Color LaserJet Pro M452

User Guide

M452nw
M452dn
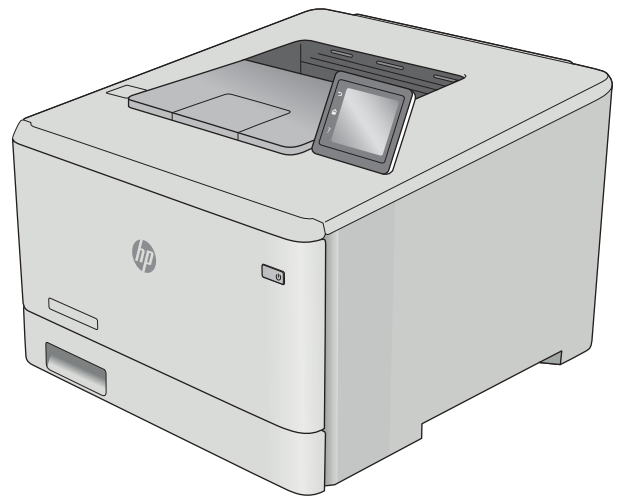
M452dw

www.hp.com/support/colorljM452

HP Color LaserJet Pro M452

User Guide

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- [Printer hardware setup and software installation](#)

For more information:

The following information is correct at the time of publication. For current information, see www.hp.com/support/colorljM452.

HP's all-inclusive help for the printer includes the following information:

- Install and configure

- Learn and use

- Solve problems

- Download software and firmware updates

- Join support forums

- Find warranty and regulatory information

Product views

- [Printer front view](#)
- [Printer back view](#)
- [2-line control-panel view (M452nw and M452dn models)](#)
- [Touchscreen control-panel view (M452dw model)](#)

Printer front view
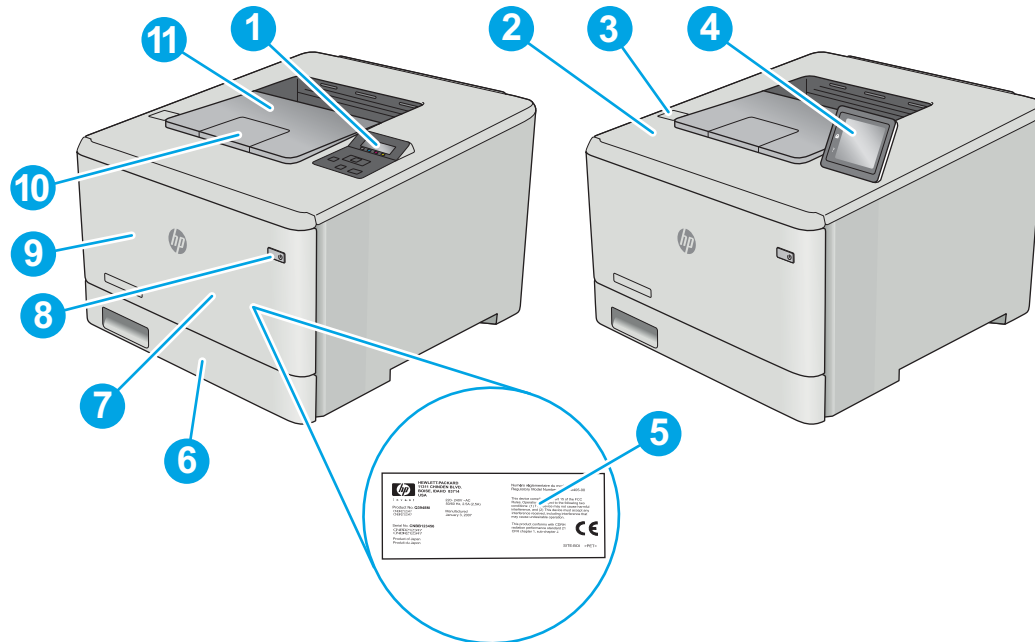
1	2-line control panel (nw and dn models)
2	Near field communication (NFC) internal antenna (dw model only)
3	Walk-up USB port (for printing without a computer) (dw model only)
4	Touchscreen control panel (dw model) (tilts up for easier viewing)
5	Regulatory label (inside the front door)
6	Tray 2
7	Tray 1
8	Power on/off button
9	Front door (provides toner cartridge access)
10	Output bin extension
11	Output bin

Printer back view
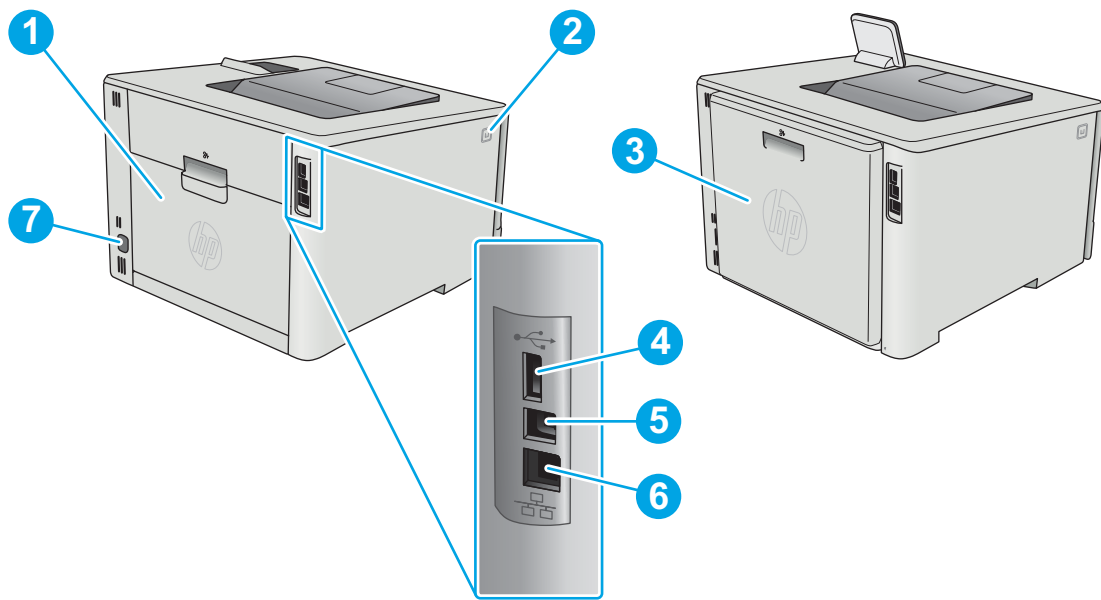
1	Rear door (nw model only) (provides access for clearing jams)
2	Front door release button
3	Duplexer (dn and dw models only)
4	USB port for job storage
5	USB port for direct connection to a computer
6	Ethernet port
7	Power connection

2-line control-panel view (M452nw and M452dn models)

1	2-line control panel display	This screen displays menus and printer information.
2	OK button	Press the OK button for the following actions:
		● Open the control-panel menus.
		● Open a submenu displayed on the control-panel display.
		● Select a menu item.
		● Clear some errors.
		● Begin a print job in response to a control-panel prompt (for example, when the message **Press [OK] to continue** appears on the control-panel display).
3	Right arrow ▶ button	Use this button to navigate through the menus or to increase a value that appears on the display.
4	Cancel ✕ button	Press this button to cancel a print job or to exit the control panel menus.
5	Wireless button (wireless models only)	Use this button to navigate the open the **Wireless** menu and wireless status information.
6	Back arrow ↰ button	Use this button for the following actions:
		● Exit the control-panel menus.
		● Scroll back to a previous menu in a submenu list.
		● Scroll back to a previous menu item in a submenu list (without saving changes to the menu item).
7	Left arrow ◀ button	Use this button to navigate through the menus or to decrease a value that appears on the display.
8	Ready LED	The Ready light is on when the printer is ready to print. It blinks when the printer is receiving print data, or when the printer is in sleep mode.
9	Attention LED	The Attention light blinks when the printer requires user attention.

Touchscreen control-panel view (M452dw model)
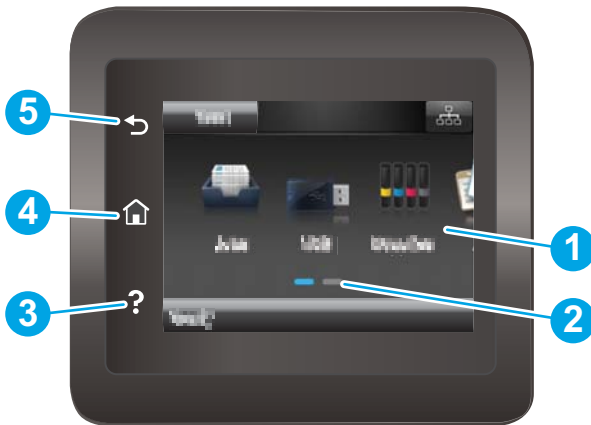
1	Touchscreen	The display provides access to menus, help animations, and printer information.
2	Home page screen indicator	The display indicates which Home screen the control panel is currently displaying.
3	Help ? button	Touch this button to open the control-panel help system.
4	Home button	Touch this button to navigate to the Home screen.
5	Back button	Touch this button to return to the previous screen.

NOTE: While the control panel does not have a standard Cancel button, during many printer processes a Cancel button appears on the touchscreen. This permits users to cancel a process before the printer completes it.

Home screen layout

The Home screen provides access to the printer features and indicates the current status of the printer.

Return to the Home screen at any time by touching the Home button on the printer control panel.

NOTE: The features that appear on the Home screen can vary, depending on the printer configuration.
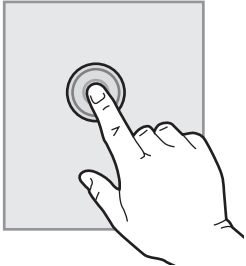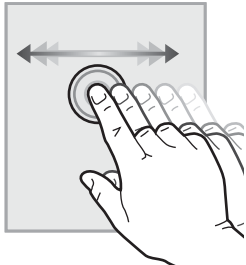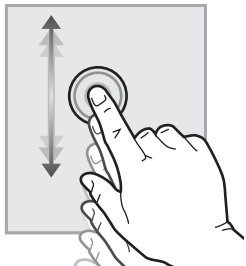
1	Reset button	Touch this button to reset any temporary job settings to the default printer settings.
2	Connection Information button	Touch this button to open the Connection Information menu, which provides network information. The button appears as either a wired network icon or a wireless network icon , depending on the type of network to which the printer is connected.
3	Setup button	Touch this button to open the Setup menu.
4	Apps button	Touch this button to open the Apps menu to print directly from select Web applications.
5	Supplies button	Touch this button to view information about supplies status.
6	USB button	Touch this button to open the USB Flash Drive menu.
7	Printer status	This screen area provides information about the overall printer status.
8	Jobs button	Touch this button to open the stored jobs feature.

How to use the touchscreen control panel

Use the following actions to use the printer touchscreen control panel.

Action	Description	Example
Touch	Touch an item on the screen to select that item or open that menu. Also, when scrolling through menus, briefly touch the screen to stop the scrolling.	Touch the Setup 🔘 button to open the Setup menu.
Swipe	Touch the screen and then move the finger horizontally to move the screen sideways.	Swipe the Home screen to access the Setup 🔘 button.
Scroll	Touch the screen, and then, without lifting the finger, move the finger vertically to move the screen.	Scroll through the Setup menu.

Product specifications

📝 **IMPORTANT:** The following specifications are correct at the time of publication, but they are subject to change. For current information, see www.hp.com/support/colorljM452.

- Technical specifications
- Supported operating systems
- Mobile printing solutions
- Printer dimensions
- Power consumption, electrical specifications, and acoustic emissions
- Operating-environment range

Technical specifications

Model name		M452nw	M452dn	M452dw
Product number		**CF388A**	**CF389A**	**CF394A**
Paper handling	50-sheet multipurpose input tray (Tray 1)	✓	✓	✓
	Tray 2 (250-sheet capacity)	✓	✓	✓
	Automatic duplex printing	Not available	✓	✓
Connectivity	10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓	✓
	Hi-Speed USB 2.0	✓	✓	✓
	Walk-up USB port	Not available	Not available	✓
	Print server for wireless network connectivity	✓	Not available	✓
	HP near field communication (NFC) and Wi-Fi Direct for printing from mobile devices	Not available	Not available	✓
Control-panel display and input	2-line control panel	✓	✓	Not available
	Touchscreen control panel	Not available	Not available	✓
Print	Prints 27 pages per minute (ppm) on A4 and 28 ppm on letter-size paper	✓	✓	✓
	Walk-up USB printing (no computer required)	Not available	Not available	✓
	Job storage and PIN-protected printing (Requires a 16 GB or greater USB thumb drive.)	✓	✓	✓

Supported operating systems

The following information applies to the printer-specific Windows PCL 6 and OS X print drivers.

Windows: The HP Software Installer installs the HP PCL.6, HP PCL-6, or HP PCL 6 driver depending on the Windows operating system along with optional software when using the full software installer. See the software installation notes for more information.

Mac computers and OS X: Mac computers and Apple mobile devices are supported with this printer. The OS X print driver and print utility are available for download from hp.com and may also be available via Apple Software Update. The HP installer software for OS X is not included in the in-box CD. Follow these steps to download the OS X installer software:

1. Go to www.hp.com/support/colorljM452.

2. Select **Support Options**, and then under **Download Options** select **Drivers, Software & Firmware**.

3. Click the operating system version, and then click the **Download** button.

Operating system	Print driver installed	Notes
Windows® XP SP3 or later, 32-bit	The HP PCL.6 printer-specific print driver is installed for this operating system as part of the basic software installation. The basic installer installs the driver and scan application only.	The full software installation is not supported for this operating system. Microsoft retired mainstream support for Windows XP in April 2009. HP will continue to provide best-effort support for the discontinued XP operating system.
Windows Vista®, 32-bit	The HP PCL.6 printer-specific print driver is installed for this operating system as part of the basic software installation. The basic installer installs the driver only.	The full software installation is not supported for this operating system.
Windows Server 2003 SP2 or later, 32-bit	The HP PCL.6 printer-specific print driver is installed for this operating system as part of the basic software installation. The basic installer installs the driver only.	The full software installation is not supported for this operating system. Use UPD drivers for 64-bit operating systems. Microsoft retired mainstream support for Windows Server 2003 in July 2010. HP will continue to provide best-effort support for the discontinued Server 2003 operating system.
Windows 7 SP1 or later, 32-bit and 64-bit	The HP PCL 6 printer-specific print driver is installed for this operating system as part of the full software installation.	
Windows 8, 32-bit and 64-bit	The HP PCL-6 printer-specific print driver is installed for this operating system as part of the basic software installation.	Windows 8 RT support is provided through Microsoft IN OS Version 4, 32-bit driver.
Windows 8.1, 32-bit and 64-bit	The HP PCL-6 printer-specific print driver is installed for this operating system.	Windows 8.1 RT support is provided through Microsoft IN OS Version 4, 32-bit driver.
Windows 10	The HP PCL-6 printer-specific print driver is installed for this operating system.	

Operating system	Print driver installed	Notes
Windows Server 2008 SP2, 32-bit	The HP PCL.6 printer-specific print driver is installed for this operating system as part of the basic software installation.	
Windows Server 2008 SP2, 64-bit	The HP PCL.6 printer-specific print driver is installed for this operating system as part of the basic software installation.	
Windows Server 2008 R2, SP 1, 64-bit	The HP PCL 6 printer-specific print driver is installed for this operating system as part of the basic software installation.	
Windows Server 2012, 64-bit	The software installer does not support Windows Server 2012 but the HP PCL 6 and HP PCL-6 printer-specific print drivers do support it.	Download the HP PCL 6 or PCL-6 driver from the HP Web site www.hp.com/support/colorljM452, and use the Windows Add Printer tool to install it.
Windows Server 2012 R2, 64 bit	The software installer does not support Windows Server 2012 but the HP PCL 6 and HP PCL-6 printer-specific print drivers do support it.	Download the HP PCL 6 or PCL-6 driver from the HP Web site www.hp.com/support/colorljM452, and use the Windows Add Printer tool to install it.
OS X 10.8 Mountain Lion, OS X 10.9 Mavericks, and OS X 10.10 Yosemite	The OS X print driver and print utility are available for download from hp.com and may also be available via Apple Software Update. The HP installer software for OS X is not included in the in-box CD.	For OS X, download the full installer from the support Web site for this printer. 1. Go to www.hp.com/support/colorljM452. 2. Select **Support Options**, and then under **Download Options** select **Drivers, Software & Firmware**. 3. Click the operating system version, and then click the **Download** button.

📝 **NOTE:**   For a current list of supported operating systems, go to www.hp.com/support/colorljM452 for HP's all-inclusive help for the printer.

📝 **NOTE:**   For details on client and server operating systems and for HP UPD PCL6, UPD PCL 5, and UPD PS driver support for this printer, go to www.hp.com/go/upd and click the **Specifications** tab.

Mobile printing solutions

The printer supports the following software for mobile printing:

● HP ePrint software

📝 **NOTE:**   The HP ePrint Software supports the following operating systems: Windows 7 SP 1 (32-bit and 64-bit); Windows 8 (32-bit and 64-bit); Windows 8.1 (32-bit and 64-bit); Windows 10 (32-bit and 64-bit); and OS X versions 10.8 Mountain Lion, 10.9 Mavericks, and 10.10 Yosemite.

● HP ePrint via email (Requires HP Web Services to be enabled and the printer to be registered with HP Connected)

● HP ePrint app (Available for Android, iOS, and Blackberry)

● ePrint Enterprise app (Supported on all printers with ePrint Enterprise Server Software)

- HP All-in-One Remote app for iOS and Android devices

- Google Cloud Print

- AirPrint

- Android Printing

Printer dimensions

Figure 1-1 Dimensions for the M452nw model
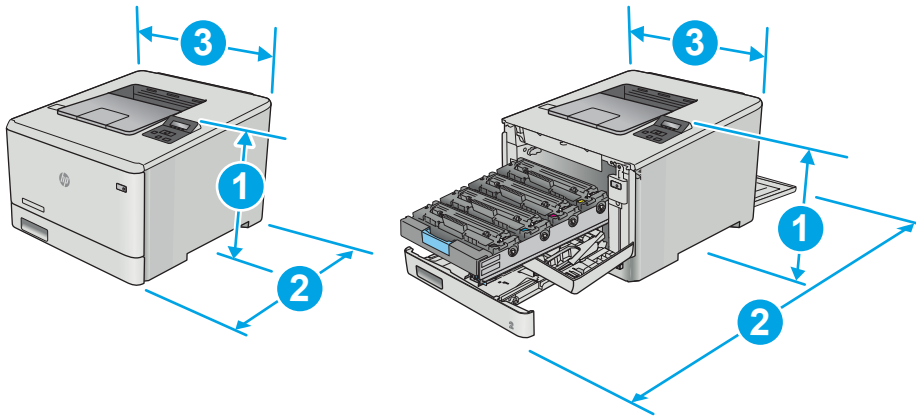
	Printer fully closed	Printer fully open
1. Height	295.7 mm (11.64 in)	295.7 mm (11.64 in)
2. Depth	453 mm (17.83 in)	1025 mm (40.35 in)
3. Width	413.6 mm (16.28 in)	413.6 mm (16.28 in)
Weight (with cartridges)	17.5 kg (38.58 lb)	

Figure 1-2 Dimensions for the M452dn and M452dw models
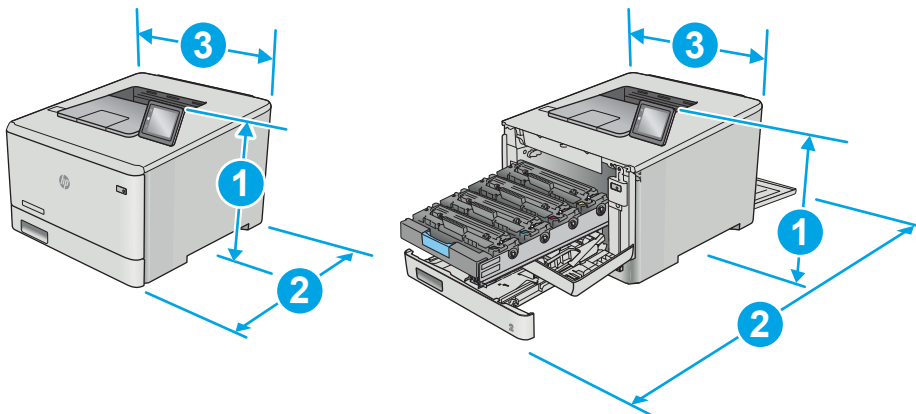
	Printer fully closed	Printer fully open
1. Height	295.7 mm (11.64 in)	295.7 mm (11.64 in) (dn model)
		339.6 mm (13.37 in) (dw model)

	Printer fully closed	Printer fully open
2. Depth	472.3 mm (18.59 in)	1124.4 mm (44.27 in)
3. Width	413.6 mm (16.28 in)	413.6 mm (16.28 in)
Weight (with cartridges)	18.9 kg (41.67 lb)	

Figure 1-3 Dimensions for models with optional Tray 3
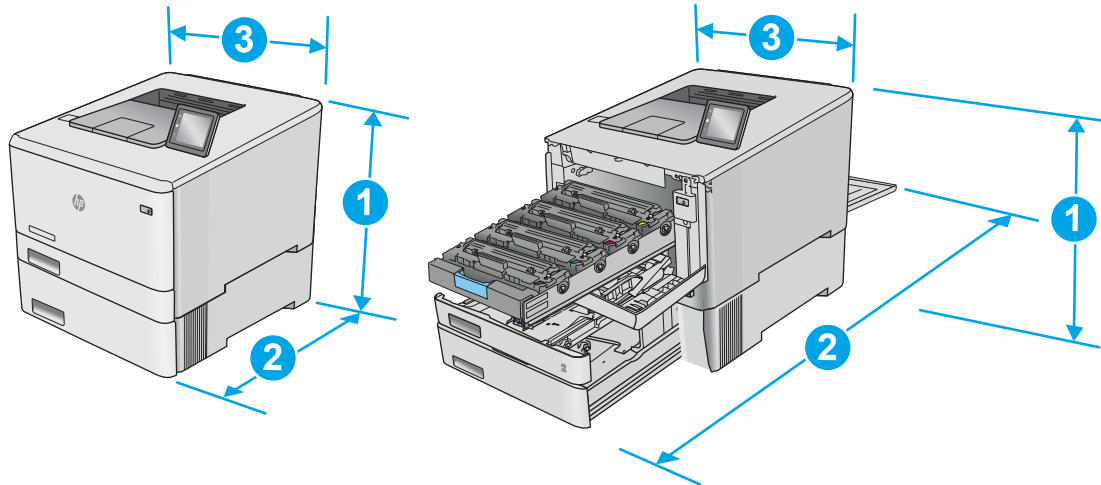
	Printer fully closed	Printer fully open
1. Height	427.7 mm (16.83 in)	427.7 mm (16.83 in) (nw and dn models)
		471.6 mm (18.56 in) (dw model)
2. Depth	453 mm (17.83 in) (nw model)	1025 mm (40.35 in) (nw model)
	472.3 mm (18.59 in) (dn and dw models)	1124.4 mm (44.27 in) (dn and dw models)
3. Width	413.6 mm (16.28 in)	413.6 mm (16.28 in)
Weight (with cartridges)	22.7 kg (50.04 lb) (nw model)	
	24.1 kg (53.13 lb) (dn and dw models)	

Power consumption, electrical specifications, and acoustic emissions

See www.hp.com/support/colorljM452 for current information.

