



Dell 2230d Laser Printer

User's Guide

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Safety information


Connect the power supply cord to a properly grounded electrical outlet that is near the product and easily accessible.

 **CAUTION—SHOCK HAZARD:** Do not set up this product or make any electrical or cabling connections, such as the power supply cord or telephone, during a lightning storm.


Refer service or repairs, other than those described in the user documentation, to a professional service person.


This product is designed, tested, and approved to meet strict global safety standards with the use of specific manufacturer's components. The safety features of some parts may not always be obvious. The manufacturer is not responsible for the use of other replacement parts.


 **CAUTION—SHOCK HAZARD:** Make sure that all external connections (such as Ethernet and telephone system connections) are properly installed in their marked plug-in ports.


 **CAUTION—POTENTIAL INJURY:** This product uses a laser. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.


This product uses a printing process that heats the print media, and the heat may cause the media to release emissions. You must understand the section in your operating instructions that discusses the guidelines for selecting print media to avoid the possibility of harmful emissions.


 **CAUTION—HOT SURFACE:** The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching.


 **CAUTION—POTENTIAL INJURY:** Use the handholds on the sides of the printer to lift it, and make sure your fingers are not under the printer when you set it down.

 **CAUTION—POTENTIAL INJURY:** Do not twist, bind, crush, or place heavy objects on the power cord. Do not subject the power cord to abrasion or stress. Do not pinch the power cord between objects such as furniture and walls. If the power cord is misused, a risk of fire or electrical shock results. Inspect the power cord regularly for signs of misuse. Remove the power cord from the electrical outlet before inspecting it.

 **CAUTION—SHOCK HAZARD:** When accessing the system board, turn the printer off, and then unplug the power cord from the wall outlet before continuing. If you have other devices attached to the printer, then turn them off as well and unplug any cables going to the printer.

 **CAUTION—SHOCK HAZARD:** If you are accessing the system board or installing optional hardware or memory devices sometime after setting up the printer, then turn the printer off, and unplug the power cord from the wall outlet before continuing. If you have any other devices attached to the printer, then turn them off as well, and unplug any cables going into the printer.

 **CAUTION—SHOCK HAZARD:** To avoid the risk of electric shock when cleaning the exterior of the printer, unplug the power cord from the wall outlet and disconnect all cables from the printer before proceeding.

 **CAUTION—POTENTIAL INJURY:** Before moving the printer, follow these guidelines to avoid personal injury or printer damage:

- Turn the printer off using the power switch, and then unplug the power cord from the wall outlet.
- Disconnect all cords and cables from the printer before moving it.
- Lift the printer off of the optional drawer and set it aside instead of trying to lift the drawer and printer at the same time.

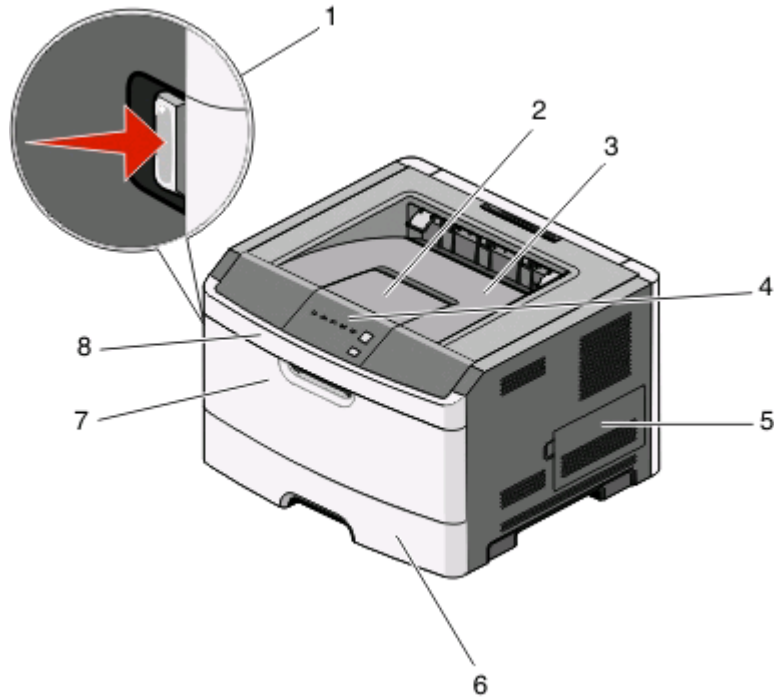
Note: Use the handholds located on both sides of the printer to lift it off the optional drawer.

