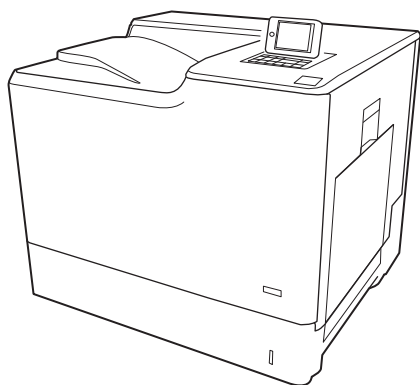


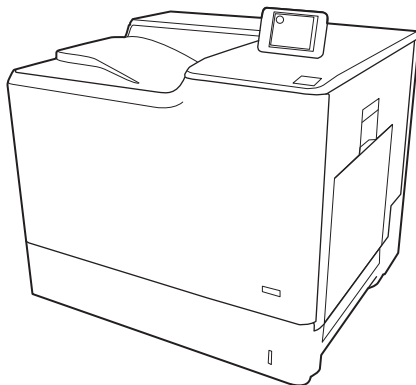


Color LaserJet Enterprise M652, M653

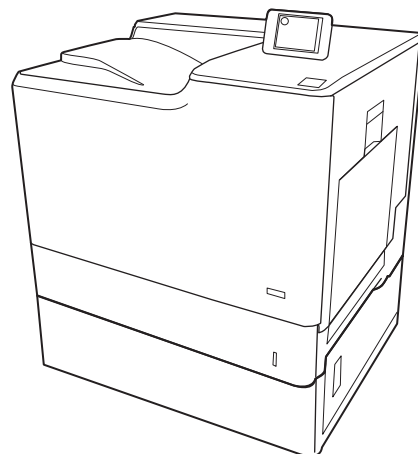
User Guide



M652n
M652dn



M653dn



M653x



www.hp.com/support/colorljM652
www.hp.com/support/colorljM653



Color LaserJet Enterprise M652, M653

User Guide

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Edition 2, 1/2019

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Table of contents

1 Printer overview	1
Printer views	2
Printer front view	2
Printer back view	3
Interface ports	4
Control-panel view (color graphical display with keypad control panel, M652 models only)	5
Control-panel view (touchscreen control panel, M653 models only)	7
How to use the touchscreen control panel	9
Printer specifications	10
Technical specifications	10
Supported operating systems	12
Mobile printing solutions	14
Printer dimensions	15
Power consumption, electrical specifications, and acoustic emissions	17
Operating-environment range	17
Printer hardware setup and software installation	18
 2 Paper trays	 19
Introduction	20
Load Tray 1	20
Introduction	20
Tray 1 paper orientation	22
Use alternative letterhead mode	24
Enable Alternative Letterhead Mode by using the printer control-panel menus	24
Load Tray 2 and the 550-sheet trays	25
Introduction	25
Tray 2 and the 550-sheet trays paper orientation	27
Use alternative letterhead mode	29
Enable Alternative Letterhead Mode by using the printer control-panel menus	29
Load the 2,000-sheet high-capacity input tray	30
Introduction	30
High-capacity input tray paper orientation	32

Use alternative letterhead mode	34
Enable Alternative Letterhead Mode by using the printer control-panel menus	34
Load and print envelopes	35
Introduction	35
Print envelopes	35
Envelope orientation	35
Load and print labels	36
Introduction	36
Manually feed labels	36
Label orientation	36

3 Supplies, accessories, and parts 37

Order supplies, accessories, and parts	38
Ordering	38
Supplies and accessories	38
Maintenance/long-life consumables	39
Customer self-repair parts	40
Configure the HP toner-cartridge-protection supply settings	41
Introduction	41
Enable or disable the Cartridge Policy feature	41
Use the printer control panel to enable the Cartridge Policy feature	41
Use the printer control panel to disable the Cartridge Policy feature	41
Use the HP Embedded Web Server (EWS) to enable the Cartridge Policy feature	42
Use the HP Embedded Web Server (EWS) to disable the Cartridge Policy feature	43
Troubleshoot Cartridge Policy control panel error messages	44
Enable or disable the Cartridge Protection feature	44
Use the printer control panel to enable the Cartridge Protection feature	44
Use the printer control panel to disable the Cartridge Protection feature	44
Use the HP Embedded Web Server (EWS) to enable the Cartridge Protection feature	45
Use the HP Embedded Web Server (EWS) to disable the Cartridge Protection feature	46
Troubleshoot Cartridge Protection control panel error messages	47
Replace the toner cartridges	48
Toner-cartridge information	48
Remove and replace the cartridges	49
Replace the toner-collection unit	52

4 Print 55

Print tasks (Windows)	56
How to print (Windows)	56
Automatically print on both sides (Windows)	57
Manually print on both sides (Windows)	58

Print multiple pages per sheet (Windows)	58
Select the paper type (Windows)	58
Additional print tasks	60
Print tasks (OS X)	61
How to print (OS X)	61
Automatically print on both sides (OS X)	61
Manually print on both sides (OS X)	61
Print multiple pages per sheet (OS X)	62
Select the paper type (OS X)	62
Additional print tasks	63
Store print jobs on the printer to print later or print privately	64
Introduction	64
Create a stored job (Windows)	64
Create a stored job (OS X)	66
Print a stored job	66
Delete a stored job	67
Information sent to printer for Job Accounting purposes	67
Mobile printing	68
Introduction	68
Wireless Direct Print and NFC Printing	68
HP ePrint via email	69
HP ePrint software	70
AirPrint	71
Android embedded printing	71
Print from the USB port	72
Introduction	72
Enable the USB port for printing	72
Print USB documents	73
5 Manage the printer	75
Advanced configuration with HP Embedded Web Server (EWS)	76
Introduction	76
How to access the HP Embedded Web Server (EWS)	76
HP Embedded Web Server features	77
Information tab	78
General tab	78
Print tab	79
Troubleshooting tab	80
Security tab	81
HP Web Services tab	81
Networking tab	81

Other Links list	83
Configure IP network settings	84
Printer sharing disclaimer	84
View or change network settings	84
Rename the printer on a network	85
Manually configure IPv4 TCP/IP parameters from the control panel	86
Manually configure IPv6 TCP/IP parameters from the control panel	86
Link speed and duplex settings	86
Printer security features	88
Introduction	88
Security statements	88
IP Security	88
Assign an administrator password	88
Encryption support: HP High Performance Secure Hard Disks	89
Lock the formatter	90
Energy-conservation settings	91
Introduction	91
Set the idle settings	91
Set the sleep timer and configure the printer to use 1 watt or less of power	91
HP Web Jetadmin	92
Software and firmware updates	93
6 Solve problems	95
Customer support	96
Control panel help system	97
Restore factory settings	98
Introduction	98
Method one: Restore factory settings from the printer control panel	98
Method two: Restore factory settings from the HP Embedded Web Server (network-connected printers only)	98
A “Cartridge is low” or “Cartridge is very low” message displays on the printer control panel	100
Change the “Very Low” settings	100
Order supplies	100
Printer does not pick up paper or misfeeds	101
Introduction	101
The printer does not pick up paper	101
The printer picks up multiple sheets of paper	103
Clear paper jams	107
Introduction	107
Paper jam locations	107
Auto-navigation for clearing paper jams	108

Experiencing frequent or recurring paper jams?	108
13.E1 output bin paper jam	109
13.A1 tray 1 paper jam	110
13.A2 tray 2 paper jam	112
13.A3, 13.A4, 13.A5 tray 3, tray 4, tray 5 paper jam	116
13.A 2000-sheet tray paper jam	121
13.B9, 13.B2, 13.FF fuser paper jam	125
13.B2 right door paper jam	128
Improve print quality	129
Introduction	129
Print from a different software program	129
Check the paper-type setting for the print job	129
Check the paper type setting (Windows)	129
Check the paper type setting (OS X)	129
Check toner-cartridge status	130
Print a cleaning page	130
Visually inspect the toner cartridge	131
Check paper and the printing environment	131
Step one: Use paper that meets HP specifications	131
Step two: Check the environment	131
Step three: Set the individual tray alignment	132
Try a different print driver	132
Calibrate the printer to align the colors	133
Image defects table	134
Solve wired network problems	141
Introduction	141
Poor physical connection	141
The computer is using the incorrect IP address for the printer	141
The computer is unable to communicate with the printer	142
The printer is using incorrect link and duplex settings for the network	142
New software programs might be causing compatibility problems	142
The computer or workstation might be set up incorrectly	142
The printer is disabled, or other network settings are incorrect	142
Solve wireless network problems	143
Introduction	143
Wireless connectivity checklist	143
The printer does not print after the wireless configuration completes	144
The printer does not print, and the computer has a third-party firewall installed	144
The wireless connection does not work after moving the wireless router or printer	144
Cannot connect more computers to the wireless printer	144
The wireless printer loses communication when connected to a VPN	145

The network does not appear in the wireless networks list	145
The wireless network is not functioning	145
Reduce interference on a wireless network	145

Index	147
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1 Printer overview

- [Printer views](#)
- [Printer specifications](#)
- [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/colorljM652 or www.hp.com/support/colorljM653.

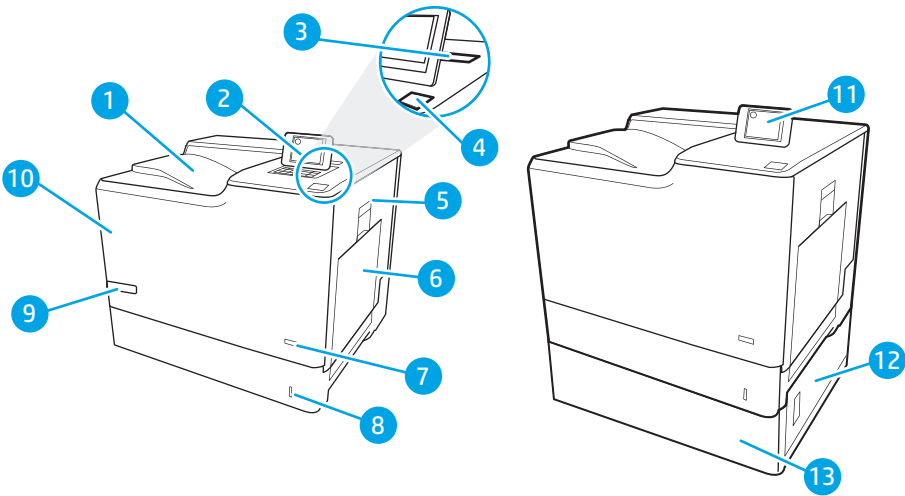
HP's all-inclusive help for the printer includes the following information:

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

Printer views

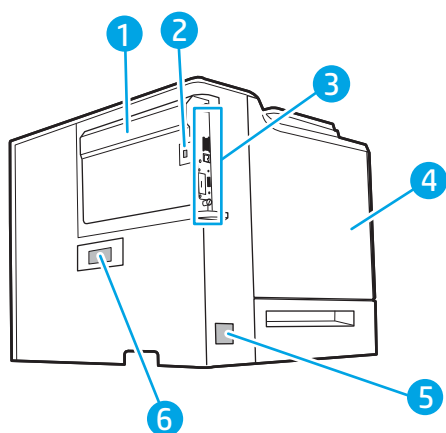
- [Printer front view](#)
- [Printer back view](#)
- [Interface ports](#)
- [Control-panel view \(color graphical display with keypad control panel, M652 models only\)](#)
- [Control-panel view \(touchscreen control panel, M653 models only\)](#)

Printer front view



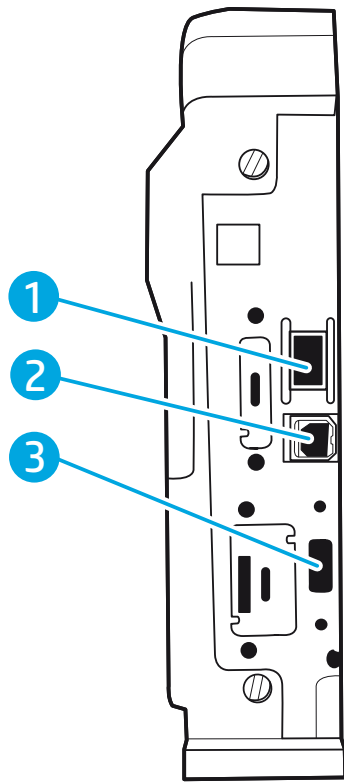
1	Output bin
2	Control panel with color graphical display and keypad (M652 models only)
3	Hardware integration pocket for connecting accessory and third-party devices
4	Easy-access USB port Insert a USB flash drive for printing without a computer or to update the printer firmware. NOTE: An administrator must enable this port before use.
5	Right door (access to the fuser and for clearing jams)
6	Tray 1
7	On/off button
8	Tray 2
9	Model name
10	Front door (access to the toner cartridges)
11	Control panel with color touchscreen display (M653 models only)
12	Lower-right door (access for clearing jams)
13	1 x 550-sheet paper feeder, Tray 3 (included with the M653x model, optional for the other models)

Printer back view



1	Formatter cover
2	Slot for a cable-type security lock
3	Formatter (contains the interface ports)
4	Left door (access to the toner-collection unit)
5	Power connection
6	Serial number and product number label

Interface ports



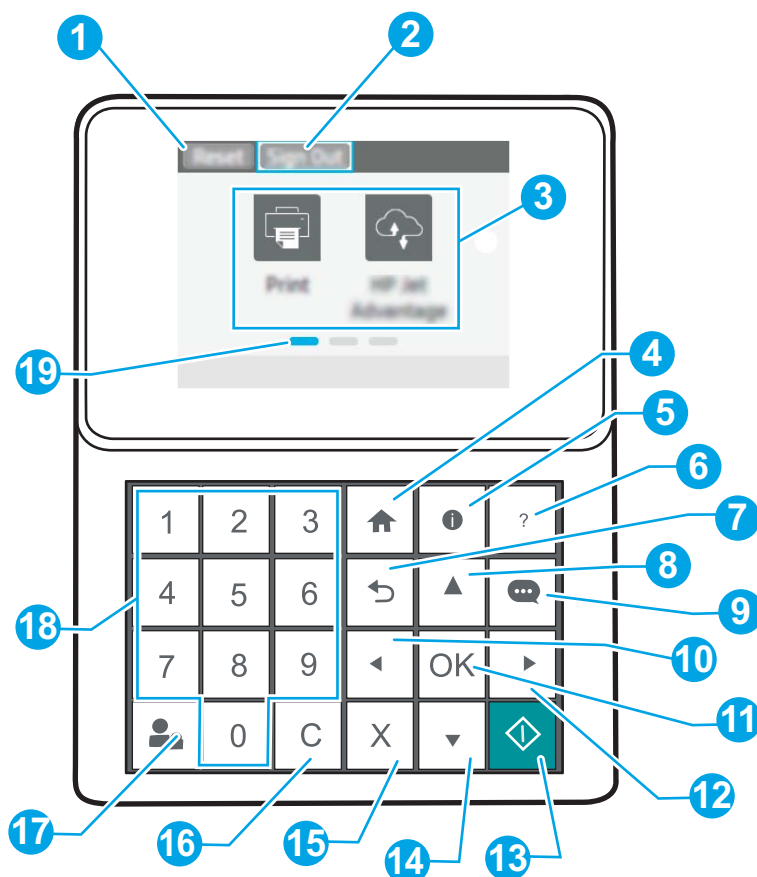
- | | |
|---|---|
| 1 | Local area network (LAN) Ethernet 10/100/1000 network port |
| 2 | Hi-Speed USB 2.0 printing port |
| 3 | USB port for connecting external USB devices (this port might be covered) |

NOTE: For easy-access USB printing, use the USB port near the control panel.

Control-panel view (color graphical display with keypad control panel, M652 models only)

Use the control panel to obtain printer and job status information and to configure the printer.

 **NOTE:** For more information about the printer-control-panel features, go to www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653. Select **Manuals**, and then select **General reference**.



1	Reset button	Select the Reset button to clear changes, release the printer from a paused state, reset the copy count field, display hidden errors, and restore the default settings (including the language and keyboard layout).
2	Sign In or Sign Out icon	Select the Sign In button to access secured features. Select the Sign Out button to sign out of the printer. The printer restores all options to the default settings. NOTE: This icon displays only if the administrator has configured the printer to require permission for access to features.
3	Applications area	Select any of the icons to open the application. NOTE: The available applications vary by printer. The administrator can configure which applications appear and the order in which they appear.
4	Home  button	Returns to the Home screen

5	Information  button	Select the information button to access several types of printer information. Select the items on the screen for the following information: • Display Language: Change the language setting for the current user session. • Wi-Fi Direct: View information for how to connect directly to the printer using a phone, tablet, or other device. • Wireless: View or change wireless connection settings (for the M652 model, only when an optional wireless accessory is installed). • Ethernet: View or change Ethernet connection settings. • HP Web Services: View information to connect and print to the printer using HP Web Services (ePrint).
6	Help  button	Provides a list of help topics or information about a topic when using the Home screen, an app, an option, or a feature
7	Back  button	Backs up one level in the menu tree or backs up one numeric entry
8	Up arrow  button	Navigates to the previous item or widget in the list, or increases the value of numeric items
9	Message Center  button	Displays the Message Center
10	Left arrow  button	Navigates to the previous item, widget, or level in a menu tree (but does not exit the app), or decreases the value of numeric items
11	OK button	Saves the selected value for an item, activates a focused button, or clears an error condition when the condition is clearable
12	Right arrow  button	Navigates to the next item, widget, or level in a menu tree, or increases the value of numeric items
13	Start  button	Starts the print job
14	Down arrow  button	Navigates to the next item or widget in the list, or decreases the value of numeric items
15	Cancel  button	Pauses the printer and displays a message confirming the job cancellation, if there is an active job
16	Clear  button	Clears the entire entry in an input field
17	Sign In or Sign Out button	Press the Sign In button to access secured features. Press the Sign Out button to sign out of the printer. The printer restores all options to the default settings.
18	Numeric keypad	Enters numeric values
19	Home-screen page indicator	Indicates the number of pages on the Home screen or in an application. The current page is highlighted. Use the arrow buttons to scroll between pages.

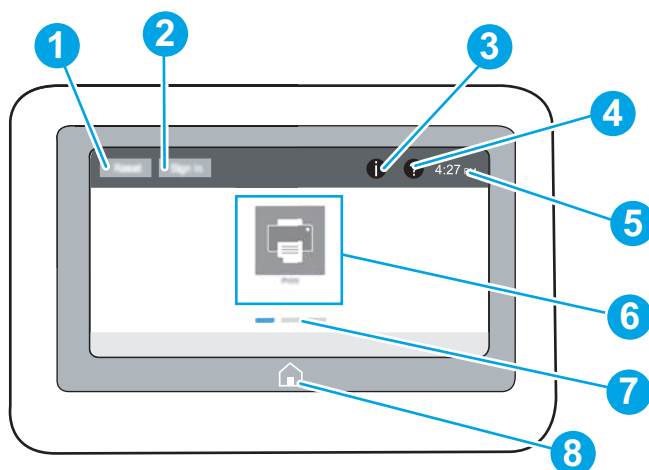
Control-panel view (touchscreen control panel, M653 models only)

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 left side of the printer control panel, or touch the Home button in the upper-left corner of most screens.

 **NOTE:** For more information about the printer-control-panel features, go to www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653. Select **Manuals**, and then select **General reference**.

 **NOTE:** The features that appear on the Home screen can vary, depending on the printer configuration.

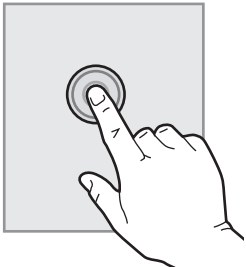
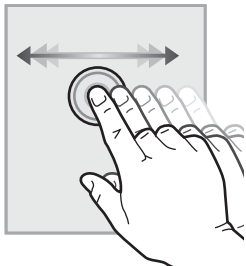
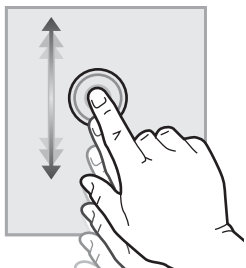


1	Reset button	Touch the Reset button to clear changes, release the printer from a paused state, reset the copy count field, display hidden errors, and restore the default settings (including the language and keyboard layout).
2	Sign In or Sign Out button	Touch the Sign In button to access secured features. Touch the Sign Out button to sign out of the printer. The printer restores all options to the default settings. NOTE: This button displays only if the administrator has configured the printer to require permission for access to features.
3	Information  button	Touch the information button to access a screen that provides access to several types of printer information. Touch the buttons at the bottom of the screen for the following information: • Display Language: Change the language setting for the current user session. • Sleep Mode: Place the printer into sleep mode. • Wi-Fi Direct: View information for how to connect directly to the printer using a phone, tablet, or other device with Wi-Fi. • Wireless: View or change wireless connection settings (wireless models only). • Ethernet: View or change Ethernet connection settings. • HP Web Services: View information to connect and print to the printer using HP Web Services (ePrint).
4	Help  button	Touch the Help button to open the embedded help system.
5	Current time	Displays the current time.

6	Applications area	Touch any of the icons to open the application. Swipe the screen sideways to access more applications. NOTE: The available applications vary by printer. The administrator can configure which applications appear and the order in which they appear.
7	Home-screen page indicator	Indicates the number of pages on the Home Screen or in an application. The current page is highlighted. Swipe the screen sideways to scroll between pages.
8	Home  button	Touch the Home button to return to the Home screen.

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 Settings icon to open the Settings app.
Swipe 	Touch the screen and then move your finger horizontally to scroll the screen sideways.	Swipe until the Settings app displays.
Scroll 	Touch the screen and then move your finger vertically to scroll the screen up and down. When scrolling through menus, briefly touch the screen to stop the scrolling.	Scroll through the Settings app.

Printer 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/colorljM652 or www.hp.com/support/colorljM653.

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

Technical specifications

Model name		M652n	M652dn	M653dn	M653x
Product number		J7Z98A	J7Z99A	J8A04A	J8A05A
Paper handling	Tray 1 (100-sheet capacity)	✓	✓	✓	✓
	Tray 2 (550-sheet capacity)	✓	✓	✓	✓
	1 x 550-sheet paper feeder	Optional	Optional	Optional	✓
	NOTE: The M652n, M652dn and M653dn models accept up to two optional 1 x 550-sheet feeders. Tray 3 is included with the M653x model, which can accept one additional 1 x 550-sheet paper feeder.				
	1 x 550-sheet paper feeder with stand	Optional	Optional	Optional	Optional
	3 x 550-sheet paper feeder with stand	Optional	Optional	Optional	Optional
	High-capacity input feeder (HCI)	Optional	Optional	Optional	Optional
Connectivity	Automatic duplex printing	Not supported	✓	✓	✓
	10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓	✓	✓
	Hi-Speed USB 2.0	✓	✓	✓	✓
	Easy-access USB port for printing without a computer and upgrading the firmware	✓	✓	✓	✓
	Hardware Integration Pocket for connecting accessory and third-party devices	✓	✓	✓	✓
	HP Internal USB Ports	Optional	Optional	Optional	✓

Model name		M652n	M652dn	M653dn	M653x
Product number		J7Z98A	J7Z99A	J8A04A	J8A05A
	HP Jetdirect 3000w NFC/ Wireless Accessory for printing from mobile devices	Optional	Optional	Optional	Optional
	NOTE: For use in the Hardware Integration Pocket. The HP Jetdirect 3000w NFC/ Wireless Accessory requires the HP Internal USB ports accessory. The J8030A can also be connected via the rear host USB port. In that case the HIP is not used.				
	Integrated HP and Wi-Fi Direct functionality for printing from mobile devices	Not available	Not available	Not available	✓
	HP Jetdirect 2900nw Print Server accessory for wireless connectivity	Optional	Optional	Optional	Optional
Memory	1 GB base memory	✓	✓	✓	✓
	NOTE: The base memory is expandable to 2 GB by adding a DIMM memory module.				
Mass storage	500 GB FIPS140 certified hard-disk drive	Optional	Optional	Optional	Optional
Security	HP Trusted Platform Module for encrypting all data that passes through the printer	Optional	Optional	Optional	Optional
Control-panel display and input	Color graphical display with 10-key keypad	✓	✓	Not supported	Not supported
	Color touchscreen control panel	Not supported	Not supported	✓	✓
Print	Prints 50 pages per minute (ppm) on letter and 47 ppm on A4-size paper	✓	✓	Not supported	Not supported
	Prints 60 pages per minute (ppm) on letter and 56 ppm on A4-size paper	Not supported	Not supported	✓	✓
	Easy-access USB printing (no computer required)	✓	✓	✓	✓
	Store jobs in the printer memory to print later or print privately	✓	✓	✓	✓

Supported operating systems

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

Windows: The HP Software Installer installs the “HP PCL.6” version 3 print driver, the “HP PCL 6” version 3 print driver, or the “HP PCL-6” version 4 print driver, depending on the Windows operating system, along with optional software when using the software installer. Download the “HP PCL.6” version 3 print driver, the “HP PCL 6” version 3 print driver, and the “HP PCL-6” version 4 print driver from the printer-support website for this printer: www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653.

OS X: Mac computers are supported with this printer. Download HP Easy Start either from 123.hp.com/LaserJet or from the Printer Support page, and then use HP Easy Start to install the HP print driver. HP Easy Start is not included in the HP Software Installer.

1. Go to 123.hp.com/LaserJet.
2. Follow the steps provided to download the printer software.

Linux: For information and print drivers for Linux, go to www.hp.com/go/linuxprinting.

UNIX: For information and print drivers for UNIX®, go to www.hp.com/go/unixmodelscripts.

Table 1-1 Supported operating systems and print drivers

Operating system	Print driver (for Windows, or the installer on the web for OS X)	Notes
Windows® XP SP3, 32-bit	The “HP PCL.6” printer-specific print driver is installed for this operating system as part of the software installation.	Microsoft retired mainstream support for Windows XP in April 2009. HP will continue to provide best effort support for the discontinued XP operating system. Some features of the print driver are not supported.
Windows Vista®, 32-bit	The “HP PCL.6” printer-specific print driver is installed for this operating system as part of the software installation.	Microsoft retired mainstream support for Windows Vista in April 2012. HP will continue to provide best effort support for the discontinued Vista operating system. Some features of the print driver are not supported.
Windows Server 2003 SP2, 32-bit	The “HP PCL.6” printer-specific print driver is available for download from the printer-support website. Download the driver, and then use the Microsoft Add Printer tool to install it.	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. Some features of the print driver are not supported.
Windows 7, 32-bit and 64-bit	The “HP PCL 6” printer-specific print driver is installed for this operating system as part of the 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 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” V4 printer-specific print driver is installed for this operating system as part of the software installation.	Windows 8.1 RT support is provided through Microsoft IN OS Version 4, 32-bit driver.
Windows 10, 32-bit and 64-bit	The “HP PCL-6” V4 printer-specific print driver is installed for this operating system as part of the software installation.	

Table 1-1 Supported operating systems and print drivers (continued)

Operating system	Print driver (for Windows, or the installer on the web for OS X)	Notes
Windows Server 2008 SP2, 32-bit	The "HP PCL 6" printer-specific print driver is available for download from the printer-support website. Download the driver, and then use the Microsoft Add Printer tool to install it.	Microsoft retired mainstream support for Windows Server 2008 in January 2015. HP will continue to provide best effort support for the discontinued Server 2008 operating system. Some features of the print driver are not supported.
Windows Server 2008 SP2, 64-bit	The "HP PCL 6" printer-specific print driver is available for download from the printer-support website. Download the driver, and then use the Microsoft Add Printer tool to install it.	Microsoft retired mainstream support for Windows Server 2008 in January 2015. HP will continue to provide best effort support for the discontinued Server 2008 operating system.
Windows Server 2008 R2, SP 1, 64-bit	The "HP PCL 6" printer-specific print driver is available for download from the printer-support website. Download the driver, and then use the Microsoft Add Printer tool to install it.	
Windows Server 2012, 64-bit	The PCL 6 printer-specific print driver is available for download from the printer-support website. Download the driver, and then use the Microsoft Add Printer tool to install it.	
Windows Server 2012 R2, 64-bit	The PCL 6 printer-specific print driver is available for download from the printer-support website. Download the driver, and then use the Microsoft Add Printer tool to install it.	
OS X 10.10 Yosemite, OS X 10.11 El Capitan, OS X 10.12 Sierra	The HP print driver is available for download from 123.hp.com/LaserJet . The HP installer software for OS X is not included in the HP Software Installer.	For OS X, download the installer from 123.hp.com/LaserJet . 1. Go to 123.hp.com/LaserJet. 2. Follow the steps provided to download the printer software.

 **NOTE:** For a current list of supported operating systems, go to www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653 for HP's all-inclusive help for the printer.

 **NOTE:** For details on client and server operating systems and for HP UPD driver support for this printer, go to www.hp.com/go/upd. Under **Additional information**, click the links.