⚠ CAUTION: Power requirements are based on the country/region where the printer is sold. Do not convert operating voltages. This will damage the printer and void the printer warranty.

Operating-environment range

Table 1-1 Operating-environment specifications

Environment	Recommended	Allowed
Temperature	15° to 27°C (59° to 80.6°F)	15° to 30°C (59° to 86°F)
Relative humidity	20% to 70% relative humidity (RH), non-condensing	10% to 80% RH, non-condensing

Printer hardware setup and software installation

For basic setup instructions, see the Setup Poster and Getting Started Guide that came with the printer. For additional instructions, go to HP support on the Web.

Go to www.hp.com/support/colorljM452 for HP's all-inclusive help for the printer. Find the following support:

- Install and configure
- Learn and use
- Solve problems
- Download software and firmware updates
- Join support forums
- Find warranty and regulatory information

2 Paper trays

- [Load paper into Tray 1 (multipurpose tray)](#)
- [Load paper into Tray 2](#)
- [Load and print envelopes](#)

For more information:

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Load paper into Tray 1 (multipurpose tray)

Introduction

Use Tray 1 to print single-page documents, documents that require multiple paper types, or envelopes.

- [Load paper into Tray 1 (multipurpose tray)](#)
- [Tray 1 paper orientation](#)

Load paper into Tray 1 (multipurpose tray)

1. Open Tray 1.
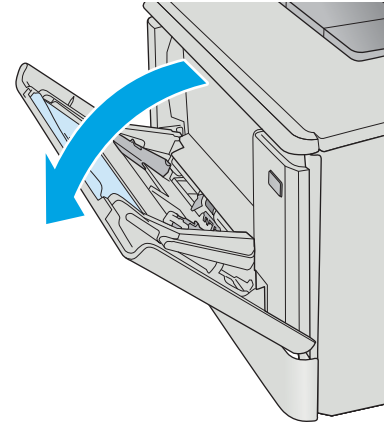
2. Press the tab on the right paper guide to move the paper width guides outward, and then slide out the tray extension.
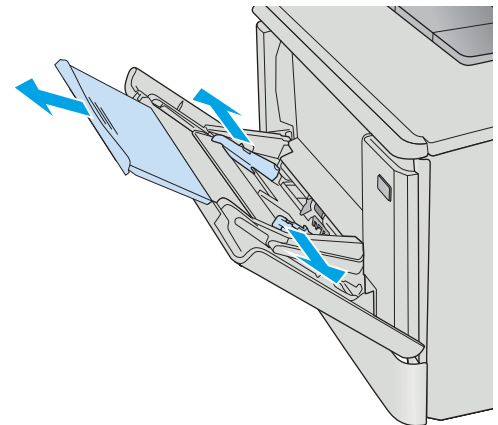
3. Place the paper stack in the tray, and then adjust the side guides so that they lightly touch the stack, but do not bend it. For information about how to orient the paper, see Tray 1 paper orientation on page 18.
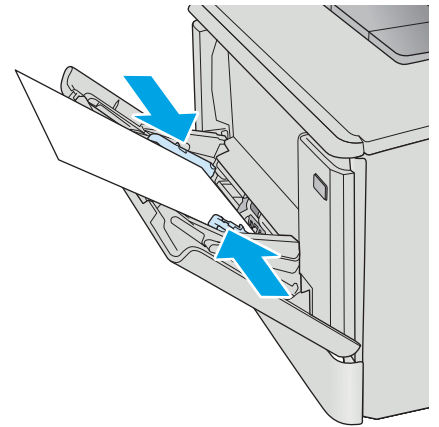
4. At the computer, begin the printing process from the software application. Make sure that the driver is set to the correct paper type and size for the paper being printed from Tray 1.

Tray 1 paper orientation

When using paper that requires a specific orientation, load it according to the information in the following table.

Paper type	Output	How to load paper
Letterhead or preprinted	1-sided printing	Face-up Top edge leading into the printer
Letterhead or preprinted	2-sided printing	Face-down Top edge away from the printer
Prepunched	1-sided printing or 2-sided printing	Face-up Holes toward the left side of the printer
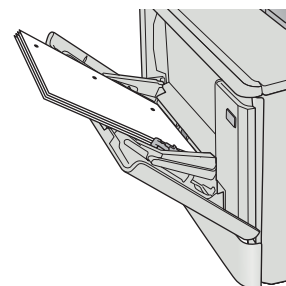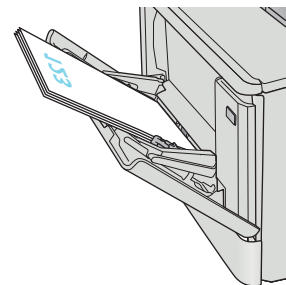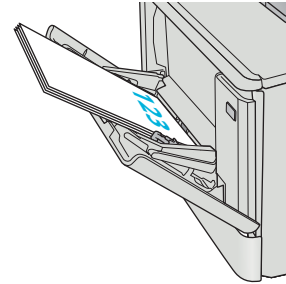
Load paper into Tray 2

Introduction

The following information describes how to load paper in Tray 2.

- Load paper into Tray 2
- Tray 2 paper orientation

Load paper into Tray 2

1. Open the tray.
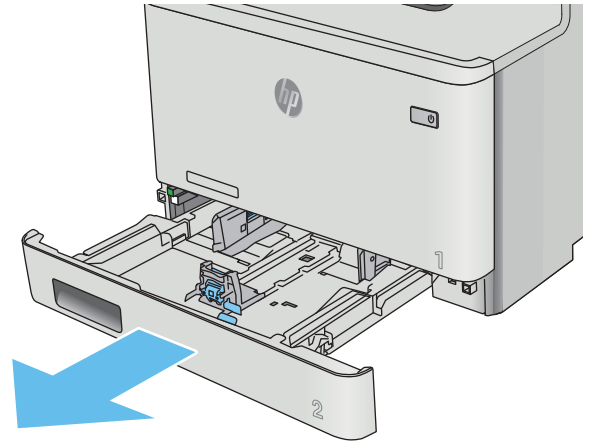
2. Adjust the paper-width guides by squeezing the adjustment latches on the guides and then sliding the guides to the size of the paper being used.
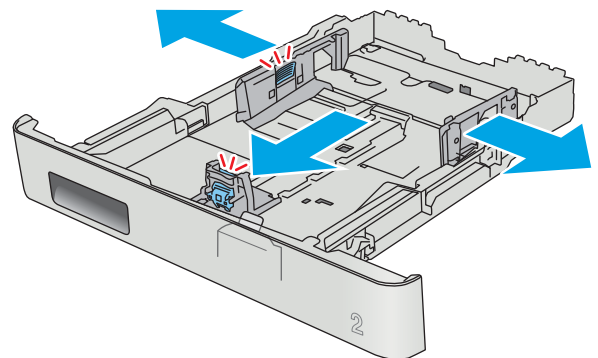
3. To load legal-size paper, extend the tray front by squeezing the front latch and pulling the front of the tray.

   NOTE: When loaded with legal-size paper, Tray 2 extends from the front of the printer approximately 51 mm (2 in).
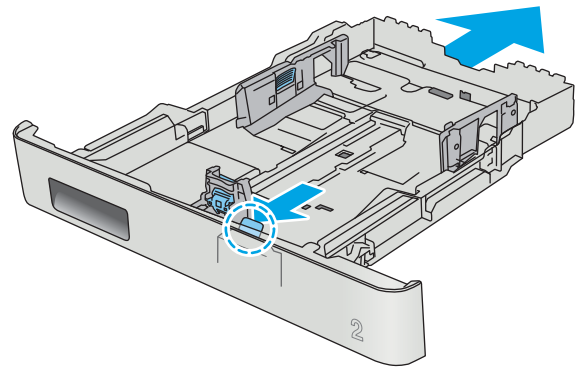
4. Load paper into the tray.
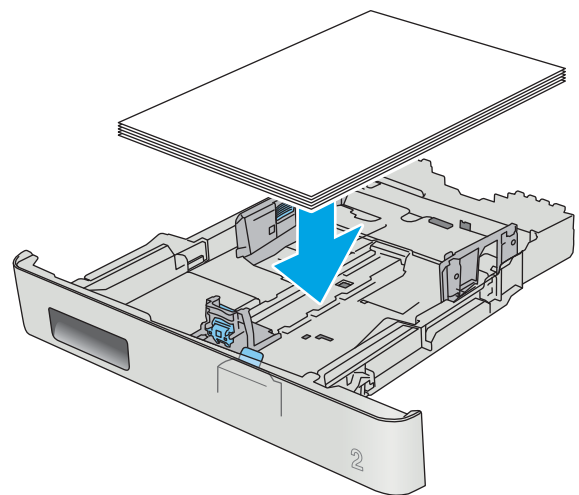
5. Make sure that the paper stack is flat at all four corners. Slide the paper length and width guides so that they are against the stack of paper.

   NOTE: To prevent jams, do not overfill the tray. Be sure that the top of the stack is below the tray full indicator.
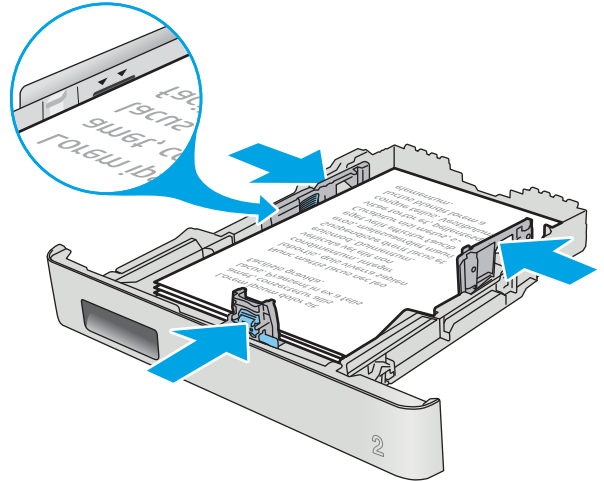
6. After making sure that the paper stack is below the tray full indicator, close the tray.
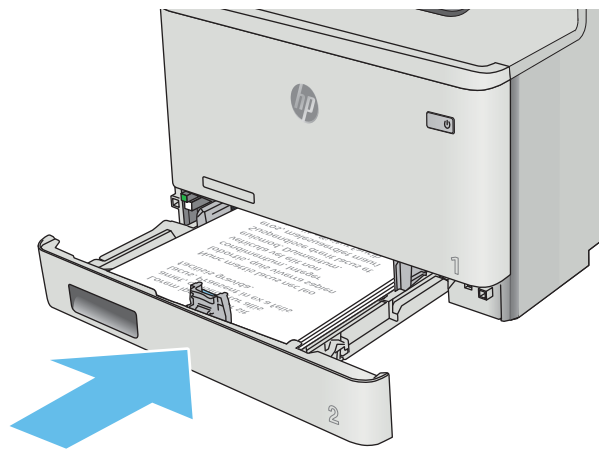
Tray 2 paper orientation

When using paper that requires a specific orientation, load it according to the information in the following table.

Paper type	Output	How to load paper
Letterhead or preprinted	1-sided printing	Face-up Top edge toward the printer
Letterhead or preprinted	2-sided printing	Face-down Top edge away from the printer
Prepunched	1-sided printing or 2-sided printing	Face-up Holes toward the left side of the printer
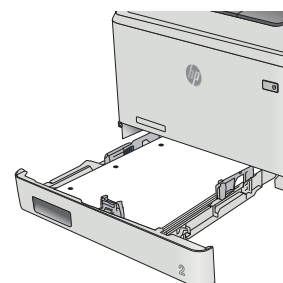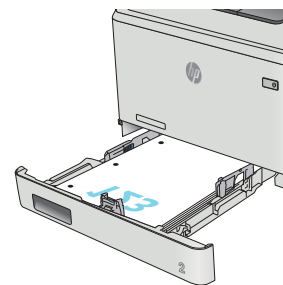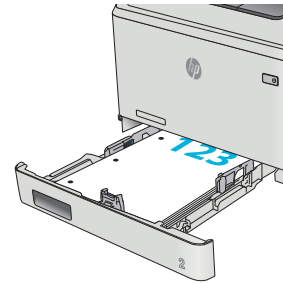
Load and print envelopes

Introduction

The following information describes how to print and load envelopes. For the best performance, only 5 mm (.2 in) of envelopes (4 to 6 envelopes) should be loaded into Tray 1, and only 10 envelopes should be loaded into Tray2.

To print envelopes using either Tray 1 or Tray 2, follow these steps to select the correct settings in the print driver.

Print envelopes

1. From the software program, select the **Print** option.

2. Select the printer from the list of printers, and then click or tap the **Properties** or **Preferences** button to open the print driver.

   📝 **NOTE:** The name of the button varies for different software programs.

   📝 **NOTE:** To access these features from a Windows 8 or 8.1 Start screen, select **Devices**, select **Print**, and then select the printer.

3. Click or tap the **Paper/Quality** tab.

4. In the **Paper size** drop-down list, select the correct size for the envelopes.

5. In the **Paper type** drop-down list, select **Envelope**.

6. In the **Paper source** drop-down list, select the tray to be used.

7. Click the **OK** button to close the **Document Properties** dialog box.

8. In the **Print** dialog box, click the **OK** button to print the job.

Envelope orientation

Load envelopes in Tray 1 face up, with the short, postage end leading into the printer.
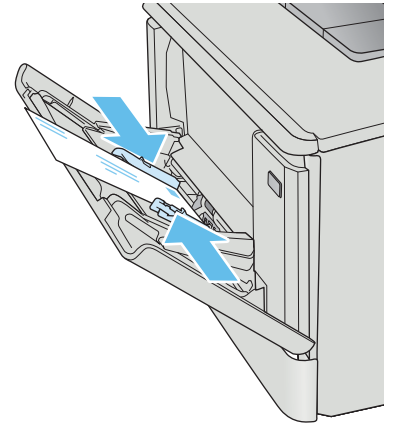
Load envelopes in Tray 2 face up, with the short, postage end leading into the printer.
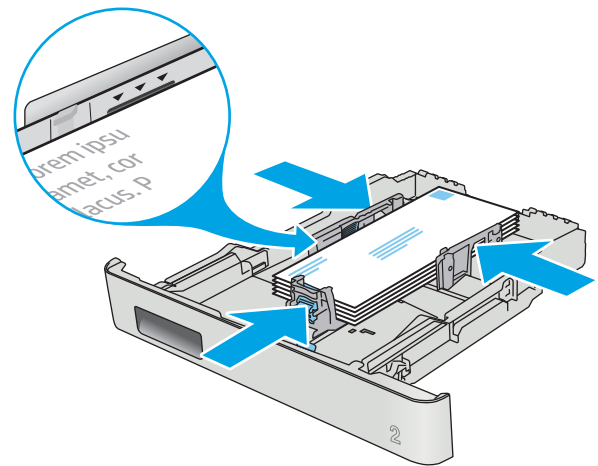
3 Supplies, accessories, and parts

- [Order supplies, accessories, and parts](#)

- [Replace the toner cartridges](#)

For more information:

The following information is correct at the time of publication. For current information, see [www.hp.com/support/colorljM452](#).

HP's all-inclusive help for the printer includes the following information:

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Order supplies, accessories, and parts

Ordering

Order supplies and paper	www.hp.com/go/suresupply
Order genuine HP parts or accessories	www.hp.com/buy/parts
Order through service or support providers	Contact an HP-authorized service or support provider.
Order using the HP Embedded Web Server (EWS)	To access, in a supported Web browser on the computer, enter the printer IP address or host name in the address/URL field. The EWS contains a link to the HP SureSupply Web site, which provides options for purchasing Original HP supplies.

Supplies and accessories

Item	Description	Cartridge number	Part number
Supplies			
HP 410A Black Original LaserJet Toner Cartridge	Standard-capacity replacement black toner cartridge	410A	CF410A
HP 410X High Yield Black Original LaserJet Toner Cartridge	High-capacity replacement black toner cartridge	410X	CF410X
HP 410A Cyan Original LaserJet Toner Cartridge	Standard-capacity replacement cyan toner cartridge	410A	CF411A
HP 410X High Yield Cyan Original LaserJet Toner Cartridge	High-capacity replacement cyan toner cartridge	410X	CF411X
HP 410A Yellow Original LaserJet Toner Cartridge	Standard-capacity replacement yellow toner cartridge	410A	CF412A
HP 410X High Yield Yellow Original LaserJet Toner Cartridge	High-capacity replacement yellow toner cartridge	410X	CF412X
HP 410A Magenta Original LaserJet Toner Cartridge	Standard-capacity replacement magenta toner cartridge	410A	CF413A
HP 410X High Yield Magenta Original LaserJet Toner Cartridge	High-capacity replacement magenta toner cartridge	410X	CF413X
Accessories			
Optional 550-sheet paper feeder	Optional Tray 3		CF404A
USB 2.0 printer cable	A-to-B cable (2-meter standard)		C6518A

Customer self-repair parts

Customer Self-Repair (CSR) parts are available for many HP LaserJet printers to reduce repair time. More information about the CSR program and benefits can be found at www.hp.com/go/csr-support and www.hp.com/go/csr-faq.

Genuine HP replacement parts can be ordered at www.hp.com/buy/parts or by contacting an HP-authorized service or support provider. When ordering, one of the following will be needed: part number, serial number (found on back of printer), product number, or printer name.

- Parts listed as **Mandatory** self-replacement are to be installed by customers, unless you are willing to pay HP service personnel to perform the repair. For these parts, on-site or return-to-depot support is not provided under the HP product warranty.

- Parts listed as **Optional** self-replacement can be installed by HP service personnel at your request for no additional charge during the printer warranty period.

Item	Description	Self-replacement options	Part number
150-sheet paper input tray	Replacement cassette for Tray 2	Mandatory	RM2-6377-000CN
550-sheet paper feeder	Replacement optional Tray 3	Mandatory	CF404-67901

Replace the toner cartridges

Introduction

This printer indicates when the toner cartridge level is low. The actual toner cartridge life remaining can vary. Consider having a replacement cartridge available to install when print quality is no longer acceptable.

To purchase cartridges or check cartridge compatibility for the printer, go to HP SureSupply at www.hp.com/go/suresupply. Scroll to the bottom of the page and verify that the country/region is correct.