Learning about the printer

Printer configurations

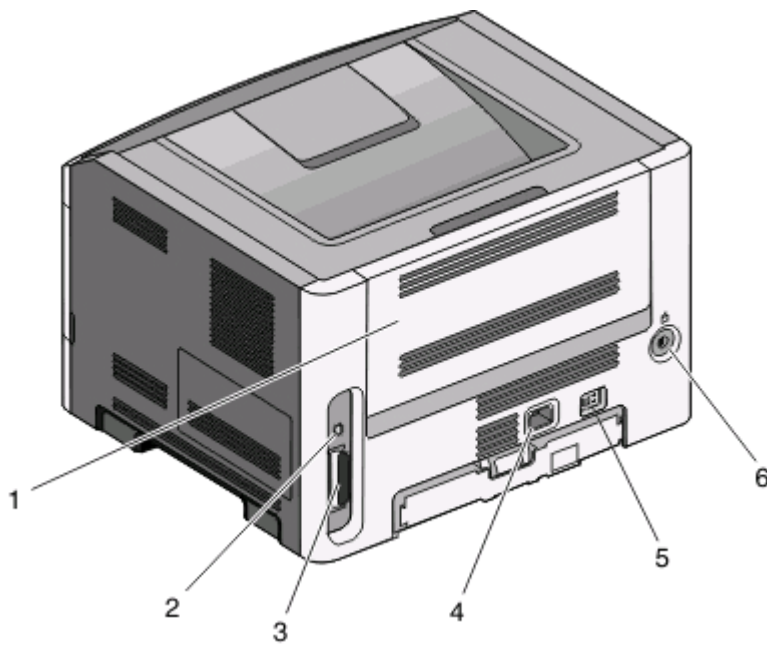
Basic model

The following illustration shows the printer front with its basic features or parts:



1	Front door release button
2	Paper stop
3	Standard exit bin
4	Printer control panel
5	System board door
6	Standard 250-sheet tray (Tray 1)
7	Manual feeder door
8	Front door

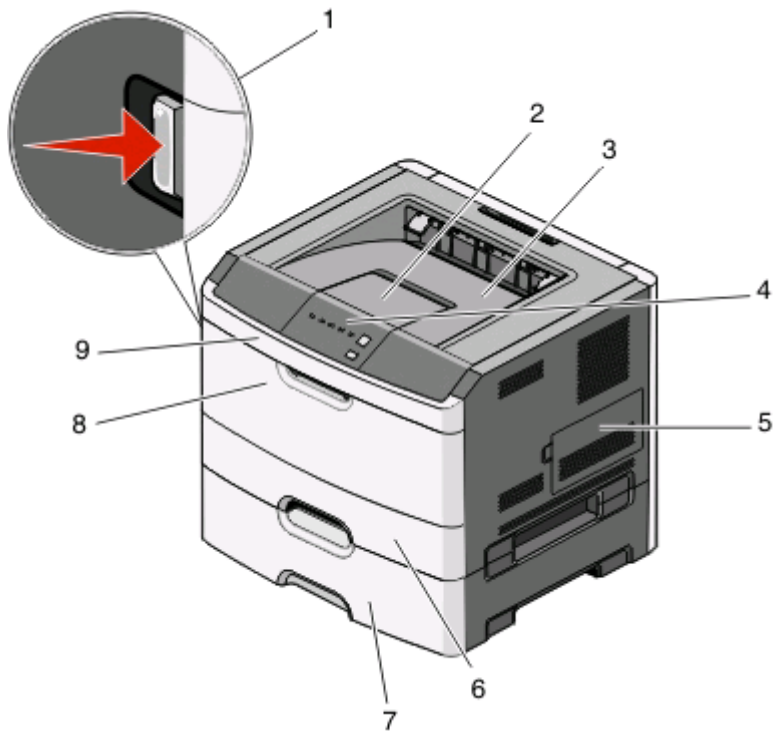
The following illustration shows the printer back with its basic features or parts:



1	Rear door
2	USB port
3	Parallel port
4	Printer power cord socket
5	Power button (On/Off switch)
6	Locking device

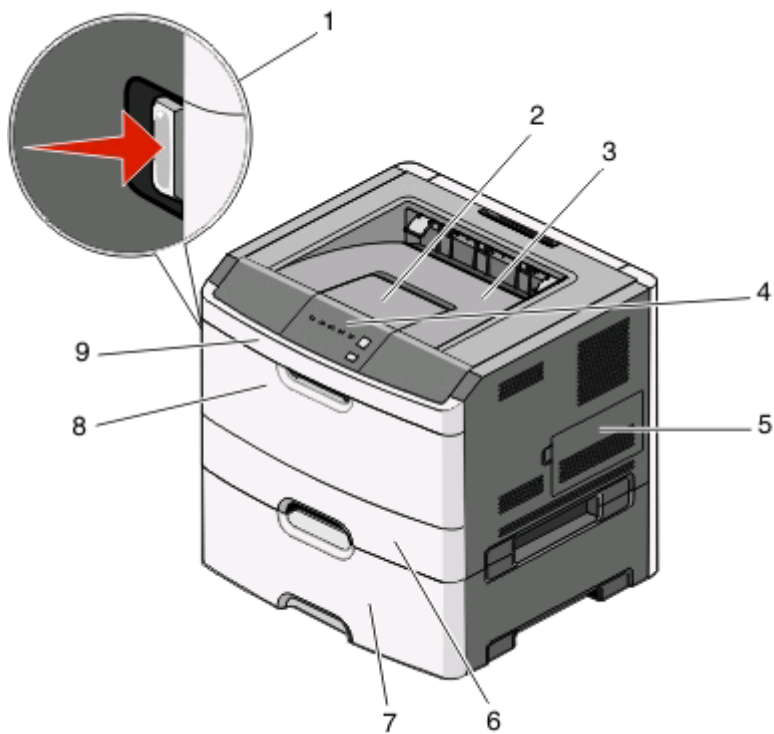
Configured models

The following illustration shows the printer configured with an optional 250-sheet drawer:



1	Front door release button
2	Paper stop
3	Standard exit bin
4	Printer control panel
5	System board door
6	Standard 250-sheet tray (Tray 1)
7	Optional 250-sheet drawer (Tray 2)
8	Manual feeder door
9	Front door

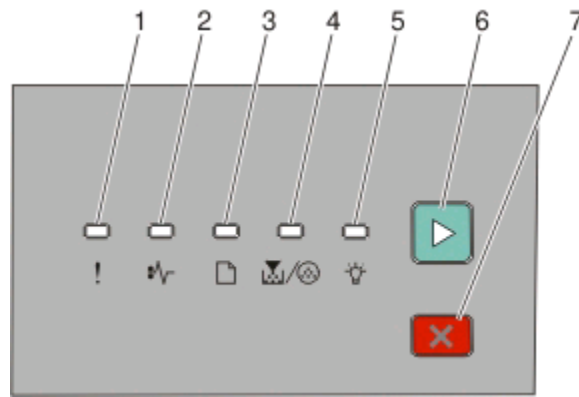
The following illustration shows the printer configured with an optional 550-sheet drawer:










1	Front door release button
2	Paper stop
3	Standard exit bin
4	Printer control panel
5	System board door
6	Standard 250-sheet tray (Tray 1)
7	Optional 550-sheet drawer (Tray 2)
8	Manual feeder door
9	Front door

Understanding the printer control panel

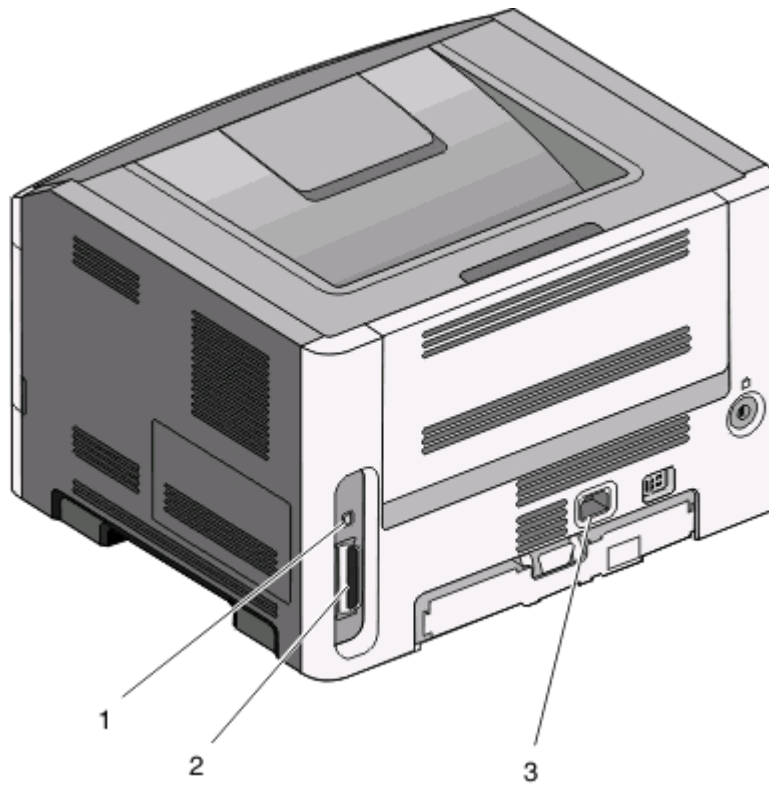
The printer control panel features six lights and two buttons.



Item		
1	Error light	
2	Jam light	
3	Load paper light	
4	Toner light	
5	Ready light	
6	Continue button	
7	Stop button	

Attaching cables

- 1 Connect the printer to a computer using USB or parallel cable.
- 2 Connect the power cord to the printer first and then to a wall outlet.



1	USB port
2	Parallel port
3	Printer power cord socket

Understanding the printer menus

A number of menus are available to make it easy for you to change the printer settings. You may print a menu list by printing the menu settings page. From a printer connected by USB or parallel cable, access the menus by using the Local Printer Settings Utility for Microsoft® Windows® or Printer Settings for Macintosh®.

Paper menu

Default Source menu

Menu item	Description
Default Source Tray <x> Manual Paper Manual Env	Sets a default paper source for all print jobs Notes: <ul style="list-style-type: none">• Tray 1 (standard tray) is the factory default setting.• Only an installed paper source will appear as a menu setting.• A paper source selected for a print job overrides the Default Source setting for the duration of the print job.• If the same size and type of paper are in two trays and the Paper Size and Paper Type settings match, the trays are automatically linked. When one tray is empty, the job prints using paper from the linked tray.

Size/Type menu

Menu item	Description
Select Source menu Tray 1 Tray 2 Manual Paper Manual Envelope	Notes: <ul style="list-style-type: none">• These menus let you specify the installed paper size and type in the selected tray or manual feeder.• Only installed trays and feeders are listed in this menu.
Set Size menu for Tray 1 or Tray 2 A4 A5 A6 JIS B5 Executive Folio Legal Letter Oficio (Mexico) Statement Universal	Lets you specify the paper size loaded in each tray Notes: <ul style="list-style-type: none">• Letter is the US factory default setting. A4 is the international factory default setting.• If the same size and type of paper are in two trays and the Paper Size and Paper Type settings match, then the trays are automatically linked. When one tray is empty, the job prints using paper from the linked tray.• The A6 paper size is supported only in Tray 1.

