0 CustomMediaSize ubyte eInch CustomMediaSizeUnits."`

Driver-supported media types

The following table shows the media types that the HP LaserJet M4345 MFP print-drivers support.

Table 7-8 HP LaserJet M4345 MFP – Supported input media types

Media types (command string)	Tray 1	Trays 2–5 (500-sheet)	Envelope feeder (75-sheet)	Duplexing unit	Manual duplexing	Face up (Left bin, HP 500-Sheet Stapler/Stacker, and HP 3-Bin Mailbox)	Face down (Left bin, HP 500-Sheet Stapler/Stacker, and HP 3-Bin Mailbox)	HP 500-Sheet Stapler/Stacker
Unspecified	Y	Y	Y	Y	Y	Y	Y	Y
Plain	Y	Y	Y	Y	Y	Y	Y	Y
Preprinted	Y	Y	Y	Y	Y	Y	Y	Y
Letterhead	Y	Y	Y	Y	Y	Y	Y	Y
Transparency	Y	Y	N	N	N	Y	Y	N
Prepunched	Y	Y	Y	Y	Y	Y	Y	Y
Labels	Y	N	Y	N	N	Y	Y	N
Bond	Y	Y	Y	Y	Y	Y	Y	Y
Recycled	Y	Y	Y	Y	Y	Y	Y	Y
Color	Y	Y	Y	Y	Y	Y	Y	Y
Light (less than 75 g/m ² [20 lb])	Y	N	Y	N	Y	Y	Y	Y
Rough	Y	N	Y	N	N	Y	Y	Y
Envelope	Y	N	Y	N	N	Y	N	N
Custom	Y	Y	Y	Y	Y	Y	Y	Y

Custom paper sizes

The following table shows custom paper sizes that are available for the HP LaserJet M4345 MFP.

Table 7-9 HP PCL 6 driver custom media sizes

Tray	Dimensions	Minimum	Maximum
Tray 1 (100-sheet multipurpose)	Width	76 mm (3.0 inches)	215 mm (8.5 inches)
	Height	127 mm (5.0 inches)	356 mm (14.0 inches)
Tray 2 (500-sheet)	Width	148.0 mm (5.83 inches)	215 mm (8.5 inches)
	Height	210 mm (8.26 inches)	356 mm (14.0 inches)
Trays 3–5 (500-sheet, optional)	Width	148.0 mm (5.83 inches)	215 mm (8.5 inches)
	Height	210 mm (8.26 inches)	356 mm (14.0 inches)
Duplexing unit	Width	148.0 mm (5.83 inches)	215 mm (8.5 inches)
	Height	210.0 mm (8.26 inches)	356 mm (14.0 inches)



NOTE The envelope feeder and the HP 500-Sheet Stapler/Stacker do not support custom media sizes.

Media-type commands

The HP PCL 5 driver 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 7-10 HP LaserJet M4345 MFP – Media-type commands

Esc&	n#	Wd	Paper type
Esc&	6	Wd	Plain
Esc&	11	Wd	Preprinted
Esc&	11	Wd	Letterhead
Esc&	13	Wd	Transparency
Esc&	11	Wd	Prepunched
Esc&	7	Wd	Labels
Esc&	5	Wd	Bond
Esc&	9	Wd	Recycled
Esc&	6	Wd	Color
Esc&	6	Wd	Light <75 g/m ²
Esc&	6	Wd	Heavy
Esc&	11	Wd	Cardstock > 163 g/m ² ¹
Esc&	6	Wd	Rough
Esc&	9	Wd	Envelope

¹ The correct command for cardstock is "Esc&n11WdCard Stock", with a space between the "d" and the "S", and with an uppercase "S".

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