The printer uses four colors and has a different toner cartridge for each color: yellow (Y), magenta (M), cyan (C), and black (K). The toner cartridges are inside the front door.

Item	Description	Cartridge number	Part number
HP 410A Black Original LaserJet Toner Cartridge	Standard-capacity replacement black toner cartridge	410A	CF410A
HP 410X High Yield Black Original LaserJet Toner Cartridge	High-capacity replacement black toner cartridge	410X	CF410X
HP 410A Cyan Original LaserJet Toner Cartridge	Standard-capacity replacement cyan toner cartridge	410A	CF411A
HP 410X High Yield Cyan Original LaserJet Toner Cartridge	High-capacity replacement cyan toner cartridge	410X	CF411X
HP 410A Yellow Original LaserJet Toner Cartridge	Standard-capacity replacement yellow toner cartridge	410A	CF412A
HP 410X High Yield Yellow Original LaserJet Toner Cartridge	High-capacity replacement yellow toner cartridge	410X	CF412X
HP 410A Magenta Original LaserJet Toner Cartridge	Standard-capacity replacement magenta toner cartridge	410A	CF413A
HP 410X High Yield Magenta Original LaserJet Toner Cartridge	High-capacity replacement magenta toner cartridge	410X	CF413X

Do not remove the toner cartridge from its package until it is time to install it.

⚠ CAUTION: To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. If the toner cartridge must be removed from the printer for an extended period of time, place the cartridge in the original plastic packaging, or cover the cartridge with a light-weight, opaque item.

The following illustration shows the toner-cartridge components.
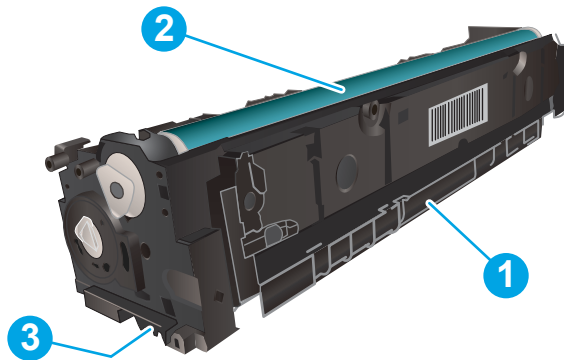
1	Handle
2	Imaging drum
3	Memory chip

⚠ **CAUTION:** If toner gets on clothing, wipe it off by using a dry cloth and wash the clothes in cold water. Hot water sets toner into fabric.

📝 **NOTE:** Information about recycling used toner cartridges is in the toner cartridge box.

Remove and replace the toner cartridges

1. Open the front door by pressing the button on the left panel.
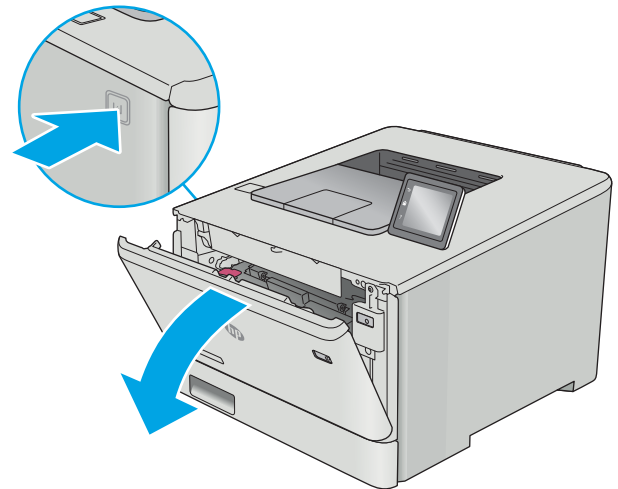
2. Grasp the blue handle on the toner cartridge drawer, and then pull out the drawer.
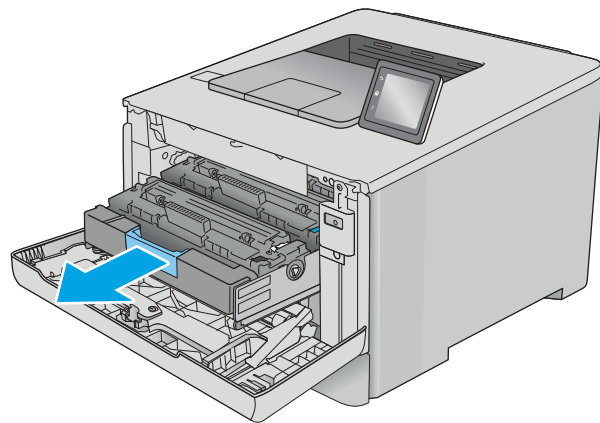
3. Grasp the handle on the toner cartridge, and then pull the toner cartridge straight up to remove it.
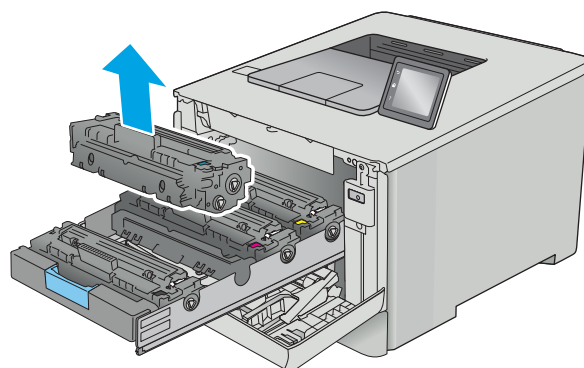
4. Remove the new toner cartridge package from the box, and then pull the release tab on the packaging.
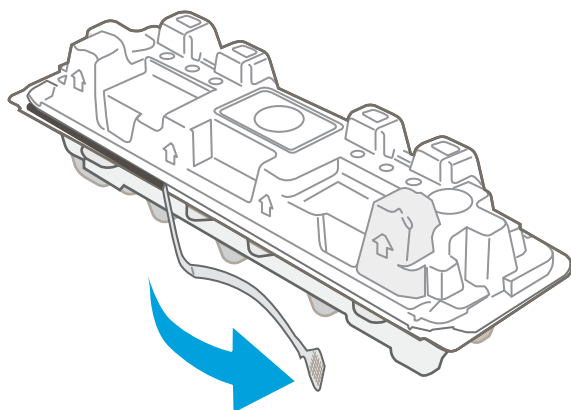
5. Remove the toner cartridge from the opened packaging shell.
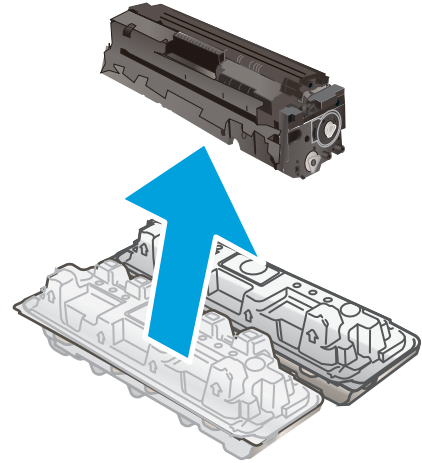
6. Holding the toner on both ends, gently rock the toner cartridge end to end to distribute the toner evenly inside the cartridge.
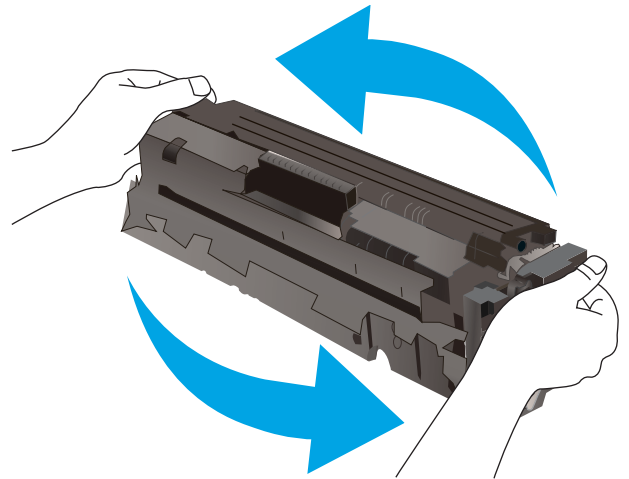
7. Do not touch the imaging drum on the bottom of the toner cartridge. Fingerprints on the imaging drum can cause print-quality problems.

    Also, do not expose the cartridge to light unnecessarily.
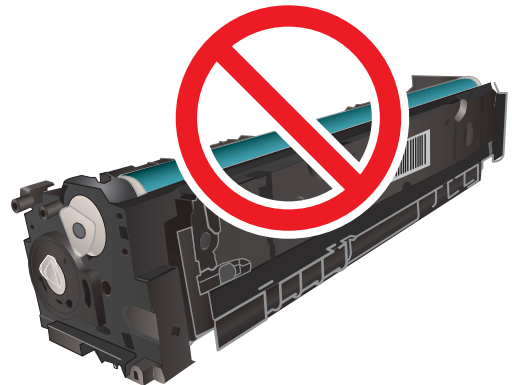
8. Insert the new toner cartridge into the drawer. Make sure that the color chip on the cartridge matches the color chip on the drawer.
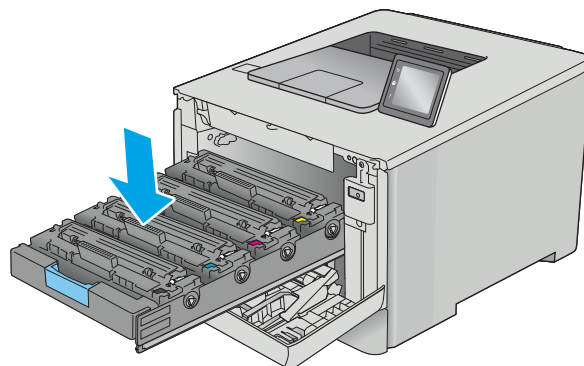
9. Close the toner cartridge drawer.
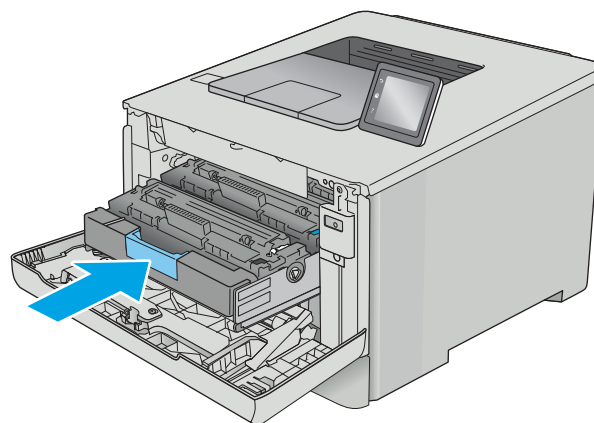
10. Close the front door.
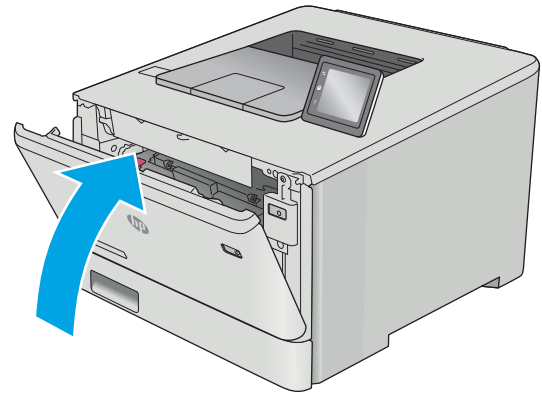
11. Pack the used toner cartridge into the packaging that the new cartridge came in.

    In the U.S. and Canada, a pre-paid shipping label is included in the box. In other countries/regions, go to www.hp.com/recycle to print a pre-paid shipping label.

    Adhere the pre-paid shipping label to the box, and then return the used cartridge to HP for recycling (where available).

http://www.hp.com/recycle
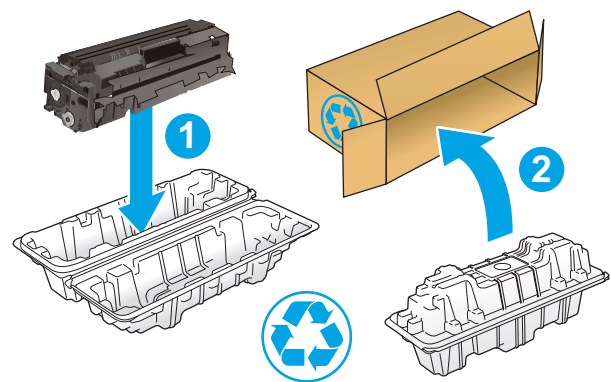
4 Print

- [Print tasks (Windows)](#)

- [Print tasks (macOS)](#)

- [Store print jobs on the product to print later or print privately](#)

- [Mobile printing](#)

- [Use walk-up USB printing (touchscreen models only)](#)

For more information:

The following information is correct at the time of publication. For current information, see [www.hp.com/support/colorljM452](#).

HP's all-inclusive help for the printer includes the following information:

- Install and configure

- Learn and use

- Solve problems

- Download software and firmware updates

- Join support forums

- Find warranty and regulatory information

Print tasks (Windows)

How to print (Windows)

The following procedure describes the basic printing process for Windows.

1. From the software program, select the **Print** option.

2. Select the printer from the list of printers. To change settings, click or tap the **Properties** or **Preferences** button to open the print driver.

    NOTE: The name of the button varies for different software programs.

    NOTE: To access these features from a Windows 8 or 8.1 Start screen app, select **Devices**, select **Print**, and then select the printer.

    NOTE: For more information, click the Help (?) button in the print driver.

    NOTE: The print driver might look different than what is shown here, but the steps are the same.
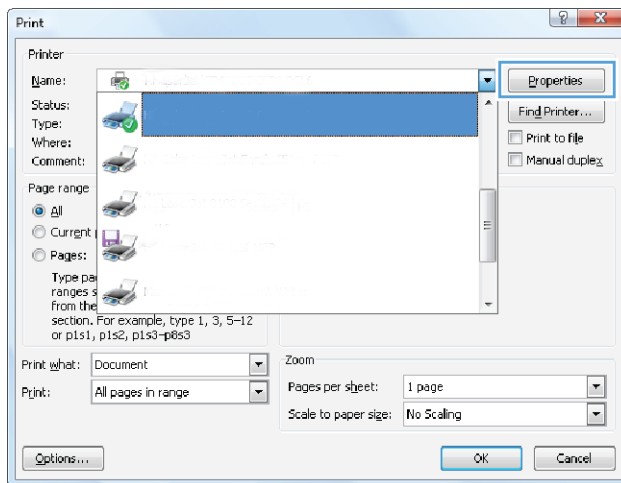
3. Click or tap the tabs in the print driver to configure the available options. For example, set the paper orientation on the **Finishing** tab, and set the paper source, paper type, paper size, and quality settings on the **Paper/Quality** tab.
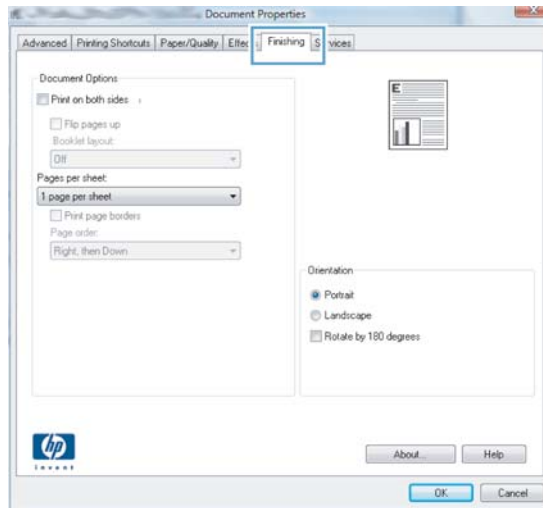
4. Click or tap the **OK** button to return to the **Print** dialog box. Select the number of copies to print from this screen.

5. Click or tap the **OK** button to print the job.

Automatically print on both sides (Windows)

Use this procedure for printers that have an automatic duplexer installed. If the printer does not have an automatic duplexer installed, or to print on paper types that the duplexer does not support, print on both sides manually.

1. From the software program, select the **Print** option.

2. Select the printer from the list of printers, and then click or tap the **Properties** or **Preferences** button to open the print driver.

    📝 **NOTE:** The name of the button varies for different software programs.

    📝 **NOTE:** To access these features from a Windows 8 or 8.1 Start screen app, select **Devices**, select **Print**, and then select the printer.

3. Click or tap the **Finishing** tab.

4. Select the **Print on both sides** check box. Click the **OK** button to close the **Document Properties** dialog box.

5. In the **Print** dialog box, click the **OK** button to print the job.

Manually print on both sides (Windows)

Use this procedure for printers that do not have an automatic duplexer installed or to print on paper that the duplexer does not support.

1. From the software program, select the **Print** option.

2. Select the printer from the list of printers, and then click or tap the **Properties** or **Preferences** button to open the print driver.

    📝 **NOTE:** The name of the button varies for different software programs.

    📝 **NOTE:** To access these features from a Windows 8 or 8.1 Start screen app, select **Devices**, select **Print**, and then select the printer.

3. Click or tap the **Finishing** tab.

4. Select the **Print on both sides (manually)** check box. Click the **OK** button to print the first side of the job.

5. Retrieve the printed stack from the output bin, and place it in Tray 1.

6. If prompted, touch the appropriate control panel button to continue.

Print multiple pages per sheet (Windows)

1. From the software program, select the **Print** option.

2. Select the printer from the list of printers, and then click or tap the **Properties** or **Preferences** button to open the print driver.

    NOTE: The name of the button varies for different software programs.

    NOTE: To access these features from a Windows 8 or 8.1 Start screen app, select **Devices**, select **Print**, and then select the printer.

3. Click or tap the **Finishing** tab.

4. Select the number of pages per sheet from the **Pages per sheet** drop-down list.

5. Select the correct **Print page borders**, **Page order**, and **Orientation** options. Click the **OK** button to close the **Document Properties** dialog box.

6. In the **Print** dialog box, click the **OK** button to print the job.

Select the paper type (Windows)

1. From the software program, select the **Print** option.

2. Select the printer from the list of printers, and then click or tap the **Properties** or **Preferences** button to open the print driver.

    NOTE: The name of the button varies for different software programs.

    NOTE: To access these features from a Windows 8 or 8.1 Start screen app, select **Devices**, select **Print**, and then select the printer.

3. Click or tap the **Paper/Quality** tab.

4. From the **Paper type** drop-down list, click the **More...** option.

5. Expand the list of **Type is:** options.

6. Expand the category of paper types that best describes your paper.

7. Select the option for the type of paper you are using, and then click the **OK** button.

8. Click the **OK** button to close the **Document Properties** dialog box. In the **Print** dialog box, click the **OK** button to print the job.

    If the tray needs to be configured, a tray configuration message displays on the printer control panel.

9. Load the tray with the specified type and size of paper, and then close the tray.

10. Touch the OK button to accept the detected type and size, or touch the Modify button to choose a different paper size or type.

11. Select the correct type and size, and then touch the OK button.

Additional print tasks

Go to www.hp.com/support/colorljM452.

Instructions are available for performing specific print tasks, such as the following:

- Create and use printing shortcuts or presets
- Select the paper size, or use a custom paper size
- Select the page orientation
- Create a booklet
- Scale a document to fit a specific paper size
- Print the first or last pages of the document on different paper
- Print watermarks on a document

Print tasks (macOS)

How to print (macOS)

The following procedure describes the basic printing process for macOS.

1. Click the **File** menu, and then click the **Print** option.

2. Select the printer.

3. Click **Show Details** or **Copies & Pages**, and then select other menus to adjust the print settings.

   📝 **NOTE:** The name of the item varies for different software programs.

4. Click the **Print** button.

Automatically print on both sides (macOS)

📝 **NOTE:** This information applies to printers that include an automatic duplexer.

📝 **NOTE:** This feature is available if you install the HP print driver. It might not be available if you are using AirPrint.

1. Click the **File** menu, and then click the **Print** option.

2. Select the printer.

3. Click **Show Details** or **Copies & Pages**, and then click the **Layout** menu.

   📝 **NOTE:** The name of the item varies for different software programs.

4. Select a binding option from the **Two-Sided** drop-down list.

5. Click the **Print** button.

Manually print on both sides (macOS)

📝 **NOTE:** This feature is available if you install the HP print driver. It might not be available if you are using AirPrint.

1. Click the **File** menu, and then click the **Print** option.

2. Select the printer.

3. Click **Show Details** or **Copies & Pages**, and then click the **Manual Duplex** menu.

   📝 **NOTE:** The name of the item varies for different software programs.

4. Click the **Manual Duplex** box, and select a binding option.

5. Click the **Print** button.

6. Go to the printer, and remove any blank paper that is in Tray 1.

7. Retrieve the printed stack from the output bin and place it with the printed-side facing down in the input tray.

8. If prompted, touch the appropriate control panel button to continue.

Print multiple pages per sheet (macOS)

1. Click the **File** menu, and then click the **Print** option.

2. Select the printer.

3. Click **Show Details** or **Copies & Pages**, and then click the **Layout** menu.

    📝 **NOTE:** The name of the item varies for different software programs.