Table 1-2 Minimum system requirements

Windows	OS X
• CD-ROM drive, DVD drive, or an Internet connection • Dedicated USB 1.1 or 2.0 connection or a network connection • 400 MB of available hard-disk space • 1 GB RAM (32-bit) or 2 GB RAM (64-bit)	• Internet connection • 1 GB of available hard-disk space

Mobile printing solutions

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 (wireless models only)
- 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)
- HP All-in-One Remote app for iOS and Android devices
- HP ePrint software
- Google Cloud Print
- AirPrint
- Android Printing

Printer dimensions

Table 1-3 Dimensions for the n and dn models

	Printer fully closed	Printer fully opened
Height	M652n and M652dn models: 482 mm (19 in) M653dn models: 510 mm (20 in)	M652n and M652dn models: 482 mm (19 in) M653dn models: 510 mm (20 in)
Depth	458 mm (18 in)	770 mm (30.3 in)
Width	510 mm (20 in)	963 mm (37.9 in)
Weight	26.8 kg (59 lb)	

Table 1-4 Dimensions for the x model

	Printer fully closed	Printer fully opened
Height	510 mm (16.3 in)	510 mm (19.2 in)
Depth	458 mm (18 in)	770 mm (30.3 in)
Width	510 mm (20 in)	963 mm (37.9 in)
Weight	33.1 kg (72.9 lb)	

Table 1-5 Dimensions for the 1 x 550-sheet paper feeder

Height	130 mm (5.1 in)
Depth	Tray closed: 458 mm (18 in) Tray opened: 770 mm (30.3 in)
Width	Door closed: 510 mm (20.7 in) Door opened: 510 mm (20.7 in)
Weight	6.3 kg (13.8 lb)

Table 1-6 Dimensions for the printer with one 1 x 550-sheet paper feeder

	Printer fully closed	Printer fully opened
Height	M652n and M652dn models: 612 mm (14 in) M653dn models: 640 mm (25.1 in) M653x models: 770 mm (30.3 in)	M652n and M652dn models: 612 mm (14 in) M653dn models: 640 mm (25.1 in) M653x models: 770 mm (30.3 in)
Depth	458 mm (18 in)	770 mm (30.3 in)
Width	510 mm (20.7 in)	963 mm (37.9 in)
Weight	33.1 kg (72.9 lb)	

Table 1-7 Dimensions for the 1 x 550-sheet paper feeder with stand

Height	450 mm (17.7 in)
Depth	Tray closed: 657 mm (25.8 in) Tray opened: 948 mm (37.3 in)
Width	Door closed: 657 mm (25.8 in) Door opened: 992 mm (39 in)
Weight	18.6 kg (41 lb)

Table 1-8 Dimensions for the printer and the 1 x 550-sheet paper feeder with stand

	Printer and accessories fully closed	Printer and accessories fully opened
Height	M652n and M652dn models: 932 mm (36.6 in) M653dn models: 960 mm (37.7 in)	M652n and M652dn models: 932 mm (36.6 in) M653dn models: 960 mm (37.7 in)
Depth	657 mm (25.8 in)	948 mm (37.3 in)
Width	657 mm (25.8 in)	992 mm (39 in)
Weight	45.4 kg (100 lb)	

Table 1-9 Dimensions for the 3 x 550-sheet paper feeder with stand

Height	450 mm (17.7 in)
Depth	Tray closed: 657 mm (25.8 in) Tray open: 984 mm (37.3 in)
Width	Door closed: 657 mm (25.8 in) Door open: 992 mm (39 in)
Weight	22.7 kg (50 lb)

Table 1-10 Dimensions for the printer and the 3 x 550-sheet paper feeder with stand

	Printer and accessories fully closed	Printer and accessories fully opened
Height	M652n and M652dn models: 932 mm (36.6 in) M653dn models: 960 mm (37.7 in)	M652n and M652dn models: 932 mm (36.6 in) M653dn models: 960 mm (37.7 in)
Depth	657 mm (25.8 in)	984 mm (37.3 in)
Width	657 mm (25.8 in)	992 mm (39 in)
Weight	49.5 kg (109 lb)	

Table 1-11 Dimensions for the High-capacity input feeder (HCI) with stand

Height	450 mm (17.7 in)
--------	------------------

Table 1-11 Dimensions for the High-capacity input feeder (HCI) with stand (continued)

Depth	Tray closed: 657 mm (25.8 in)
	Tray open: 967 mm (38 in)
Width	Door closed: 657 mm (25.8 in)
	Door open: 992 mm (39 in)
Weight	25.2 kg (55.5 lb)

Table 1-12 Dimensions for the printer and the High-capacity input feeder (HCI) with stand

	Printer and accessories fully closed	Printer and accessories fully opened
Height	M652n and M652dn models: 932 mm (36.6 in)	M652n and M652dn models: 932 mm (36.6 in)
	M653dn models: 960 mm (37.7 in)	M653dn models: 960 mm (37.7 in)
Depth	657 mm (25.8 in)	967 mm (38 in)
Width	657 mm (25.8 in)	992 mm (39 in)
Weight	52 kg (114.6 lb)	

Power consumption, electrical specifications, and acoustic emissions

See www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653 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 1-13 Operating-environment specifications

Environment	Recommended	Allowed
Temperature	15° to 27°C (59° to 80.6°F)	10° to 30°C (50° to 86°F)
Relative humidity	30% to 70% relative humidity (RH)	10% to 80% RH

Printer hardware setup and software installation

For basic setup instructions, see the Hardware Installation Guide that came with the printer. For additional instructions, go to HP support on the Web.

Go to www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653 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

- [Introduction](#)
- [Load Tray 1](#)
- [Load Tray 2 and the 550-sheet trays](#)
- [Load the 2,000-sheet high-capacity input tray](#)
- [Load and print envelopes](#)
- [Load and print labels](#)

For more information:

The following information is correct at the time of publication. For current information, see www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653.

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

Introduction

⚠ CAUTION: Do not extend more than one paper tray at a time.

Do not use paper tray as a step.

Keep hands out of paper trays when closing.

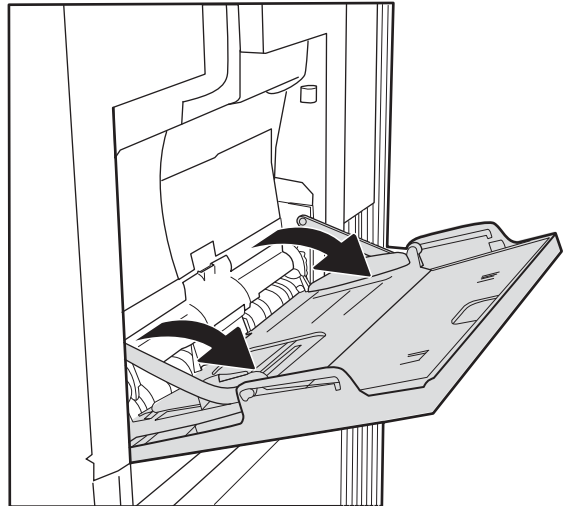
All trays must be closed when moving the printer.

Load Tray 1

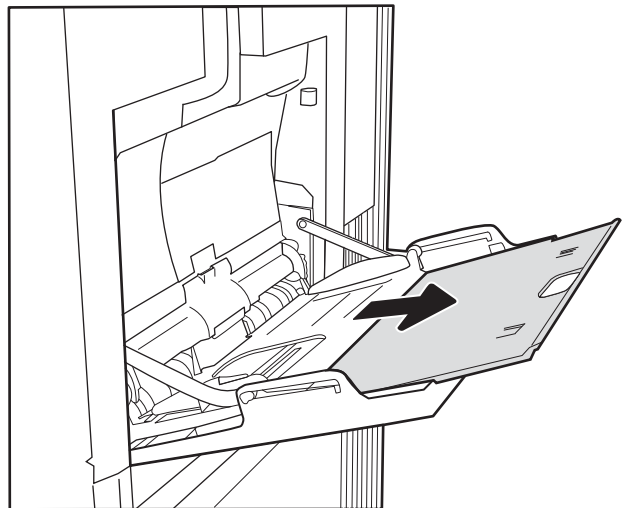
Introduction

The following information describes how to load paper into Tray 1. This tray holds up to 100 sheets of 75 g/m² (20 lb) paper or 10 envelopes.

1. Open Tray 1.



2. Pull out the tray extension to support the paper.

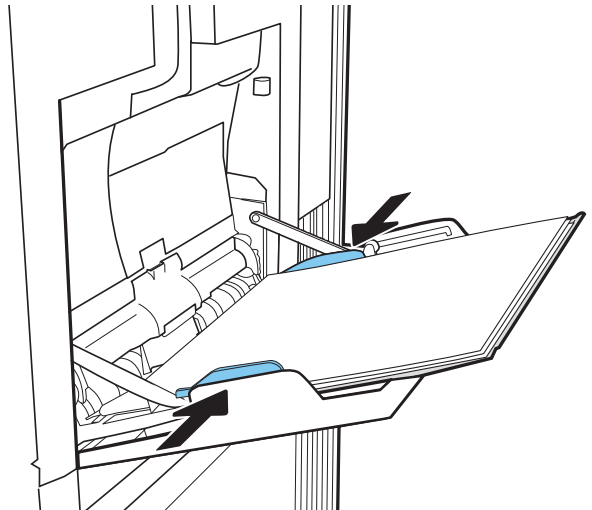
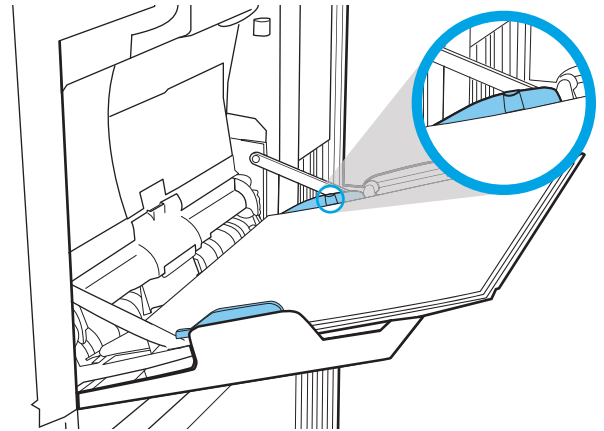


3. Use the blue adjustment latch to spread the paper guides to the correct size, and then load paper in the tray. For information about how to orient the paper, see [Table 2-1 Tray 1 paper orientation on page 22](#).

Make sure that the paper fits under the fill line on the paper guides.

NOTE: The maximum stack height is 10 mm (0.4 in), or approximately 100 sheets of 75 g/m² (20 lb) paper.

4. Using the blue adjustment latch, adjust the side guides so that they lightly touch the paper stack, but do not bend it.



Tray 1 paper orientation

Table 2-1 Tray 1 paper orientation

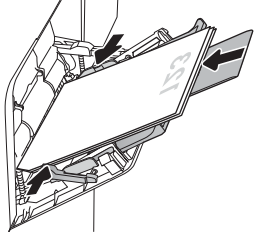
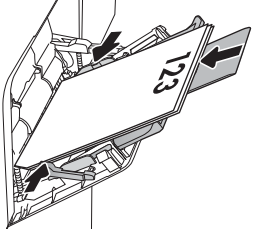
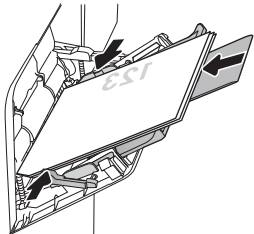
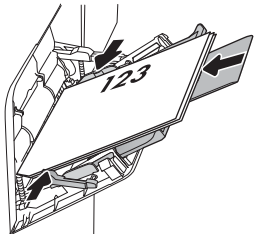
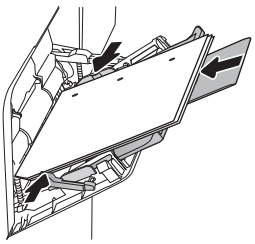
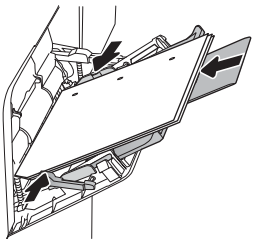
Paper type	Image orientation	Duplex mode	Paper size	How to load paper
Letterhead or preprinted	Portrait	1-sided printing	Letter, Legal, Executive, Statement, Oficio (8.5 x 13), 3 x 5, 4 x 6, 5 x 7, 5 x 8, A4, A5, A6, RA4, B5 (JIS), B6 (JIS), L (90 x 130 mm), 10 x 15 cm, Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm, Japanese Postcard (Postcard (JIS)), Double Japan Postcard Rotated (Double Postcard (JIS))	Face-down Bottom edge leading into the printer 
		Automatic 2-sided printing or with Alternative Letterhead Mode enabled	Letter, Legal, Executive, Oficio (8.5 x 13), A4, A5, RA4, B5 (JIS), Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm	Face-up Bottom edge leading into the printer 
	Landscape	1-sided printing	Letter, Legal, Executive, Statement, Oficio (8.5 x 13), 3 x 5, 4 x 6, 5 x 7, 5 x 8, A4, A5, A6, RA4, B5 (JIS), B6 (JIS), L (90 x 130 mm), 10 x 15 cm, Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm, Japanese Postcard (Postcard (JIS)), Double Japan Postcard Rotated (Double Postcard (JIS))	Face-down Top edge toward the back of the printer 
		Automatic 2-sided printing or with Alternative Letterhead Mode enabled	Letter, Legal, Executive, Oficio (8.5 x 13), A4, A5, RA4, B5 (JIS), Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm	Face-up Top edge toward the back of the printer 

Table 2-1 Tray 1 paper orientation (continued)

Paper type	Image orientation	Duplex mode	Paper size	How to load paper
Prepunched	Portrait and landscape	1-sided printing	Letter, Legal, Executive, Statement, Oficio (8.5 x 13), 3 x 5, 4 x 6, 5 x 7, 5 x 8, A4, A5, A6, RA4, B5 (JIS), B6 (JIS), L (90 x 130 mm), 10 x 15 cm, Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm, Japanese Postcard (Postcard (JIS)), Double Japan Postcard Rotated (Double Postcard (JIS))	Holes toward the back of the printer 
		Automatic 2-sided printing or with Alternative Letterhead Mode enabled	Letter, Legal, Executive, Oficio (8.5 x 13), A4, A5, RA4, B5 (JIS), Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm	Holes toward the back of the printer 

Use alternative letterhead mode

Use the [Alternative Letterhead Mode](#) feature to load letterhead or preprinted paper into the tray the same way for all jobs, whether printing to one side of the sheet of paper or to both sides. When using this mode, load paper as for automatic duplex printing.

To use the feature, enable it by using the printer control-panel menus.

Enable Alternative Letterhead Mode by using the printer control-panel menus

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Copy/Print](#) or [Print](#)
 - [Manage Trays](#)
 - [Alternative Letterhead Mode](#)
3. Select [Enabled](#), and then touch the [Save](#) button or press the [OK](#) button.

Load Tray 2 and the 550-sheet trays

Introduction

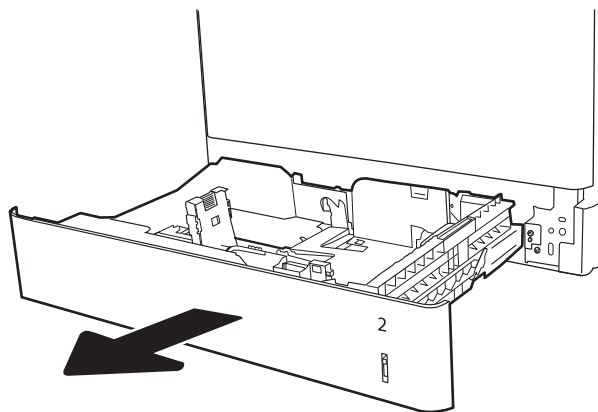
The following information describes how to load paper into Tray 2 and the optional 550-sheet trays. These trays hold up to 550 sheets of 75 g/m² (20 lb) paper.

 **NOTE:** The procedure to load paper for the 550-sheet trays is the same as for Tray 2. Only Tray 2 is shown here.

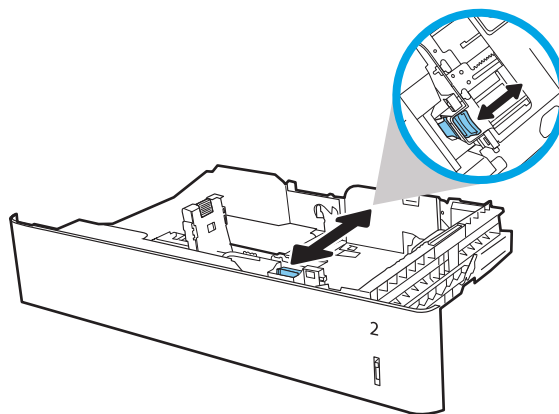
 **CAUTION:** Do not extend more than one paper tray at a time.

1. Open the tray.

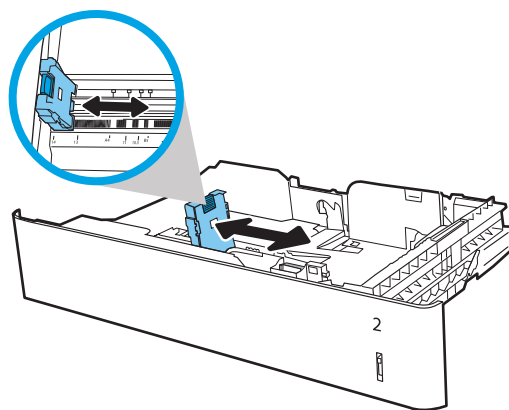
NOTE: Do not open this tray while it is in use.



2. Before loading paper, adjust the paper-width guides by squeezing the blue adjustment latches and sliding the guides to the size of the paper being used.



3. Adjust the paper-length guide by squeezing the adjustment latch and sliding the guide to the size of the paper being used.

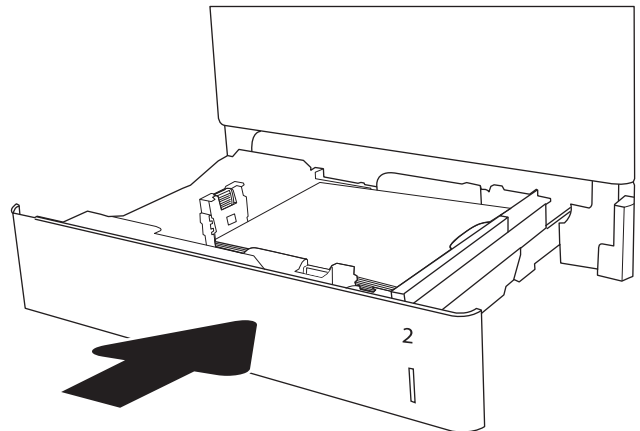
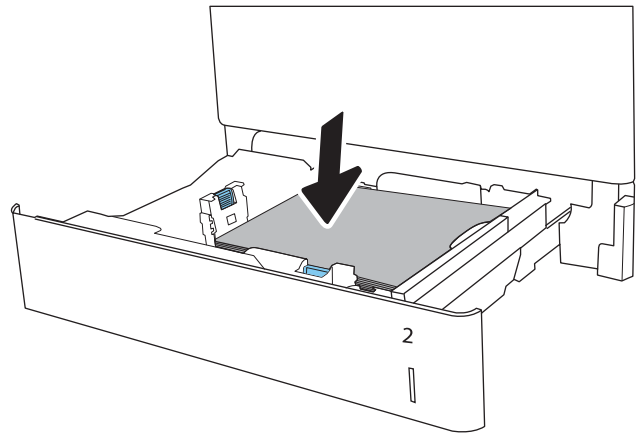


4. Load paper into the tray. Check the paper to verify the guides lightly touch the stack, but do not bend it. For information about how to orient the paper, see [Table 2-2 Tray 2 and the 550-sheet trays paper orientation on page 27](#).

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

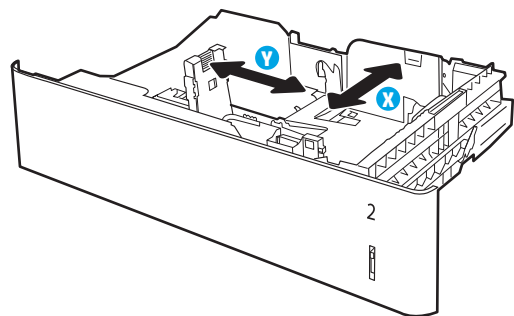
NOTE: To prevent jams, adjust the paper guides to the correct size and do not overfill the tray. Be sure that the top of the stack is below the tray full indicator.

5. Close the tray.



6. The tray configuration message displays on the printer control panel.
7. Touch the **OK** button to accept the detected type and size, or touch the **Modify** button to choose a different paper size or type.

For custom-size paper, specify the X and Y dimensions for the paper when the prompt displays on the printer control panel.



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

Tray 2 and the 550-sheet trays paper orientation

Table 2-2 Tray 2 and the 550-sheet trays paper orientation

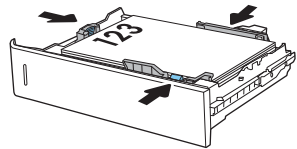
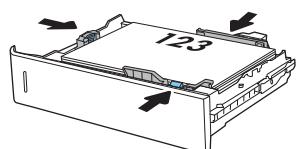
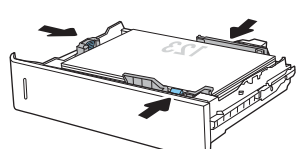
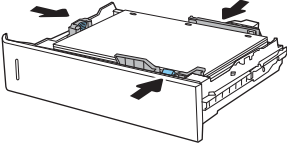
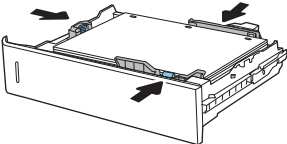
Paper type	Image orientation	Duplex mode	Paper size	How to load paper
Letterhead or preprinted	Portrait	1-sided printing	Letter, Legal, Executive, Statement, Oficio (8.5 x 13), 4 x 6, 5 x 7, 5 x 8, A4, A5, A6, RA4, B5 (JIS), B6 (JIS), L (90 x 130 mm), 10 x 15 cm, Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm, Double Japan Postcard Rotated (Double Postcard (JIS))	Face-up Top edge at the left side of the tray 
	Landscape	1-sided printing	Letter, Legal, Executive, Statement, Oficio (8.5 x 13), 4 x 6, 5 x 7, 5 x 8, A4, A5, A6, RA4, B5 (JIS), B6 (JIS), L (90 x 130 mm), 10 x 15 cm, Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm, Double Japan Postcard Rotated (Double Postcard (JIS))	Face-up Top edge toward the back of the tray 
		Automatic 2-sided printing or with Alternative Letterhead Mode enabled	Letter, Legal, Executive, Oficio (8.5 x 13), A4, A5, RA4, Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm	Face-down Top edge toward the back of the tray 

Table 2-2 Tray 2 and the 550-sheet trays paper orientation (continued)

Paper type	Image orientation	Duplex mode	Paper size	How to load paper
Prepunched	Portrait or landscape	1-sided printing	Letter, Legal, Executive, Statement, Oficio (8.5 x 13), 4 x 6, 5 x 7, 5 x 8, A4, A5, A6, RA4, B5 (JIS), B6 (JIS), L (90 x 130 mm), 10 x 15 cm, Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm, Double Japan Postcard Rotated (Double Postcard (JIS))	Holes toward the back of the tray 
		Automatic 2-sided printing or with Alternative Letterhead Mode enabled	Letter, Legal, Executive, Oficio (8.5 x 13), A4, A5, RA4, Oficio (216 x 340), 16K 195 x 270 mm, 16K 184 x 260 mm, 16K 197 x 273 mm	Holes toward the back of the tray 

Use alternative letterhead mode

Use the [Alternative Letterhead Mode](#) feature to load letterhead or preprinted paper into the tray the same way for all jobs, whether printing to one side of the sheet of paper or to both sides. When using this mode, load paper as for automatic duplex printing.

To use the feature, enable it by using the printer control-panel menus.

Enable Alternative Letterhead Mode by using the printer control-panel menus

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Copy/Print](#) or [Print](#)
 - [Manage Trays](#)
 - [Alternative Letterhead Mode](#)
3. Select [Enabled](#), and then touch the [Save](#) button or press the [OK](#) button.

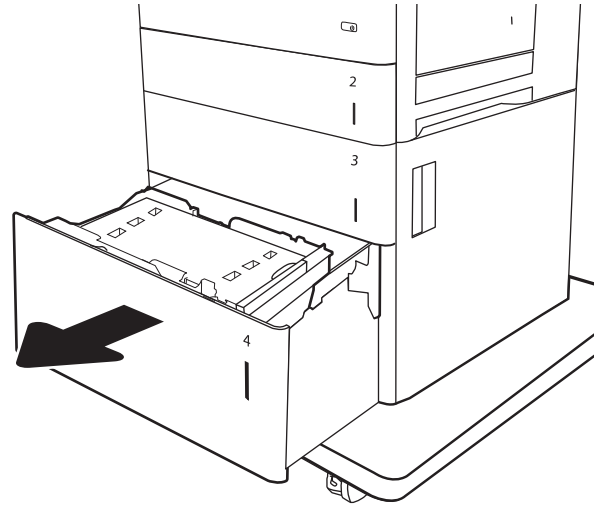
Load the 2,000-sheet high-capacity input tray

Introduction

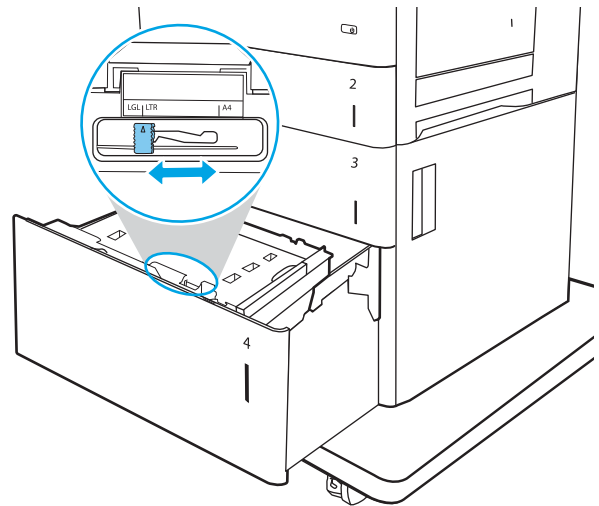
The following information describes how to load paper into High-capacity input tray. This tray holds up to 2,000 sheets of 75 g/m² (20 lb) paper.

1. Open the tray.

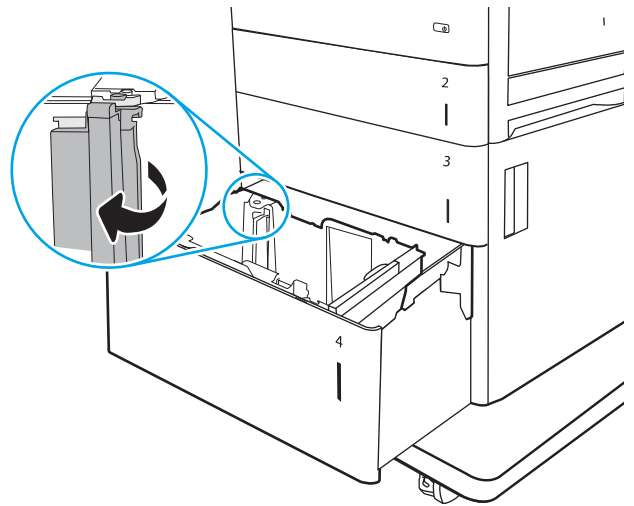
NOTE: Do not open this tray while it is in use.



2. Before loading paper, adjust the paper-width guide by squeezing the blue adjustment latch and sliding it to the size of the paper being used.

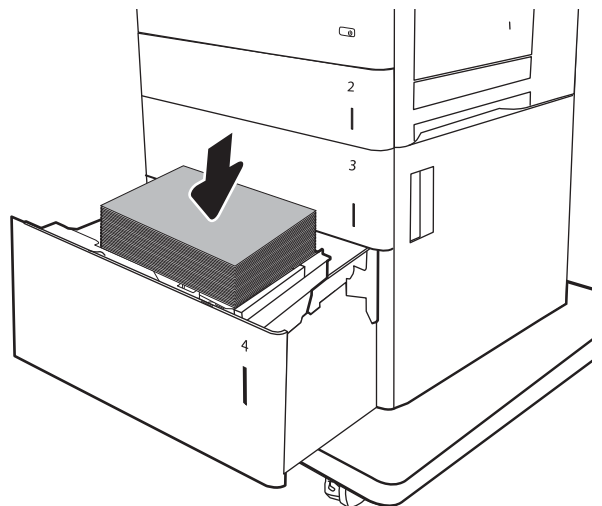


3. Rotate the paper-stop lever to the correct position for the paper being used.

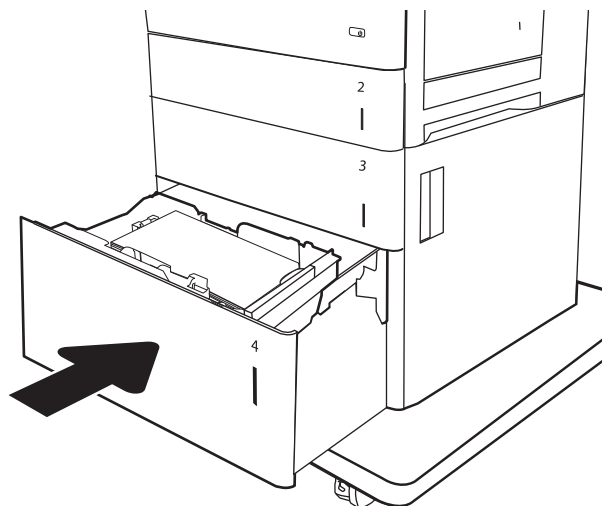


4. Load paper into the tray. Check the paper to verify the guides lightly touch the stack, but do not bend it. For information about how to orient the paper, see [Table 2-3 High-capacity input tray paper orientation on page 32](#).