Menu item	Description
<p>Set Size menu for Manual Paper</p> <ul style="list-style-type: none"> A4 A5 Executive Folio JIS B5 Legal Letter Oficio (Mexico) Statement Universal 	<p>Lets you specify the size of the paper being loaded in the manual feeder</p> <p>Note: Letter is the US factory default setting. A4 is the international factory default setting.</p>
<p>Set Size menu for Manual Envelope</p> <ul style="list-style-type: none"> 7 3/4 Envelope 9 Envelope 10 Envelope C5 Envelope B5 Envelope DL Envelope Other Envelope 	<p>Lets you specify the size of the envelope being manually loaded</p> <p>Note: 10 Envelope is the US factory default setting. DL Envelope is the international factory default setting.</p>
<p>Set Type menu for Tray 1</p> <ul style="list-style-type: none"> Plain Paper Card Stock Transparency Recycled Bond Letterhead Preprinted Colored Paper Light Paper Heavy Paper Rough/Cotton Custom Type <x> 	<p>Lets you specify the type of paper loaded in Tray 1</p> <p>Notes:</p> <ul style="list-style-type: none"> • Plain Paper is the factory default setting for Tray 1. • If available, a user-defined name will appear instead of Custom Type <x>. • Use this menu item to configure automatic tray linking.
<p>Set Type menu for Tray 2</p> <ul style="list-style-type: none"> Plain Paper Card Stock Recycled Bond Letterhead Preprinted Colored Paper Light Paper Heavy Paper Rough/Cotton Custom Type <x> 	<p>Lets you specify the type of paper loaded in Tray 2</p> <p>Notes:</p> <ul style="list-style-type: none"> • Custom Type <x> is the factory default setting. • If available, a user-defined name will appear instead of Custom Type <x>. • Use this menu item to configure automatic tray linking.

Menu item	Description
Set Type menu for Manual Paper Plain Paper Card Stock Transparency Bond Letterhead Preprinted Colored Paper Light Paper Heavy Paper Rough/Cotton Custom Type <x>	Lets you specify the type of paper being manually loaded Note: Plain Paper is the factory default setting.
Set Type menu for Manual Envelope Envelope Custom Type <x>	Lets you specify the type of envelope being manually loaded Note: Envelope is the factory default setting.

Paper Texture menu

In the Paper Texture menu, the Select Type and Select Texture features work together to enable you to select the texture for a specific type of paper.

Menu item	Description
Select Type Plain Texture Card Stock Texture Transparency Texture Recycled Texture Bond Texture Envelope Texture Letterhead Texture Preprinted Texture Colored Texture Light Texture Heavy Texture Rough Texture Custom <x> Texture	Specifies the paper type

Menu item	Description
Select Texture Smooth Normal Rough	After you select a setting for Select Type, the Select Texture feature lets you set the texture for that type of media. Notes: <ul style="list-style-type: none"> • Normal is the factory default setting for most items. • Rough is the factory default setting for Bond. • When Rough Texture is the setting selected for Select Type, Rough is the only Select Texture setting available. • Settings appear only if the paper is supported.

Paper Weight menu

In the Paper Weight menu, the Select Type and Select Weight features work together to enable you to select the weight for a specific type of paper.

Menu item	Description
Select Type Plain Weight Card Stock Weight Transparency Weight Recycled Weight Bond Weight Envelope Weight Letterhead Weight Preprinted Weight Colored Weight Light Weight Heavy Weight Rough Weight Custom <x> Texture	Specifies the paper type
Select Weight Light Normal Heavy	After you select a setting for Select Type, the Select Weight feature lets you set the weight for that type of media. Notes: <ul style="list-style-type: none"> • Normal is the factory default setting for most items. • When Light Weight is the setting selected for Select Type, Light is the only Select Weight setting available. • When Heavy Weight is the setting selected for Select Type, Heavy is the only Select Weight setting available. • Settings appear only if the paper is supported.