4. From the **Pages per Sheet** drop-down list, select the number of pages that you want to print on each sheet.

5. In the **Layout Direction** area, select the order and placement of the pages on the sheet.

6. From the **Borders** menu, select the type of border to print around each page on the sheet.

7. Click the **Print** button.

Select the paper type (macOS)

1. Click the **File** menu, and then click the **Print** option.

2. Select the printer.

3. Click **Show Details** or **Copies & Pages**, and then click the **Media & Quality** menu or the **Paper/Quality** menu.

    📝 **NOTE:** The name of the item varies for different software programs.

4. Select from the **Media & Quality** or **Paper/Quality** options.

    📝 **NOTE:** This list contains the master set of options available. Some options are not available on all printers.

    ● **Media Type**: Select the option for the type of paper for the print job.

    ● **Print Quality**: Select the resolution level for the print job.

    ● **Edge-To-Edge Printing**: Select this option to print close to the paper edges.

5. Click the **Print** button.

Additional print tasks

Go to www.hp.com/support/colorljM452.

Instructions are available for performing specific print tasks, such as the following:

● Create and use printing shortcuts or presets

● Select the paper size, or use a custom paper size

● Select the page orientation

● Create a booklet

● Scale a document to fit a specific paper size

- Print the first or last pages of the document on different paper

- Print watermarks on a document

Store print jobs on the product to print later or print privately

Introduction

This section provides procedures for creating and printing documents that are stored on the printer. These jobs can be printed at a later time or printed privately.

Before you begin

The job storage feature has the following requirements:

- A dedicated USB 2.0 flash drive with at least 16 GB free space must be installed in the rear host USB. This USB flash drive holds the job storage jobs sent to the printer. Removing this USB flash drive from the printer disables the job storage feature.

- If you are using an HP Universal Print Driver (UPD), you must use UPD version 5.9.0 or above.

Set up the printer for job storage

Complete the following processes to enable the printer job storage feature.

Step one: Install the USB flash drive

1. Locate the rear USB port.
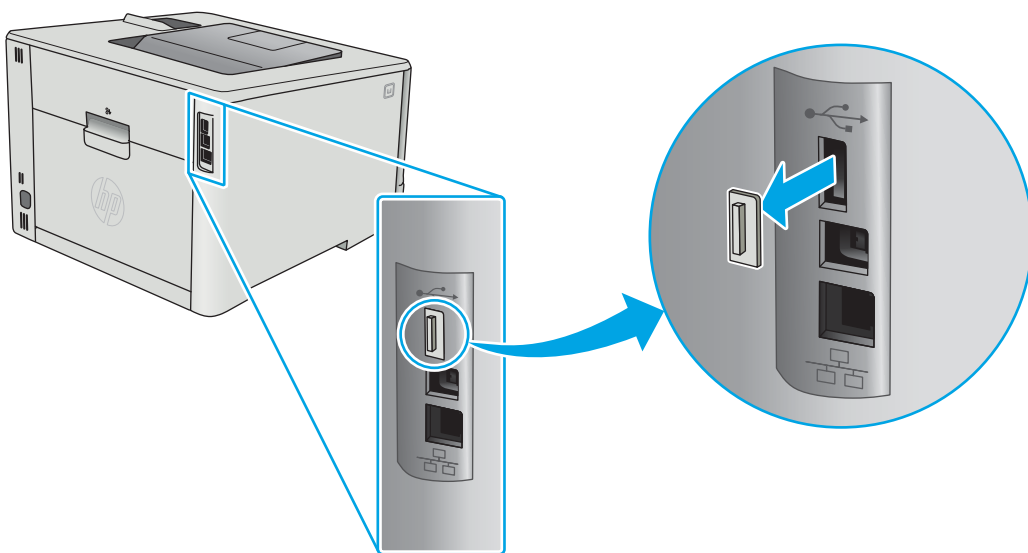
📝 **NOTE:** On some models, the rear USB port is covered. Remove the rear USB port cover before proceeding.

2. Install the USB flash drive into the rear USB port.
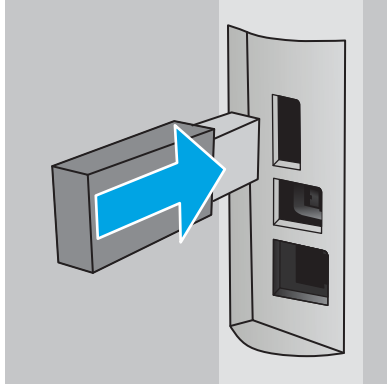
    The control panel displays a **The USB drive will be formatted** message.

3. Select OK to complete the procedure.

Step two: Update the print driver

Update the print driver in Windows

1. Click the **Start** button, and then click **Devices and Printers**.

2. Right-click on the name of the HP printer, and then select **Printer properties**.

3. In the **Printer Properties** dialog, select the **Device Settings** tab.

4. Select **Update Now**, and then click **OK**. The print driver updates.

    The updated print driver will include the **Job Storage** tab.

Create a stored job (Windows)

Store jobs on the printer for private or delayed printing.

NOTE: The print driver might look different than what is shown here, but the steps are the same.

1. From the software program, select the **Print** option.

2. Select the printer from the list of printers, and then select **Properties** or **Preferences** (the name varies for different software programs).

   NOTE: The name of the button varies for different software programs.

   NOTE: To access these features from a Windows 8 or 8.1 Start screen app, select **Devices**, select **Print**, and then select the printer.
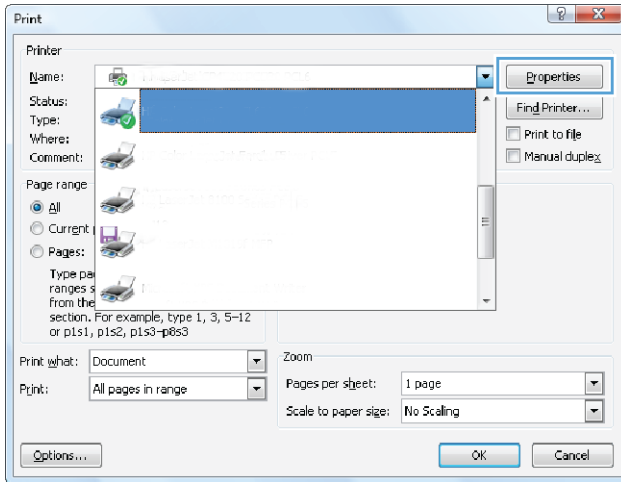
3. Click the **Job Storage** tab.
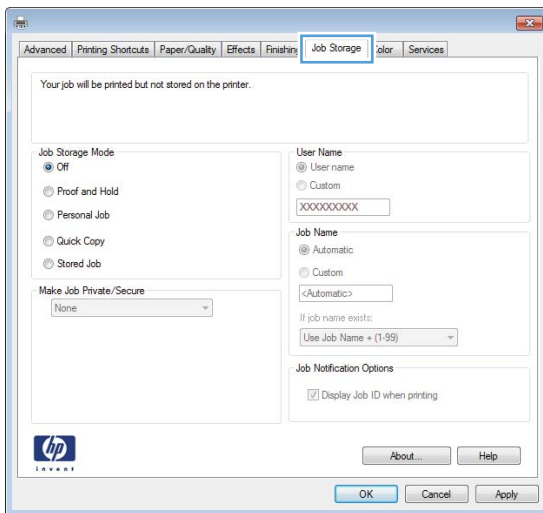
4. Select a **Job Storage Mode** option.

Mode	Description	PIN protected	Job deletion
Proof and Hold	Print the first page of a document to verify print quality, and then print the rest of the document from the printer control panel	No	Automatically after the job is printed or when job retention limit is reached.
Personal Job	The job does not print until you request it at the printer control panel.	Yes (optional)	Automatically after the job is printed or when job retention limit is reached.

Mode	Description	PIN protected	Job deletion
Quick Copy	Print the requested number of copies of a job and store a copy of the job in the printer memory so you can print it again later.	No	Manually
Stored Job	Store a job on the printer and allow other users to print the job at any time.	Yes (optional)	Manually

5. To use a custom user name or job name, click select the **Custom** option, and then enter the user name or the job name.

   Select which option to use if another stored job already has that name:

   ● **Use Job Name + (1-99)**: Append a unique number to the end of the job name.

   ● **Replace Existing File**: Overwrite the existing stored job with the new one.

6. Click the **OK** button to close the **Document Properties** dialog box. In the **Print properties** dialog box, click the **OK** button to print the job.

Print a stored job

Use the following procedure to print a job that is stored in the product memory.

1. **2-line control panels**: On the printer control panel, press the OK button. Scroll to and select **Job Storage**.

   Touchscreen control panels: From the Home screen on the printer control panel, swipe until the Jobs menu displays. Touch the Jobs ⎙ icon to open the menu.

2. From the Job Folders list, select a user name. A list of jobs stored under that user name displays.

3. Select the name of the job. If the job is private or encrypted, enter the PIN or password.

4. To adjust the number of copies, select Copies, enter the number of copies, and then select OK.

5. Select Print to print the job.

Store print jobs on the product to print later or print privately

Delete a stored job

When you send a stored job to the printer memory, the printer overwrites any previous jobs with the same user and job name. If the printer memory is full, the printer control panel displays a **No more memory** message and existing stored jobs must be deleted before additional print jobs can be stored.

Use this procedure to delete a job that is stored in the printer memory.

NOTE: The steps vary according to the type of control panel.

1. **2-line control panels**: On the printer control panel, press the OK button. Scroll to and select **Job Storage**.

    Touchscreen control panels: From the Home screen on the printer control panel, swipe until the Jobs menu displays. Touch the Jobs icon to open the menu.

2. From the Job Folders list, select a user name. A list of jobs stored under that user name displays.

3. Select the name of the job. If the job is private or encrypted, enter the PIN or password.

4. Select Delete, and then select OK to delete the job.

Mobile printing

Introduction

HP offers multiple mobile and ePrint solutions to enable easy printing to an HP printer from a laptop, tablet, smartphone, or other mobile device. To see the full list and to determine the best choice, go to www.hp.com/go/LaserJetMobilePrinting.

NOTE: Update the printer firmware to ensure all mobile printing and ePrint capabilities are supported.

- Wi-Fi Direct and NFC Printing (wireless models only)
- HP ePrint via email
- HP ePrint software
- AirPrint
- Android embedded printing

Wi-Fi Direct and NFC Printing (wireless models only)

Wi-Fi Direct and NFC enable printing from a wireless mobile device without requiring a connection to a network or the Internet. NFC capabilities enable easy one-to-one print connection for mobile devices using device-to-device touch.

NOTE: Not all mobile operating systems are currently supported by Wi-Fi Direct and NFC.

Use **Wi-Fi Direct** to print wirelessly from the following devices:

- Android mobile devices compatible with the Android embedded print solution
- iPhone, iPad, or iPod touch using Apple AirPrint or the HP ePrint app
- Android mobile devices using the HP ePrint App or the Android embedded print solution
- PC and Mac devices using the HP ePrint Software

For more information on Wi-Fi Direct printing, go to www.hp.com/go/wirelessprinting.

NFC and Wi-Fi Direct capabilities can be enabled or disabled from the printer control panel.

Enable or disable Wi-Fi Direct

Wi-Fi Direct capabilities must be enabled first from the printer control panel.

NOTE: The steps vary according to the type of control panel.

1. **2-line control panels**: On the printer control panel, press the OK button, and then open the **Network Setup** menu.

Touchscreen control panels: From the Home screen on the printer control panel, select the Connection Information ⬡/📶 button.

2. Open the following menus:

- Wi-Fi Direct

- Settings

- On/Off

3. Touch the On menu item. Touching the Off button disables Wi-Fi Direct printing.

📝 **NOTE:** In environments where more than one model of the same printer is installed, it might be helpful to provide each printer a unique Wi-Fi Direct name for easier printer identification for Wi-Fi Direct printing. The Wi-Fi Direct Name is also available by touching the Connection Information ⬡/📶 icon from the Home screen on the printer control panel, and then touching the Wi-Fi Direct icon.

Change the printer Wi-Fi Direct name

Follow this procedure to change the printer Wi-Fi Direct name using the HP Embedded Web Server (EWS):

Step one: Open the HP Embedded Web Server

📝 **NOTE:** The steps vary according to the type of control panel.

1. **2-line control panels**: On the printer control panel, press the OK button. Open the **Network Setup** menu, and then select **Show IP Address** to display the IP address or host name.

Touchscreen control panels: From the Home screen on the printer control panel, touch the Connection Information ⬡/📶 button, and then touch the Network Connected ⬡ button or the Network Wi-Fi ON 📶 button to display the IP address or host name.

2. Open a Web browser, and in the address line, type the IP address or host name exactly as it displays on the printer control panel. Press the Enter key on the computer keyboard. The EWS opens.

 https://10.10.XXXXX/

If the Web browser displays a **There is a problem with this website's security certificate** message when attempting to open the EWS, click **Continue to this website (not recommended)**.

📝 NOTE: Choosing **Continue to this website (not recommended)** will not harm the computer while navigating within the EWS for the HP printer.

Step two: Change the Wi-Fi Direct name

1. Click the **Networking** tab.

2. On the left navigation pane, click the **Wi-Fi Direct Setup** link.

3. In the **Wi-Fi Direct Name** field, enter the new name.

4. Click **Apply**.

HP ePrint via email

Use HP ePrint to print documents by sending them as an email attachment to the printer's email address from any email-enabled device.

To use HP ePrint, the printer must meet these requirements:

● The printer must be connected to a wired or wireless network and have Internet access.

● HP Web Services must be enabled on the printer, and the printer must be registered with HP Connected.

Follow this procedure to enable HP Web Services and register with HP Connected:

1. From the Home screen on the printer control panel, touch the Connection Information button.

2. Open the following menus:

   ○ HP ePrint

   ○ Settings

   ○ Enable Web Services

3. Touch the Print button to read the terms of use agreement. Touch the OK button to accept the terms of use and enable HP Web Services

The printer enables Web Services, and then prints an information page. The information page contains the printer code necessary to register the HP printer at HP Connected.

4. Go to www.hpconnected.com to create an HP ePrint account and complete the setup process.

HP ePrint software

The HP ePrint software makes it easy to print from a Windows or Mac desktop or laptop computer to any HP ePrint-capable printer. This software makes it easy to find HP ePrint-enabled printers that are registered to your HP Connected account. The target HP printer can be located in the office or at locations across the globe.

- **Windows:** After installing the software, open the **Print** option from within your application, and then select **HP ePrint** from the installed printers list. Click the **Properties** button to configure print options.

- **macOS:** After installing the software, select **File**, **Print**, and then select the arrow next to **PDF** (in the bottom left of the driver screen). Select **HP ePrint**.

For Windows, the HP ePrint software supports TCP/IP printing to local network printers on the network (LAN or WAN) to products that support UPD PostScript®.

Windows and macOS both support IPP printing to LAN or WAN network-connected products that support ePCL.

Windows and macOS also both support printing PDF documents to public print locations and printing using HP ePrint via email through the cloud.

Go to www.hp.com/go/eprintsoftware for drivers and information.

📝 **NOTE:** For Windows, the name of the HP ePrint Software print driver is HP ePrint + JetAdvantage.

📝 **NOTE:** The HP ePrint software is a PDF workflow utility for macOS, and is not technically a print driver.

📝 **NOTE:** HP ePrint Software does not support USB printing.

AirPrint

Direct printing using Apple's AirPrint is supported for iOS and from Mac computers running macOS 10.7 Lion and newer. Use AirPrint to print directly to the printer from an iPad, iPhone (3GS or later), or iPod touch (third generation or later) in the following mobile applications:

- Mail

- Photos

- Safari

- iBooks

- Select third-party applications

To use AirPrint, the printer must be connected to the same network (sub-net) as the Apple device. For more information about using AirPrint and about which HP printers are compatible with AirPrint, go to www.hp.com/go/MobilePrinting.

📝 **NOTE:** Before using AirPrint with a USB connection, verify the version number. AirPrint versions 1.3 and earlier do not support USB connections.

Android embedded printing

HP's built-in print solution for Android and Kindle enables mobile devices to automatically find and print to HP printers that are either on a network or within wireless range for Wi-Fi Direct printing.

The print solution is built into the many versions of the operating system.

📝 **NOTE:** If printing is not available on your device, go to the Google Play > Android apps and install the HP Print Service Plugin.

For more information on how to use Android embedded printing and which Android devices are supported, go to www.hp.com/go/LaserJetMobilePrinting.

Use walk-up USB printing (touchscreen models only)

Introduction

This printer features walk-up USB printing, for quickly printing files without sending them from a computer. The printer accepts standard USB flash drives in the USB port. It supports the following types of files:

- .pdf

- .jpg

- .prn and .PRN

- .cht and .CHT

- .pxl

- .pcl and .PCL

- .ps and .PS

- .doc and .docx

- .ppt and .pptx

Step one: Access USB files on the printer

1. Insert the USB flash drive into the walk-up USB port on the printer.

2. The USB Flash Drive menu opens with the following options:

    - Print Documents

    - View and Print Photos

    - Scan to USB Drive

Step two: Print USB documents

Option one: Print documents

1. To print a document, select Print Documents.

2. Select the name of the document to print. If the document is stored in a folder, select the folder first, and then select the document to print.

3. When the summary screen opens, the following settings can be adjusted:

    - Number of Copies

    - Paper Size

- Paper Type

- Fit to Page

- Collation

- Output Color (color models only)

4. Select Print to print the document.

5. Retrieve the printed job from the output bin, and remove the USB flash drive.

Option two: Print photos

1. To print photos, select View and Print Photos.

2. Select the preview image of each photo to be printed, and then select Done.

3. When the summary screen opens, the following settings can be adjusted:

- Image Size

- Paper Size

- Paper Type

- Number of Copies

- Output Color (color printers only)

- Lighter/Darker

4. Select Print to print the photos.

5. Retrieve the printed job from the output bin, and remove the USB flash drive.

5 Manage the product

- [Use HP Web Services applications](#)

- [Change the product connection type (Windows)](#)

- [Advanced configuration with HP Embedded Web Server (EWS) and HP Device Toolbox (Windows)](#)

- [Advanced configuration with HP Utility for OS X](#)

- [Configure IP network settings](#)

- [Product security features](#)

- [Economy conservation settings](#)

- [HP Web Jetadmin](#)

- [Update the firmware](#)

For more information:

The following information is correct at the time of publication. For current information, see www.hp.com/support/colorljM452.

HP's all-inclusive help for the printer includes the following information:

- Install and configure

- Learn and use

- Solve problems

- Download software and firmware updates

- Join support forums

- Find warranty and regulatory information

Use HP Web Services applications

HP Web Services applications provide useful content that can be automatically downloaded from the Internet to the printer. Choose from a variety of applications including news, calendars, forms, and cloud-based document storage.

To activate these applications and schedule the downloads, go to the HP Connected Web site at www.hpconnected.com

NOTE: To use this feature, the printer must be connected to a wired or wireless network and have internet access. HP Web Services must be enabled on the printer.

Enable Web Services (2-line control panels)

1. On the printer control panel, press the OK button.

2. Select the **HP Web Services** menu, and then press the OK button.

3. Select the **Enable Web Services** item, and then press the OK button.

Enable Web Services (touchscreen control panels)

This process enables both HP Web Services and the Apps button.

1. From the Home screen on the printer control panel, swipe until the Setup menu displays. Touch the Setup icon to open the menu.

2. Touch HP Web Services.

3. Touch Enable Web Services.

4. To print the HP Web Services Terms of Use, touch Print.

5. Touch OK to complete the procedure.

   After you download an application from the HP Connected Web site, it is available in the Apps menu on the printer control panel.

Change the product connection type (Windows)

If you are already using the product and you wish to change the way it is connected, use the **Reconfigure your HP Device** shortcut on your computer desktop to change the connection. For example, you can reconfigure the product to use a different wireless address, to connect to a wired or wireless network, or change from a network connection to a USB connection. You can change the configuration without inserting the product CD. After you select the type of connection you wish to make, the program goes directly to the portion of the product setup procedure that needs to change.

Advanced configuration with HP Embedded Web Server (EWS) and HP Device Toolbox (Windows)

Use the HP Embedded Web Server to manage printing functions from your computer instead of the printer control panel.

- View printer status information

- Determine the remaining life for all supplies and order new ones

- View and change tray configurations

- View and change the printer control-panel menu configuration

- View and print internal pages

- Receive notification of printer and supplies events

- View and change network configuration

The HP Embedded Web Server works when the printer is connected to an IP-based network. The HP Embedded Web Server does not support IPX-based printer connections. You do not have to have Internet access to open and use the HP Embedded Web Server.