NOTE: To prevent jams, adjust the paper guides to the correct size and do not overfill the tray. Be sure that the top of the stack is below the tray full indicator.



5. Close the tray.



6. The tray configuration message displays on the printer control panel.
7. Touch the **OK** button to accept the detected type and size, or touch the **Modify** button to choose a different paper size or type.

High-capacity input tray paper orientation

Table 2-3 High-capacity input tray paper orientation

Paper type	Image orientation	Duplex mode	Paper size	How to load paper
Letterhead or preprinted	Portrait	1-sided printing	Letter, Legal, A4	Face-up Top edge at the left side of the tray
		Automatic 2-sided printing or with Alternative Letterhead Mode enabled	Letter, Legal, A4	Face-down Top edge at the left side of the tray
	Landscape	1-sided printing	Letter, Legal, A4	Face-up Top edge toward the back of the tray

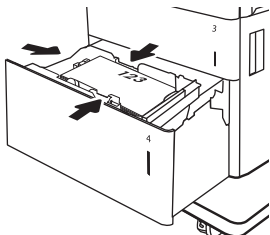
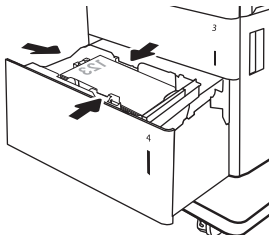
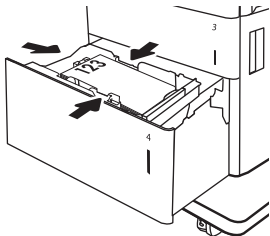
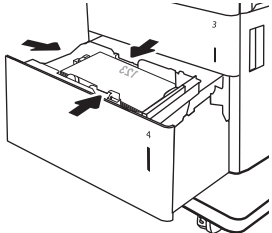
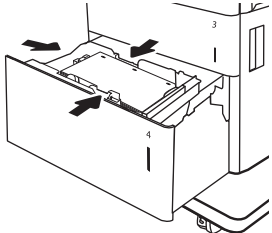
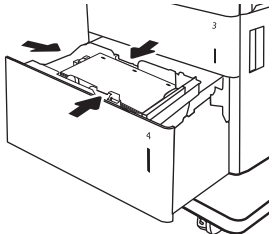


Table 2-3 High-capacity input tray paper orientation (continued)

Paper type	Image orientation	Duplex mode	Paper size	How to load paper
		Automatic 2-sided printing or with Alternative Letterhead Mode enabled	Letter, Legal, A4	Face-down Top edge toward the back of the tray 
Prepunched	Portrait or landscape	1-sided printing	Letter, Legal, A4	Holes toward the back of the tray 
		Automatic 2-sided printing or with Alternative Letterhead Mode enabled	Letter, Legal, A4	Holes toward the back of the tray 

Use alternative letterhead mode

Use the [Alternative Letterhead Mode](#) feature to load letterhead or preprinted paper into the tray the same way for all jobs, whether printing to one side of the sheet of paper or to both sides. When using this mode, load paper as for automatic duplex printing.

To use the feature, enable it by using the printer control-panel menus.

Enable Alternative Letterhead Mode by using the printer control-panel menus

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Copy/Print](#) or [Print](#)
 - [Manage Trays](#)
 - [Alternative Letterhead Mode](#)
3. Select [Enabled](#), and then touch the [Save](#) button or press the [OK](#) button.

Load and print envelopes

Introduction

The following information describes how to print and load envelopes. Use only Tray 1 to print on envelopes. Tray 1 holds up to 10 envelopes.

To print envelopes using the manual feed option, follow these steps to select the correct settings in the print driver, and then load the envelopes into the tray after sending the print job to the printer.

Print envelopes

1. From the software program, select the **Print** option.
2. Select the printer from the list of printers, and then click the **Properties** or **Preferences** button to open the print driver.

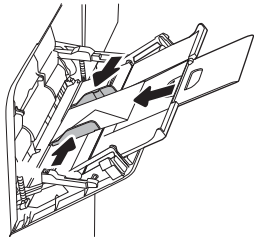
 **NOTE:** The name of the button varies for different software programs.

 **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 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 **Manual feed**.
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

Tray	Envelope size	How to load
Tray 1	Envelope #9, Envelope #10, Envelope Monarch, Envelope B5, Envelope C5, Envelope C6, Envelope DL	Face-down Top edge toward the front of the printer



Load and print labels

Introduction

The following information describes how to print and load labels.

To print on sheets of labels, use Tray 2 or one of the 550-sheet trays. Tray 1 does not support labels.

To print labels using the manual feed option, follow these steps to select the correct settings in the print driver, and then load the labels into the tray after sending the print job to the printer. When using manual feed, the printer waits to print the job until it detects that the tray has been opened.

Manually feed labels

- 1. From the software program, select the **Print** option.
- 2. Select the printer from the list of printers, and then click 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.

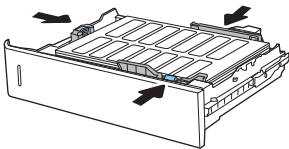
- 3. Click the **Paper/Quality** tab.
- 4. In the **Paper size** drop-down list, select the correct size for the sheets of labels.
- 5. In the **Paper type** drop-down list, select **Labels**.
- 6. In the **Paper source** drop-down list, select **Manual feed**.

 **NOTE:** When using manual feed, the printer prints from the lowest-numbered tray that is configured for the correct size of paper, so it is not necessary to specify a particular tray. For example, if Tray 2 is configured for labels, the printer will print from Tray 2. If Tray 3 is installed and configured for labels, but Tray 2 is not configured for labels, the printer will print from Tray 3.

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

Label orientation

Tray	How to load labels
Tray 2 and the 550-sheet trays	Face-up Top edge toward the right of the printer



3 Supplies, accessories, and parts

- [Order supplies, accessories, and parts](#)
- [Configure the HP toner-cartridge-protection supply settings](#)
- [Replace the toner cartridges](#)
- [Replace the toner-collection unit](#)

For more information:

The following information is correct at the time of publication. For current information, see www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653.

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

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 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.

Supplies and accessories

Item	Description	Cartridge number	Part number
Supplies			
HP 655A Black Original LaserJet Toner Cartridge	Standard-yield replacement black toner cartridge	655A	CF450A
HP 656X High Yield Black Original LaserJet Toner Cartridge	High-yield replacement black toner cartridge	656X	CF460X
HP 655A Cyan Original LaserJet Toner Cartridge	Standard-yield replacement cyan toner cartridge	655A	CF451A
HP 656X High Yield Cyan Original LaserJet Toner Cartridge	High-yield replacement cyan toner cartridge	656X	CF461X
HP 656X Yellow Original LaserJet Toner Cartridge	Standard-yield replacement yellow toner cartridge	655A	CF452A
HP 656X High Yield Yellow Original LaserJet Toner Cartridge	High-yield replacement yellow toner cartridge	656X	CF462X
HP 656X Magenta Original LaserJet Toner Cartridge	Standard-yield replacement magenta toner cartridge	655A	CF453A
HP 656X High Yield Magenta Original LaserJet Toner Cartridge	High-yield replacement magenta toner cartridge	656X	CF463X
Accessories			
HP Color LaserJet 550-sheet Paper Tray	Optional 550-sheet paper feeder NOTE: The printer supports up to two 1 x 550-sheet paper feeders unless other input devices are present.	Not applicable	P1B09A
HP Color LaserJet 550-sheet Paper Tray with Stand	Optional 550-sheet paper feeder with stand	Not applicable	P1B10A
HP Color LaserJet 3 x 550-sheet Paper Tray with Stand	Optional 3 x 550-sheet paper feeder with stand to support the printer	Not applicable	P1B11A
HP Color LaserJet High Capacity Paper Feeder with Stand	Optional 2,000-sheet paper feeder and 550-sheet paper feeder with stand to support the printer	Not applicable	P1B12A

Item	Description	Cartridge number	Part number
HP Jetdirect 2900nw Print Server	USB wireless print server accessory	Not applicable	J8031A
HP Jetdirect 3000w NFC/Wireless Accessory	Wi-Fi direct accessory for “touch” printing from mobile devices	Not applicable	J8030A
NOTE: For use in the Hardware Integration Pocket. The HP Jetdirect 3000w NFC/Wireless Accessory requires the HP Internal USB ports accessory (B5L28A). The J8031A can also be connected via the rear host USB port. In that case, the HIP is not used.			
HP Trusted Platform Module	Automatically encrypts all data that passes through the printer	Not applicable	F5S62A
HP Internal USB ports	Two optional USB ports for connecting third-party devices	Not applicable	B5L28A
HP Secure High Performance Hard Disk Drive	Optional 500 GB FIPS140 certified hard drive	Not applicable	B5L29A
HP 1GB DDR3 x32 144-Pin 800MHz SODIMM	Optional DIMM for expanding the memory	Not applicable	E5K48A

Maintenance/long-life consumables

Maintenance/LLC Kit	Part number	Estimated life ¹
HP LaserJet 110V Maintenance Kit	P1B91A	150,000 pages*
HP LaserJet 220V Maintenance Kit	P1B92A	150,000 pages*
HP LaserJet Image Transfer Belt Kit	P1B93A	150,000 pages*
HP LaserJet Toner Collection Unit	P1B94A	100,000 pages*
MP Roller kit	P1B96A	150,000 pages*

¹ HP Maintenance/Long Life Consumables (LLC) life specifications are estimations based on the LLC life test conditions listed below. Actual individual life/yield during normal use varies depending on usage, environment, paper and other factors. Estimated life is not an implied guarantee or warrantable.

*The LLC life test conditions

- Print coverage: 5% evenly distributed across the page
- Environment: 17° to 25°C (62.6° to 77°F); 30%–70% relative humidity (RH)
- Media size: Letter/A4
- Media weight: 75 g/m² (20 lb) plain media
- Job size: 4 pages
- Short edge feed (A3) (i.e., Legal size media)

Factors that can reduce life from the conditions above:

- Media narrower than Letter/A4 widths (thermal slow downs equal more rotations)
- Paper heavier than 75 g/m² (20 lb) (heavier media creates higher stress on printer components)
- Print jobs smaller than 4 pages (smaller jobs mean more thermal cycling and more rotations)

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 printer 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
1 x 550-sheet paper feeder	Replacement 1 x 550-sheet paper tray	Mandatory	P1B09-67901
Secure Hard Disk Drive	Replacement hard disk drive	Mandatory	B5L29-67903
1GB 90-Pin DDR3 x32 800 MHz SODIMM	Replacement memory DIMM	Mandatory	E5K48-67902
Trusted Platform Module	Replacement Trusted Platform Module	Mandatory	F5S62-61001
HP Jetdirect 2900nw Print Server	Replacement USB wireless print server accessory	Mandatory	J8031-61001
HP Jetdirect 3000w NFC/Wireless Accessory	Replacement Wireless Direct Print accessory for "touch" printing from mobile devices	Mandatory	J8030-61001
Control Panel Kit (M653 models)	Replacement control panel	Mandatory	5851-7252
Control Panel Kit (M652 models)	Replacement control panel	Mandatory	5851-7253

Configure the HP toner-cartridge-protection supply settings

- [Introduction](#)
- [Enable or disable the Cartridge Policy feature](#)
- [Enable or disable the Cartridge Protection feature](#)

Introduction

Use HP Cartridge Policy and Cartridge Protection to control which cartridges are installed in the printer and protect the cartridges that are installed from theft. These features are available with HP FutureSmart versions 3 and later.

- **Cartridge Policy:** This feature protects the printer from counterfeit toner cartridges by allowing only genuine HP cartridges to be used with the printer. Using genuine HP cartridges ensures the best possible print quality. When someone installs a cartridge that is not a genuine HP cartridge, the printer control panel displays a message that the cartridge is unauthorized and it provides information explaining how to proceed.
- **Cartridge Protection:** This feature permanently associates toner cartridges with a specific printer, or fleet of printers, so they cannot be used in other printers. Protecting cartridges protects your investment. When this feature is enabled, if someone attempts to transfer a protected cartridge from the original printer into an unauthorized printer, that printer will not print with the protected cartridge. The printer control panel displays a message that the cartridge is protected, and it provides information explaining how to proceed.

 **CAUTION:** After enabling cartridge protection for the printer, all subsequent toner cartridges installed in the printer are automatically and *permanently* protected. To avoid protecting a new cartridge, disable the feature *before* installing the new cartridge.

Turning the feature off does not turn off protection for cartridges that are currently installed.

Both features are off by default. Follow these procedures to enable or disable them.

Enable or disable the Cartridge Policy feature

 **NOTE:** Enabling or disabling this feature might require entering an administrator password.

Use the printer control panel to enable the Cartridge Policy feature

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Manage Supplies](#)
 - [Cartridge Policy](#)
3. Select [Authorized HP](#).

Use the printer control panel to disable the Cartridge Policy feature

 **NOTE:** Enabling or disabling this feature might require entering an administrator password.

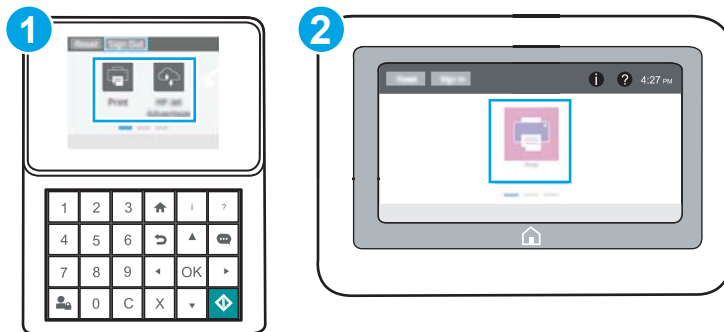
1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:

- [Manage Supplies](#)
- [Cartridge Policy](#)

3. Select **Off**.

Use the HP Embedded Web Server (EWS) to enable the Cartridge Policy feature

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



- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

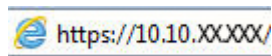
1. Open the HP Embedded Web Server (EWS):

- a. **Keypad control panels:** On the printer control panel, press the **i** button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the **i** button, and then select the Network  icon 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.

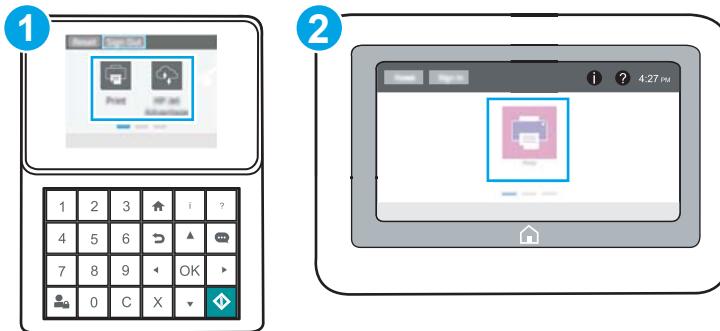
 **NOTE:** If the web browser displays a message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.



- Open the **Print** tab.
- From the left navigation pane, select **Manage Supplies**.
- In the Supply Settings area, select **Authorized HP** from the **Cartridge Policy** drop-down list.
- Click the **Apply** button to save the changes.

Use the HP Embedded Web Server (EWS) to disable the Cartridge Policy feature

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



- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

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

- a. **Keypad control panels:** On the printer control panel, press the  button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the  button, and then select the Network  icon 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.



2. Open the **Print** tab.
3. From the left navigation pane, select **Manage Supplies**.
4. In the Supply Settings area, select **Off** from the **Cartridge Policy** drop-down list.
5. Click the **Apply** button to save the changes.

Troubleshoot Cartridge Policy control panel error messages

Error message	Description	Recommended action
10.OX.30 Unauthorized <Color> Cartridge	The administrator has configured this printer to use only genuine HP supplies that are still under warranty. The cartridge must be replaced to continue printing.	Replace the cartridge with a genuine HP toner cartridge. If you believe you purchased a genuine HP supply, visit www.hp.com/go/anticounterfeit to determine if the toner cartridge is a genuine HP cartridge, and learn what to do if it is not a genuine HP cartridge.

Enable or disable the Cartridge Protection feature



NOTE: Enabling or disabling this feature might require entering an administrator password.

Use the printer control panel to enable the Cartridge Protection feature

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Manage Supplies](#)
 - [Cartridge Protection](#)
3. Select [Protect Cartridges](#).
4. When the printer prompts to confirm, select [Continue](#) to enable the feature.



CAUTION: After enabling cartridge protection for the printer, all subsequent toner cartridges installed in the printer are automatically and *permanently* protected. To avoid protecting a new cartridge, disable the feature *before* installing the new cartridge.

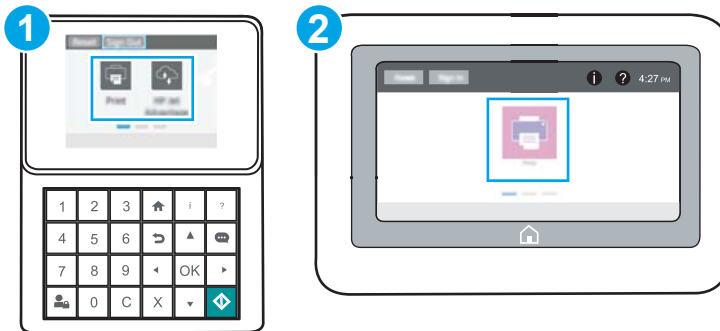
Turning the feature off does not turn off protection for cartridges that are currently installed.

Use the printer control panel to disable the Cartridge Protection feature

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Manage Supplies](#)
 - [Cartridge Protection](#)
3. Select [Off](#).

Use the HP Embedded Web Server (EWS) to enable the Cartridge Protection feature

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



- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

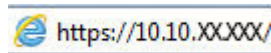
1. Open the HP Embedded Web Server (EWS):

- a. **Keypad control panels:** On the printer control panel, press the  button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the  button, and then select the Network  icon 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.



2. Open the **Print** tab.
3. From the left navigation pane, select **Manage Supplies**.
4. In the Supply Settings area, select **Protect cartridges** from the **Cartridge Protection** drop-down list.
5. Click the **Apply** button to save the changes.

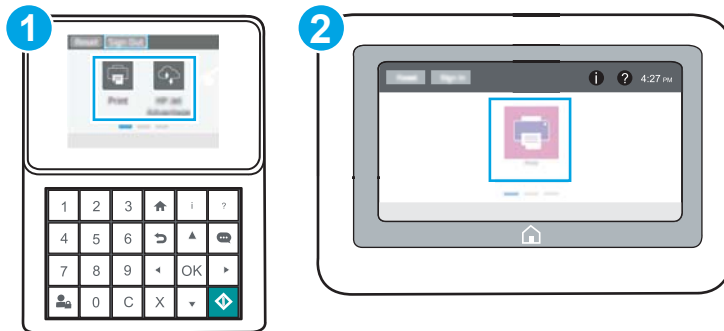
 **CAUTION:** After enabling cartridge protection for the printer, all subsequent toner cartridges installed in the printer are automatically and *permanently* protected. To avoid protecting a new cartridge, disable the feature *before* installing the new cartridge.

Turning the feature off does not turn off protection for cartridges that are currently installed.

Use the HP Embedded Web Server (EWS) to disable the Cartridge Protection feature



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



- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

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

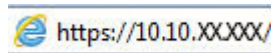
- Keypad control panels:** On the printer control panel, press the **i** button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the **i** button, and then select the Network  icon to display the IP address or host name.

- 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.



- Open the **Print** tab.
- From the left navigation pane, select **Manage Supplies**.
- In the Supply Settings area, select **Off** from the **Cartridge Protection** drop-down list.
- Click the **Apply** button to save the changes.

Troubleshoot Cartridge Protection control panel error messages

Error message	Description	Recommended action
10.0X.57 Protected <Color> Cartridge	The cartridge can only be used in the printer or fleet of printers that initially protected it using HP Cartridge Protection. The Cartridge Protection feature allows an administrator to restrict cartridges to work in only one printer or fleet of printers. The cartridge must be replaced to continue printing.	Replace the cartridge with a new toner cartridge.

Replace the toner cartridges

Toner-cartridge information

This printer indicates when the toner-cartridge level is low and very 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 655A Black Original LaserJet Toner Cartridge	Standard-yield replacement black toner cartridge	655A	CF450A
HP 656X High Yield Black Original LaserJet Toner Cartridge	High-yield replacement black toner cartridge	656X	CF460X
HP 655A Cyan Original LaserJet Toner Cartridge	Standard-yield replacement cyan cartridge	655A	CF451A
HP 656X High Yield Cyan Original LaserJet Toner Cartridge	High-yield replacement cyan toner cartridge	656X	CF461X
HP 655A Yellow Original LaserJet Toner Cartridge	Standard-yield replacement yellow toner cartridge	655A	CF452A
HP 656X High Yield Yellow Original LaserJet Toner Cartridge	High-yield replacement yellow toner cartridge	656X	CF462X
HP 655A Magenta Original LaserJet Toner Cartridge	Standard-yield replacement magenta toner cartridge	655A	CF453A
HP 656X High Yield Magenta Original LaserJet Toner Cartridge	High-yield replacement magenta toner cartridge	656X	CF463X



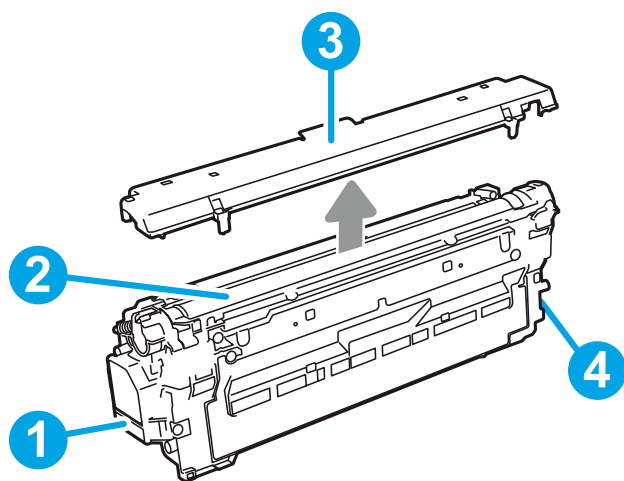
NOTE: High-yield toner cartridges contain more toner than standard cartridges for increased page yield. For more information, go to www.hp.com/go/learnaboutsupplies.

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



CAUTION: To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. Cover the green imaging drum if the toner cartridge must be removed from the printer for an extended period of time.

The following illustration shows the toner-cartridge components.



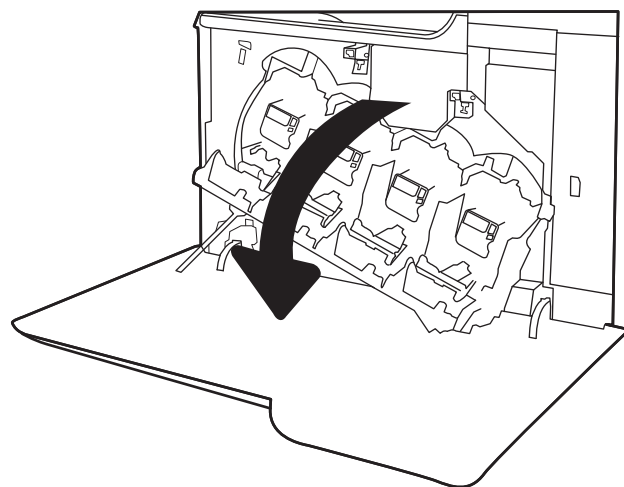
1	Handle
2	Imaging drum
3	Protective shield
4	Memory chip

⚠ 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.

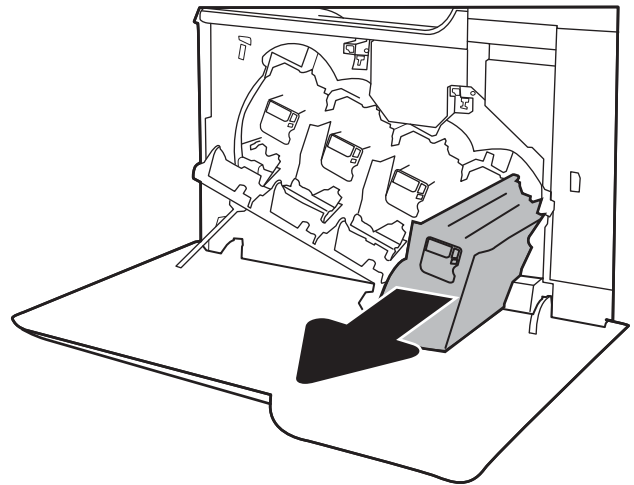
📋 NOTE: Information about recycling used toner cartridges is in the toner-cartridge box.

Remove and replace the cartridges

1. Open the front door.

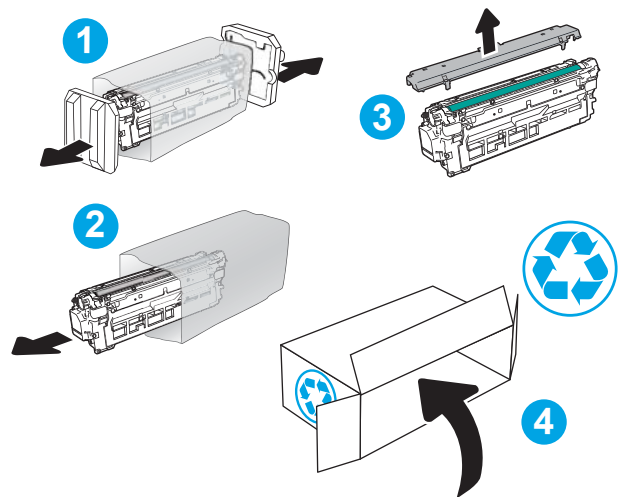


2. Grasp the handle of the used toner cartridge and pull out to remove it.

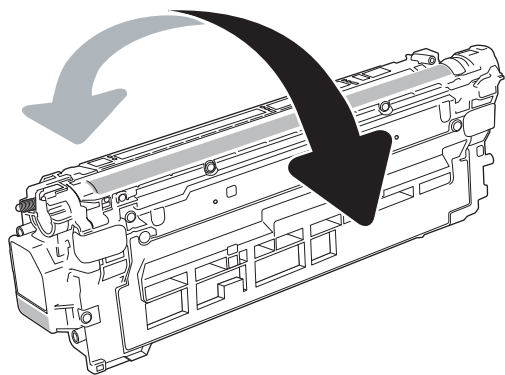


3. Remove the new toner cartridge from its packaging by removing the plastic end caps, removing the cartridge from the plastic bag, and then removing the orange protective shield. Save all packaging for recycling the used toner cartridge.

NOTE: Avoid touching the green imaging drum. Fingerprints on the imaging drum can cause print defects.

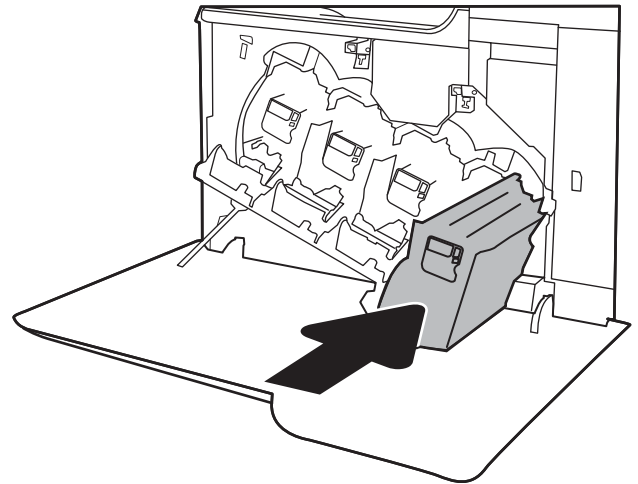


4. Hold both ends of the toner cartridge and rock it 5-6 times.

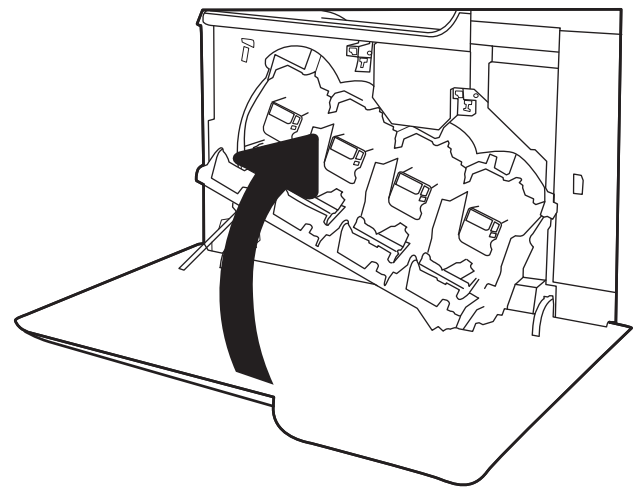


5. Support the toner cartridge underneath with one hand while holding the cartridge handle with the other. Align the toner cartridge with its slot on the shelf, and then insert the toner cartridge into the printer.

NOTE: Avoid touching the green imaging drum. Fingerprints on the imaging drum can cause print defects.