Paper Loading menu

Menu item	Description
Select Type Recycled Loading Bond Loading Letterhead loading Preprinted Loading Colored Loading Light Loading Heavy Loading Custom Loading	Specifies the paper type Note: After you select the type of paper, the Set Loading menu appears.
Set Loading <ul style="list-style-type: none"> • Duplex • Off 	Specifies whether duplex (2-sided) printing is turned on Note: Off is the factory default setting.

Custom Types menu

Menu item	Description
Custom Type <x> Paper Card Stock Transparency Envelope Rough/Cotton	Name a Custom Type <x> , and this user-defined name displays instead of Custom Type <x> . Notes: <ul style="list-style-type: none"> • The Custom Name must be limited to 16 characters. • Paper is the factory default setting for the Custom Type. • The custom media type must be supported by the selected tray or feeder in order for you to print from that source.
Recycled Paper Card Stock Transparency Envelope Rough/Cotton	Assign a paper type for the Recycled paper type loaded, and it will also be the Recycled paper type in other menus. Notes: <ul style="list-style-type: none"> • Paper is the factory default setting. • The Recycled type must be supported by the selected tray or feeder in order for you to print from that source.

Universal Setup menu

These menu items are used to specify the height, width, and feed direction of the Universal Paper Size. The Universal Paper Size is a user-defined paper size. It is listed with the other paper size settings and includes similar options, such as support for duplex printing and printing multiple pages on one sheet.

Menu item	Description
Units of Measure Inches Millimeters	Identifies the units of measure Notes: <ul style="list-style-type: none">• Inches is the US factory default setting.• Millimeters is the international factory default setting.
Portrait Width 3–14.17 inches 76–360 mm	Sets the portrait width Notes: <ul style="list-style-type: none">• If the width exceeds the maximum, then the printer uses the maximum width allowed.• 8.5 inches is the US factory default setting. Inches can be increased in 0.01-inch increments.• 216 mm is the international factory default setting. Millimeters can be increased in 1-mm increments.
Portrait Height 3–14.17 inches 76–360 mm	Sets the portrait height Notes: <ul style="list-style-type: none">• If the height exceeds the maximum, then the printer uses the maximum height allowed.• 14 inches is the US factory default setting. Inches can be increased in 0.01-inch increments.• 356 mm is the international factory default setting. Millimeters can be increased in 1-mm increments.
Feed Direction Short Edge Long Edge	Specifies the feed direction Notes: <ul style="list-style-type: none">• Short Edge is the factory default setting.• Long Edge appears only if the longest edge is shorter than the maximum length supported in the tray.

USB menu

Menu item	Description
PCL SmartSwitch On Off	Sets the printer to automatically switch to PCL emulation when a print job received through a USB port requires it, regardless of the default printer language Notes: <ul style="list-style-type: none"> • On is the factory default setting. • When the Off setting is used, the printer does not examine incoming data. • When the Off setting is used, the printer uses PostScript emulation if the PS Smartswitch setting is On. It uses the default printer language specified in the Setup menu if the PS SmartSwitch setting is Off.
PS SmartSwitch On Off	Sets the printer to automatically switch to PostScript emulation when a print job received through a USB port requires it, regardless of the default printer language Notes: <ul style="list-style-type: none"> • On is the factory default setting. • When the Off setting is used, the printer does not examine incoming data. • When the Off setting is used, the printer uses PCL emulation if the PCL Smartswitch setting is On. It uses the default printer language specified in the Setup menu if the PCL SmartSwitch setting is Off.
NPA Mode On Off Auto	Sets the printer to perform the special processing required for bidirectional communication following the conventions defined by the NPA protocol Notes: <ul style="list-style-type: none"> • Auto is the factory default setting. • Changing this setting automatically resets the printer.
USB Buffer Disabled Auto 3K to <maximum size allowed>	Sets the size of the USB input buffer Notes: <ul style="list-style-type: none"> • Auto is the factory default setting. • The Disabled setting turns off job buffering. Any jobs already buffered are printed before normal processing is resumed. • The USB buffer size value can be changed in 1 K increments. • The maximum size allowed depends on the amount of memory in the printer, the size of the other link buffers, and whether the Resource Save setting is On or Off. • To increase the maximum size range for the USB Buffer, disable or reduce the size of the parallel buffer. • Changing this setting automatically resets the printer.
Mac Binary PS On Off Auto	Sets the printer to process Macintosh binary PostScript print jobs Notes: <ul style="list-style-type: none"> • Auto is the factory default setting. • The Off setting filters print jobs using the standard protocol. • The On setting processes raw binary PostScript print jobs.