When the printer is connected to the network, the HP Embedded Web Server is automatically available.

NOTE: HP Device Toolbox is available only if you performed a full installation when you installed the printer. Depending on how the printer is connected, some features might not be available.

NOTE: The HP Embedded Web Server is not accessible beyond the network firewall.

Open the HP Embedded Web Server (EWS) from the Start menu

1. Click the **Start** button, and then click the **Programs** item.

2. Click your HP printer group, and then click the **HP Device Toolbox** item.

Open the HP Embedded Web Server (EWS) from a Web browser

NOTE: The steps vary according to the type of control panel.

1. **2-line control panels**: On the printer control panel, press the OK button. Open the **Network Setup** menu, and then select **Show IP Address** to display the IP address or host name.

   Touchscreen control panels: From the Home screen on the printer control panel, touch the Connection Information 🖧/(ツ) button, and then touch the Network Connected 🖧 button or the Network Wi-Fi ON (ツ) button to display the IP address or host name.

2. Open a Web browser, and in the address line, type the IP address or host name exactly as it displays on the printer control panel. Press the Enter key on the computer keyboard. The EWS opens.

📝 NOTE: If the Web browser displays a **There is a problem with this website's security certificate** message when attempting to open the EWS, click **Continue to this website (not recommended)**.

Choosing **Continue to this website (not recommended)** will not harm the computer while navigating within the EWS for the HP printer.

Tab or section	Description
Home tab Provides printer, status, and configuration information.	● **Device Status**: Shows the printer status and shows the approximate percent life remaining of HP supplies. ● **Supplies Status**: Shows the approximate percent life remaining of HP supplies. Actual supply life remaining can vary. Consider having a replacement supply available to install when print quality is no longer acceptable. The supply does not need to be replaced unless the print quality is no longer acceptable. ● **Device Configuration**: Shows the information found on the printer configuration page. ● **Network Summary**: Shows the information found on the printer network configuration page. ● **Reports**: Print the configuration and supplies status pages that the printer generates. ● **Event Log**: Shows a list of all printer events and errors.
System tab Provides the ability to configure the printer from your computer.	● **Device Information**: Provides basic printer and company information. ● **Paper Setup**: Change the default paper-handling settings for the printer. ● **Print Quality**: Change the default print-quality settings for the printer. ● **EcoSMART Console**: Change the default times for entering Sleep mode or Auto Power Down mode. Configure which events cause the printer to wake. ● **Paper Types**: Configure print modes that correspond to the paper types that the printer accepts. ● **System Setup**: Change the system defaults for the printer. ● **Service**: Perform the cleaning procedure on the printer. ● **Save and Restore**: Save the current settings for the printer to a file on the computer. Use this file to load the same settings onto another printer or to restore these settings to this printer at a later time. ● **Administration**: Set or change the printer password. Enable or disable printer features. NOTE: The **System** tab can be password-protected. If this printer is on a network, always consult with the administrator before changing settings on this tab.

Tab or section	Description
Print tab Provides the ability to change default print settings from your computer.	• **Printing**: Change the default printer print settings, such as number of copies and paper orientation. These are the same options that are available on the control panel. • **PCL5c**: View and change the PCL5c settings. • **PostScript**: Turn off or on the **Print PS Errors** feature.
Networking tab (Network-connected printers only) Provides the ability to change network settings from your computer.	Network administrators can use this tab to control network-related settings for the printer when it is connected to an IP-based network. It also allows the network administrator to set up Wireless Direct functionality. This tab does not appear if the printer is directly connected to a computer.
HP Web Services tab	Use this tab to set up and use various Web tools with the printer.

Advanced configuration with HP Utility for OS X

Use the HP Utility to check printer status or to view or change printer settings from your computer.

You can use the HP Utility when the printer is connected with a USB cable or is connected to a TCP/IP-based network.

Open HP Utility

1. At the computer, open the **System Preferences** menu, and then click **Print & Fax**, **Print & Scan**, or **Printers & Scanners**.

2. Select the printer in the list.

3. Click the **Options & Supplies** button.

4. Click the **Utility** tab.

5. Click the **Open Printer Utility** button.

HP Utility features

The HP Utility toolbar includes these items:

- **Devices**: Click this button to show or hide Mac products found by the HP Utility.

- **All Settings**: Click this button to return to the HP Utility main view.

- **HP Support**: Click this button to open a browser and go to the HP support Web site.

- **Supplies**: Click this button to open the HP SureSupply Web site.

- **Registration**: Click this button to open the HP registration Web site.

- **Recycling**: Click this button to open the HP Planet Partners Recycling Program Web site.

HP Utility consists of pages that you open by clicking in the **All Settings** list. The following table describes the tasks that you can perform with HP Utility.

Item	Description
Supplies Status	Show the printer supplies status and provides links for ordering supplies online.
Device Information	Show information about the currently selected printer, including the printer Service ID (if assigned), the firmware version (FW Version), the Serial Number, and the IP address.
Commands	Send special characters or print commands to the printer after the print job.
	NOTE: This option is available only after you open the **View** menu and select the **Show Advanced Options** item.
Color Usage (Color printers only)	Show information about color jobs that the printer has produced.

Item	Description
File Upload	Transfer files from the computer to the printer. You can upload the following types of files:
	○ HP LaserJet printer command language (.PRN)
	○ Portable document format (.PDF)
	○ Postscript (.PS)
	○ Text (.TXT)
Power Management	Configure the printer economy settings.
Update Firmware	Transfer a firmware update file to the printer.
	NOTE: This option is available only after you open the **View** menu and select the **Show Advanced Options** item.
HP Connected	Access the HP Connected Web site.
Upload Fonts	Upload fonts from the computer to the printer.
Message Center	Display error events that have occurred with the printer.
Duplex Mode	Turn on the automatic two-sided printing mode.
Network Settings (Network-connected printers only)	Configure the network settings, such as the IPv4 settings, IPv6 settings, Bonjour settings, and other settings.
Supplies Management	Configure how the printer should behave when supplies are nearing the end of their estimated life.
Trays Configuration	Change paper size and type for each of the trays.
Additional Settings	Open the HP Embedded Web Server (EWS) for the printer.
	NOTE: USB connections are not supported.
Proxy Server Settings	Configure a proxy server for the printer.
Basic Fax Settings (MFP fax models only)	Set up the fields in the fax header and configure how the printer answers incoming calls.
Fax Forwarding (MFP fax models only)	Set up the printer to send the incoming faxes to a different number.
Fax Logs (MFP fax models only)	View the logs of all faxes.
Fax Speed Dials (MFP fax models only)	Add fax numbers to the speed dial list.
Junk Fax Blocking (MFP fax models only)	Store the fax numbers you want to block.
Scan to E-mail (MFP printers only)	Open the HP Embedded Web Server (EWS) page for configuring settings for scanning to email.
Scan to Network Folder (MFP printers only)	Open the HP Embedded Web Server (EWS) page for configuring settings for scanning to a network folder.

Configure IP network settings

Introduction

Use the following sections to configure the printer network settings.

- Printer sharing disclaimer

- View or change network settings

- Rename the printer on a network

- Manually configure IPv4 TCP/IP parameters from the control panel

Printer sharing disclaimer

HP does not support peer-to-peer networking, as the feature is a function of Microsoft operating systems and not of the HP printer drivers. Go to Microsoft at www.microsoft.com.

View or change network settings

Use the HP Embedded Web Server to view or change IP configuration settings.

NOTE: The steps vary according to the type of control panel.

1. Open the HP Embedded Web Server (EWS):

   a. **2-line control panels**: On the printer control panel, press the OK button. Open the **Network Setup** menu, and then select **Show IP Address** to display the IP address or host name.

   Touchscreen control panels: From the Home screen on the printer control panel, touch the Connection Information ⬚/⬚ button, and then touch the Network Connected ⬚ button or the Network Wi-Fi ON ⬚ button to display the IP address or host name.

b. Open a Web browser, and in the address line, type the IP address or host name exactly as it displays on the printer control panel. Press the Enter key on the computer keyboard. The EWS opens.

> **NOTE:** If the Web browser displays a **There is a problem with this website's security certificate** message when attempting to open the EWS, click **Continue to this website (not recommended)**.
>
> Choosing **Continue to this website (not recommended)** will not harm the computer while navigating within the EWS for the HP printer.

2. Click the **Networking** tab to obtain network information. Change settings as needed.

Rename the printer on a network

If you want to rename the printer on a network so that it can be uniquely identified, use the HP Embedded Web Server.

> **NOTE:** The steps vary according to the type of control panel.

1. Open the HP Embedded Web Server (EWS):

   a. **2-line control panels**: On the printer control panel, press the OK button. Open the **Network Setup** menu, and then select **Show IP Address** to display the IP address or host name.

   Touchscreen control panels: From the Home screen on the printer control panel, touch the Connection Information ⬚/⬚ button, and then touch the Network Connected ⬚ button or the Network Wi-Fi ON ⬚ button to display the IP address or host name.

   b. Open a Web browser, and in the address line, type the IP address or host name exactly as it displays on the printer control panel. Press the Enter key on the computer keyboard. The EWS opens.

   > **NOTE:** If the Web browser displays a **There is a problem with this website's security certificate** message when attempting to open the EWS, click **Continue to this website (not recommended)**.
   >
   > Choosing **Continue to this website (not recommended)** will not harm the computer while navigating within the EWS for the HP printer.

2. Open the **System** tab.

3. On the **Device Information** page, the default printer name is in the **Device Status** field. You can change this name to uniquely identify this printer.

   NOTE: Completing the other fields on this page is optional.

4. Click the **Apply** button to save the changes.

Manually configure IPv4 TCP/IP parameters from the control panel

Use the control-panel menus to manually set an IPv4 address, subnet mask, and default gateway.

NOTE: The steps vary according to the type of control panel.

2-line control panels

1. On the printer control panel, press the OK button.

2. Open the following menus:

   - **Network Setup**

   - **TCP/IP configuration**

   - **Manual**

3. Use the arrow keys and the OK button to enter the IP address, subnet mask, and default gateway, and then touch the OK button to save the changes.

Touchscreen control panels

1. From the Home screen on the printer control panel, touch the Setup ⚙ button.

2. Open the following menus:

   - Network Setup

   - TCP/IP configuration

   - Manual

3. Use the keypad on the touchscreen to enter the IP address, and touch the OK button. Touch the Yes button to confirm.

4. Use the keypad on the touchscreen to enter the subnet mask, and touch the OK button. Touch the Yes button to confirm.

5. Use the keypad on the touchscreen to enter the default gateway, and touch the OK button. Touch the Yes button to confirm.

Product security features

Introduction

The printer includes several security features to restrict who has access to configuration settings, to secure data, and to prevent access to valuable hardware components.

- Assign or change the system password using the HP Embedded Web Server

Assign or change the system password using the HP Embedded Web Server

Assign an administrator password for access to the printer and the HP Embedded Web Server so that unauthorized users cannot change the printer settings.

1. Open the HP Embedded Web Server (EWS):

   NOTE: The steps vary according to the type of control panel.

   a. **2-line control panels**: On the printer control panel, press the OK button. Open the **Network Setup** menu, and then select **Show IP Address** to display the IP address or host name.

   Touchscreen control panels: From the Home screen on the printer control panel, touch the Connection Information ⬚ / ⟨⟨𝗉⟩⟩ button, and then touch the Network Connected ⬚ button or the Network Wi-Fi ON ⟨⟨𝗉⟩⟩ button to display the IP address or host name.

   b. Open a Web browser, and in the address line, type the IP address or host name exactly as it displays on the printer control panel. Press the Enter key on the computer keyboard. The EWS opens.

   https://10.10.XXXXX/

   NOTE: If the Web browser displays a **There is a problem with this website's security certificate** message when attempting to open the EWS, click **Continue to this website (not recommended)**.

   Choosing **Continue to this website (not recommended)** will not harm the computer while navigating within the EWS for the HP printer.

2. On the **System** tab, click the **Administration** link in the left navigation pane.

3. In the area labeled **Product Security**, enter the password in the **Password** field.

4. Re-enter the password in the **Confirm Password** field.

5. Click the **Apply** button.

NOTE: Make note of the password and store it in a safe place.

Economy conservation settings

Introduction

The printer includes several economy features to conserve energy and supplies.

- Print with EconoMode
- Set the Sleep/Auto Off After setting
- Set the Shut Down After delay and configure the printer to use 1 watt or less of power
- Set the Delay Shut Down setting

Print with EconoMode

This printer has an EconoMode option for printing drafts of documents. Using EconoMode can use less toner. However, using EconoMode can also reduce print quality.

HP does not recommend the full-time use of EconoMode. If EconoMode is used full-time, the toner supply might outlast the mechanical parts in the toner cartridge. If print quality begins to degrade and is no longer acceptable, consider replacing the toner cartridge.

NOTE: If this option is not available in your print driver, you can set it using the HP Embedded Web Server.

1. From the software program, select the **Print** option.
2. Select the printer, and then click the **Properties** or **Preferences** button.
3. Click the **Paper/Quality** tab.
4. Click the **EconoMode** check box.

Set the Sleep/Auto Off After setting

Use the control panel menus to set the amount of idle time before the printer enters sleep mode.

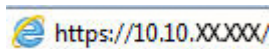**NOTE:** The steps vary according to the type of control panel.

2-line control panels

1. On the printer control panel, press the OK button.

2. Open the following menus:

- System Setup

- Energy Settings

- Sleep/Auto Off After

3. Use the arrow keys to select the time for the Sleep/Auto Off delay, and then press the OK button.

Touchscreen control panels

1. From the Home screen on the printer control panel, swipe until the Setup menu displays. Touch the Setup icon to open the menu.

2. Open the following menus:

- System Setup

- Energy Settings

- Shut Down After

3. Select the time for the Shut Down After delay.

Set the Shut Down After delay and configure the printer to use 1 watt or less of power

Use the control panel menus to set the amount of time before the printer shuts down.

📝 **NOTE:** After the printer shuts down, the power consumption is 1 watt or less.

📝 **NOTE:** The steps vary according to the type of control panel.

2-line control panels

1. On the printer control panel, press the OK button.

2. Open the following menus:

- System Setup

- Energy Settings

- Shut Down After

3. Select the time for the Shut Down After delay.

NOTE: The default value is 4 hours.

Touchscreen control panels

1. From the Home screen on the printer control panel, touch the Setup ⚙ button.

2. Open the following menus:

   - System Setup

   - Energy Settings

   - Shut Down After

3. Select the time for the Shut Down After delay.

   NOTE: The default value is 4 hours.

Set the Delay Shut Down setting

Use the control panel menus to select whether or not the printer delays shutting down after the power button is pressed.

NOTE: The steps vary according to the type of control panel.

2–line control panels

1. On the printer control panel, touch the OK button.

2. Open the following menus:

   - System Setup

   - Energy Settings

   - Delay Shut Down

3. Select one of the delay options:

   - No Delay: The printer shuts down after a period of inactivity determined by the Shut Down After setting.

   - When Ports Are Active: When this option is selected the printer will not shut down unless all ports are inactive. An active network link or fax connection will prevent the printer from shutting down.

Touchscreen control panels

1. From the Home screen on the printer control panel, swipe until the Setup menu displays. Touch the Setup ⚙ icon to open the menu.

2. Open the following menus:

   - System Setup

   - Energy Settings

   - Delay Shut Down

3. Select one of the delay options:

   - No Delay: The printer shuts down after a period of inactivity determined by the Shut Down After setting.

   - When Ports Are Active: When this option is selected the printer will not shut down unless all ports are inactive. An active network link or fax connection will prevent the printer from shutting down.

HP Web Jetadmin

HP Web Jetadmin is an award-winning, industry-leading tool for efficiently managing a wide variety of networked HP products, including printers, multifunction printers, and digital senders. This single solution allows you to remotely install, monitor, maintain, troubleshoot, and secure your printing and imaging environment — ultimately increasing business productivity by helping you save time, control costs, and protect your investment.

HP Web Jetadmin upgrades are periodically made available to provide support for specific product features. Go to www.hp.com/go/webjetadmin for more information.

Update the firmware

HP offers periodic printer updates, new Web Services apps, and new features to existing Web Services apps. Follow these steps to update the printer firmware for a single printer. When you update the firmware, Web Service apps will update automatically.

There are two supported methods to perform a firmware update on this printer. Use only one of the following methods to update the printer firmware.

Method one: Update the firmware using the control panel

Use these steps to load the firmware from the control panel (for network-connected printers only), and/or set the printer to automatically load future firmware updates. For USB-connected printers, skip to method two.

📝 **NOTE:**   The steps vary according to the type of control panel.

2-line control panels

1.   Make sure the printer is connected to a wired (Ethernet) or wireless network with an active Internet connection.

   📝 **NOTE:**   The printer must be connected to the internet to update the firmware via a network connection.

2.   On the printer control panel, press the OK button to open the **Setup** menu.

3.   Scroll to and open the **Service** menu, and then open the **LaserJet Update** menu.

   📝 **NOTE:**   If the **LaserJet Update** option is not listed, use method two.

4.   Select **Check for Update** to check for updates.

   📝 **NOTE:**   The printer automatically checks for an update, and if a newer version is detected, the update process automatically starts.

5.   Set the printer to automatically update the firmware when updates become available.

   On the printer control panel, press the OK button to open the **Setup** menu.

   Scroll to and open the **Service** menu, open the **LaserJet Update** menu, and then select the **Manage Updates** menu.

   Set the **Allow Updates** option to **YES**, and then set the **Automatic Check** option to **ON**.

Touchscreen control panels

1.   Make sure the printer is connected to a wired (Ethernet) or wireless network with an active Internet connection.

   📝 **NOTE:**   The printer must be connected to the internet to update the firmware via a network connection.

2. From the Home screen on the printer control panel, touch the Setup ⚙ button.

3. Scroll to and open the Service menu, and then open the LaserJet Update menu.

   📝 **NOTE:** If the LaserJet Update option is not listed, use method two.

4. Touch Check for Updates Now to check for updates.

   📝 **NOTE:** The printer automatically checks for an update, and if a newer version is detected, the update process automatically starts.

5. Set the printer to automatically update the firmware when updates become available.

   From the Home screen on the printer control panel, touch the Setup ⚙ button.

   Scroll to and open the Service menu, open the LaserJet Update menu, and then select the Manage Updates menu.

   Set the Allow Updates option to YES, and then set the Check automatically option to ON.

Method two: Update the firmware using the Firmware Update Utility

Use these steps to manually download and install the Firmware Update Utility from HP.com.

📝 **NOTE:** This method is the only firmware update option available for printers connected to the computer via a USB cable. It also works for printers connected to a network.

1. Go to www.hp.com/go/support, click the **Drivers & Software** link, type the printer name in the search field, press the ENTER button, and then select the printer from the list of search results.

2. Select the operating system.

3. Under the **Firmware** section, locate the **Firmware Update Utility**.

4. Click **Download**, click **Run**, and then click **Run** again.

5. When the utility launches, select the printer from the drop-down list, and then click **Send Firmware**.

   📝 **NOTE:** To print a configuration page to verify the installed firmware version before or after the update process, click **Print Config**.

6. Follow the on-screen instructions to complete the installation, and then click the **Exit** button to close the utility.

6 Solve problems

- Customer support
- Control panel help system (touchscreen models only)
- Restore the factory-set defaults
- A "Cartridge is low" or "Cartridge is very low" message displays on the printer control panel
- Product does not pick up paper or misfeeds
- Clear paper jams
- Improve print quality
- Solve wired network problems
- Solve wireless network problems

For more information:

The following information is correct at the time of publication. For current information, see www.hp.com/support/colorljM452.

HP's all-inclusive help for the printer includes the following information:

- Install and configure
- Learn and use
- Solve problems
- Download software and firmware updates
- Join support forums
- Find warranty and regulatory information

Customer support

Get telephone support for your country/region Have the printer name, serial number, date of purchase, and problem description ready	Country/region phone numbers are on the flyer that was in the box with the printer or at www.hp.com/support/.
Get 24-hour Internet support, and download software utilities and drivers	www.hp.com/support/colorljM452
Order additional HP service or maintenance agreements	www.hp.com/go/carepack
Register the printer	www.register.hp.com

Control panel help system (touchscreen models only)

The printer has a built-in Help system that explains how to use each screen. To open the Help system, touch the Help ? button in the upper-right corner of the screen.

For some screens, the Help opens to a global menu where you can search for specific topics. You can browse through the menu structure by touching the buttons in the menu.

Some Help screens include animations that guide you through procedures, such as clearing jams.

For screens that contain settings for individual jobs, the Help opens to a topic that explains the options for that screen.

If the printer alerts you of an error or warning, touch the Help ? button to open a message that describes the problem. The message also contains instructions to help solve the problem.

Restore the factory-set defaults

Restoring the factory-set defaults returns all of the printer and network settings to the factory defaults. It will not reset the page count, tray size, or language. To restore the printer to the factory-default settings, follow these steps.