6. Close the front door.



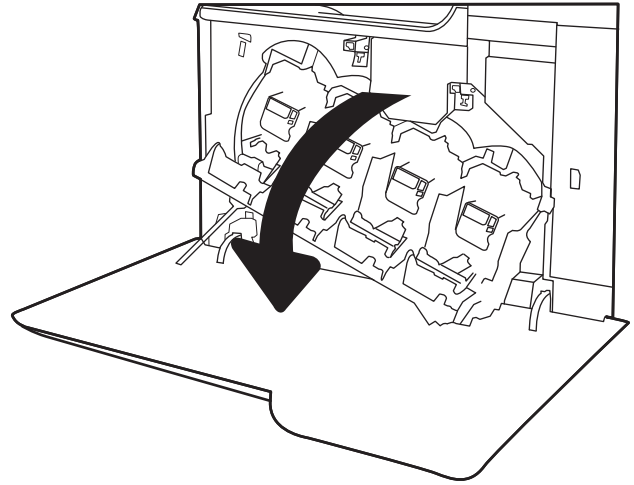
Replace the toner-collection unit

Replace the toner collection unit when the control panel prompts you.

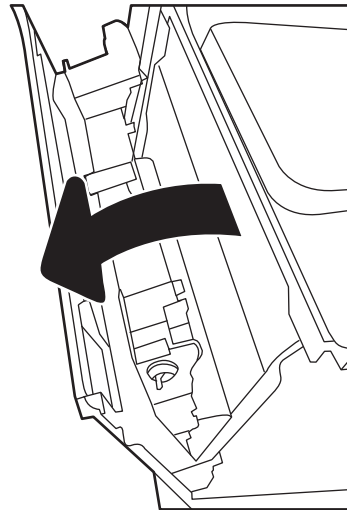
 **NOTE:** The toner collection unit is designed for a single use. Do not attempt to empty the toner collection unit and reuse it. Doing so could lead to toner being spilled inside the printer, which could result in reduced print quality. After use, return the toner collection unit to HP's Planet Partners program for recycling.

 **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.

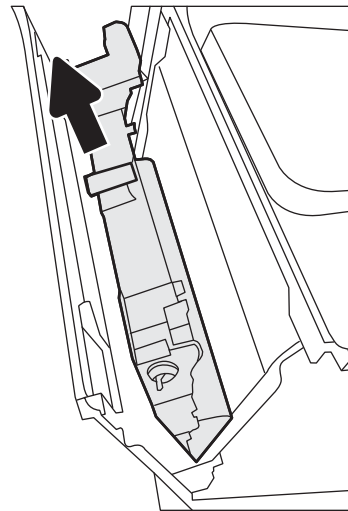
1. Open the front door.



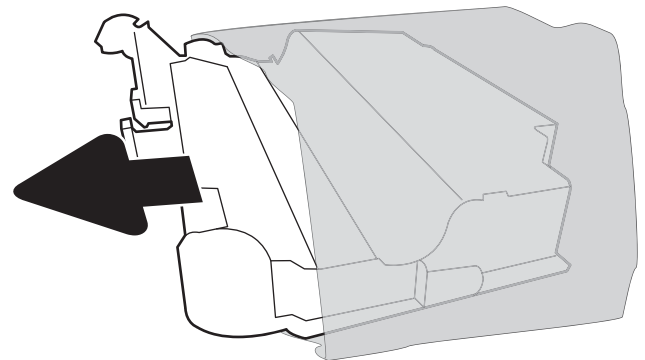
2. Open the left door.



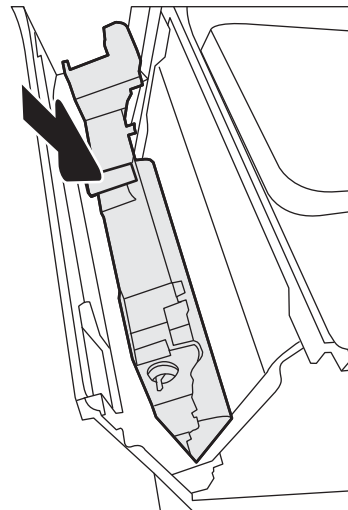
3. Grasp the top of the toner-collection unit and remove it from the printer.



4. Remove the new toner-collection unit from its packaging.



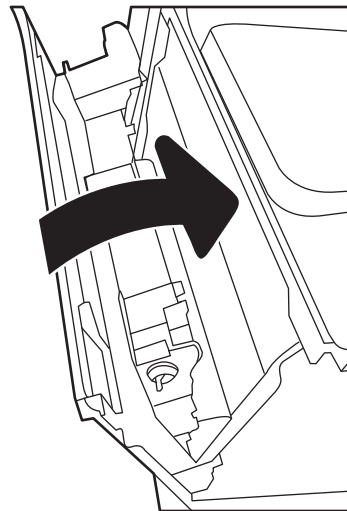
5. Install the new unit into the printer. Make sure the toner-collection unit is firmly in place.



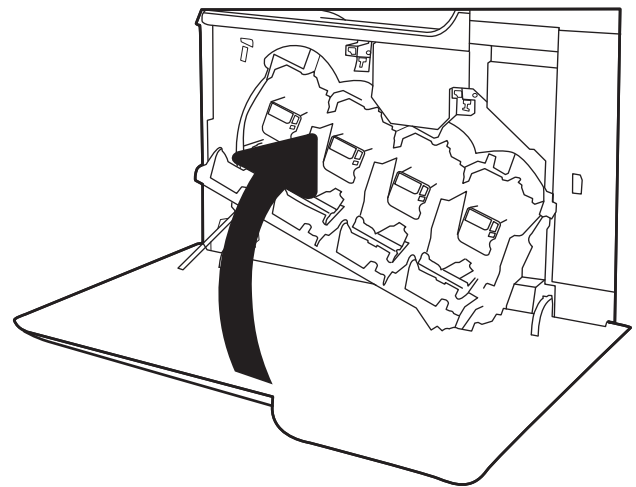
6. Close the left door.

NOTE: If the toner-collection unit is not installed correctly, the left door does not close completely.

To recycle the used toner-collection unit, follow the instructions included with the new toner-collection unit.



7. Close the front door.



4 Print

- [Print tasks \(Windows\)](#)
- [Print tasks \(OS X\)](#)
- [Store print jobs on the printer to print later or print privately](#)
- [Mobile printing](#)
- [Print from the USB port](#)

For more information:

The following information is correct at the time of publication. For current information, see www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653.

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.

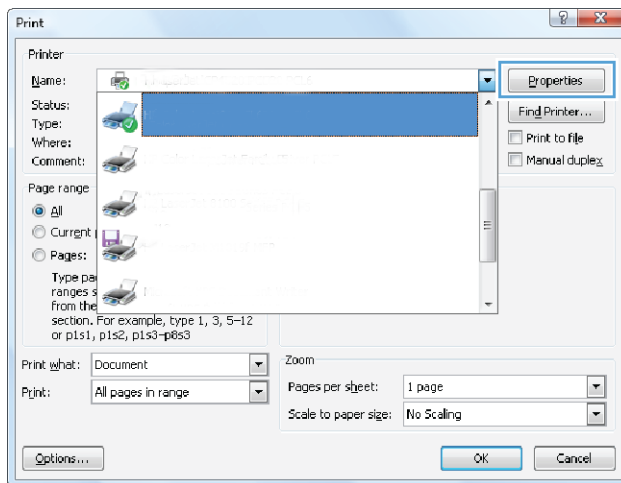
1. From the software program, select the **Print** option.
2. Select the printer from the list of printers. To change settings, click the **Properties** or **Preferences** button to open the print driver.

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

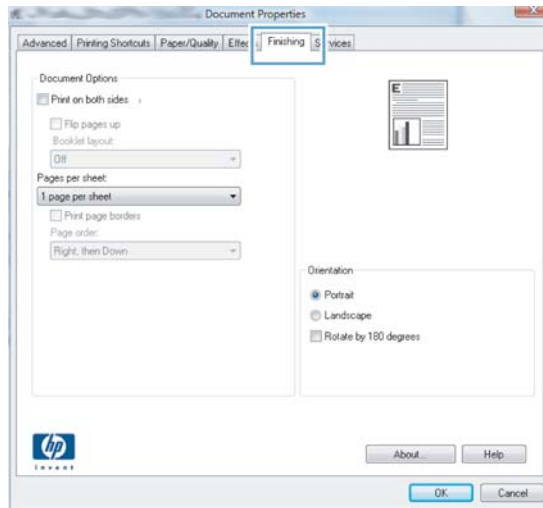
 **NOTE:** To access these features from a Windows 8 or 8.1 Start screen app, select **Devices**, select **Print**, and then select the printer.

 **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 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 the **OK** button to return to the **Print** dialog box. Select the number of copies to print from this screen.
5. Click the **Print** 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 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 the **Finishing** tab.
4. Select **Print on both sides**. Click **OK** to close the **Document Properties** dialog.
5. In the **Print** dialog, click **Print** 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 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 the **Finishing** tab.
4. Select **Print on both sides (manually)**, and then click **OK** to close the Document Properties dialog.
5. In the Print dialog, click **Print** to print the first side of the job.
6. Retrieve the printed stack from the output bin, and place it in Tray 1.
7. 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 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 the **Finishing** tab.
4. Select the number of pages per sheet from the **Pages per sheet** drop-down.
5. Select the correct **Print page borders**, **Page order**, and **Orientation** options. Click **OK** to close the **Document Properties** dialog.
6. In the **Print** dialog, click **Print** 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 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 the **Paper/Quality** tab.
4. From the **Paper type** drop-down, select 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 **OK**.
8. Click **OK** to close the **Document Properties** dialog. In the **Print** dialog, click **Print** 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/colorljM652 or www.hp.com/support/colorljM653.

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 (OS X)

How to print (OS X)

The following procedure describes the basic printing process for OS X.

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 (OS X)



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 (OS X)



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 (OS X)

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 (OS X)

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.
 - **EconoMode:** Select this option to conserve toner when printing drafts of documents.
5. Click the **Print** button.

Additional print tasks

Go to www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653.

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 printer to print later or print privately

Introduction

The following information 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.

- [Create a stored job \(Windows\)](#)
- [Create a stored job \(OS X\)](#)
- [Print a stored job](#)
- [Delete a stored job](#)
- [Information sent to printer for Job Accounting purposes](#)

Create a stored job (Windows)

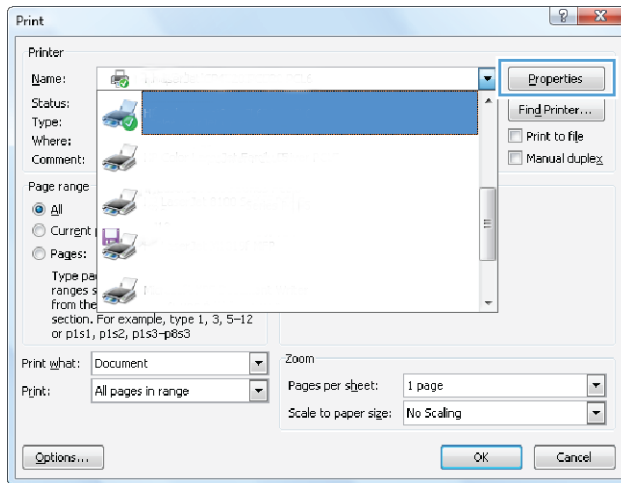
Store jobs on the printer for private or delayed printing.

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

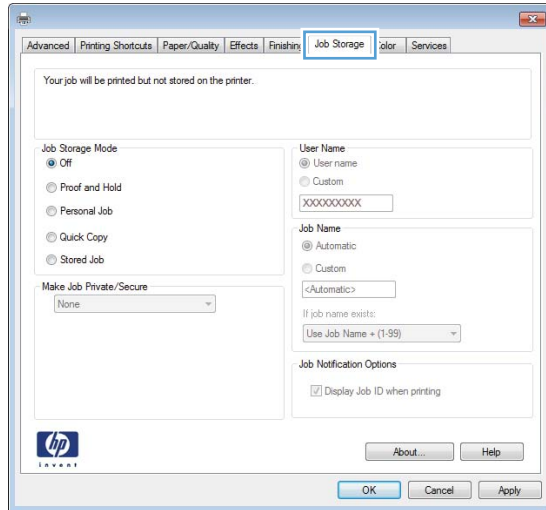
1. From the software program, select the **Print** option.
2. Select the printer from the list of printers, and then select **Properties** or **Preferences** (the name varies for different software programs).

 **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.
 - **Proof and Hold:** Print and proof one copy of a job, and then print more copies.
 - **Personal Job:** The job does not print until you request it at the printer control panel. For this job-storage mode, you can select one of the **Make Job Private/Secure** options. If you assign a personal identification number (PIN) to the job, you must provide the required PIN at the control panel. If you encrypt the job, you must provide the required password at the control panel. The print job is deleted from memory after it prints and is lost if the printer loses power.
 - **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.
 - **Stored Job:** Store a job on the printer and allow other users to print the job at any time. For this job-storage mode, you can select one of the **Make Job Private/Secure** options. If you assign a personal identification number (PIN) to the job, the person who prints the job must provide the required PIN at the control panel. If you encrypt the job, the person who prints the job must provide the required password at the control panel.
5. To use a custom user name or job name, click the **Custom** button, 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** dialog box, click the **Print** button to print the job.
7. For information about how to print the job, see the topic for "Print a stored job."

Create a stored job (OS X)

Store jobs on the printer for private or delayed printing.

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 **Job Storage** menu.
4. In the **Mode** drop-down list, select the type of stored job.
 - **Proof and Hold:** Print and proof one copy of a job, and then print more copies.
 - **Personal Job:** The job does not print until someone requests it at the printer control panel. If the job has a personal identification number (PIN), provide the required PIN at the control panel. The print job is deleted from memory after it prints and is lost if the printer loses power.
 - **Quick Copy:** Print the requested number of copies of a job and store a copy of the job in the printer memory to print it again later.
 - **Stored Job:** Store a job on the printer and allow other users to print the job at any time. If the job has a personal identification number (PIN), the person who prints the job must provide the required PIN at the control panel.
5. To use a custom user name or job name, click the **Custom** button, 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. If you selected the **Stored Job** or **Personal Job** option in step 3, you can protect the job with a PIN. Type a 4-digit number in the **Use PIN to Print** field. When other people attempt to print this job, the printer prompts them to enter this PIN number.
 7. Click the **Print** button to process the job.

Print a stored job

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

1. From the Home screen on the printer control panel, select **Print**.
2. Select **Print from Job Storage**.
3. Select **Choose**, and then select the name of the folder where the job is stored.
4. Select the name of the job. If the job is private or encrypted, enter the PIN or password.
5. To adjust the number of copies, select the number of copies field in the bottom-left corner of the screen. Use the keypad to enter the number of copies to print.
6. Select **Print** to print the job.

Delete a stored job

When a new job is stored in the printer memory, the printer overwrites any previous jobs with the same user and job name. If a job is not already stored under the same user and job name, and the printer needs additional space, the printer might delete other stored jobs starting with the oldest. To change the number of jobs that the printer can store, complete the following procedure:

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Copy/Print or Print](#)
 - [Manage Stored Jobs](#)
 - [Temporary Job Storage Limit](#)
3. Use the keypad to enter the number of jobs that the printer stores.
4. Select [Done](#) to save the setting.

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

1. From the Home screen on the printer control panel, select [Print](#).
2. Select [Print from Job Storage](#).
3. Select [Choose](#), and then select the name of the folder where the job is stored.
4. Select the name of the job. If the job is private or encrypted, enter the PIN or password.
5. Select the Trash  icon to delete the job.

Information sent to printer for Job Accounting purposes

Printing jobs sent from drivers on the client (e.g., PC) may send personally identifiable information to HP's Printing and Imaging devices. This information may include, but is not limited to, user name and client name from which the job originated that may be used for job accounting purposes, as determined by the Administrator of the printing device. This same information may also be stored with the job on the mass storage device (e.g., disk drive) of the printing device when using the job storage feature.

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.

- [Wireless Direct Print and NFC Printing](#)
- [HP ePrint via email](#)
- [HP ePrint software](#)
- [AirPrint](#)
- [Android embedded printing](#)

Wireless Direct Print and NFC Printing

HP provides Wireless Direct Print and NFC (Near Field Communication) printing for printers with a supported HP Jetdirect 3000w NFC/Wireless Accessory. This accessory is available as an option for HP LaserJet printers that include a hardware-integration pocket (HIP).

Wireless Direct Print and NFC printing enable Wi-Fi capable (mobile) devices to make a wireless network connection directly to the printer without using a wireless router.

The printer does not need to be connected to the network for this mobile walk-up printing to work.

Use Wireless Direct Print to print wirelessly from the following devices:

- 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 wireless printing, go to www.hp.com/go/wirelessprinting.

NFC and Wireless Direct Print capabilities can be enabled or disabled from the printer control panel.

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Networking](#)
 - [Wireless Direct](#)
 - [Status](#)
3. Select [On](#), and then select [OK](#) to enable wireless 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 Wireless Direct Name for easier printer identification for HP Wireless Direct printing. The Wireless network names, e.g., Wireless, WiFi Direct, etc. are available on the Information screen by selecting the Information  icon, and then selecting the Network  icon or the Wireless  icon.

Complete the following procedure to change the printer Wireless Direct name:

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Networking](#)
 - [Wireless Direct](#)
 - [Wireless Direct Name](#)
3. Use the keypad to change the name in the [Wireless Direct Name](#) text field. Select [OK](#).

HP ePrint via email

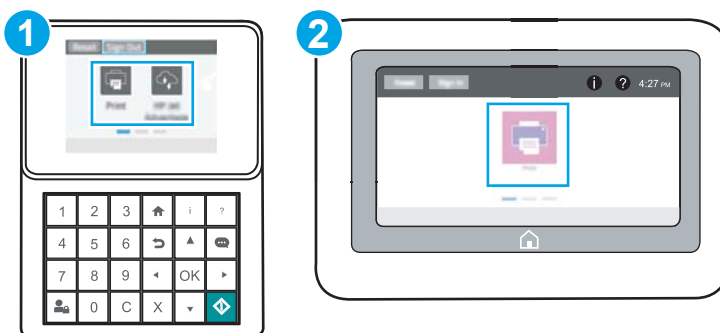
Use HP ePrint to print documents by sending them as an email attachment to the printer's email address from any email enabled device.

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:

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



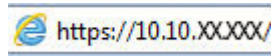
- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

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

- a. **Keypad control panels:** On the printer control panel, press the  button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the  button, and then select the Network  icon 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

2. Click the **HP Web Services** tab.

3. Select the option to enable Web Services.

 **NOTE:** Enabling Web Services might take several minutes.

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.
- **OS X:** 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 OS X both support IPP printing to LAN or WAN network-connected products that support ePCL.

Windows and OS X 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 OS X, 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 OS X 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/LaserJetMobilePrinting.

 **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 printer must be connected to the same network (sub-net) as the Android device.

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](https://play.google.com/store/apps/details?id=com.hp.print.plugin) 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.

Print from the USB port

Introduction

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

- .pdf
- .prn
- .pcl
- .ps
- .cht

Enable the USB port for printing

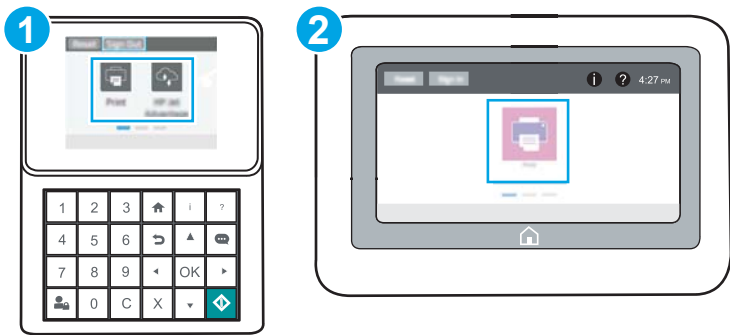
The USB port is disabled by default. Before using this feature, enable the USB port. Use one of the following methods to enable the port:

Method one: Enable the USB port from the printer control-panel menus

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [USB Settings](#)
 - [Print From USB Drive Settings](#)
 - [Enable Print From USB Drive](#)
3. Select the [Enabled](#) option.

Method two: Enable the USB port from the HP Embedded Web server (network-connected printers only)

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



- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

1. Open the HP Embedded Web Server (EWS):
 - a. **Keypad control panels:** On the printer control panel, press the  button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the  button, and then select the Network  icon 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.XXXX/>
-  **NOTE:** If the web browser displays a message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.
2. Open the **Copy/Print** tab.
 3. On the left side of the screen, click **Retrieve from USB Setup**.
 4. Select the **Enable Retrieve from USB** check box.
 5. Click **Apply**.

Print USB documents

1. Insert the USB flash drive into the easy-access USB port.
-  **NOTE:** The port might be covered. For some printers, the cover flips open. For other printers, pull the cover straight out to remove it.
2. From the Home screen on the printer control panel, select **Print**.
 3. Select **Print from USB Drive**.
 4. Select **Choose**, and then select the name of the document to print. Select **Select**.
-  **NOTE:** The document might be in a folder. Open folders as necessary.
5. To adjust the number of copies, touch the number of copies field in the bottom-left corner of the screen. Use the keypad to enter the number of copies to print.
 6. Press the Start  button or touch **Print** to print the document.

5 Manage the printer

- [Advanced configuration with HP Embedded Web Server \(EWS\)](#)
- [Configure IP network settings](#)
- [Printer security features](#)
- [Energy-conservation settings](#)
- [HP Web Jetadmin](#)
- [Software and firmware updates](#)

For more information:

The following information is correct at the time of publication. For current information, see www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653.

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

Advanced configuration with HP Embedded Web Server (EWS)

- [Introduction](#)
- [How to access the HP Embedded Web Server \(EWS\)](#)
- [HP Embedded Web Server features](#)

Introduction

Use the HP Embedded Web Server to manage printing functions from a 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

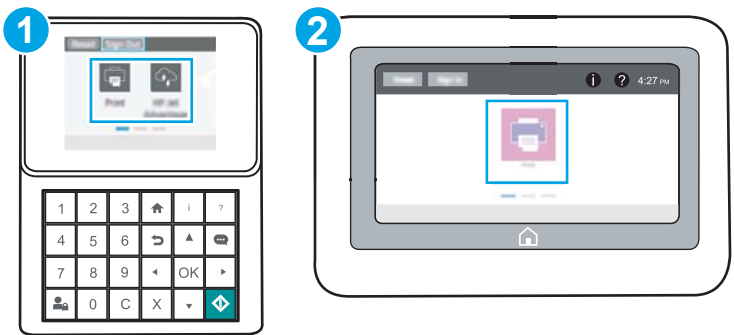
The HP Embedded Web Server works when the printer is connected to an IP-based network. The HP Embedded Web Server does not support IPX-based printer connections. Internet access is not needed to open and use the HP Embedded Web Server.

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

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

How to access the HP Embedded Web Server (EWS)

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



- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

1. **Keypad control panels:** On the printer control panel, press the  button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the  button, and then select the Network  icon 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

To use the HP Embedded Web Server, the browser must meet the following requirements:

Windows® 7

- Internet Explorer (version 8.x or greater)
- Google Chrome (version 34.x or greater)
- Firefox (version 20.x or greater)

Windows® 8 or greater

- Internet Explorer (version 9.x or greater)
- Google Chrome (version 34.x or greater)
- Firefox (version 20.x or greater)

OS X

- Safari (version 5.x or greater)
- Google Chrome (version 34.x or greater)

Linux

- Google Chrome (version 34.x or greater)
- Firefox (version 20.x or greater)

HP Embedded Web Server features

- [Information tab](#)
- [General tab](#)
- [Print tab](#)
- [Troubleshooting tab](#)
- [Security tab](#)
- [HP Web Services tab](#)

- [Networking tab](#)
- [Other Links list](#)

Information tab

Table 5-1 HP Embedded Web Server Information tab

Menu	Description
Device Status	Shows the printer status and shows the estimated life remaining of HP supplies. The page also shows the type and size of paper set for each tray. To change the default settings, click the Change Settings link.
Job Log	Shows a summary of all jobs the printer has processed.
Configuration Page	Shows the information found on the configuration page.
Supplies Status Page	Shows the status of the supplies for the printer.
Event Log Page	Shows a list of all printer events and errors. Use the HP Instant Support link (in the Other Links area on all HP Embedded Web Server pages) to connect to a set of dynamicweb pages that help solve problems. These pages also show additional services available for the printer.
Usage Page	Shows a summary of the number of pages the printer has printed, grouped by size, type, and paper print path.
Device Information	Shows the printer network name, address, and model information. To customize these entries, click the Device Information menu on the General tab.
Control Panel Snapshot	Shows an image of the current screen on the control panel display.
Print	Upload a print-ready file from the computer to print. The printer uses the default print settings to print the file.
Printable Reports and Pages	Lists the internal reports and pages for the printer. Select one or more items to print or view.
Open Source Licenses	Shows a summary of the licenses for open source software programs that can be used with the printer.

General tab

Table 5-2 HP Embedded Web Server General tab

Menu	Description
Alerts	Setup email alerts for various printer and supplies events.
Control Panel Administration Menu	Shows the menu structure of the Administration menu on the control panel. NOTE: Configure settings on this screen, or the HP Embedded Web Server provides more advanced configuration options than are available through the Administration menu.
General Settings	Configure how the printer recovers from jams and whether copy jobs initiated at the printer control panel take priority over print jobs.
AutoSend	Configure the printer to send automated emails regarding printer configuration and supplies to specific email addresses.
Edit Other Links	Add or customize a link to another website. This link displays in the footer area on all HP Embedded Web Server pages.

Table 5-2 HP Embedded Web Server General tab (continued)

Menu	Description
Ordering Information	Enter information about ordering replacement toner cartridges. This information displays on the supplies status page.
Device Information	Name the printer and assign an asset number to it. Enter the name of the primary contact who will receive information about the printer.
Language	Set the language in which to display the HP Embedded Web Server information.
Date/Time Settings	Set the date and time or synchronize with a network time server.
Energy Settings	Set or edit a wake time, sleep time, and sleep delay for the printer. Set a different schedule for each day of the week and for holidays. Set which interactions with the printer cause it to wake from sleep mode.
Backup and Restore	Create a backup file that contains printer and user data. If necessary, use this file to restore data to the printer.
Reset Factory Settings	Restore printer settings to the factory defaults.
Solution Installer	Install third-party software packages that extend or modify the functionality of the printer.
Firmware Upgrade	Download and install printer firmware upgrade files.
Quota and Statistics Services	Provides connection information about third-party job-statistics services.

Print tab

Table 5-3 HP Embedded Web Server Print tab

Menu	Description
Print from USB drive settings	Enable or disable the Print from USB Drive menu on the control panel.
Manage Stored Jobs	Enable or disable the ability to store jobs in the printer memory. Configure job-storage options.
Default Print Options	Configure the default options for print jobs.
Adjust Paper Types	Override the factory-default mode settings if print quality problems occur when using a specific paper type.
Restrict Color	Permit or restrict color printing.
(Color printers only)	Specify permissions for individual users or for jobs that are sent from specific software programs.
PCL and PostScript Settings	Adjust the PCL and PostScript settings for all print jobs.

Table 5-3 HP Embedded Web Server Print tab (continued)

Menu	Description
Print Quality	Configure the print quality settings, including the following: • General print-quality settings • Default color settings • Default image registration settings • Auto sense behavior • Default paper types • Default optimization settings
Manage Supplies	Configure how the printer reacts when supplies reach a Very Low state.
Manage Trays	Configure settings for paper trays.

Troubleshooting tab

Table 5-4 HP Embedded Web Server Troubleshooting tab

Menu	Description
General Troubleshooting	Select from a variety of reports and tests to help solve problems with the printer.
Online Help	Link to HP cloud-based online help to assist in troubleshooting printing issues.
Retrieve Diagnostic Data	Export printer information to a file that can be useful for detailed problem analysis.
NOTE: This item is available only if an administrator password is set from the Security tab.	
Calibration/Cleaning (Color printers only)	Enable the automatic cleaning feature, create and print the cleaning page, and select an option to calibrate the printer immediately.
Firmware Upgrade	Download and install printer firmware upgrade files.
Restore Factory Settings	Restore printer settings to factory defaults.

Security tab

Table 5-5 HP Embedded Web Server Security tab

Menu	Description
General Security	Settings for general security, including the following: • Configure an administrator password to restrict access to certain features on the printer. • Set PDL password for processing PDL commands. • Set file system access and firmware upgrade security. • Enable or disable the Host USB port on the control panel or the USB connectivity port on the formatter for printing directly from a computer. • View the status of all security settings.
Account Policy	Enable administrator account settings.
Access Control	Configure access to printer functions for specific individuals or groups, and select the method individuals use to sign in to the printer.
Protect Stored Data	Configure and manage the internal hard drive for the printer. Configure settings for jobs that are stored on the printer hard drive.
Certificate Management	Install and manage security certificates for access to the printer and the network.
Web Service Security	Allow resources on this printer to be accessed by web pages from different domains. If no sites are added to the list, then all sites are trusted.
Self Test	Verify that the security functions are running according to expected system parameters.

HP Web Services tab

Use the **HP Web Services** tab to configure and enable HP Web Services for this printer. It is necessary to Enable HP Web Services to use the HP ePrint feature.

Table 5-6 HP Embedded Web Server HP Web Services tab

Menu	Description
Web Services Setup	Connect this printer to HP Connected on the web by enabling HP Web Services.
Web Proxy	Configure a proxy server if there are issues enabling HP Web Services or connecting the printer to the Internet.
HP JetAdvantage	Access solutions that extend the capabilities of the printer

Networking tab

Use the **Networking** tab to configure and secure network settings for the printer when it is connected to an IP-based network. This tab does not display if the printer is connected to other types of networks.