⚠️ **CAUTION:**   Restoring the factory-set defaults returns all of the settings to the factory defaults, and it also deletes any pages that are stored in the memory.

📝 **NOTE:**   The steps vary according to the type of control panel.

1. **2-line control panels**: On the printer control panel, press the OK button.

    Touchscreen control panels: From the Home screen on the printer control panel, touch the Setup ⚙️ button.

2. Open the Service menu.

3. Select the Restore Defaults option, and then press or touch the OK button.

    The printer automatically restarts.

# A "Cartridge is low" or "Cartridge is very low" message displays on the printer control panel

- Change the "Very Low" settings

- Order supplies

Cartridge is low: The printer indicates when a toner cartridge level is low. Actual toner cartridge life remaining may vary. Consider having a replacement available to install when print quality is no longer acceptable. The toner cartridge does not need to be replaced now.

Continue printing with the current cartridge until redistributing the toner no longer yields acceptable print quality. To redistribute the toner, remove the toner cartridge from the printer and gently rock the cartridge back and forth end to end. Reinsert the toner cartridge into the printer and close the cover.

Cartridge is very low: The printer indicates when the toner cartridge level is very low. Actual toner cartridge life remaining may vary. To extend the life of the toner, gently rock the cartridge back and forth end to end. Consider having a replacement available to install when print quality is no longer acceptable. The toner cartridge does not need to be replaced now unless the print quality is no longer acceptable.
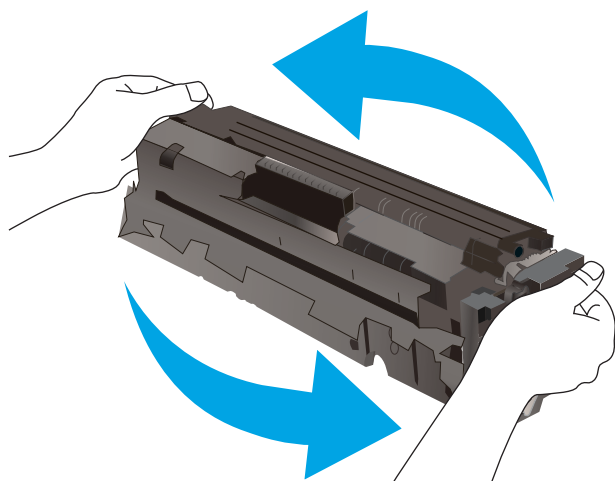
Once an HP toner cartridge has reached **Very Low**, HP's Premium Protection Warranty on that toner cartridge has ended.

Change the "Very Low" settings

You can change the way the printer reacts when supplies reach the Very Low state. You do not have to re-establish these settings when you install a new toner cartridge.

NOTE: The steps vary according to the type of control panel.

1. **2-line control panels**: On the printer control panel, press the OK button.

Touchscreen control panels: From the Home screen on the printer control panel, touch the Setup ⚙ button.

2. Open the following menus:

   ● System Setup

   ● Supply Settings

   ● Black Cartridge or Color Cartridges

   ● Very Low Setting

3. Select one of the following options:

   ● Select the Continue option to set the printer to alert you that the toner cartridge is very low, but to continue printing.

   ● Select the Stop option to set the printer to stop printing until you replace the toner cartridge.

   ● Select the Prompt option to set the printer to stop printing and prompt you to replace the toner cartridge. You can acknowledge the prompt and continue printing. A customer configurable option on this printer is "Prompt to Remind Me in 100 pages, 200 pages, 300 pages, 400 pages, or never." This option is provided as a customer convenience and is not an indication these pages will have acceptable print quality.

Order supplies

Order supplies and paper	www.hp.com/go/suresupply
Order through service or support providers	Contact an HP-authorized service or support provider.
Order using the HP Embedded Web Server (EWS)	To access, in a supported Web browser on your computer, enter the printer IP address or host name in the address/URL field. The EWS contains a link to the HP SureSupply Web site, which provides options for purchasing Original HP supplies.

Product does not pick up paper or misfeeds

Introduction

The following solutions can help solve problems if the printer is not picking up paper from the tray or is picking up multiple sheets of paper at one time. Either of these situations can result in paper jams.

- The printer does not pick up paper

- The printer picks up multiple sheets of paper

The printer does not pick up paper

If the printer does not pick up paper from the tray, try these solutions.

1. Open the printer and remove any jammed sheets of paper. Verify that no torn remnants of paper remain inside the printer.

2. Load the tray with the correct size of paper for the job.

3. Make sure the paper size and type are set correctly on the printer control panel.

4. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray. The arrow on the tray guide should line up exactly with the marking on the tray.
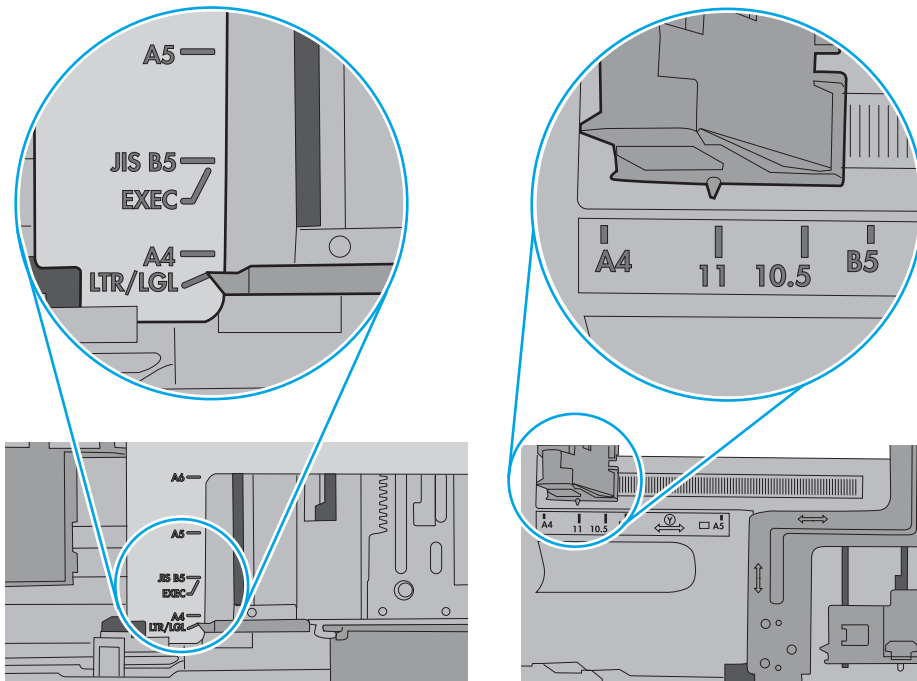
    📝 NOTE: Do not adjust the paper guides tightly against the paper stack. Adjust them to the indentations or markings in the tray.

    The following images show examples of the paper-size indentations in the trays for various printers. Most HP printers have markings similar to these.

    Figure 6-1 Size markings for Tray 1 or the multipurpose tray
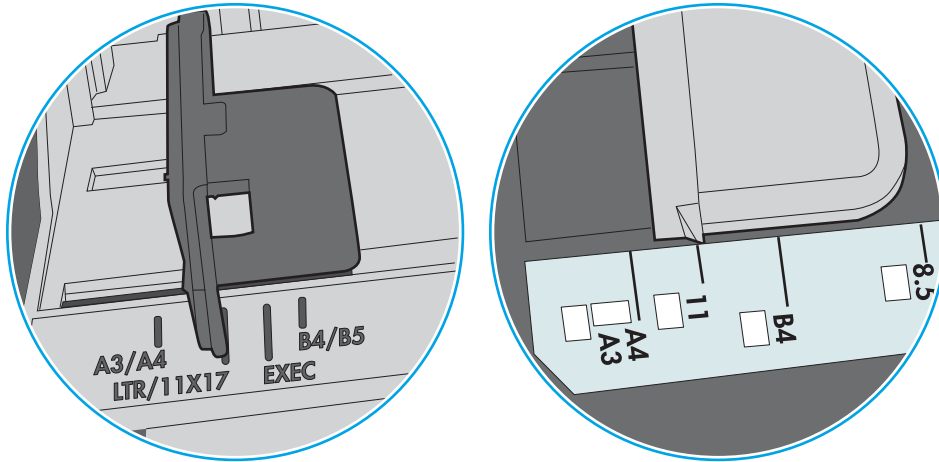

    Figure 6-2 Size markings for cassette trays

5. Verify that the humidity in the room is within specifications for this printer and that paper is being stored in unopened packages. Most reams of paper are sold in moisture-proof wrapping to keep paper dry.

    In high-humidity environments, paper at the top of the stack in the tray can absorb moisture, and it might have a wavy or uneven appearance. If this happens, remove the top 5 to 10 sheets of paper from the stack.

    In low-humidity environments, excess static electricity can cause sheets of paper to stick together. If this happens, remove the paper from the tray, and flex the stack by holding it at each end and bringing the ends up to form a U shape. Then, rotate the ends down to reverse the U shape. Next, hold each side of the stack of paper, and repeat this process. This process releases individual sheets without introducing static electricity. Straighten the paper stack against a table before returning it to the tray.

    Figure 6-3 Technique for flexing the paper stack
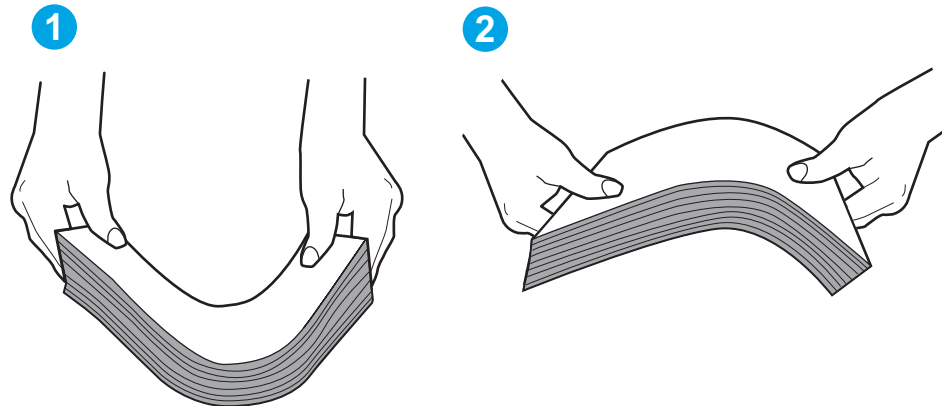

6. Check the printer control panel to see if it is displaying a prompt to feed the paper manually. Load paper, and continue.

7. The rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water. Use distilled water, if it is available.

    ⚠ CAUTION: Do not spray water directly on to the printer. Instead, spray water on the cloth or dab the cloth in water and wring it out before cleaning the rollers.

    The following image shows examples of the roller location for various printers.

    Figure 6-4 Roller locations for Tray 1 or the multipurpose tray
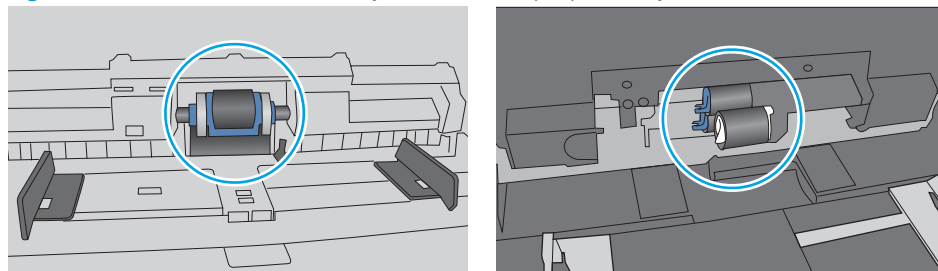
The printer picks up multiple sheets of paper

If the printer picks up multiple sheets of paper from the tray, try these solutions.

1. Remove the stack of paper from the tray and flex it, rotate it 180 degrees, and flip it over. *Do not fan the paper.* Return the stack of paper to the tray.

NOTE: Fanning the paper introduces static electricity. Instead of fanning the paper, flex the stack by holding it at each end and bringing the ends up to form a U shape. Then, rotate the ends down to reverse the U shape. Next, hold each side of the stack of paper, and repeat this process. This process releases individual sheets without introducing static electricity. Straighten the paper stack against a table before returning it to the tray.

Figure 6-5 Technique for flexing the paper stack
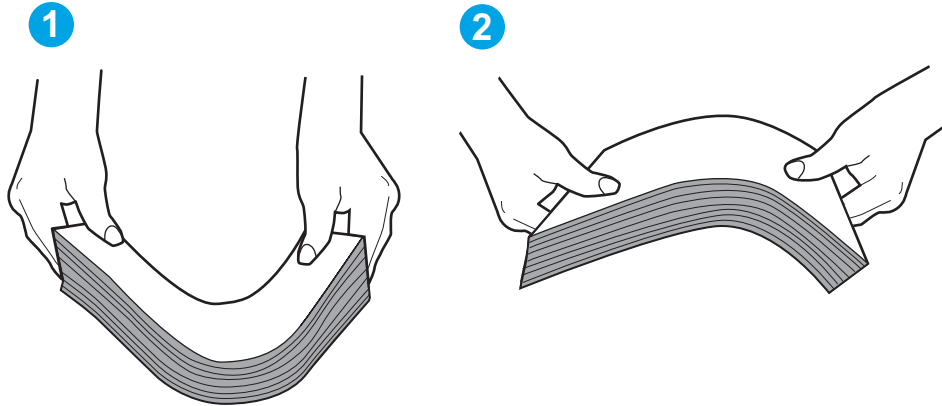
2. Use only paper that meets HP specifications for this printer.

3. Verify that the humidity in the room is within specifications for this printer, and that paper is being stored in unopened packages. Most reams of paper are sold in moisture-proof wrapping to keep paper dry.

   In high-humidity environments, paper at the top of the stack in the tray can absorb moisture, and it might have a wavy or uneven appearance. If this happens, remove the top 5 to 10 sheets of paper from the stack.

   In low-humidity environments, excess static electricity can cause sheets of paper to stick together. If this happens, remove the paper from the tray, and flex the stack as described above.

4. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.

5. Make sure the tray is not overfilled by checking the stack-height markings inside the tray. If it is overfilled, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.

The following images show examples of the stack-height markings in the trays for various printers. Most HP printers have markings similar to these. Also make sure that all sheets of paper are below the tabs near the stack-height marks. These tabs help hold the paper in the correct position as it enters the printer.

Figure 6-6 Stack-height markings
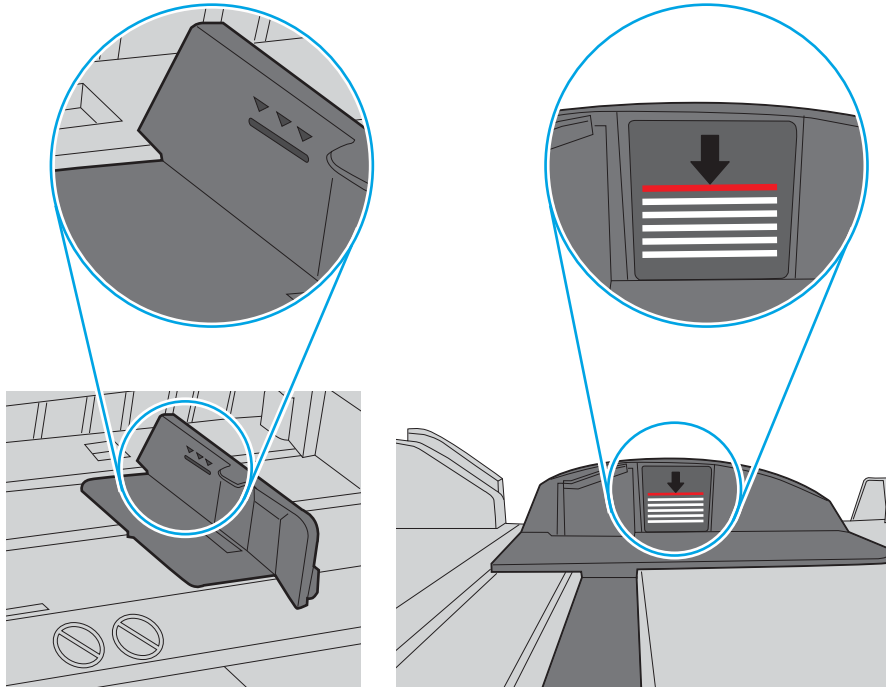
Figure 6-7 Tab for the paper stack
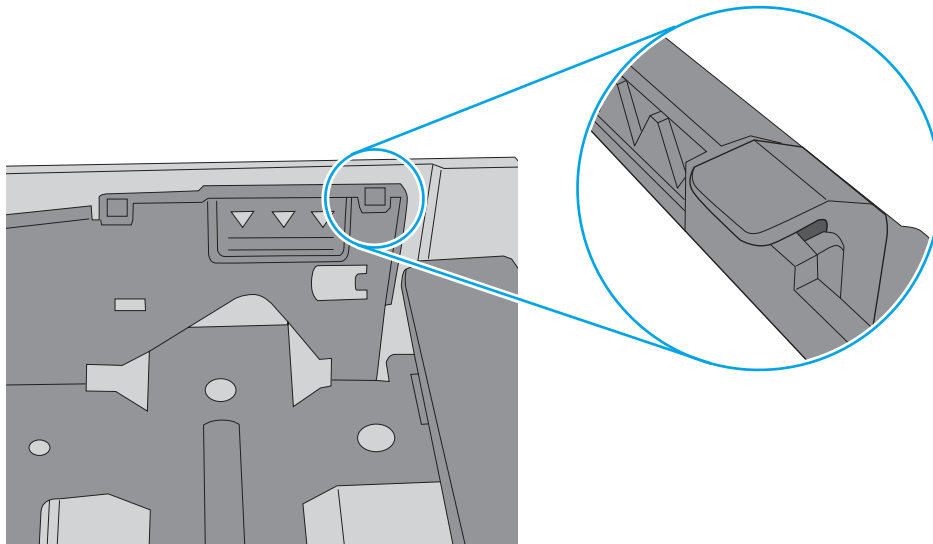
6. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray. The arrow on the tray guide should line up exactly with the marking on the tray.

NOTE: Do not adjust the paper guides tightly against the paper stack. Adjust them to the indentations or markings in the tray.

The following images show examples of the paper-size indentations in the trays for various printers. Most HP printers have markings similar to these.

Figure 6-8 Size markings for Tray 1 or the multipurpose tray
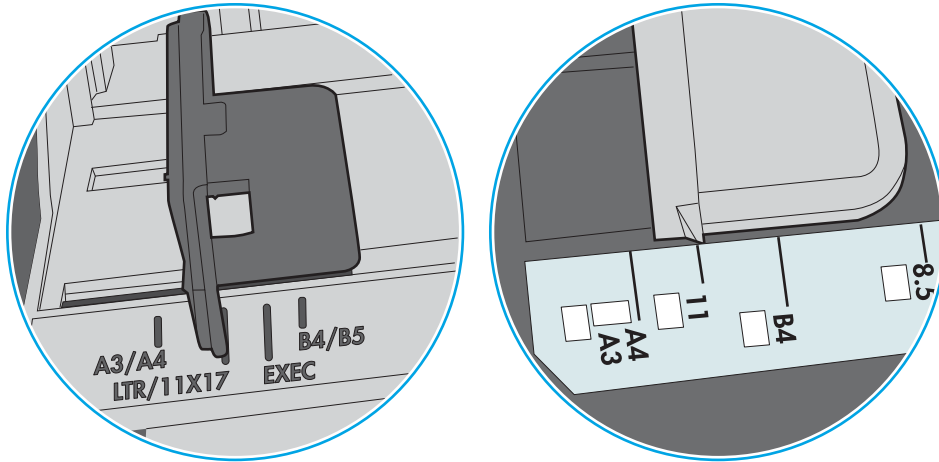
Figure 6-9 Size markings for cassette trays
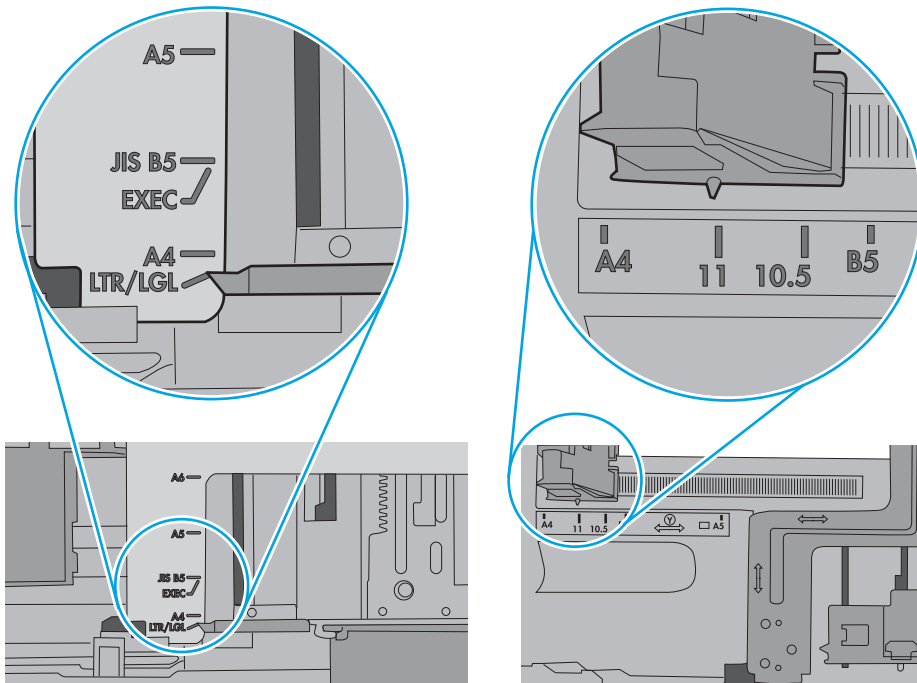
7. Make sure the printing environment is within recommended specifications.