Table 5-7 HP Embedded Web Server Networking tab

Menu	Description
Configuration	

Table 5-7 HP Embedded Web Server Networking tab (continued)

Menu	Description
Wireless Direct	Configure Wireless Direct settings for printers that include embedded Wireless Direct printing or that have a wireless accessory installed. NOTE: The configuration options available depend on the print server model.
TCP/IP Settings	Configure TCP/IP settings for IPv4 and IPv6 networks. NOTE: The configuration options available depend on the print server model.
Network Settings	Configure IPX/SPX, AppleTalk, DLC/LLC, and SNMP settings, depending on the print server model.
Other Settings	Configure general printing protocols and services supported by the print server. The available options depend on the print server model, but can include firmware update, LPD queues, USB settings, support information, and refresh rate.
AirPrint	Enable, set up, or disable network printing from Apple supported printers.
Select Language	Change the language displayed by the HP Embedded Web Server. This page displays if the web pages support multiple languages. Optionally, select supported languages through language-preference settings in the browser.
Google Cloud Print	
Setup	Set up Google Cloud Print options.
Web Proxy	Configure proxy settings.
Security	
Settings	View and restore current security settings to factory-default values. Configure security settings using the Security Configuration Wizard. NOTE: Do not use the Security Configuration Wizard to configure security settings using network-management applications, such as HP Web Jetadmin.
Authorization	Control configuration management and use of this printer, including the following: • Set or change the administrator password to control access to configuration parameters. • Request, install, and manage digital certificates on the HP Jetdirect print server. • Limit host access to this printer through an Access Control List (ACL) (for selected print servers on IPv4 networks only).
Secure Communication	Configure security settings.
Mgmt. Protocols	Configure and manage security protocols for this printer, including the following: • Set the security management level for the HP Embedded Web Server, and control traffic over HTTP and HTTPS. • Configure the SNMP (Simple Network Management Protocol) operation. Enable or disable the SNMP v1/v2c or SNMP v3 agents on the print server. • Control access through protocols that may not be secure, such as printing protocols, print services, discovery protocols, name resolution services, and configuration-management protocols.

Table 5-7 HP Embedded Web Server Networking tab (continued)

Menu	Description
802.1X Authentication	Configure 802.1X authentication settings on the Jetdirect print server as required for client authentication on the network, and reset the 802.1X authentication settings to factory-default values. CAUTION: When changing the 802.1X authentication settings; the printer might lose its connection. To reconnect, it might be necessary to reset the print server to a factory-default state and reinstall the printer.
IPsec/Firewall	View or configure a Firewall policy or an IPsec/Firewall policy.
Announcement Agent	Enable or disable the HP Device Announcement Agent, set the configuration server, and configure mutual authentication using certificates.
Diagnostics	
Network Statistics	Display network statistics that are collected and stored on the HP Jetdirect print server.
Protocol Info	View a list of network-configuration settings on the HP Jetdirect print server for each protocol.
Configuration Page	View the HP Jetdirect configuration page, which contains status and configuration information.

Other Links list



NOTE: Configure which links display in the footer of the HP Embedded Web Server by using the **Edit Other Links** menu on the **General** tab. The following are the default links.

Table 5-8 HP Embedded Web Server Other Links list

Menu	Description
Product Support	Connect to the support site for the printer to search for help on various topics.
Shop for Supplies	Connect to the HP SureSupply website for information on purchasing original HP supplies, such as toner cartridges and paper.
HP Instant Support	Connect to the HP website to find solutions to printer problems.

Configure IP 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](#)
- [Manually configure IPv6 TCP/IP parameters from the control panel](#)
- [Link speed and duplex settings](#)

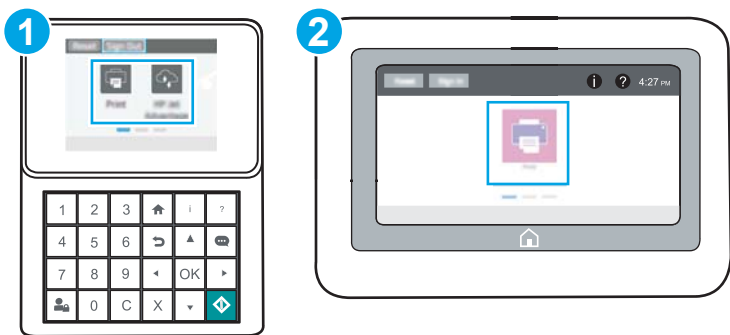
Printer sharing disclaimer

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.

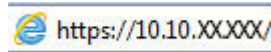
 **NOTE:** The steps vary according to the type of control panel.



- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

1. Open the HP Embedded Web Server (EWS):
 - a. **Keypad control panels:** On the printer control panel, press the **i** button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.
Touchscreen control panels: On the printer control panel, touch the **i** button, and then select the Network  icon 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

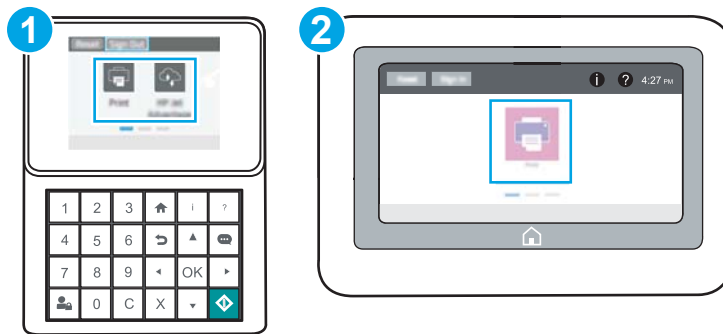
2. Click the **Networking** tab to obtain network information. Change settings as needed.

Rename the printer on a network

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

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

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

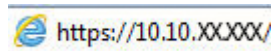


- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

- a. **Keypad control panels:** On the printer control panel, press the **i** button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the **i** button, and then select the Network  icon 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

2. Open the **General** tab.
3. On the **Device Information** page, the default printer name is in the **Device Name** 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 [Settings](#) menus to manually set an IPv4 address, subnet mask, and default gateway.

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Networking](#)
 - [Ethernet](#)
 - [TCP/IP](#)
 - [IPV 4 Settings](#)
 - [Config Method](#)
3. Select the [Manual](#) option, and then select the [Save](#) button.
4. Open the [Manual Settings](#) menu.
5. Select the [IP Address](#), [Subnet Mask](#), or [Default Gateway](#) option.
6. Using the numeric keyboard, enter the correct digits for the field, and then press or touch the [OK](#) button.

Repeat the process for each field, and then select [Save](#).

Manually configure IPv6 TCP/IP parameters from the control panel

Use the control-panel [Settings](#) menus to manually set an IPv6 address.

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. To enable manual configuration, open the following menus:
 - [Networking](#)
 - [Ethernet](#)
 - [TCP/IP](#)
 - [IPV6 Settings](#)
3. Select [Enable](#), and then select [On](#).
4. To configure the address, open the [Address](#) menu, and then touch the field to open a keypad.
5. Using the numeric keyboard, enter the correct digits for the field, and then press or touch the [OK](#) button.
6. Select [Save](#).

Link speed and duplex settings



NOTE: This information applies only to Ethernet networks. It does not apply to wireless networks.

The link speed and communication mode of the print server must match the network hub. For most situations, leave the printer in automatic mode. Incorrect changes to the link speed and duplex settings might prevent the printer from communicating with other network devices. To make changes, use the printer control panel.

 **NOTE:** The printer setting must match the setting for the network device (a network hub, switch, gateway, router, or computer).

 **NOTE:** Making changes to these settings causes the printer to turn off and then on. Make changes only when the printer is idle.

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Networking](#)
 - [Ethernet](#)
 - [Link Speed](#)
3. Select one of the following options:
 - [Auto](#): The print server automatically configures itself for the highest link speed and communication mode allowed on the network.
 - [10T Half](#): 10 megabytes per second (Mbps), half-duplex operation
 - [10T Full](#): 10 Mbps, full-duplex operation
 - [10T Auto](#): 10 Mbps, automatic-duplex operation
 - [100TX Half](#): 100 Mbps, half-duplex operation
 - [100TX Full](#): 100 Mbps, full-duplex operation
 - [100TX Auto](#): 100 Mbps, automatic-duplex operation
 - [1000T Full](#): 1000 Mbps, full-duplex operation
4. Select [Save](#). The printer turns off and then on.

Printer 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.

- [Security statements](#)
- [IP Security](#)
- [Assign an administrator password](#)
- [Encryption support: HP High Performance Secure Hard Disks](#)
- [Lock the formatter](#)

Security statements

The printer supports security standards and recommended protocols that help you keep the printer secure, protect critical information on your network, and simplify the way you monitor and maintain the printer.

IP Security

IP Security (IPsec) is a set of protocols that control IP-based network traffic to and from the printer. IPsec provides host-to-host authentication, data integrity, and encryption of network communications.

For printers that are connected to the network and have an HP Jetdirect print server, you can configure IPsec by using the **Networking** tab in the HP Embedded Web Server.

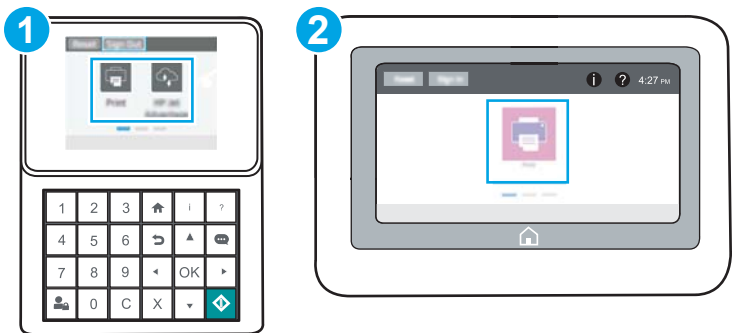
Assign an administrator password

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.

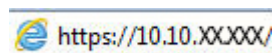


- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

- a. **Keypad control panels:** On the printer control panel, press the  button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the  button, and then select the Network  icon 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

2. Click the **Security** tab.
3. Open the **General Security** menu.
4. In the area labeled **Set the Local Administrator Password**, enter the name to associate with the password in the **Username** field.
5. Enter the password in the **New Password** field, and then enter it again in the **Verify Password** field.

 **NOTE:** To change an existing password, first enter the existing password in the **Old Password** field.

6. Click the **Apply** button.

 **NOTE:** Make note of the password and store it in a safe place. The administrator password cannot be recovered. If the administrator password is lost or forgotten, contact HP Support at support.hp.com for the assistance required to completely reset the printer.

Some features on the printer control panel can be secured so that unauthorized people cannot use them. When a feature is secured, the printer prompts you to sign in before you can use it. You can also sign in without waiting for a prompt by selecting **Sign In** from the printer control panel.

Typically, the credentials for signing in to the printer are the same as for signing in to the network. Consult the network administrator for this printer if you have questions about which credentials to use.

1. **Keypad control panels:** Press the Sign In  button

Touchscreen control panels: From the Home screen on the printer control panel, select **Sign In**.

2. Follow the prompts to enter the credentials.

 **NOTE:** To maintain security for the printer, press or touch the Sign Out  button when you have finished using the printer.

Encryption support: HP High Performance Secure Hard Disks

The hard disk provides hardware-based encryption so you can securely store sensitive data without impacting printer performance. This hard disk uses the latest Advanced Encryption Standard (AES) and has versatile time-saving features and robust functionality.

Use the **Security** menu in the HP Embedded Web Server to configure the disk.

Lock the formatter

The formatter has a slot that you can use to attach a security cable. Locking the formatter prevents someone from removing valuable components from it.

Energy-conservation settings

Introduction

- [Set the idle settings](#)
- [Set the sleep timer and configure the printer to use 1 watt or less of power](#)

Set the idle settings

By default the printer stays warm between jobs to optimize speed and print the first page of jobs faster. To conserve energy, set the printer to cool between jobs.

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [General Settings](#)
 - [Energy Settings](#)
 - [Idle Settings](#)
3. Adjust the slider to the right to save energy. Touch [Done](#) to save the setting.

Set the sleep timer and configure the printer to use 1 watt or less of power

The sleep settings affect how much power the printer uses, the wake/sleep time, how quickly the printer enters sleep mode, and how quickly the printer wakes up from sleep mode.

To configure the printer to use 1 watt or less of power while in sleep mode, enter times for both the Sleep after Inactivity and Auto Off after sleep settings.

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [General Settings](#)
 - [Energy Settings](#)
 - [Sleep Settings](#)
3. Select [Sleep after Inactivity](#) to specify the number of minutes the printer is inactive before it enters sleep mode. Enter the appropriate time period.



NOTE: The sleep-mode default time is 0 minutes. Zero (0) indicates that the printer will go to sleep in less than 1 minute.

4. Select [Auto Off after sleep](#) to put the printer into a deeper power save mode after a period of sleep. Enter the appropriate time period.



NOTE: By default, the printer will wake from Auto Off in response to any activity other than USB or Wi-Fi, but can be set to wake only to the power button.

5. Select [Done](#) to save the settings.

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.

Software and firmware updates

HP regularly updates features that are available in the printer firmware. To take advantage of the most current features, update the printer firmware. Download the most recent firmware update file from the Web:

Go to www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653. Click **Drivers & Software**.

6 Solve problems

- [Customer support](#)
- [Control panel help system](#)
- [Restore factory settings](#)
- [A “Cartridge is low” or “Cartridge is very low” message displays on the printer control panel](#)
- [Printer does not pick up paper or misfeeds](#)
- [Clear paper jams](#)
- [Improve print quality](#)
- [Image defects table](#)
- [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/colorljM652 or www.hp.com/support/colorljM653.

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

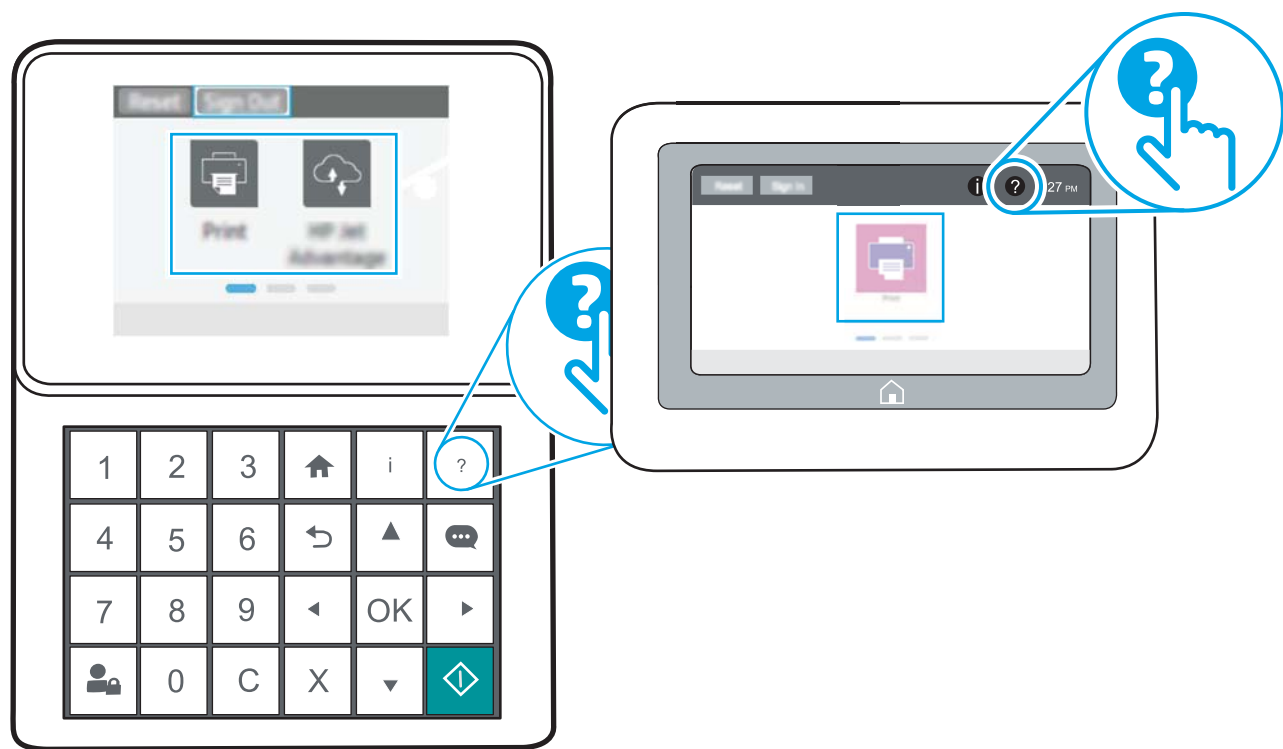
- Install and configure
- Learn and use
- Solve problems
- Download software and firmware updates
- Join support forums
- Find warranty and regulatory information

Customer support

Get telephone support for your country/region	Country/region phone numbers are on the flyer that was in the box with the printer or at support.hp.com .
Have the printer name, serial number, date of purchase, and problem description ready	
Get 24-hour Internet support, and download software utilities and drivers	www.hp.com/support/colorljM652 or www.hp.com/support/colorljM653
Order additional HP service or maintenance agreements	www.hp.com/go/carepack
Register the printer	www.register.hp.com

Control panel help system

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 show specific procedures, such as clearing paper jams.

If the printer alerts 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 factory settings

Introduction

Use one of the following methods to restore the printer to the original settings from the factory.

 **NOTE:** Restoring factory settings sets most of the printer settings to their factory defaults. However, some settings are not changed, such as language, date, time, and some network configuration settings.

Method one: Restore factory settings from the printer control panel

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [General](#)
 - [Reset Factory Settings](#)
3. Select [Reset](#).

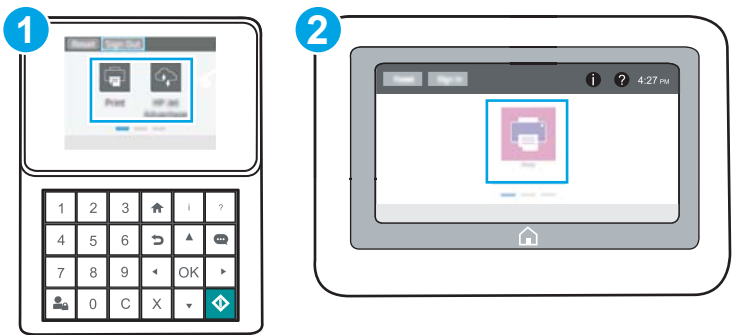
A verification message advises that completing the reset function might result in loss of data.

4. Select [Reset](#) to complete the process.

 **NOTE:** The printer restarts automatically after the reset operation completes.

Method two: Restore factory settings from the HP Embedded Web Server (network-connected printers only)

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



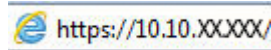
- | | |
|---|---------------------------|
| 1 | Keypad control panel |
| 2 | Touchscreen control panel |

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

- a. **Keypad control panels:** On the printer control panel, press the  button, and then use the arrow keys to select the Ethernet  menu. Press the **OK** button to open the menu and display the IP address or host name.

Touchscreen control panels: On the printer control panel, touch the  button, and then select the Network  icon 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 message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

2. Open the **General** tab.
3. On the left side of the screen, click **Reset Factory Settings**.
4. Click the **Reset** button.

 **NOTE:** The printer restarts automatically after the reset operation completes.

A “Cartridge is low” or “Cartridge is very low” message displays on the printer control panel

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.

Cartridge is very low: The printer indicates when the toner cartridge level is very 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 unless the print quality is no longer acceptable.

HP’s Premium Protection Warranty expires near the end of useable cartridge life. Check the Supplies Status Page or the HP Embedded Web Server (EWS) for the status.

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.

1. From the Home screen on the printer control panel, open the [Settings](#) menu.
2. Open the following menus:
 - [Manage Supplies](#)
 - [Very Low Behavior](#)
 - [Black Cartridge](#) or [Color Cartridges](#)
3. Select one of the following options:
 - Select the [Stop](#) option to set the printer to stop printing when the cartridge reaches the **Very Low** threshold.
 - Select the [Prompt to continue](#) option to set the printer to stop printing when the cartridge reaches the **Very Low** threshold. You can acknowledge the prompt or replace the cartridge to resume printing.
 - Select the [Continue](#) option to set the printer to alert you that the cartridge is very low, and to continue printing beyond the **Very Low** setting without interaction. This can result in unsatisfactory 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 website, which provides options for purchasing Original HP supplies.

Printer 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

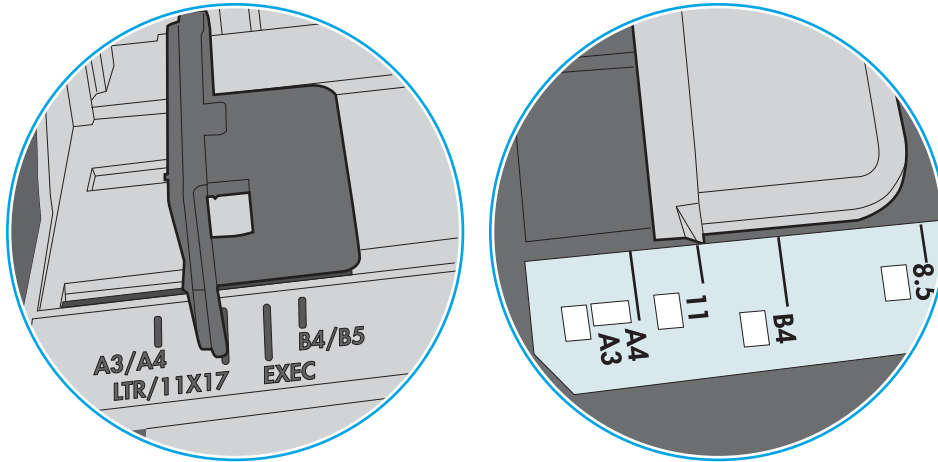
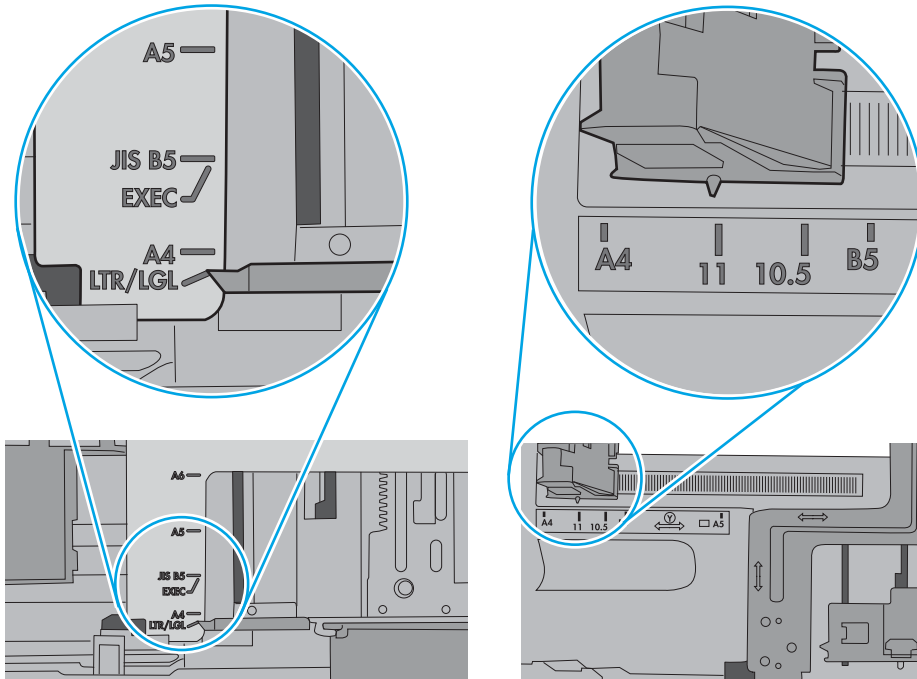


Figure 6-2 Size markings for cassette trays

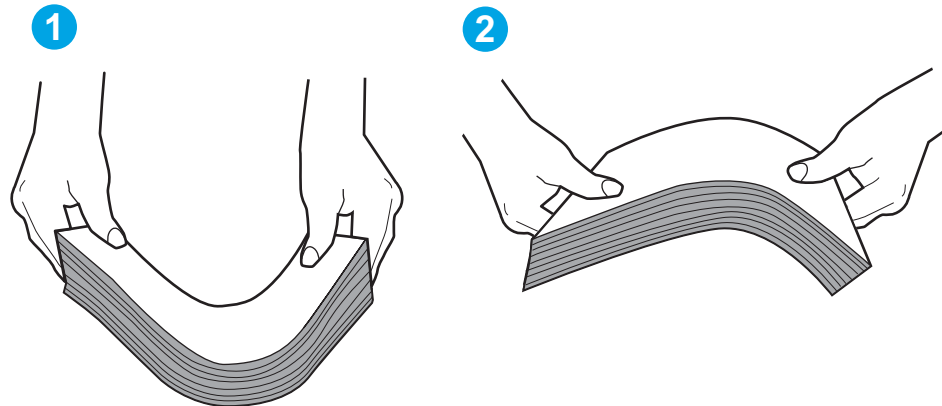


5. Verify that the humidity in the room is within specifications for this printer and that paper is being stored in unopened packages. Most reams of paper are sold in moisture-proof wrapping to keep paper dry.

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

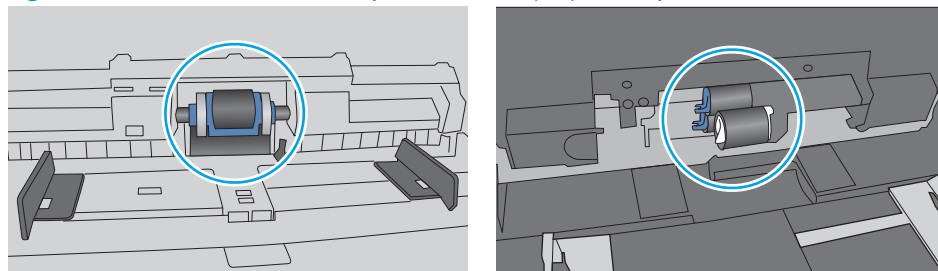


6. Check the printer control panel to see if it is displaying a prompt to feed the paper manually. Load paper, and continue.
7. The rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water. Use distilled water, if it is available.