Clear paper jams

Introduction

The following information includes instructions for clearing paper jams from the product.

Experiencing frequent or recurring paper jams?

Follow these steps to solve problems with frequent paper jams. If the first step does not resolve the problem continue with the next step until you have resolved the problem.

1. If paper has jammed in the printer, clear the jam and then print a configuration page to test the printer.

2. Check that the tray is configured for the correct paper size and type on the printer control panel. Adjust paper settings if necessary.

   📝 **NOTE:** The steps vary according to the type of control panel.

   a. **2-line control panels**: On the printer control panel, press the OK button.

   Touchscreen control panels: From the Home screen on the printer control panel, touch the Setup 🔘 button.

   b. Open the System Setup menu.

   c. Open the Paper setup menu.

   d. Select the tray from the list.

e. Select Paper Type and then select the type of paper that is in the tray.

f. Select Paper Size and then select the size of paper that is in the tray.

3. Turn the printer off, wait 30 seconds, and then turn it on again.

4. Print a cleaning page to remove excess toner from inside the printer.

   a. **2-line control panels**: On the printer control panel, press the OK button.

   Touchscreen control panels: From the Home screen on the printer control panel, touch the Setup button.

   b. Open the Service menu.

   c. Select Cleaning Page.

   d. Load plain letter or A4 paper when you are prompted.

   e. Touch the OK button to begin the cleaning process.

   The printer prints the first side and then prompts you to remove the page from the output bin and reload it in Tray 1, keeping the same orientation. Wait until the process is complete. Discard the page that prints.

5. Print a configuration page to test the printer.

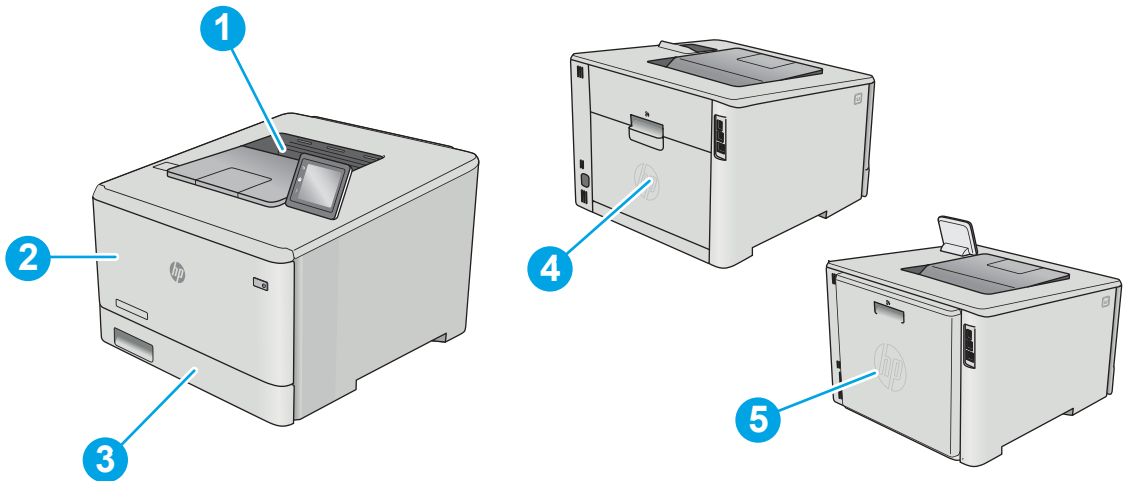   **a.** **2-line control panels**: On the printer control panel, press the OK button.

   Touchscreen control panels: From the Home screen on the printer control panel, touch the Setup button.

b. Open the Reports menu.

c. Select Configuration Report.

If none of these steps resolves the problem, the printer might need service. Contact HP customer support.

Paper jam locations

| 1	Output bin
2	Tray 1
3	Tray 2
4	Rear door (nw model only)
5	Duplexer (duplex models only)

Clear paper jams in Tray 1

When a jam occurs, the control panel displays an error message (2-line control panels) or an animation (touchscreen control panels) that assists in clearing the jam.

> **NOTE:** If the sheet tears, remove all fragments before resuming printing.

1. If you can see the jammed sheet in Tray 1, remove the jammed sheet by pulling it straight out.
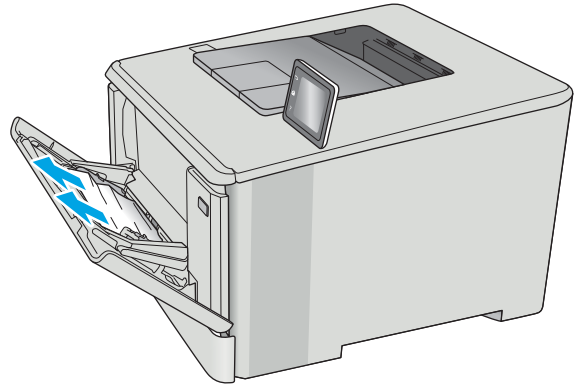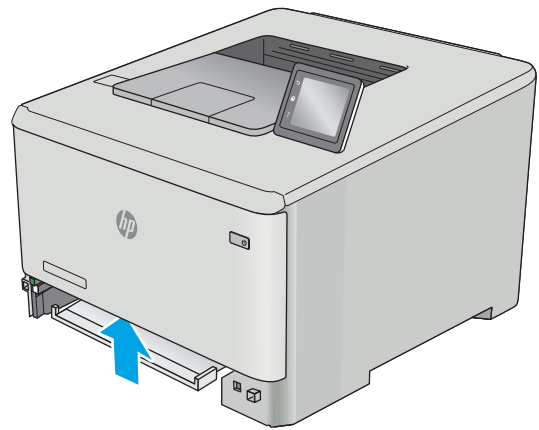
2. If you cannot see the jammed sheet, close Tray 1, and then remove Tray 2.
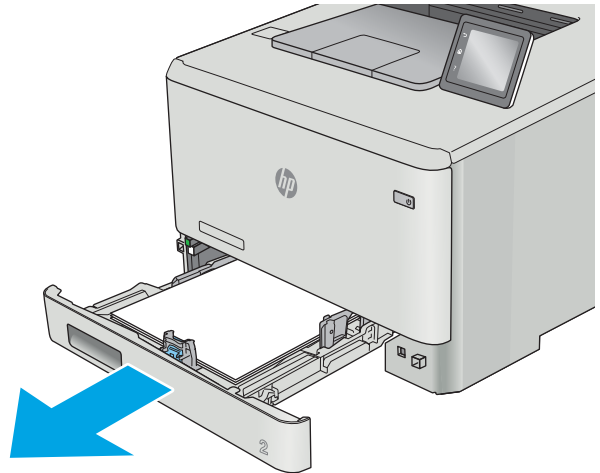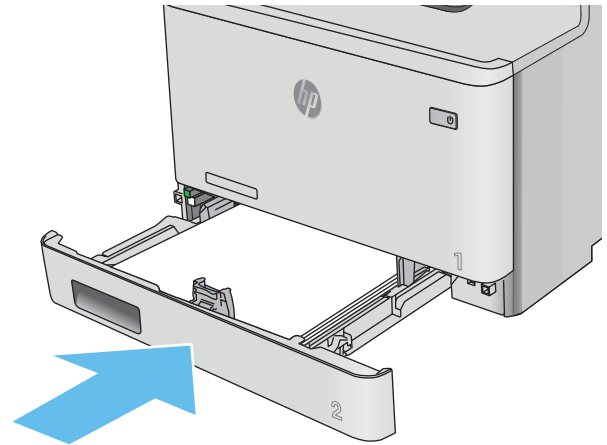
3. At the left side of the Tray 2 cavity, press the tab to lower the tray plate, and then remove any paper. Remove the jammed sheet by gently pulling it straight out.
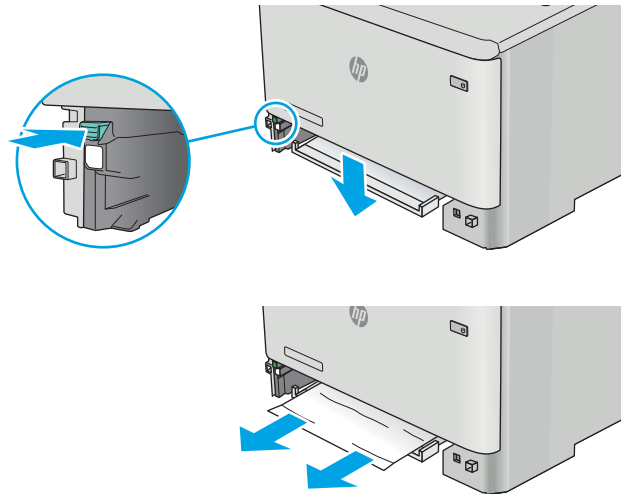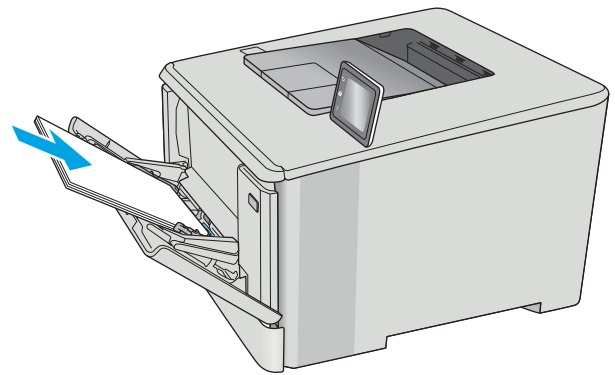
4. Push the tray plate back up into place.

5. Reinstall Tray 2.

6. Reopen Tray 1 and load paper into the tray.
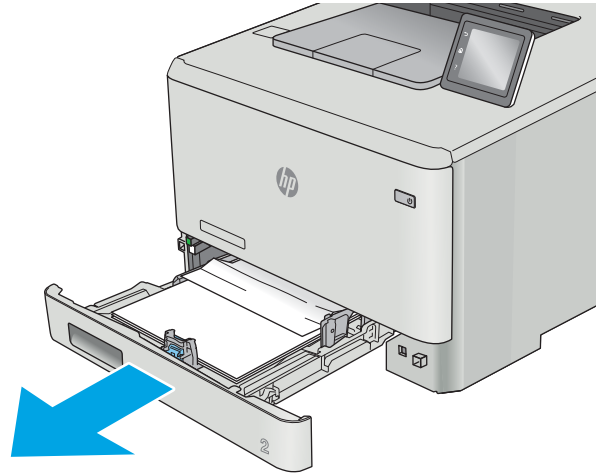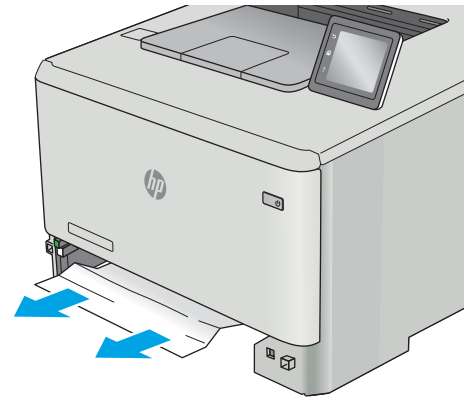
Clear paper jams in Tray 2

Use the following procedure to check for a paper jam in Tray 2. When a jam occurs, the control panel displays an error message (2-line control panels) or an animation (touchscreen control panels) that assists in clearing the jam.
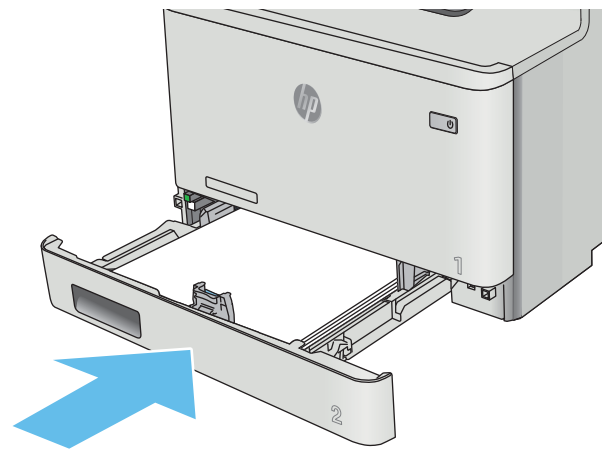
1.   Pull the tray completely out of the printer.

2.   Remove any jammed or damaged sheets of paper.

3.   Reinsert and close Tray 2.

Clear paper jams in the rear door and the fuser area (nw model)

Use the following procedure to check for paper inside the rear door. When a jam occurs, the control panel displays an error message (2-line control panels) or an animation (touchscreen control panels) that assists in clearing the jam.

⚠ CAUTION: The fuser is located above the rear door, and it is hot. Do not attempt to reach into the area above the rear door until the fuser is cool.

1.   Open the rear door.
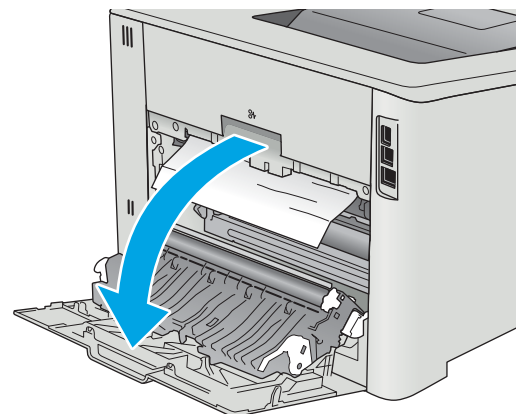
2. Gently pull out any jammed paper from the rollers in the rear door area.

3. Close the rear door.
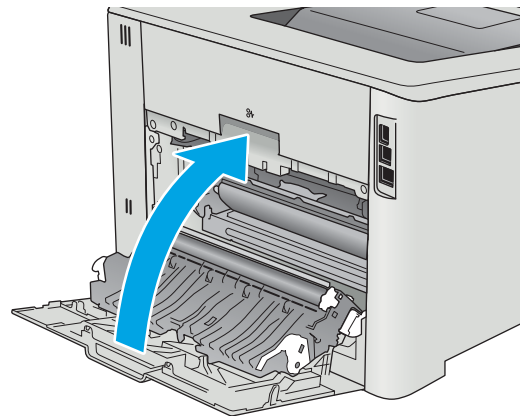
Clear paper jams in the output bin

Use the following procedure to clear jams in the output bin. When a jam occurs, the control panel displays an error message (2-line control panels) or an animation (touchscreen control panels) that assists in clearing the jam.

1. If paper is visible in the output bin, grasp the leading edge and remove it.
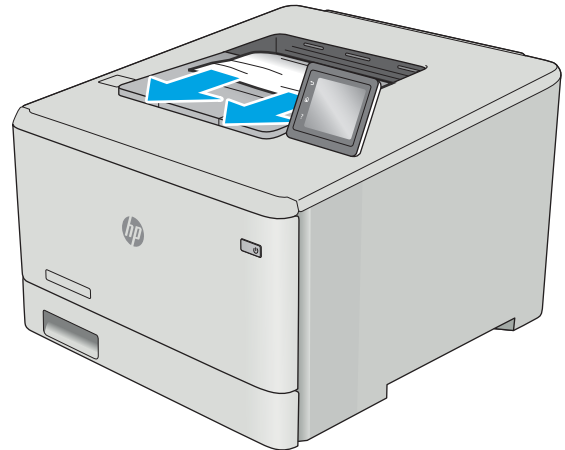
Clear paper jams in the duplexer (dn and dw models only)
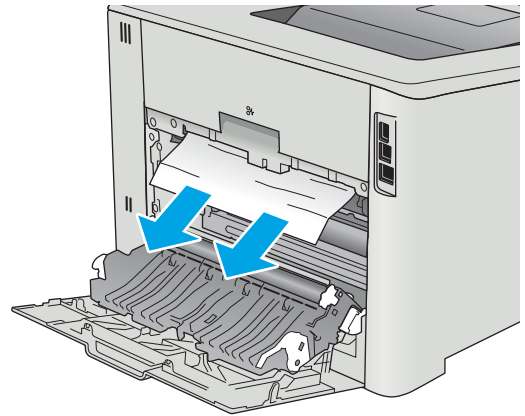
Use the following procedure to check for paper in the duplexer. When a jam occurs, the control panel displays an error message (2-line control panels) or an animation (touchscreen control panels) that assists in clearing the jam.

1. At the rear of the printer, open the duplexer.

2. Remove any jammed or damaged sheets of paper.

   CAUTION: The fuser is located above the rear door, and it is hot. Do not attempt to reach into the area above the rear door until the fuser is cool.
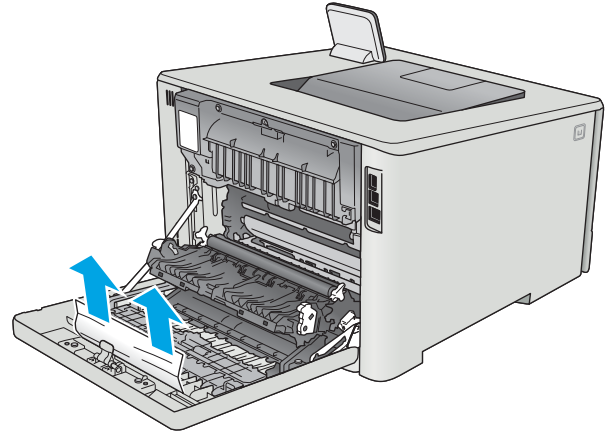
3. Close the duplexer.

Improve print quality
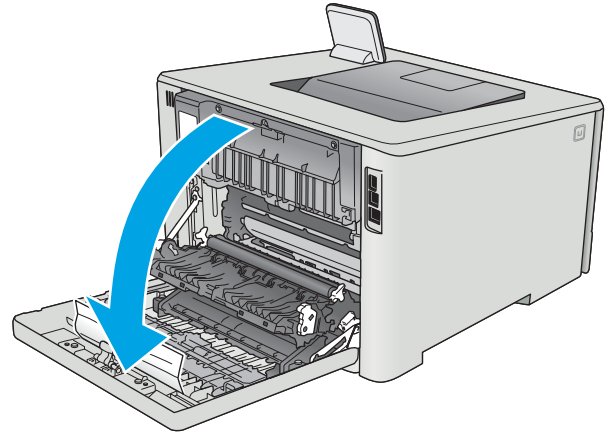
Introduction

- [Print from a different software program](#)
- [Check the paper-type setting for the print job](#)
- [Check toner-cartridge status](#)
- [Clean the product](#)
- [Visually inspect the toner cartridge](#)
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- [Adjust color settings (Windows)](#)
- [Calibrate the printer to align the colors](#)
- [Check the EconoMode settings](#)
- [Try a different print driver](#)

If the printer is having print-quality problems, try the following solutions in the order presented to resolve the issue.

Print from a different software program
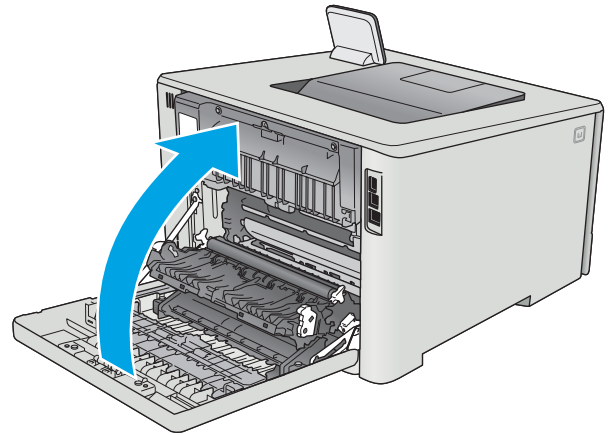
Try printing from a different software program. If the page prints correctly, the problem is with the software program from which you were printing.

Check the paper-type setting for the print job

Check the paper type setting when printing from a software program and the printed pages have smears, fuzzy or dark print, curled paper, scattered dots of toner, loose toner, or small areas of missing toner.