⚠ 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



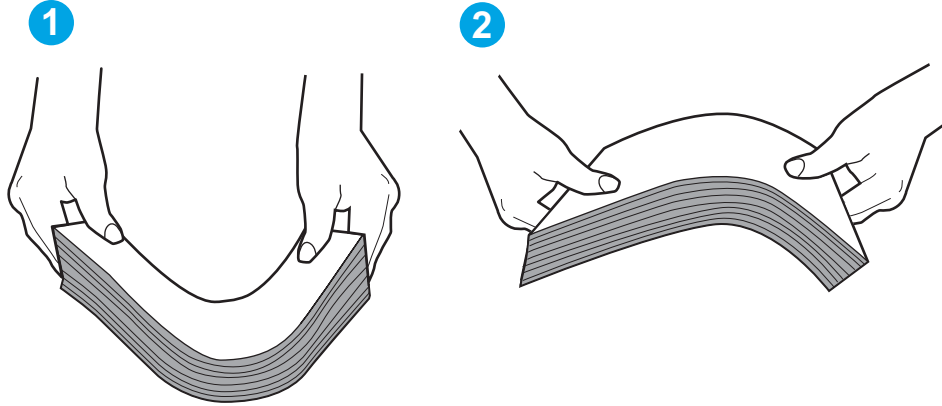
The printer picks up multiple sheets of paper

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

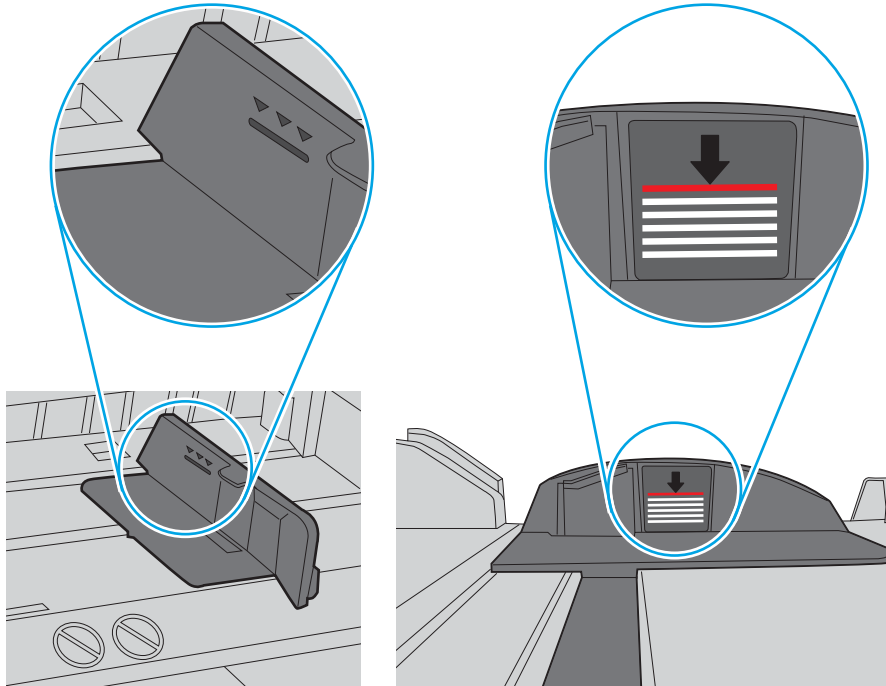
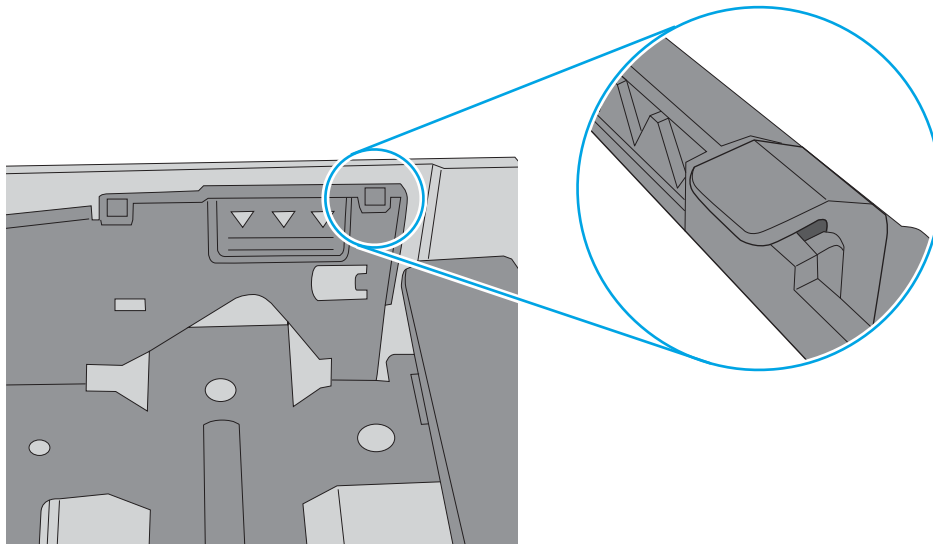


Figure 6-7 Tab for the paper stack



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

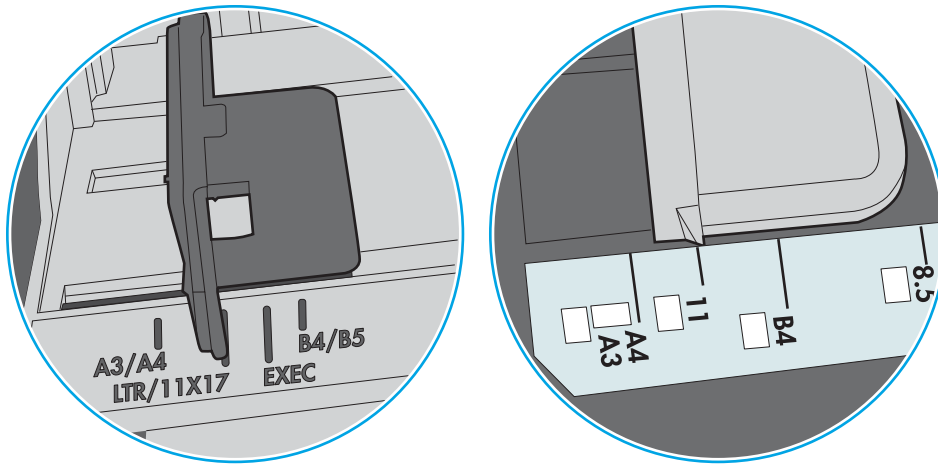
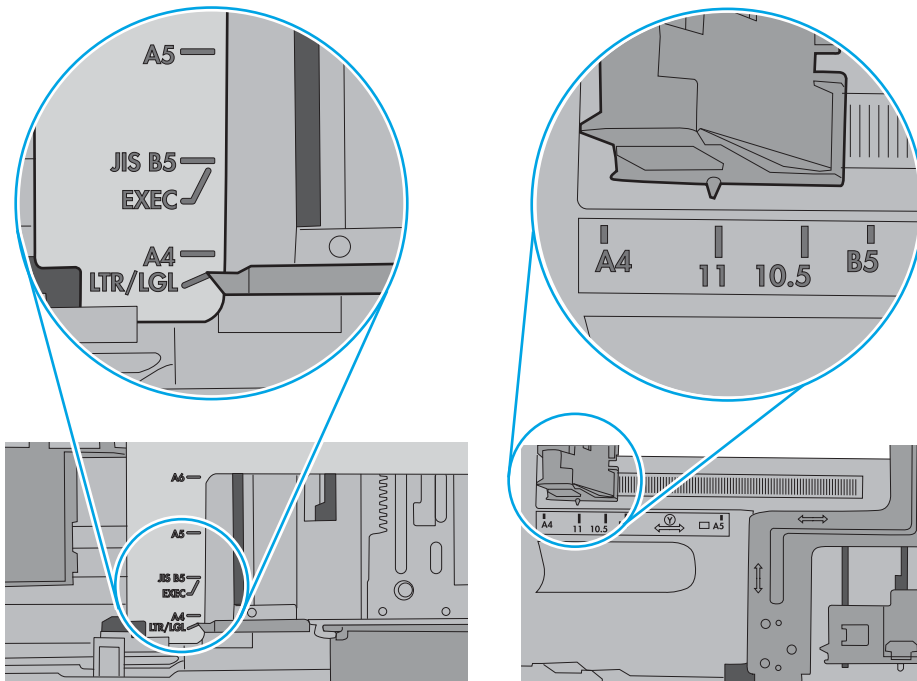


Figure 6-9 Size markings for cassette trays



7. Make sure the printing environment is within recommended specifications.

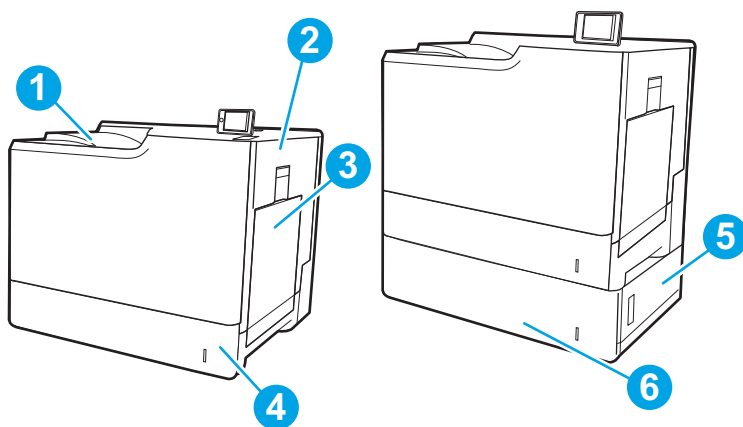
Clear paper jams

Introduction

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

- [Paper jam locations](#)
- [Auto-navigation for clearing paper jams](#)
- [Experiencing frequent or recurring paper jams?](#)
- [13.E1 output bin paper jam](#)
- [13.A1 tray 1 paper jam](#)
- [13.A2 tray 2 paper jam](#)
- [13.A3, 13.A4, 13.A5 tray 3, tray 4, tray 5 paper jam](#)
- [13.A 2000-sheet tray paper jam](#)
- [13.B9, 13.B2, 13.FF fuser paper jam](#)
- [13.B2 right door paper jam](#)

Paper jam locations



1	Output bin
2	Right door and fuser area
3	Tray 1
4	Tray 2
5	Lower-right door
6	Tray 3

Auto-navigation for clearing paper jams

The auto-navigation feature assists in clearing jams by providing step-by-step instructions on the control panel. When you complete a step, the printer displays instructions for the next step until you have completed all steps in the procedure.

Experiencing frequent or recurring paper jams?

To reduce the number of paper jams, try these solutions.



NOTE: To see a video that demonstrates how to load paper in a way that reduces the number of paper jams, click [here](#).

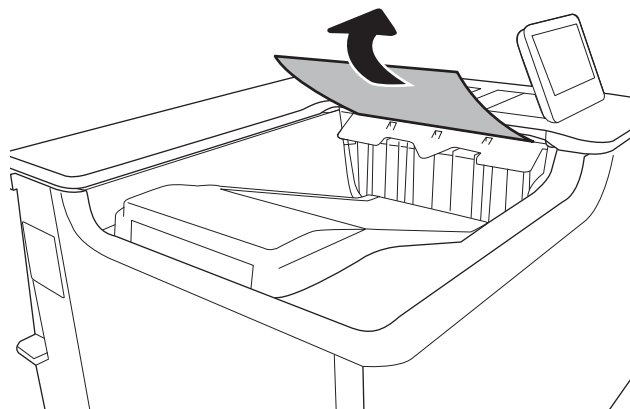
1. Use only paper that meets HP specifications for this printer.
2. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
3. Use paper that has not previously been printed or copied on.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.
6. Make sure that the tray is fully inserted in the printer.
7. If you are printing on heavy, embossed, or perforated paper, use the manual feed feature and feed sheets one at a time.
8. Open the [Trays](#) menu on the printer control panel. Verify that the tray is configured correctly for the paper type and size.
9. Make sure the printing environment is within recommended specifications.

13.E1 output bin paper jam

Use the following procedure to clear jams in the output bin. When a jam occurs, the control panel might display a message and an animation that assists in clearing the jam.

- **13.E1.XX Jam at standard output bin**

1. If paper is visible in the output bin, grasp the leading edge and gently remove it.

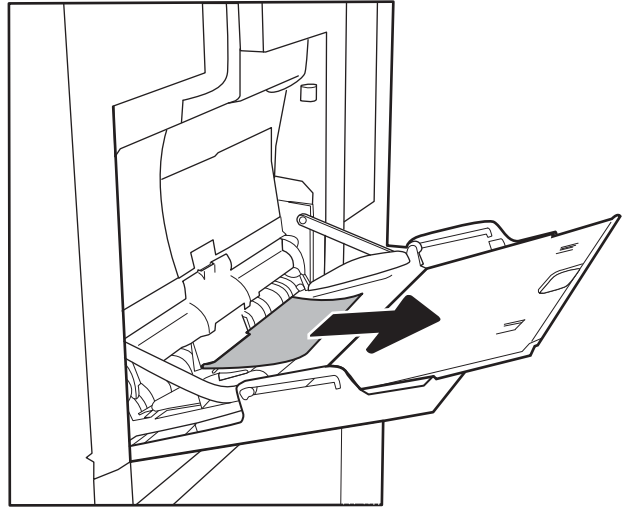


13.A1 tray 1 paper jam

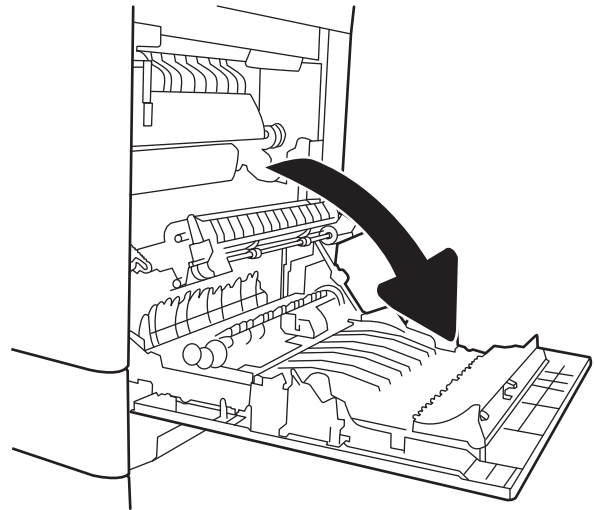
Use the following procedure to check for paper in all possible jam locations related to Tray 1. When a jam occurs, the control panel might display a message and an animation that assists in clearing the jam.

- **13.A1.XX Jam in tray 1**

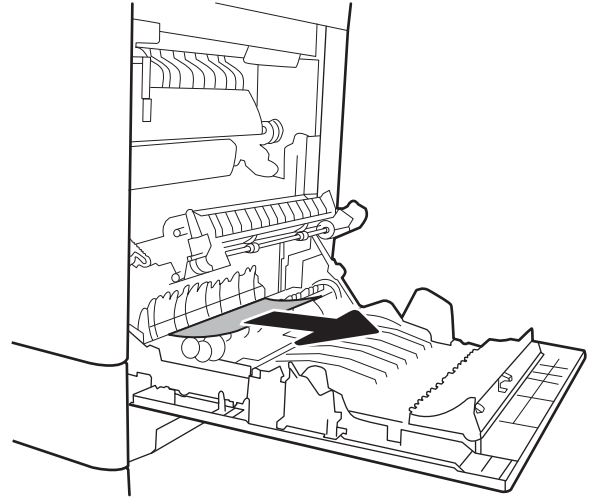
1. If jammed paper is visible in Tray 1, clear the jam by gently pulling the paper straight out.



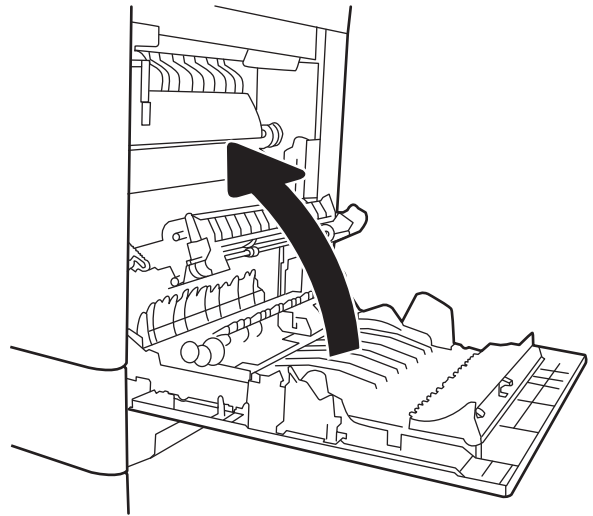
2. If you cannot remove the paper, or if no jammed paper is visible in Tray 1, close Tray 1 and open the right door.



3. Gently pull out any jammed paper.



4. Close the right door.

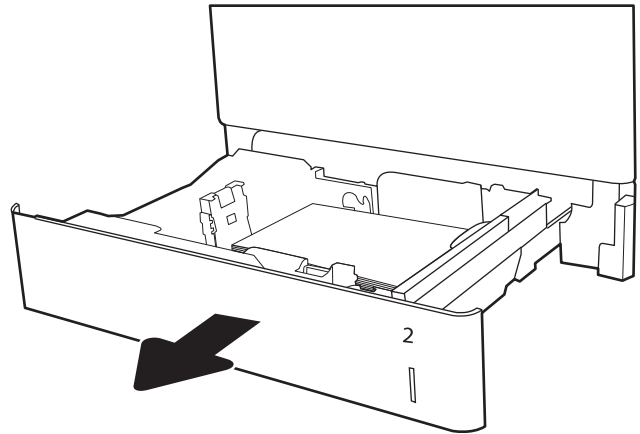


13.A2 tray 2 paper jam

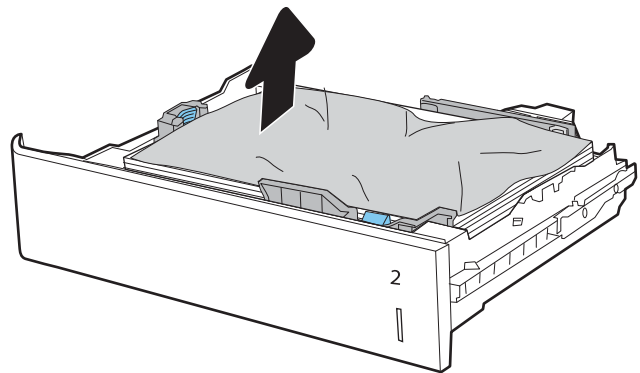
Use the following procedure to check for paper in all possible jam locations related to Tray 2. When a jam occurs, the control panel might display a message and an animation that assists in clearing the jam.

- 13.A2.XX Jam in tray 2

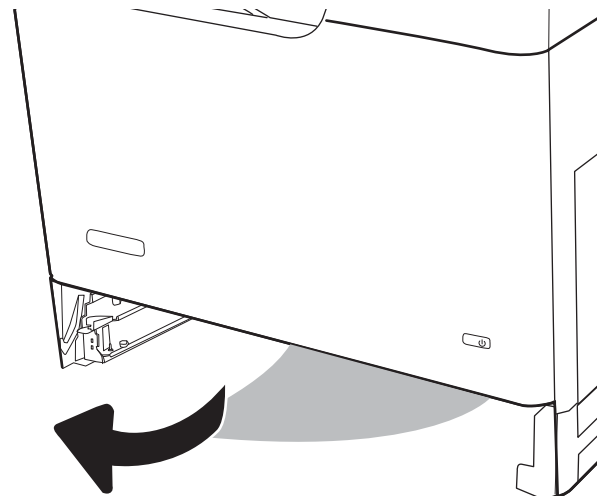
1. Pull the tray completely out of the printer by pulling and lifting it up slightly.



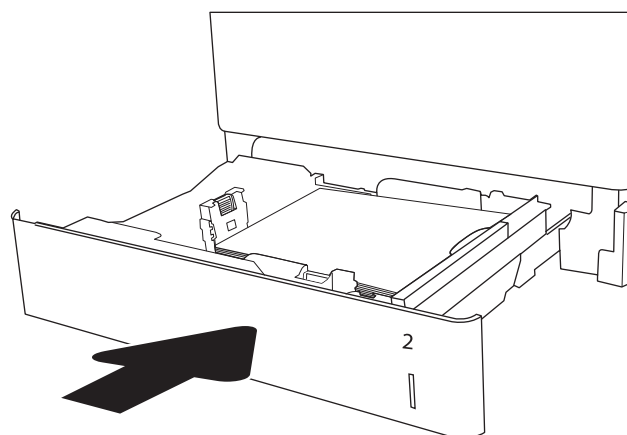
2. Remove any jammed or damaged sheets of paper. Verify that the tray is not overfilled and that the paper guides are adjusted correctly.



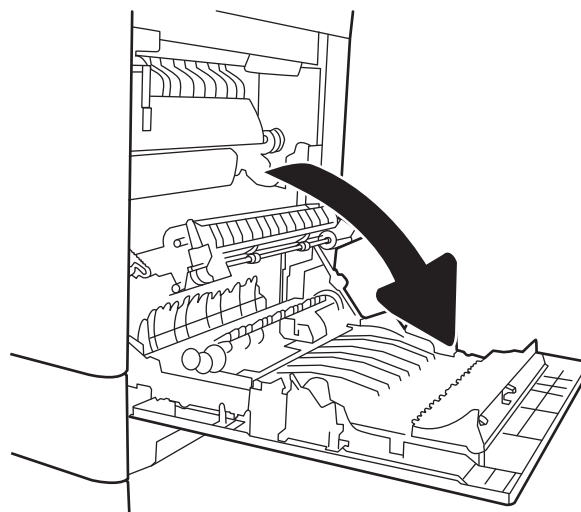
3. Gently remove any paper from the feed rollers inside the printer. First pull the paper to the left to release it, and then pull it forward to remove it.



4. Install and close the tray.



5. Open the right door.

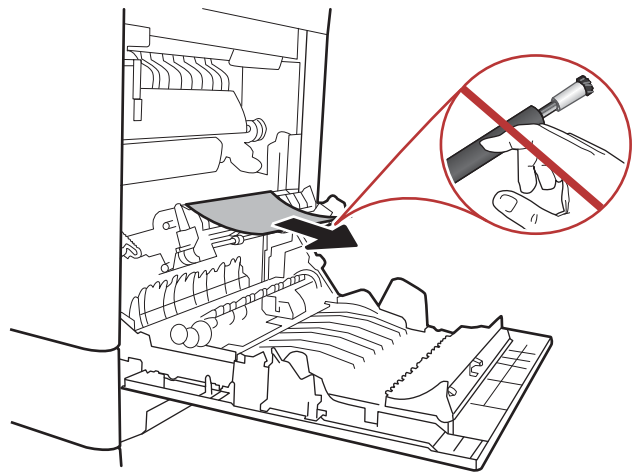


6. Gently pull out any jammed paper.

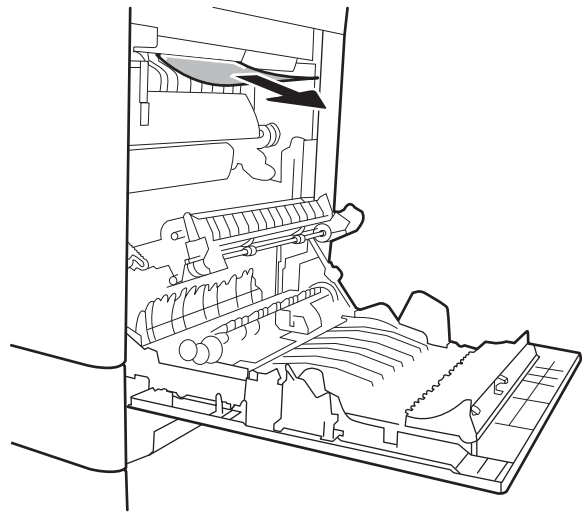


7. If paper is visible entering the bottom of the fuser, gently pull downward to remove it.

CAUTION: Do not touch the rollers on the transfer roller. Contaminants can affect print quality.



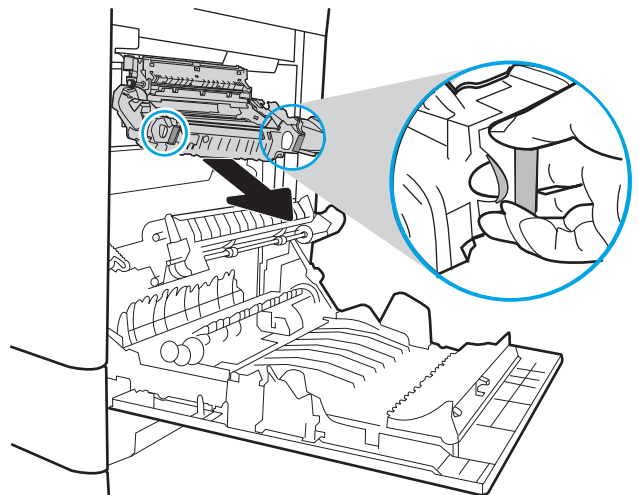
8. If paper is jammed as it enters the output bin, gently pull the paper out to remove it.



9. Paper could be jammed inside the fuser where it would not be visible. Grasp the fuser handles, lift up slightly, and then pull straight out to remove the fuser.



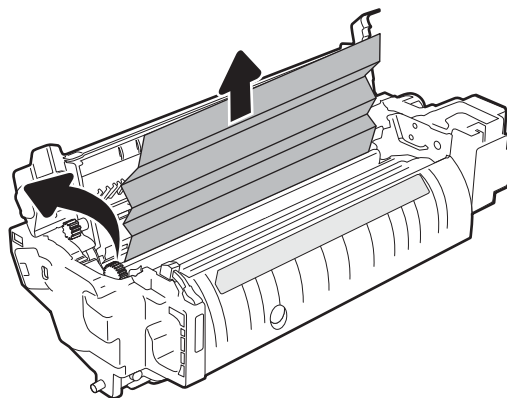
CAUTION: The fuser can be hot while the printer is in use. Wait for the fuser to cool before handling it.



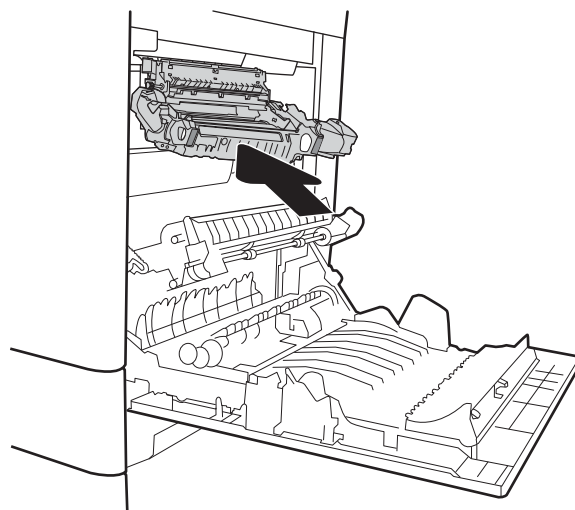
10. Open the jam-access door on the fuser. If paper is jammed inside the fuser, gently pull it straight up to remove it. If the paper tears, remove all paper fragments.



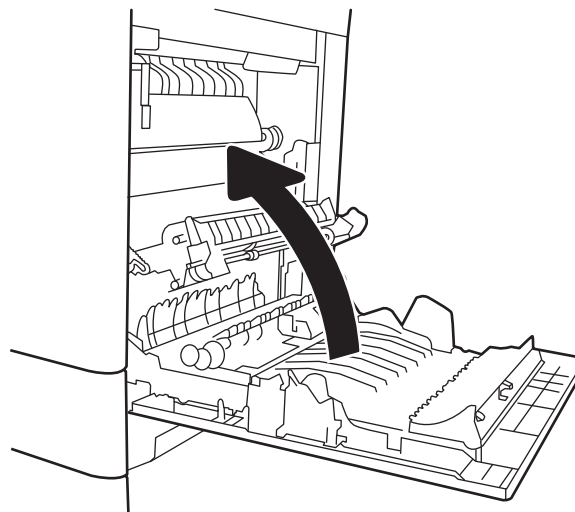
CAUTION: Even if the body of the fuser has cooled, the rollers that are inside could still be hot. Do not touch the fuser rollers until they have cooled.



11. Close the jam-access door on the fuser, and push the fuser completely into the printer until it clicks into place.



12. Close the right door.

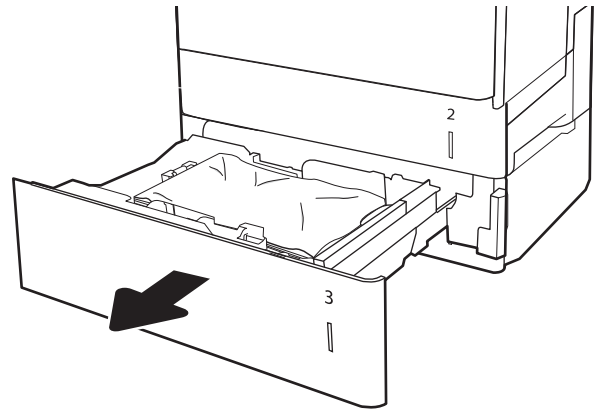


13.A3, 13.A4, 13.A5 tray 3, tray 4, tray 5 paper jam

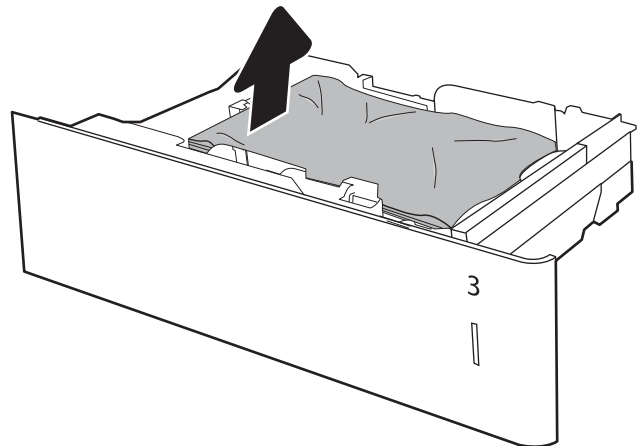
Use the following procedure to check for paper in all possible jam locations related to the 550-sheet trays. When a jam occurs, the control panel might display a message and an animation that assists in clearing the jam.

- 13.A3.XX Jam in tray 3
- 13.A4.XX Jam in tray 4
- 13.A5.XX Jam in tray 5

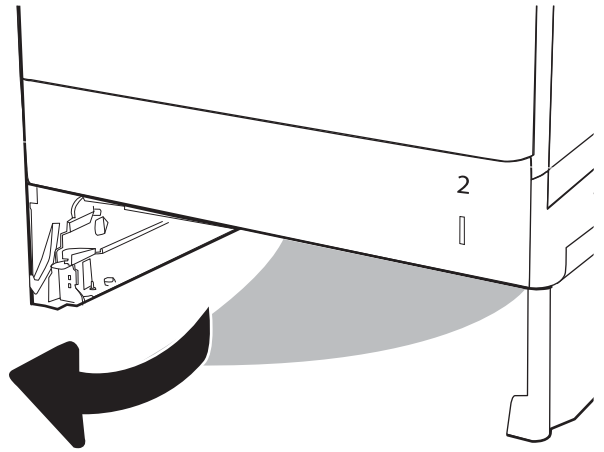
1. Pull the tray completely out of the printer by pulling and lifting it up slightly.



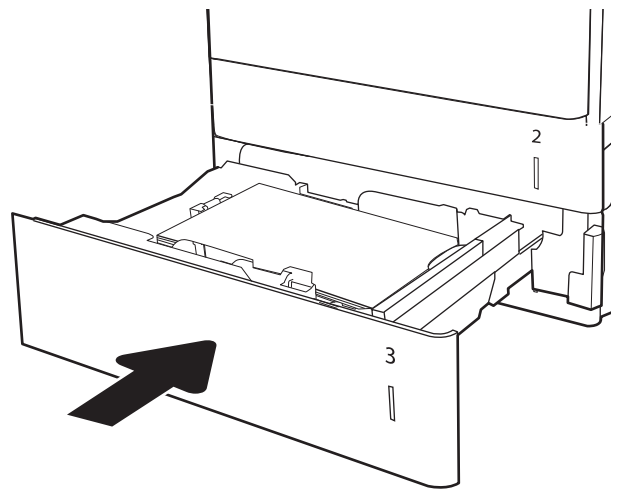
2. Remove any jammed or damaged sheets of paper. Verify that the tray is not overfilled and that the paper guides are adjusted correctly.



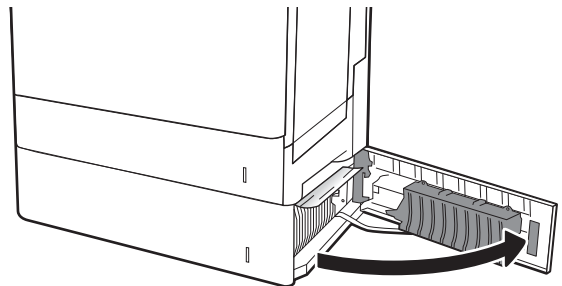
3. Remove any paper from the feed rollers inside the printer. First pull the paper to the left to release it, and then pull it forward to remove it.



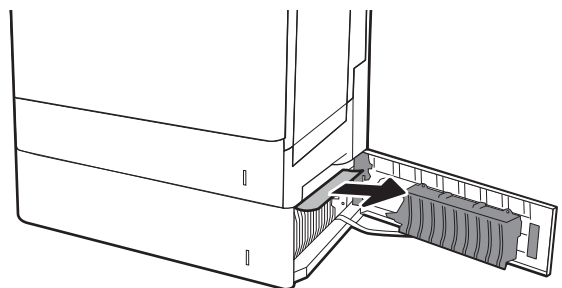
4. Install and close the tray.



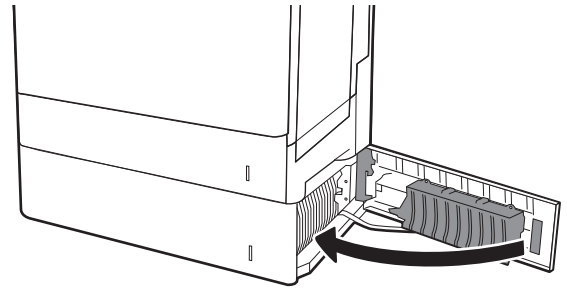
5. Open the lower-right door.



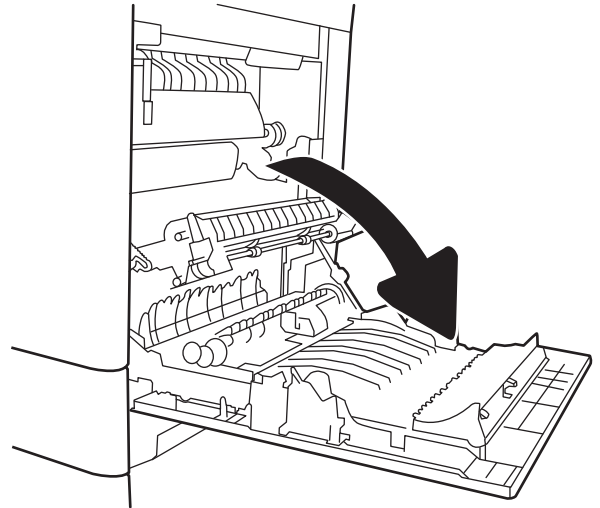
6. Gently pull out any jammed paper.



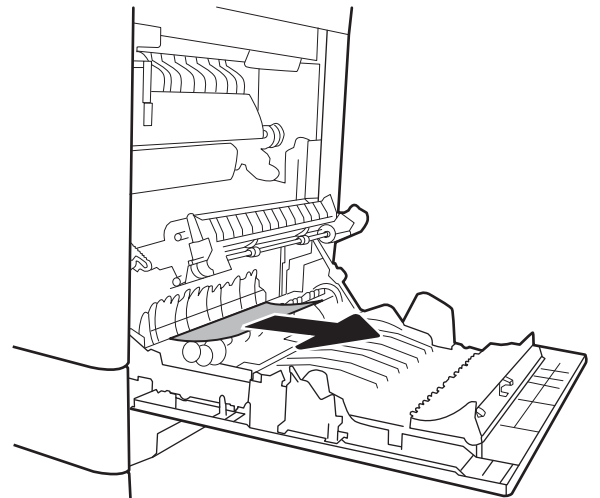
7. Close the lower-right door.



8. Open the right door.

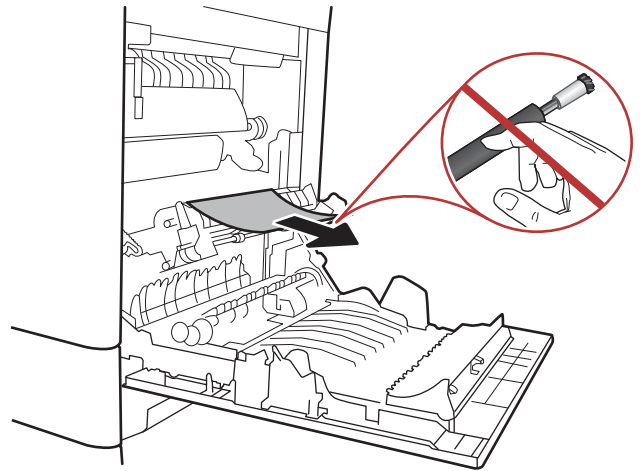


9. Gently pull out any jammed paper.

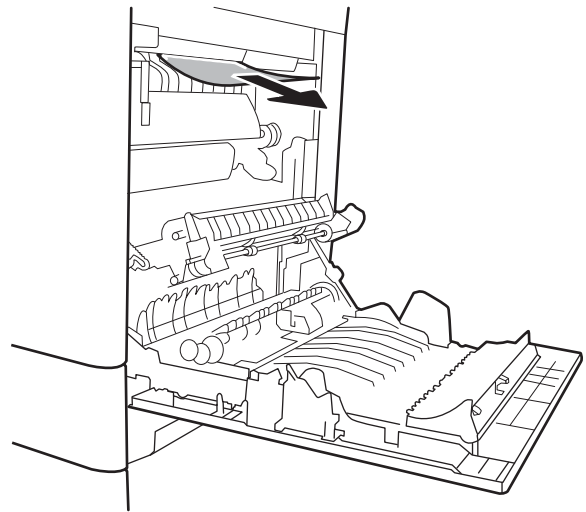


10. If paper is visible entering the bottom of the fuser, gently pull downward to remove it.

CAUTION: Do not touch the rollers on the transfer roller. Contaminants can affect print quality.



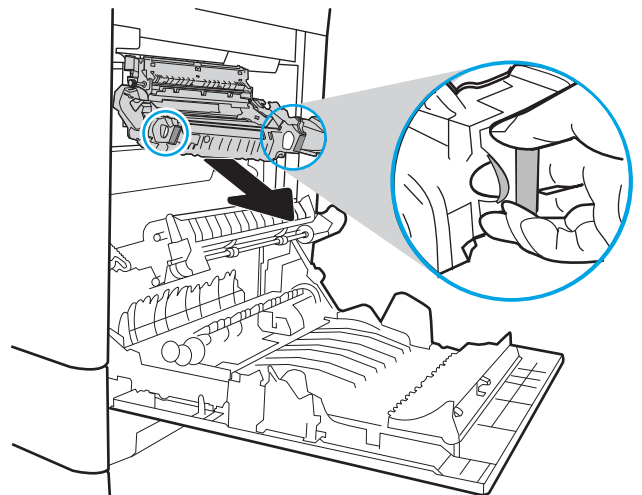
11. If paper is jammed as it enters the output bin, gently pull the paper downward to remove it.



12. Paper could be jammed inside the fuser where it would not be visible. Grasp the fuser handles, lift up slightly, and then pull straight out to remove the fuser.



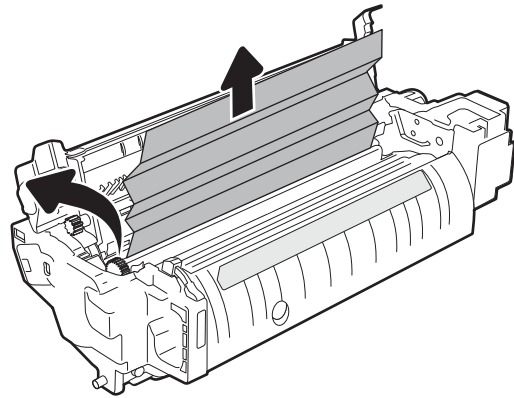
CAUTION: The fuser can be hot while the printer is in use. Wait for the fuser to cool before handling it.



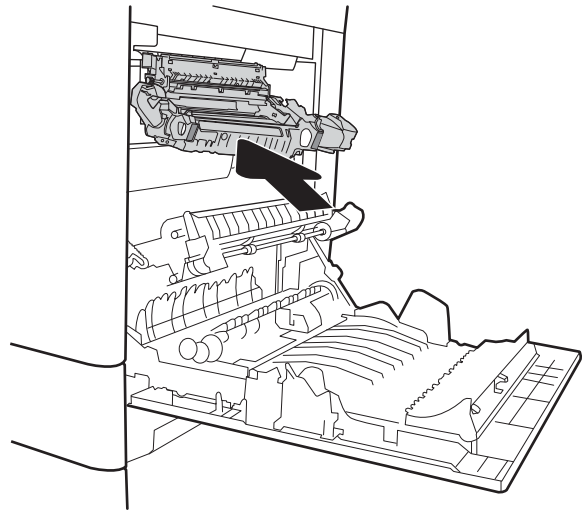
13. Open the jam-access door on the fuser. If paper is jammed inside the fuser, gently pull it straight up to remove it. If the paper tears, remove all paper fragments.



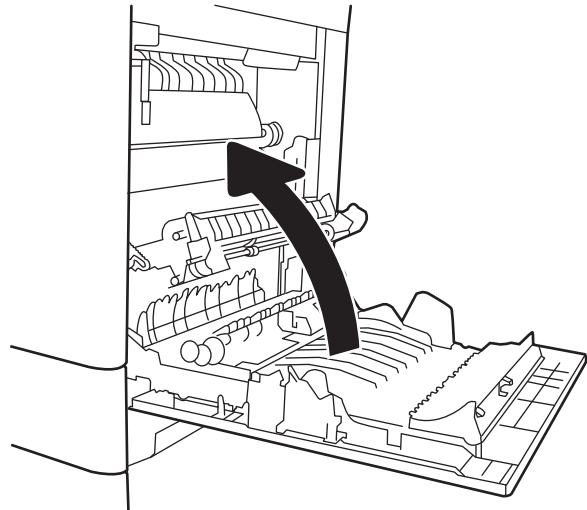
CAUTION: Even if the body of the fuser has cooled, the rollers that are inside could still be hot. Do not touch the fuser rollers until they have cooled.



14. Close the jam-access door on the fuser, and push the fuser completely into the printer until it clicks into place.



15. Close the right door.

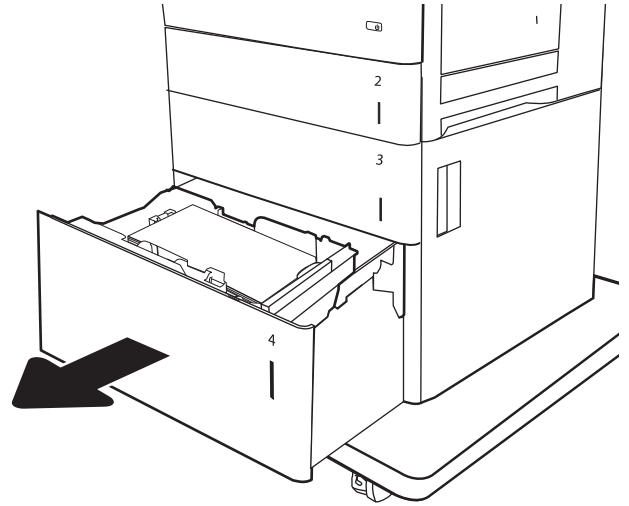


13.A 2000-sheet tray paper jam

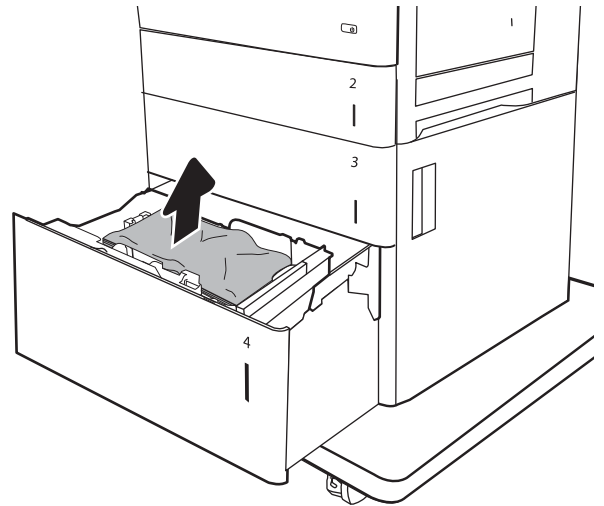
Use the following procedure to check for paper in all possible jam locations related to the 2,000-sheet high-capacity tray. When a jam occurs, the control panel might display a message and an animation that assists in clearing the jam.

- 13.A4.XX Jam in tray 4

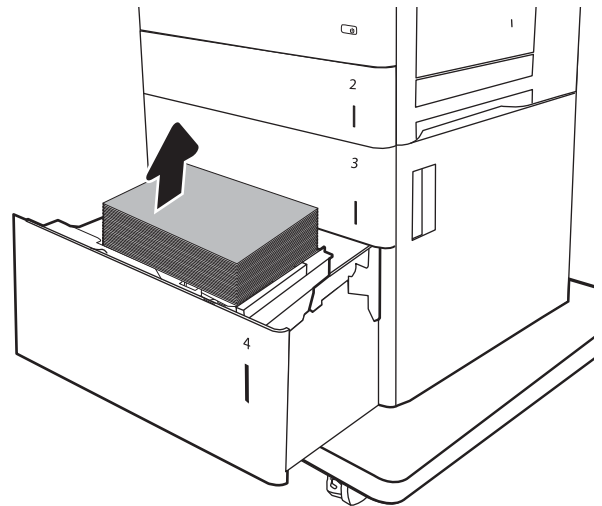
1. Open the 2,000-sheet high-capacity input tray.



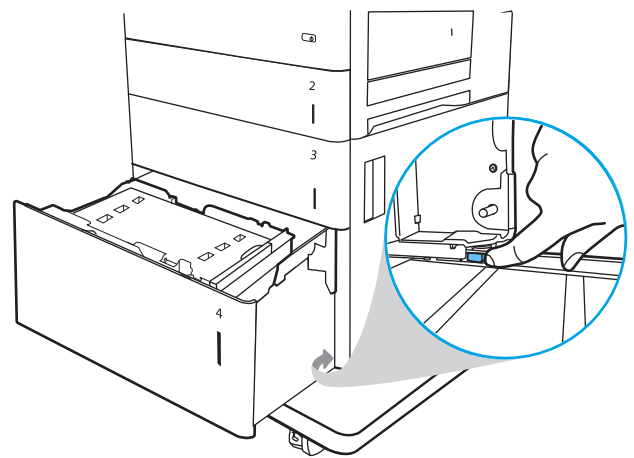
2. Remove any jammed or damaged sheets of paper. Verify that the tray is not overfilled and that the paper guides are adjusted correctly.



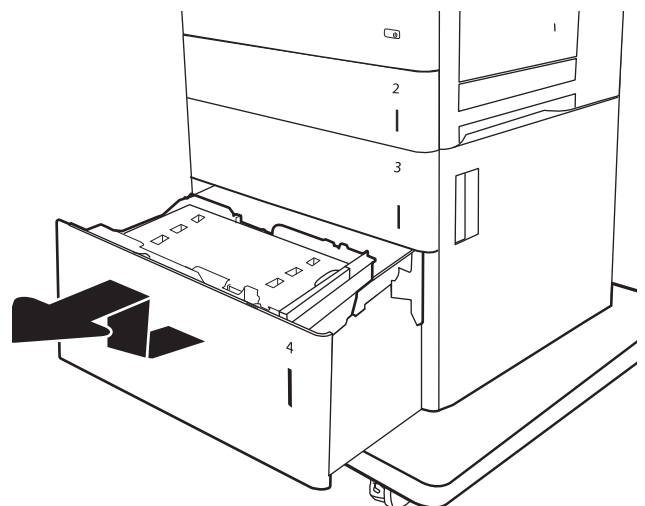
3. Remove the paper from the tray.



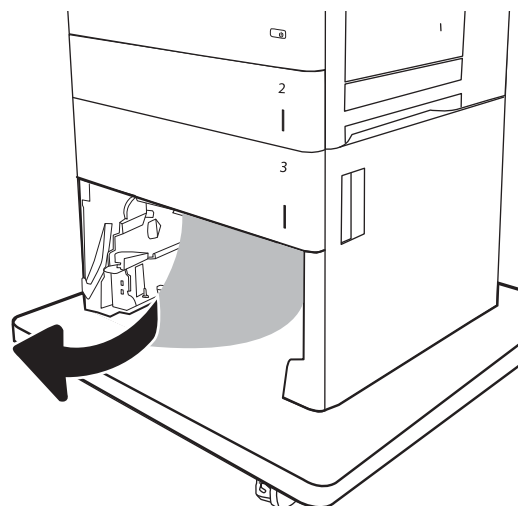
4. Press the release latch on the side of the tray to release it.



5. Lift the tray up and then pull it straight out to remove it.

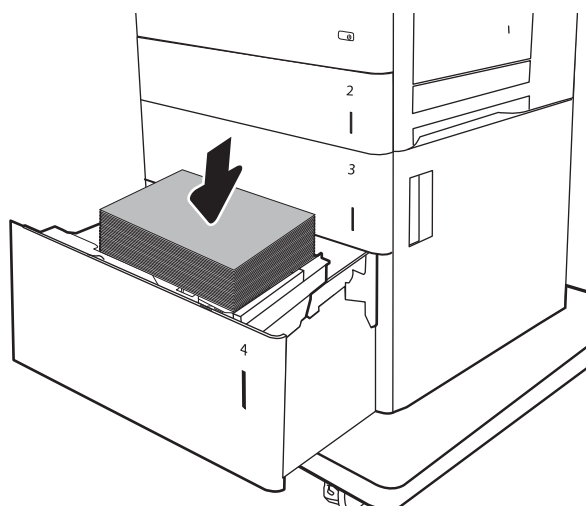


6. If jammed paper is in the feed area, pull it down to remove it. First pull the paper to the left to release it, and then pull it forward to remove it.

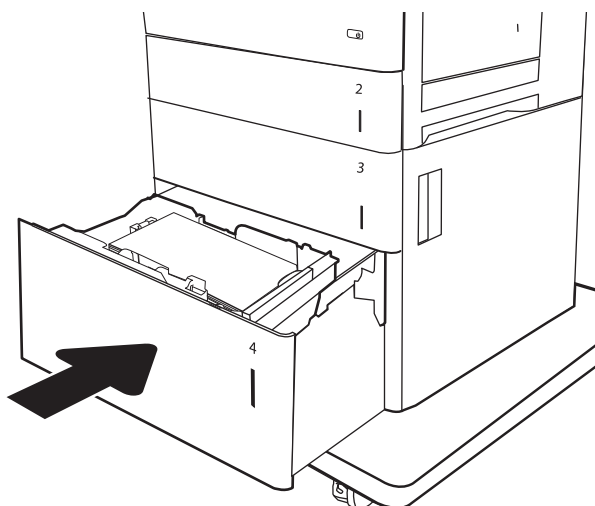


7. Install the tray, and then load full reams of paper into the tray. Verify that the tray is not overfilled and that the paper guides are adjusted correctly.

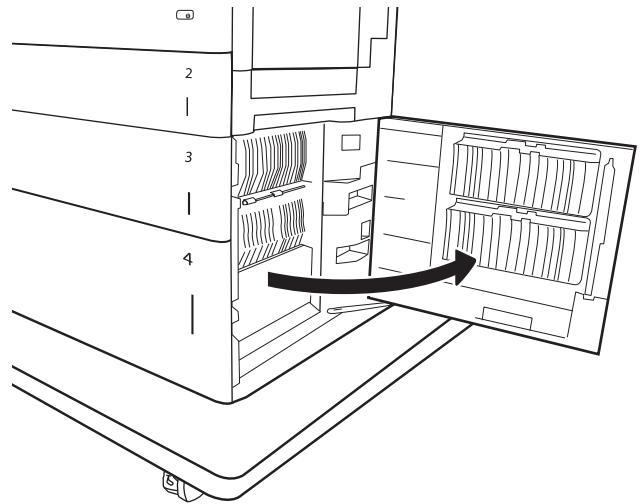
NOTE: The tray holds 2,000 sheets of paper. For best results, load full reams of paper. Avoid dividing reams into smaller sections.



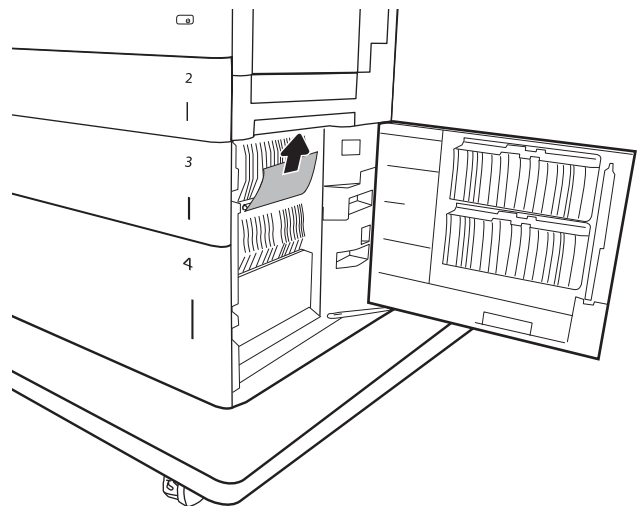
8. Close the tray.



9. Open the lower-right door.

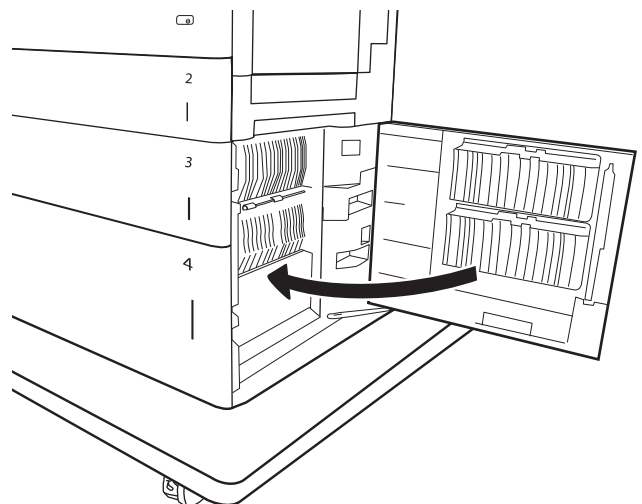


10. Remove any jammed paper.



11. Close the lower-right door.

NOTE: If, after clearing the jam, the printer control panel displays a message that there is no paper in the tray or the tray is overfilled, remove the tray and look behind it for any remaining paper.



13.B9, 13.B2, 13.FF fuser paper jam

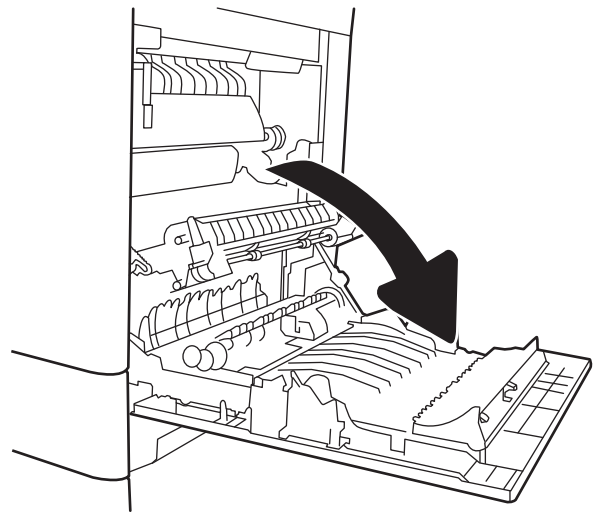
Use the following procedure to check for paper in all possible jam locations inside the right door. When a jam occurs, the control panel might display a message and an animation that assists in clearing the jam.

- 13.B9.XX Jam in fuser
- 13.B2.XX Jam in <Cover or Door>.
- 13.FF.EE Door Open Jam

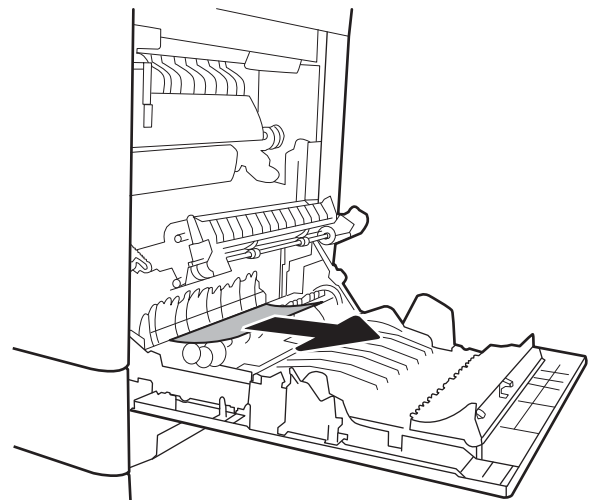


CAUTION: The fuser can be hot while the printer is in use. Wait for the fuser to cool before handling it.

1. Open the right door.

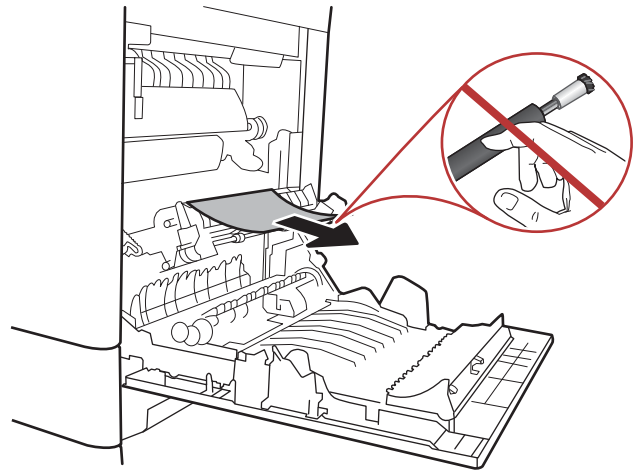


2. Gently pull out any jammed paper.

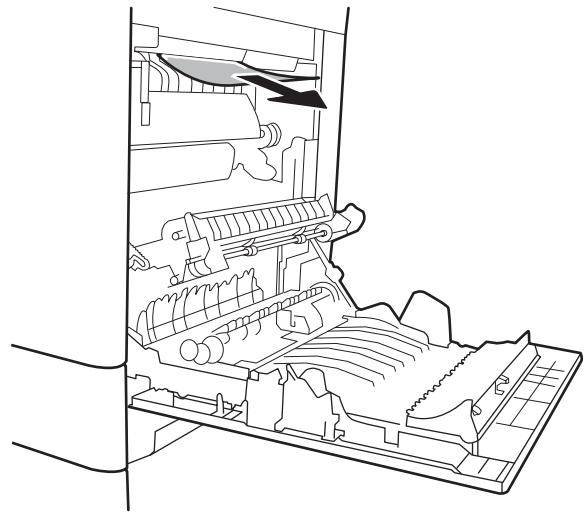


3. If paper is visible entering the bottom of the fuser, gently pull downward to remove it.

CAUTION: Do not touch the rollers on the transfer roller. Contaminants can affect print quality.



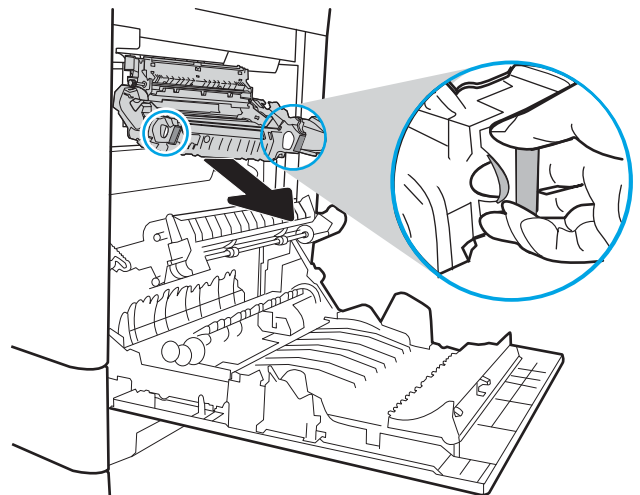
4. If paper is jammed as it enters the output bin, gently pull the paper downward to remove it.



5. Paper could be jammed inside the fuser where it would not be visible. Grasp the fuser handles, lift up slightly, and then pull straight out to remove the fuser.



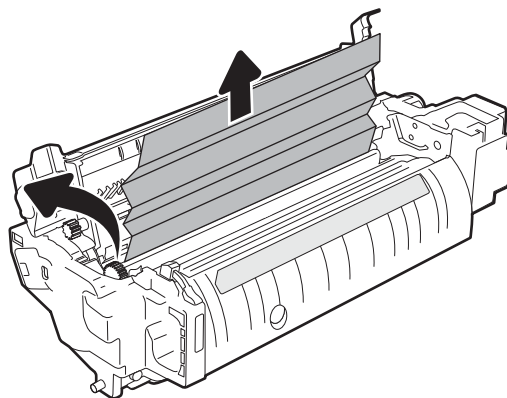
CAUTION: The fuser can be hot while the printer is in use. Wait for the fuser to cool before handling it.