Check the paper type setting (Windows)

1. From the software program, select the **Print** option.

2. Select the printer, and then click the **Properties** or **Preferences** button.

3. Click the **Paper/Quality** tab.

4. From the **Paper Type** drop-down list, click the **More...** option.

5. Expand the list of **Type is:** options.

6. Expand the category of paper types that best describes your paper.

7. Select the option for the type of paper you are using, and click the **OK** button.

8. Click the **OK** button to close the **Document Properties** dialog box. In the **Print** dialog box, click the **OK** button to print the job.

Check the paper type setting (OS X)

1. Click the **File** menu, and then click the **Print** option.

2. In the **Printer** menu, select the printer.

3. By default, the print driver displays the **Copies & Pages** menu. Open the menus drop-down list, and then click the **Finishing** menu.

4. Select a type from the **Media Type** drop-down list.

5. Click the **Print** button.

Check toner-cartridge status

Check the supplies status page for the following information:

- Estimated percentage of cartridge life remaining

- Approximate pages remaining

- Part numbers for HP toner cartridges

- Number of pages printed

Use the following procedure to print the supplies status page:

1. From the Home screen on the printer control panel, swipe until the Supplies menu displays. Touch the Supplies 〓 icon to open the menu.

2. Touch the Report button to print the supplies status page.

3. Check the percent of life remaining for the toner cartridges and if applicable, the status of other replaceable maintenance parts.

   Print quality problems can occur when using a toner cartridge that is at its estimated end of life. The supplies status page indicates when a supply level is very low. After an HP supply has reached the very low threshold, HP's premium protection warranty on that supply has ended.

   The toner cartridge does not need to be replaced now unless the print quality is no longer acceptable. Consider having a replacement available to install when print quality is no longer acceptable.

   If you determine that you need to replace a toner cartridge or other replaceable maintenance parts, the supplies status page lists the genuine HP part numbers.

4. Check to see if you are using a genuine HP cartridge.

   A genuine HP toner cartridge has the words "HP" on it, or has the HP logo on it. For more information on identifying HP cartridges go to www.hp.com/go/learnaboutsupplies.

   HP cannot recommend the use of non-HP supplies, either new or remanufactured. Because they are not HP products, HP cannot influence their design or control their quality. If you are using a refilled or remanufactured toner cartridge and are not satisfied with the print quality, replace the toner cartridge with a genuine HP toner cartridge.

Clean the product

Print a cleaning page

NOTE: The steps vary according to the type of control panel.

2-line control panels

1. From the printer control panel, press the OK button.

2. Open the **Service** menu.

3. Use the arrow keys to select the **Cleaning mode** option, and then press the OK button.

   The printer prints the first side and then prompts you to remove the page from the output bin and reload it in Tray 1, keeping the same orientation. Wait until the process is complete. Discard the page that prints.

Touchscreen control panels

1. From the Home screen on the printer control panel, touch the Setup ⚙ button.

2. Touch the Service menu.

3. Touch the Cleaning Page button.

4. Load plain letter or A4 paper when you are prompted.

5. Touch the OK button to begin the cleaning process.

   The printer prints the first side and then prompts you to remove the page from the output bin and reload it in Tray 1, keeping the same orientation. Wait until the process is complete. Discard the page that prints.

Visually inspect the toner cartridge

Follow these steps to inspect each toner cartridge.

1. Remove the toner cartridge from the printer.

2. Check the memory chip for damage.

3. Examine the surface of the green imaging drum.

   CAUTION: Do not touch the imaging drum. Fingerprints on the imaging drum can cause print-quality problems.

4. If you see any scratches, fingerprints, or other damage on the imaging drum, replace the toner cartridge.

5. Reinstall the toner cartridge, and print a few pages to see if the problem has resolved.

Check paper and the printing environment

Step one: Use paper that meets HP specifications

Some print-quality problems arise from using paper that does not meet HP specifications.

- Always use a paper type and weight that this printer supports.

- Use paper that is of good quality and free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, staples, and curled or bent edges.

- Use paper that has not been previously printed on.

- Use paper that does not contain metallic material, such as glitter.

- Use paper that is designed for use in laser printers. Do not use paper that is designed only for use in Inkjet printers.

- Use paper that is not too rough. Using smoother paper generally results in better print quality.

Step two: Check the environment

The environment can directly affect print quality and is a common cause for print-quality or paper-feeding issues. Try the following solutions:

- Move the printer away from drafty locations, such as open windows or doors, or air-conditioning vents.

- Make sure the printer is not exposed to temperatures or humidity outside of printer specifications.

- Do not place the printer in a confined space, such as a cabinet.

- Place the printer on a sturdy, level surface.

- Remove anything that is blocking the vents on the printer. The printer requires good air flow on all sides, including the top.

- Protect the printer from airborne debris, dust, steam, grease, or other elements that can leave residue inside the printer.

Adjust color settings (Windows)

Follow these steps if colors on the printed page to not match colors on the computer screen, or if the colors on the printed page are not satisfactory.

Change the color theme

1. From the software program, select the **Print** option.

2. Select the printer, and then click the **Properties** or **Preferences** button.

3. Click the **Color** tab.

4. Select the **HP EasyColor** check box to clear it.

5. Select a color theme from the **Color Themes** drop-down list.

- **Default (sRGB)**: This theme sets the printer to print RGB data in raw device mode. When using this theme, manage color in the software program or in the operating system for correct rendering.

- **Vivid (sRGB)**: The printer increases the color saturation in the midtones. Use this theme when printing business graphics.

- **Photo (sRGB)**: The printer interprets RGB color as if it were printed as a photograph using a digital mini lab. The printer renders deeper, more saturated colors differently than with the Default (sRBG) theme. Use this theme when printing photos.

- **Photo (Adobe RGB 1998)**: Use this theme with printing digital photos that use the AdobeRGB color space rather than sRGB. Turn off color management in the software program when using this theme.

- **None**: No color theme is used.

- **Custom Profile**: Select this option to use a custom input profile to accurately control color output (for example, to emulate a specific HP Color LaserJet product). Download custom profiles from www.hp.com.

6. Click the **OK** button to close the **Document Properties** dialog box. In the **Print** dialog box, click the **OK** button to print the job.

Change the color options

1. From the software program, select the **Print** option.

2. Select the printer, and then click the **Properties** or **Preferences** button.

3. Click the **Color** tab.

4. Select the **HP EasyColor** check box to clear it.

5. Click the **Automatic** or **Manual** setting.

   - **Automatic** setting: Select this setting for most color print jobs

   - **Manual** setting: Select this setting to adjust the color settings independently from other settings. Click the **Settings** button to open the manual color-adjusment window.

     📝 NOTE: Changing color settings manually can impact output. HP recommends that only color graphics experts change these settings.

6. Click the **Print in Grayscale** option to print a color document in black and shades of gray. Use this option to print color documents for photocopying or faxing. Also use this option to print draft copies or to save color toner.

7. Click the **OK** button to close the **Document Properties** dialog box. In the **Print** dialog box, click the **OK** button to print the job.

Adjust color settings (Windows)

Follow these steps if colors on the printed page to not match colors on the computer screen, or if the colors on the printed page are not satisfactory.

Change the color theme

1. From the software program, select the **Print** option.

2. Select the printer, and then click the **Properties** or **Preferences** button.

3. Click the **Color** tab.

4. Select the **HP EasyColor** check box to clear it.

5. Select a color theme from the **Color Themes** drop-down list.

    ● **Default (sRGB)**: This theme sets the printer to print RGB data in raw device mode. When using this theme, manage color in the software program or in the operating system for correct rendering.

    ● **Vivid (sRGB)**: The printer increases the color saturation in the midtones. Use this theme when printing business graphics.

    ● **Photo (sRGB)**: The printer interprets RGB color as if it were printed as a photograph using a digital mini lab. The printer renders deeper, more saturated colors differently than with the Default (sRBG) theme. Use this theme when printing photos.

    ● **Photo (Adobe RGB 1998)**: Use this theme with printing digital photos that use the AdobeRGB color space rather than sRGB. Turn off color management in the software program when using this theme.

    ● **None**: No color theme is used.

    ● **Custom Profile**: Select this option to use a custom input profile to accurately control color output (for example, to emulate a specific HP Color LaserJet product). Download custom profiles from www.hp.com.

6. Click the **OK** button to close the **Document Properties** dialog box. In the **Print** dialog box, click the **OK** button to print the job.

Change the color options

1. From the software program, select the **Print** option.

2. Select the printer, and then click the **Properties** or **Preferences** button.

3. Click the **Color** tab.

4. Select the **HP EasyColor** check box to clear it.

5. Click the **Automatic** or **Manual** setting.

    ● **Automatic** setting: Select this setting for most color print jobs

    ● **Manual** setting: Select this setting to adjust the color settings independently from other settings. Click the **Settings** button to open the manual color-adjustment window.

    📝 **NOTE:** Changing color settings manually can impact output. HP recommends that only color graphics experts change these settings.

6. Click the **Print in Grayscale** option to print a color document in black and shades of gray. Use this option to print color documents for photocopying or faxing. Also use this option to print draft copies or to save color toner.

7. Click the **OK** button to close the **Document Properties** dialog box. In the **Print** dialog box, click the **OK** button to print the job.

Calibrate the printer to align the colors

Calibration is a printer function that optimizes print quality.

Follow these steps to resolve print-quality problems such as misaligned color, colored shadows, blurry graphics, or other print-quality issues.

📝 NOTE: The steps vary according to the type of control panel.

2-line control panels

1. On the printer control panel, press the OK button.

2. Open the following menus:

   ● **System Setup**

   ● **Print Quality**

   ● **Color Calibration**

   ● **Calibrate Now**

3. Press the OK button to start the calibration process.

   A **Calibrating** message will display on the printer control panel. The calibration process takes a few minutes to complete. Do not turn the printer off until the calibration process has finished.

4. Wait while the printer calibrates, and then try printing again.

Touchscreen control panels

1. On the printer control panel, touch the Setup ⚙ button.

2. Open the following menus:

   ● System Setup

   ● Print Quality

   ● Color Calibration

3. Touch Calibrate Now. A **Calibrating** message will display on the printer control panel. The calibration process takes a few minutes to complete. Do not turn the printer off until the calibration process has finished.

4. Wait while the printer calibrates, and then try printing again.

Check the EconoMode settings

HP does not recommend the full-time use of EconoMode. If EconoMode is used full-time, the toner supply might outlast the mechanical parts in the toner cartridge. If print quality begins to degrade and is no longer acceptable, consider replacing the toner cartridge.

NOTE: This feature is available with the PCL 6 print driver for Windows. If you are not using that driver, you can enable the feature by using the HP Embedded Web Server.

Follow these steps if the entire page is too dark or too light.

1. From the software program, select the **Print** option.

2. Select the printer, and then click the **Properties** or **Preferences** button.

3. Click the **Paper/Quality** tab, and locate the **Print Quality** area.

4. If the entire page is too dark, use these settings:

   - Select the **600 dpi** option.

   - Select the **EconoMode** check box to enable it.

   If the entire page is too light, use these settings:

   - Select the **FastRes 1200** option.

   - Clear the **EconoMode** check box to disable it.

5. Click the **OK** button to close the **Document Properties** dialog box. In the **Print** dialog, click the **OK** button to print the job.

Try a different print driver

Try a different print driver when printing from a software program and the printed pages have unexpected lines in graphics, missing text, missing graphics, incorrect formatting, or substituted fonts.

Download any of the following drivers from the HP Web site: www.hp.com/support/colorljM452.

HP PCL.6 driver HP PCL 6 driver HP PCL-6 driver	• Provided as the default driver on the printer CD. This driver is automatically installed unless you select a different one.
	• Recommended for all Windows environments
	• Provides the overall best speed, print quality, and printer-feature support for most users
	• Developed to align with the Windows Graphic Device Interface (GDI) for the best speed in Windows environments
	• Might not be fully compatible with third-party and custom software programs that are based on PCL 5
HP UPD PS driver	• Recommended for printing with Adobe® software programs or with other highly graphics-intensive software programs
	• Provides support for printing from postscript emulation needs, or for postscript flash font support

HP UPD PCL 5	● Recommended for general office printing in Windows environments
	● Compatible with previous PCL versions and older HP LaserJet printers
	● The best choice for printing from third-party or custom software programs
	● The best choice when operating with mixed environments, which require the printer to be set to PCL 5 (UNIX, Linux, mainframe)
	● Designed for use in corporate Windows environments to provide a single driver for use with multiple printer models
	● Preferred when printing to multiple printer models from a mobile Windows computer
HP UPD PCL 6	● Recommended for printing in all Windows environments
	● Provides the overall best speed, print quality, and printer feature support for most users
	● Developed to align with Windows Graphic Device Interface (GDI) for best speed in Windows environments
	● Might not be fully compatible with third-party and custom software programs that are based on PCL 5

Solve wired network problems

Introduction

Check the following items to verify that the printer is communicating with the network. Before beginning, print a configuration page from the printer control panel and locate the printer IP address that is listed on this page.

- Poor physical connection

- The computer is using the incorrect IP address for the printer

- The computer is unable to communicate with the printer

- The printer is using incorrect link and duplex settings for the network

- New software programs might be causing compatibility problems

- The computer or workstation might be set up incorrectly

- The printer is disabled, or other network settings are incorrect

NOTE: HP does not support peer-to-peer networking, as the feature is a function of Microsoft operating systems and not of the HP print drivers. For more information, go to Microsoft at www.microsoft.com.

Poor physical connection

1. Verify that the printer is attached to the correct network port using a cable of the correct length.

2. Verify that cable connections are secure.

3. Look at the network port connection on the back of the printer, and verify that the amber activity light and the green link-status light are lit.

4. If the problem continues, try a different cable or port on the hub.

The computer is using the incorrect IP address for the printer

1. Open the printer properties and click the **Ports** tab. Verify that the current IP address for the printer is selected. The printer IP address is listed on the printer configuration page.

2. If you installed the printer using the HP standard TCP/IP port, select the box labeled **Always print to this printer, even if its IP address changes**.

3. If you installed the printer using a Microsoft standard TCP/IP port, use the hostname instead of the IP address.

4. If the IP address is correct, delete the printer and then add it again.

The computer is unable to communicate with the printer

1. Test network communication by pinging the network.

   a. Open a command-line prompt on your computer.

- For Windows, click **Start**, click **Run**, type `cmd`, and then press Enter.

- For OS X, go to **Applications**, then **Utilities**, and open **Terminal**.

b. Type `ping` followed by the IP address for your printer.

c. If the window displays round-trip times, the network is working.

2. If the ping command failed, verify that the network hubs are on, and then verify that the network settings, the printer, and the computer are all configured for the same network.

The printer is using incorrect link and duplex settings for the network

HP recommends leaving these settings in automatic mode (the default setting). If you change these settings, you must also change them for your network.

New software programs might be causing compatibility problems

Verify that any new software programs are correctly installed and that they use the correct print driver.

The computer or workstation might be set up incorrectly

1. Check the network drivers, print drivers, and the network redirection settings.

2. Verify that the operating system is configured correctly.

The printer is disabled, or other network settings are incorrect

1. Review the configuration page to check the status of the network protocol. Enable it if necessary.

2. Reconfigure the network settings if necessary.

Solve wireless network problems

Introduction

Use the troubleshooting information to help resolve issues.

NOTE: To determine whether HP NFC and HP wireless direct printing are enabled on your printer, print a configuration page from the printer control panel. If a page titled Wireless is included, HP Jetdirect 2800w NFC & Wireless Direct Accessory printing is enabled on the printer.

- Wireless connectivity checklist

- The printer does not print after the wireless configuration completes

- The printer does not print, and the computer has a third-party firewall installed

- The wireless connection does not work after moving the wireless router or printer

- Cannot connect more computers to the wireless printer

- The wireless printer loses communication when connected to a VPN

- The network does not appear in the wireless networks list

- The wireless network is not functioning

- Perform a wireless network diagnostic test

- Reduce interference on a wireless network

Wireless connectivity checklist

- Verify that the network cable is not connected.

- Verify that the printer and the wireless router are turned on and have power. Also make sure that the wireless radio in the printer is turned on.

- Verify that the service set identifier (SSID) is correct. Print a configuration page to determine the SSID. If you are not sure the SSID is correct, run the wireless setup again.

- With secured networks, verify that the security information is correct. If the security information is incorrect, run the wireless setup again.

- If the wireless network is working correctly, try accessing other computers on the wireless network. If the network has Internet access, try connecting to the Internet over a wireless connection.

- Verify that the encryption method (AES or TKIP) is the same for the printer as it is for the wireless access point (on networks using WPA security).

- Verify that the printer is within the range of the wireless network. For most networks, the printer must be within 30 m (100 ft) of the wireless access point (wireless router).

- Verify that obstacles do not block the wireless signal. Remove any large metal objects between the access point and the printer. Make sure poles, walls, or support columns containing metal or concrete do not separate the printer and wireless access point.

- Verify that the printer is located away from electronic devices that might interfere with the wireless signal. Many devices can interfere with the wireless signal including motors, cordless phones, security system cameras, other wireless networks, and some Bluetooth devices.

- Verify that the print driver is installed on the computer.

- Verify that you have selected the correct printer port.

- Verify that the computer and printer connect to the same wireless network.

- For OS X, verify that the wireless router supports Bonjour.

The printer does not print after the wireless configuration completes

1. Make sure that the printer is turned on and in the ready state.

2. Turn off any third-party firewalls on your computer.

3. Make sure that the wireless network is working correctly.

4. Make sure that your computer is working correctly. If necessary, restart the computer.

5. Verify that you can open the printer HP Embedded Web Server from a computer on the network.

The printer does not print, and the computer has a third-party firewall installed

1. Update the firewall with the most recent update available from the manufacturer.

2. If programs request firewall access when you install the printer or try to print, make sure you allow the programs to run.

3. Temporarily turn off the firewall, and then install the wireless printer on the computer. Enable the firewall when you have completed the wireless installation.

The wireless connection does not work after moving the wireless router or printer

1. Make sure that the router or printer connects to the same network that your computer connects to.

2. Print a configuration page.

3. Compare the service set identifier (SSID) on the configuration page to the SSID in the printer configuration for the computer.

4. If the numbers are not the same, the devices are not connecting to the same network. Reconfigure the wireless setup for the printer.

Cannot connect more computers to the wireless printer

1. Make sure that the other computers are within the wireless range and that no obstacles block the signal. For most networks, the wireless range is within 30 m (100 ft) of the wireless access point.

2. Make sure that the printer is turned on and in the ready state.

3. Turn off any third-party firewalls on your computer.

4. Make sure that the wireless network is working correctly.

5. Make sure that your computer is working correctly. If necessary, restart the computer.

The wireless printer loses communication when connected to a VPN

- Typically, you cannot connect to a VPN and other networks at the same time.

The network does not appear in the wireless networks list

- Make sure the wireless router is turned on and has power.

- The network might be hidden. However, you can still connect to a hidden network.

The wireless network is not functioning

1. Make sure that the network cable is not connected.

2. To verify if the network has lost communication, try connecting other devices to the network.

3. Test network communication by pinging the network.

    a. Open a command-line prompt on your computer.

        - For Windows, click **Start**, click **Run**, type `cmd`, and then press Enter.

        - For OS X, go to **Applications**, then **Utilities**, and open **Terminal**.

    b. Type `ping` followed by the router IP address.

    c. If the window displays round-trip times, the network is working.

4. Make sure that the router or printer connects to the same network that the computer connects to.

    a. Print a configuration page.

    b. Compare the service set identifier (SSID) on the configuration report to the SSID in the printer configuration for the computer.

    c. If the numbers are not the same, the devices are not connecting to the same network. Reconfigure the wireless setup for the printer.

Perform a wireless network diagnostic test

From the printer control panel, you can run a diagnostic test that provides information about the wireless network settings.

> 📝 NOTE: The steps vary according to the type of control panel.

2-line control panels

1. From the printer control panel, press the OK button.

2. Select the **Self Diagnostics** menu, and then press the OK button.

3. Select the **Run Wireless Test** item, and then press the OK button to start the test. The printer prints a test page that shows test results.

Touchscreen control panels

1. From the Home screen on the printer control panel, swipe until the Setup menu displays. Touch the ⚙ icon to open the menu.

2. Scroll to and select Self Diagnostics.

3. Select Run Wireless Test to start the test. The printer prints a test page that shows test results.

Reduce interference on a wireless network

The following tips can reduce interference in a wireless network:

●   Keep the wireless devices away from large metal objects, such as filing cabinets, and other electromagnetic devices, such as microwaves and cordless telephones. These objects can disrupt radio signals.

●   Keep the wireless devices away from large masonry structures and other building structures. These objects can absorb radio waves and lower signal strength.

●   Position the wireless router in a central location in line of sight with the wireless printers on the network.

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