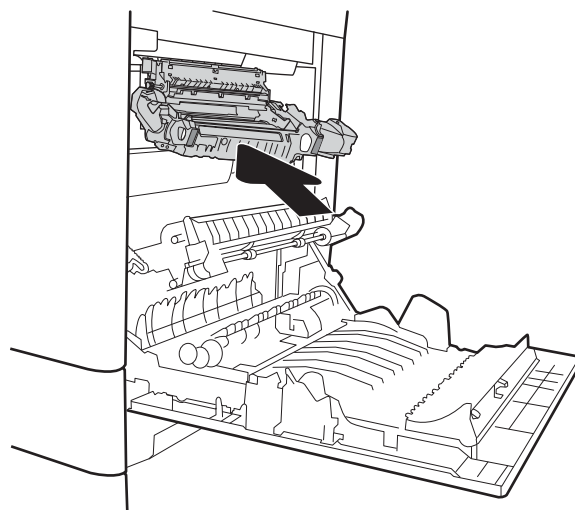
6. Open the jam-access door on the fuser. If paper is jammed inside the fuser, gently pull it straight up to remove it. If the paper tears, remove all paper fragments.



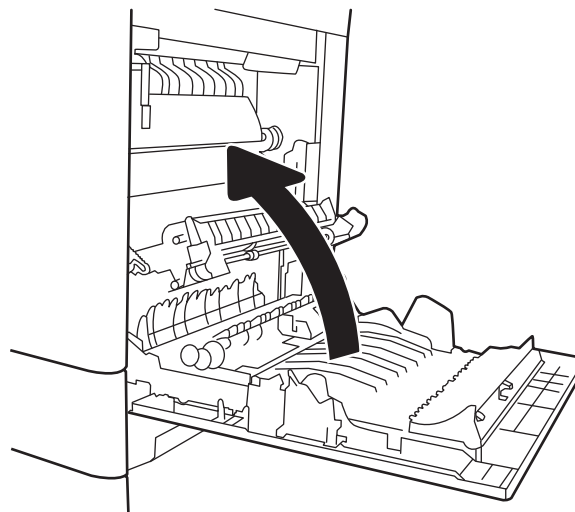
CAUTION: Even if the body of the fuser has cooled, the rollers that are inside could still be hot. Do not touch the fuser rollers until they have cooled.



7. Close the jam-access door on the fuser, and push the fuser completely into the printer until it clicks into place.



8. Close the right door.

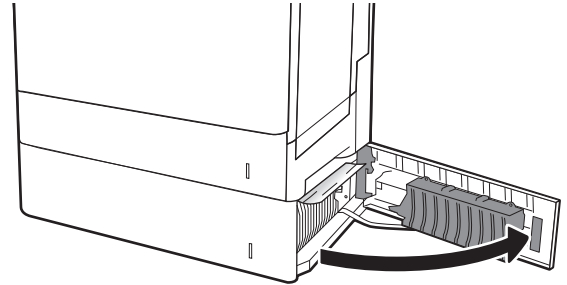


13.B2 right door paper jam

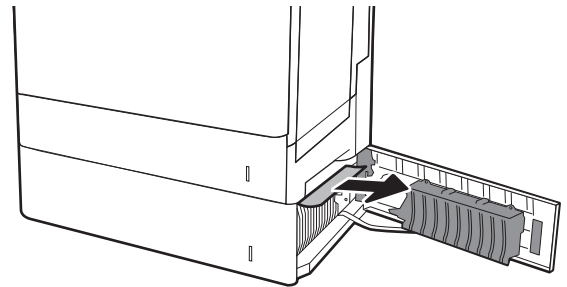
Use the following procedure to check for paper in the lower-right door. When a jam occurs, the control panel might display a message and an animation that assists in clearing the jam.

- 13.B2.XX Jam in <Cover or Door>.
- 13.FFEE Door Open Jam

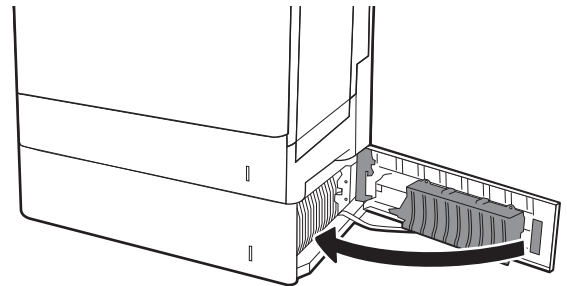
1. Open the lower-right door.



2. Gently remove any jammed paper.



3. Close the lower-right door.



Improve print quality

Introduction

- [Print from a different software program](#)
- [Check the paper-type setting for the print job](#)
- [Check toner-cartridge status](#)
- [Print a cleaning page](#)
- [Visually inspect the toner cartridge](#)
- [Check paper and the printing environment](#)
- [Try a different print driver](#)
- [Calibrate the printer to align the colors](#)

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

Follow these steps to check the estimated life remaining in the toner cartridges and if applicable, the status of other replaceable maintenance parts.

Step one: Print the supplies status page

1. From the Home screen on the printer control panel, select the **Reports** menu.
2. Select the **Configuration/Status Pages** menu.
3. Select **Supplies Status Page**, and then select **Print** to print the page.

Step two: Check supplies status

1. Look at the supplies status report to 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.

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

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

Print a cleaning page

During the printing process paper, toner, and dust particles can accumulate inside the printer and can cause print-quality issues such as toner specks or spatter, smears, streaks, lines, or repeating marks.

Follow these steps to clean the printer's paper path.

1. From the Home screen on the printer control panel, select the **Support Tools** menu.
2. Select the following menus:

- [Maintenance](#)
 - [Calibration/Cleaning](#)
 - [Cleaning Page](#)
3. Select [Print](#) to print the page.

A **Cleaning...** message displays on the printer control panel. The cleaning process takes a few minutes to complete. Do not turn the printer off until the cleaning process has finished. When it is finished, discard the printed page.

Visually inspect the toner cartridge

Follow these steps to inspect each toner cartridge.

1. Remove the toner cartridges from the printer, and verify that the sealing tape has been removed.
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.

Step three: Set the individual tray alignment

Follow these steps when text or images are not centered or aligned correctly on the printed page when printing from specific trays.

1. From the Home screen on the printer control panel, select the [Settings](#) menu.
2. Select the following menus:
 - [Copy/Print](#) or [Print](#)
 - [Print Quality](#)
 - [Image Registration](#)
3. Select [Tray](#), and then select the tray to adjust.
4. Select [Print Test Page](#), and then follow the instructions on the printed pages.
5. Select [Print Test Page](#) again to verify the results, and then make further adjustments if necessary.
6. Select [Done](#) to save the new settings.

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/colorljM652 or www.hp.com/support/colorljM653.

HP PCL6 driver	• Provided as the default driver on the printer CD. This driver is automatically installed unless you select a different one.
HP PCL 6 driver	• Recommended for all Windows environments
HP PCL-6 driver	• 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

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.

1. From the Home screen on the printer control panel, select the [Support Tools](#) menu.
2. Select the following menus:
 - [Maintenance](#)
 - [Calibration/Cleaning](#)
 - [Full Calibration](#)
3. Select [Start](#) 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.

Image defects table

Table 6-1 Image defects table quick reference

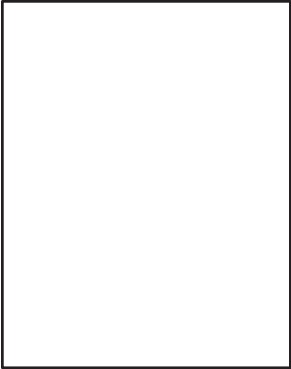
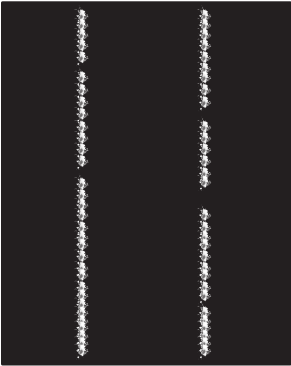
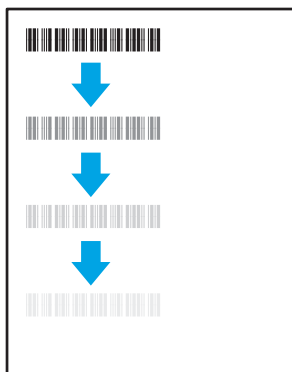
Table 6-2 Light print on page 136	Table 6-3 Gray background or dark print on page 136	Table 6-4 Blank page — No print on page 137
		
Table 6-5 Black page on page 137	Table 6-6 Banding defects on page 138	Table 6-7 Streak defects on page 138
		

Table 6-1 Image defects table quick reference (continued)

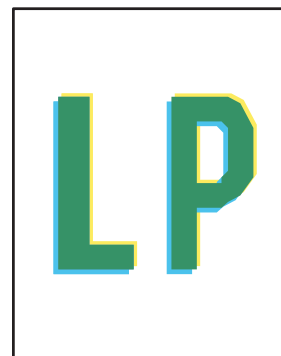
[Table 6-8 Fixing/fuser defects on page 139](#)



[Table 6-9 Image placement defects on page 139](#)



[Table 6-10 Color plane registrations defects \(color models only\) on page 140](#)



[Table 6-11 Output defects on page 140](#)

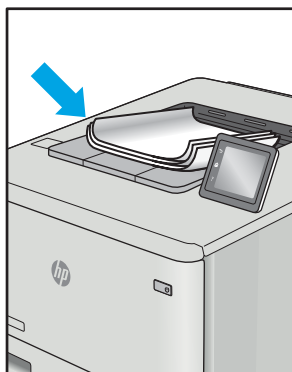


Image defects, no matter the cause, can often be resolved using the same steps. Use the following steps as a starting point for solving image defect issues.

1. Reprint the document. Print quality defects can be intermittent in nature or can go away completely with continued printing.
2. Check the condition of the cartridge or cartridges. If a cartridge is in a **Very Low** state (it has passed the rated life), replace the cartridge.
3. Make sure that the driver and tray print mode settings match the media that is loaded in the tray. Try using a different ream of media or a different tray. Try using a different print mode.
4. Make sure that the printer is within the supported operating temperature/humidity range.
5. Make sure that the paper type, size, and weight are supported by the printer. See the printer support page at support.hp.com for a list of the supported paper sizes and types for the printer.



NOTE: The term “fusing” refers to the part of the printing process where toner is affixed to paper.

The following examples depict letter-size paper that has passed through the printer short-edge first.

Table 6-2 Light print

Description	Sample	Possible solutions
Light print: The printed content on the entire page is light or faded.		1. Reprint the document. 2. Remove the cartridge, and then shake it to redistribute the toner. 3. Mono models only: Make sure that the Economode setting is disabled both at the printer control panel and in the print driver. 4. Make sure that the cartridge is installed correctly. 5. Print a Supply status page and check for life and usage of the cartridge. 6. Replace the cartridge. 7. If the problem persists, go to support.hp.com.

Table 6-3 Gray background or dark print

Description	Sample	Possible solutions
Gray background or dark print: The image or text is darker than expected.		1. Make sure that the paper in the trays has not already been run through the printer. 2. Use a different paper type. 3. Reprint the document. 4. Mono models only: From the Home screen on the printer control panel, go to the Adjust Toner Density menu, and then adjust the toner density to a lower level. 5. Make sure that the printer is in within the supported operating temperature and humidity range. 6. Replace the cartridge. 7. If the problem persists, go to support.hp.com.

Table 6-4 Blank page — No print

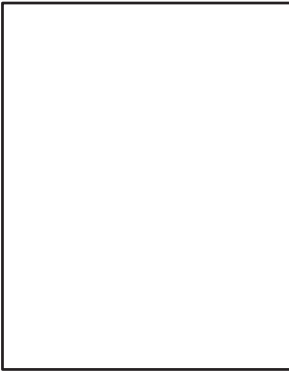
Description	Sample	Possible solutions
Blank page — No print: The page is completely blank and contains no printed content.		1. Make sure that the cartridge is genuine HP cartridges. 2. Make sure that the cartridge is installed correctly. 3. Print with a different cartridge. 4. Check the paper type in the paper tray and adjust the printer settings to match. If necessary, select a lighter paper type. 5. If the problem persists, go to support.hp.com.

Table 6-5 Black page

Description	Sample	Possible solutions
Black page: The entire printed page is black.		1. Visually inspect the cartridge to check for damage. 2. Make sure that the cartridge is installed correctly. 3. Replace the cartridge 4. If the problem persists, go to support.hp.com.

Table 6-6 Banding defects

Description	Sample	Possible solutions
Repetitive wide-pitch banding and impulse bands: Dark or light lines which repeat down the length of the page. They might be sharp or soft in nature. The defect displays only in areas of fill, not in text or sections with no printed content.		1. Reprint the document. 2. Try printing from another tray. 3. Replace the cartridge. 4. Use a different paper type. 5. Enterprise models only: From the Home screen on the printer control panel, go to the Adjust Paper Types menu, and then choose a print mode that is designed for a slightly heavier media than what you are using. This slows the print speed and might improve the print quality. 6. If the problem persists, go to support.hp.com.

Table 6-7 Streak defects

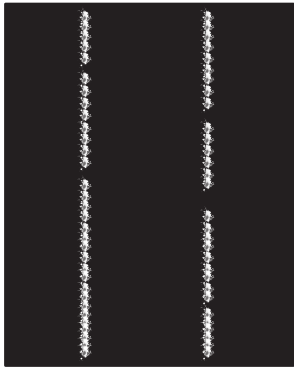
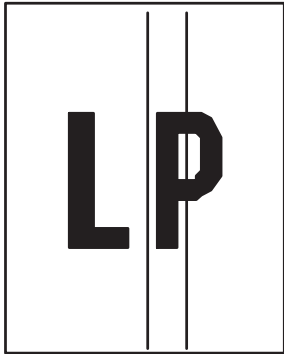
Description	Sample	Possible solutions
Light vertical streaks: Light streaks that usually span the length of the page. The defect displays only in areas of fill, not in text or sections with no printed content.		1. Reprint the document. 2. Remove the cartridge, and then shake it to redistribute the toner. 3. If the problem persists, go to support.hp.com. NOTE: Both light and dark vertical streaks can occur when the printing environment is outside the specified range for temperature or humidity. Refer to your printer's environmental specifications for allowable temperature and humidity levels.
Dark vertical streaks and ITB cleaning streaks (color models only): Dark lines which occur down the length of the page. The defect might occur anywhere on the page, in areas of fill or in sections with no printed content.		1. Reprint the document. 2. Remove the cartridge, and then shake it to redistribute the toner. 3. Print a cleaning page. 4. Check the toner level in the cartridge. 5. If the problem persists, go to support.hp.com.

Table 6-8 Fixing/fuser defects

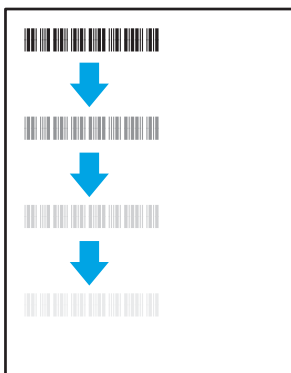
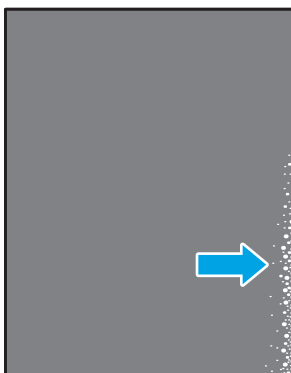
Description	Fixing/fuser	Possible solutions
Hot fuser offset (shadow): Slight shadows, or offsets, of the image repeated down the page. The repeated image might fade with each recurrence.		1. Reprint the document. 2. Check the paper type in the paper tray and adjust the printer settings to match. If necessary, select a lighter paper type. 3. If the problem persists, go to support.hp.com.
Poor fusing: Toner rubs off along either edge of page. This defect is more common at the edges of high-coverage jobs and on light media types but can occur anywhere on the page.		1. Reprint the document. 2. Check the paper type in the paper tray and adjust the printer settings to match. If necessary, select a heavier paper type. 3. Enterprise models only: From the printer control panel, go to the Edge-to-Edge menu and then select Normal. Reprint the document. 4. Enterprise models only: From the printer control panel, select Auto Include Margins and then reprint the document. 5. If the problem persists, go to support.hp.com.

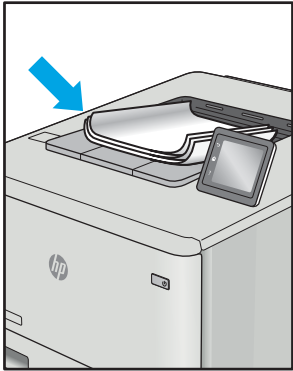
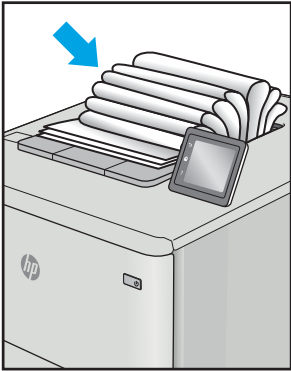
Table 6-9 Image placement defects

Description	Sample	Possible solutions
Margins and skew: The image is not centered, or is skewed on the page. The defect occurs when the paper is not positioned properly as it is pulled from the tray and moves through the paper path.		1. Reprint the document. 2. Remove the paper and then reload the tray. Make sure that all the paper edges are even on all sides. 3. Make sure that the top of the paper stack is below the tray full indicator. Do not overfill the tray. 4. Make sure that the paper guides are adjusted to the correct size for the paper. Do not adjust the paper guides tightly against the paper stack. Adjust them to the indentations or markings in the tray. 5. If the problem persists, go to support.hp.com.

Table 6-10 Color plane registrations defects (color models only)

Description	Sample	Possible solutions
Color plane registrations: One or more color of the planes is not aligned with the other color planes. The primary error will typically occur with yellow.		1. Reprint the document. 2. From the printer control panel, calibrate the printer. 3. If a cartridge has reached a Very Low state or the printed output is severely faded, replace the cartridge. 4. From the printer control panel use the Restore Calibration feature to reset the printer's calibration settings to the factory defaults. 5. If the problem persists, go to support.hp.com.

Table 6-11 Output defects

Description	Sample	Possible solutions
Output curl: Printed paper has curled edges. The curled edge can be along the short or long side of the paper. Two types of curl are possible: • Positive curl: The paper curls toward the printed side. The defect occurs in dry environments or when printing high coverage pages. • Negative curl: The paper curls away from the printed side. The defect occurs in high-humidity environments or when printing low coverage pages.		1. Reprint the document. 2. Positive curl: From the printer control panel, select a heavier paper type. The heavier paper type creates a higher temperature for printing. Negative curl: From the printer control panel, select a lighter paper type. The lighter paper type creates a lower temperature for printing. Try storing the paper in a dry environment prior or use freshly opened paper. 3. Print in duplex mode. 4. If the problem persists, go to support.hp.com.
Output stacking: The paper does not stack well in the output tray. The stack might be uneven, skewed, or the pages might be pushed out of the tray and onto the floor. Any of the following conditions can cause this defect: • Extreme paper curl • The paper in the tray is wrinkled or deformed • The paper is a non-standard paper type, such as envelopes • The output tray is too full		1. Reprint the document. 2. Extend the output bin extension. 3. If the defect is caused by extreme paper curl, complete the troubleshooting steps for Output curl. 4. Use a different paper type. 5. Use freshly opened paper. 6. Remove the paper from the output tray before the tray gets too full. 7. If the problem persists, go to support.hp.com.

Solve wired network problems

Introduction

Certain types of problems can indicate there is a network communication problem. These problems include the following issues:

- The periodic loss of ability to communicate with the printer
- The printer cannot be found during driver installation
- A periodic failure to print

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 flashes indicating network traffic, and the green link-status light is continuously lit indicating a network link.
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](#)
- [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](#)
- [Reduce interference on a wireless network](#)

Introduction

Use the troubleshooting information to help resolve issues.



NOTE: To determine whether HP NFC and Wireless Print Direct printing are enabled on your printer, print a configuration page from the printer control panel

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. Make sure there are not more than 5 concurrent Wireless Print Direct users.
4. Turn off any third-party firewalls on your computer.
5. Make sure that the wireless network is working correctly.
6. 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.

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.

Index

Symbols/Numerics

- 2,000 High-capacity input tray with stand
 - part number 38
- 2,000-sheet high-capacity input tray
 - clear jams 121
 - loading 30
- 3 x 550-sheet tray with stand
 - part number 38
- 550-sheet paper trays
 - part numbers 38
- 550-sheet tray with stand
 - part number 38
- 550-sheet trays
 - jams 116

A

- accessories
 - ordering 38
 - part numbers 38
- acoustic specifications 17
- AirPrint 71
- alternative letterhead mode 24, 29, 34
- Android devices
 - printing from 71

B

- bin, output
 - locating 2
- Bonjour
 - identifying 76
- browser requirements
 - HP embedded Web Server 76

C

- calibrate
 - colors 133

- cartridge
 - replacing 48
- cartridge policy 41
- cartridge protection 44
- cartridges
 - order numbers 48
- checklist
 - wireless connectivity 143
- cleaning
 - paper path 130
- colors
 - calibrate 133
- control panel
 - help 97
 - locating 2
 - locating features 5, 7
- customer support
 - online 96

D

- default gateway, setting 86
- deleting
 - stored jobs 67
- dimensions, printer 15
- double-sided printing
 - Mac 61
 - Windows 58
- drivers, supported 12
- duplex printing
 - Mac 61
- duplex printing (double-sided)
 - settings (Windows) 57
 - Windows 58
- duplexing
 - manually (Mac) 61
 - manually (Windows) 58

E

- easy-access USB printing 72

- electrical specifications 17
- Embedded Web Server
 - changing network settings 84
 - changing printer name 85
 - opening 84, 85
- Embedded Web Server (EWS)
 - assigning passwords 88
 - features 76
 - network connection 76
- energy use, optimizing 91
- envelopes
 - orientation 22
- envelopes, loading 35
- Ethernet (RJ-45)
 - locating 4
- Explorer, versions supported
 - HP Embedded Web Server 76

F

- formatter
 - locating 3
- fuser
 - jams 125

G

- gateway, setting default 86
- general configuration
 - HP Embedded Web Server 78
- genuine HP cartridges 41

H

- hard disks
 - encrypted 89
- hard drive
 - part number 38
- Help button
 - locating 5, 7
- help, control panel 97

- Hi-Speed USB 2.0 printing port
 - locating 4
- Home button
 - locating 5, 7
- HP Customer Care 96
- HP Embedded Web Server
 - changing network settings 84
 - changing printer name 85
 - general configuration 78
 - HP Web Services 81
 - information pages 78
 - network settings 81
 - opening 84, 85
 - other links list 83
 - print settings 79
 - security settings 81
 - troubleshooting tools 80
- HP Embedded Web Server (EWS)
 - features 76
 - network connection 76
- HP ePrint 69
- HP ePrint software 70
- HP Web Jetadmin 92
- HP Web Services
 - enabling 81
- I**
 - image quality
 - check toner-cartridge status 130
 - image quality issues
 - examples and solutions 134
 - information pages
 - HP Embedded Web Server 78
 - interface ports
 - locating 4
 - Internet Explorer, versions supported
 - HP Embedded Web Server 76
 - IP Security 88
 - IPsec 88
 - IPv4 address 86
 - IPv6 address 86
- J**
 - jams
 - 2,000-sheet high-capacity input tray 121
 - 550-sheet trays 116
 - auto-navigation 108
 - causes of 108
 - fuser 125
 - locations 107
 - lower-right door 128
 - output bin 109
 - right door 125
 - Tray 1 110
 - Tray 2 112
- Jetadmin, HP Web 92
- jobs, stored
 - creating (Windows) 64
 - deleting 67
 - Mac settings 66
 - printing 66
- K**
 - keypad
 - locating 2
- L**
 - label
 - orientation 36
 - labels
 - printing (Windows) 58
 - printing on 36
 - labels, loading 36
 - LAN port
 - locating 4
 - loading
 - paper in the 2,000-sheet high-capacity input tray 30
 - paper in Tray 1 20
 - paper in Tray 2 and the 550-sheet trays 25
 - local area network (LAN)
 - locating 4
 - lock
 - formatter 90
 - lower-right door
 - clear jams 128
- M**
 - Mac driver settings
 - Job Storage 66
 - managing network 84
 - manual duplex
 - Mac 61
 - Windows 58
 - memory
 - included 10
 - memory chip (toner)
 - locating 48
 - mobile printing
 - Android devices 71
 - mobile printing, software supported 14
 - multiple pages per sheet
 - printing (Mac) 62
 - printing (Windows) 58
- N**
 - Near Field Communication printing 68
 - Netscape Navigator, versions supported
 - HP embedded Web Server 76
 - network
 - printer name, changing 85
 - settings, changing 84
 - settings, viewing 84
 - network duplex settings, changing 86
 - network link speed settings, changing 86
 - network settings
 - HP Embedded Web Server 81
 - networks
 - default gateway 86
 - HP Web Jetadmin 92
 - IPv4 address 86
 - IPv6 address 86
 - subnet mask 86
 - supported 10
 - NFC accessory
 - part number 38
 - NFC printing 68
- O**
 - on/off button
 - locating 2
 - online help, control panel 97
 - online support 96
 - operating systems, supported 12
 - ordering
 - supplies and accessories 38
 - other links list
 - HP Embedded Web Server 83
 - output bin
 - clear jams 109
 - locating 2
- P**
 - pages per minute 10

- pages per sheet
 - selecting (Mac) 62
 - selecting (Windows) 58
 - paper
 - jams 108
 - loading the 2,000-sheet high-capacity input tray 30
 - loading Tray 1 20
 - loading Tray 2 and the 550-sheet trays 25
 - selecting 131
 - Tray 1 orientation 22
 - Tray 2 and the 500-sheet trays orientation 32
 - Tray 2 and the 550-sheet trays orientation 27
 - paper jams
 - 2,000-sheet high-capacity input tray 121
 - 550-sheet trays 116
 - fuser 125
 - locations 107
 - lower-right door 128
 - output bin 109
 - right door 125
 - Tray 1 110
 - Tray 2 112
 - paper pickup problems
 - solving 101, 103
 - paper trays
 - part numbers 38
 - paper type
 - selecting (Windows) 58
 - paper types
 - selecting (Mac) 62
 - paper, ordering 38
 - part numbers
 - accessories 38
 - replacement parts 40
 - supplies 38
 - toner cartridges 38
 - toner collection unit 38
 - ports
 - locating 4
 - power
 - consumption 17
 - power connection
 - locating 3
 - power switch
 - locating 2
 - power usage
 - 1 watt or less 91
 - print drivers, supported 12
 - print media
 - loading in Tray 1 20
 - print on both sides
 - Mac 61
 - manually, Windows 58
 - Windows 58
 - print settings
 - HP Embedded Web Server 79
 - printing
 - from USB storage accessories 72
 - stored jobs 66
 - printing on both sides
 - settings (Windows) 57
 - private printing 64
 - product number
 - locating 3
 - protect cartridges 44
- R**
- replacement parts
 - part numbers 40
 - replacing
 - toner cartridges 48
 - toner-collection unit 52
 - restore factory settings 98
 - right door
 - jams 125
 - RJ-45 port
 - locating 4
- S**
- security settings
 - HP Embedded Web Server 81
 - security
 - encrypted hard disk 89
 - serial number
 - locating 3
 - settings
 - restore factory 98
 - Sign In button
 - locating 7
 - Sign Out button
 - locating 7
 - sleep mode 91
 - special paper
 - printing (Windows) 58
 - specifications
 - electrical and acoustic 17
 - speed, optimizing 91
 - Start Copy button
 - locating 7
 - status of printer 5
 - Stop button
 - locating 5
 - storage, job
 - Mac settings 66
 - store print jobs 64
 - stored jobs
 - creating (Mac) 66
 - creating (Windows) 64
 - deleting 67
 - printing 66
 - storing jobs
 - with Windows 64
 - subnet mask 86
 - supplies
 - low threshold settings 100
 - ordering 38
 - part numbers 38
 - replacing toner cartridges 48
 - replacing toner-collection unit 52
 - using when low 100
 - support
 - online 96
 - system requirements
 - HP Embedded Web Server 76
 - minimum 13
- T**
- TCP/IP
 - manually configuring IPv4
 - parameters 86
 - manually configuring IPv6
 - parameters 86
 - technical support
 - online 96
 - toner cartridge
 - low threshold settings 100
 - using when low 100
 - toner cartridges
 - components 48
 - order numbers 48
 - part numbers 38
 - replacing 48
 - toner collection unit
 - part numbers 38

- toner-collection unit
 - replacing 52
- touchscreen
 - locating features 7
- transparencies
 - printing (Windows) 58
- Tray 1
 - jams 110
 - loading envelopes 35
 - paper orientation 22
- Tray 2
 - jams 112
- Tray 2 and the 500-sheet trays
 - paper orientation 32
- Tray 2 and the 550-sheet trays
 - loading 25
 - paper orientation 27
- trays
 - capacity 10
 - included 10
 - locating 2
- troubleshooting
 - check toner-cartridge status 130
 - jams 108
 - network problems 141
 - paper feed problems 101
 - wired network 141
 - wireless network 143
- troubleshooting tools
 - HP Embedded Web Server 80
- two-sided printing
 - settings (Windows) 57

U

- USB port
 - enabling 72
 - locating 4
- USB ports, optional
 - part number 38
- USB storage accessories
 - printing from 72

W

- Web browser requirements
 - HP Embedded Web Server 76
- Web sites
 - customer support 96
 - HP Web Jetadmin, downloading 92
- weight, printer 15

- Wi-Fi Direct printing 14
- Wireless Direct Printing 68
- wireless network
 - troubleshooting 143
- wireless network interference 145
- wireless print server
 - part number 38