Parallel menu

Menu item	Description
PCL SmartSwitch On Off	Sets the printer to automatically switch to PCL emulation when a print job received through a parallel port requires it, regardless of the default printer language Notes: <ul style="list-style-type: none"> • On is the factory default setting. • When the Off setting is used, the printer does not examine incoming data. • When the Off setting is used, the printer uses PostScript emulation if PS SmartSwitch is set to On. It uses the default printer language specified in the Setup menu if PS SmartSwitch is set to Off.
PS SmartSwitch On Off	Sets the printer to automatically switch to PostScript emulation when a print job received through a parallel port requires it, regardless of the default printer language Notes: <ul style="list-style-type: none"> • On is the factory default setting. • When the Off setting is used, the printer does not examine incoming data. • When the Off setting is used, the printer uses PCL emulation if PCL SmartSwitch is set to On. It uses the default printer language specified in the Setup menu if PCL SmartSwitch is set to Off.
NPA Mode Off Auto	Sets the printer to perform the special processing required for bidirectional communication following the conventions defined by the NPA protocol Notes: <ul style="list-style-type: none"> • Auto is the factory default setting. • Changing this setting automatically resets the printer.
Parallel Buffer Disabled Auto 3K to <max size allowed>	Sets the size of the parallel input buffer Notes: <ul style="list-style-type: none"> • Auto is the factory default setting. • The Disabled setting turns off job buffering. Any jobs already buffered on the disk are printed before normal processing is resumed. • The parallel buffer size setting can be changed in 1 K increments. • The maximum size allowed depends on the amount of memory in the printer, the size of the other link buffers, and whether Resource Save is set to On or Off. • To increase the maximum size range for the Parallel Buffer, disable or reduce the size of the USB buffer. • Changing this setting automatically resets the printer.
Advanced Status Off On	Enables bidirectional communication through the parallel port Notes: <ul style="list-style-type: none"> • On is the factory default setting. • The Off setting disables parallel port negotiation.

Menu item	Description
Protocol Standard Fastbytes	Specifies the parallel port protocol Notes: <ul style="list-style-type: none"> • Fastbytes is the factory default setting. It provides compatibility with most existing parallel ports and is the recommended setting. • The Standard setting tries to resolve parallel port communication problems.
Honor Init On Off	Determines whether the printer honors printer hardware initialization requests from the computer Notes: <ul style="list-style-type: none"> • Off is the factory default setting. • The computer requests initialization by activating the INIT signal from the parallel port. Many personal computers activate the INIT signal each time the computer is turned on and off.
Parallel Mode 2 On Off	Determines whether the parallel port data is sampled on the leading (on) or trailing (off) edge of the strobe. Note: On is the factory default setting.
Mac Binary PS On Off Auto	Sets the printer to process Macintosh binary PostScript print jobs Notes: <ul style="list-style-type: none"> • Auto is the factory default setting. • The Off setting filters print jobs using the standard protocol. • The On setting processes raw binary PostScript print jobs.

Settings menu

General Settings menu

Menu item	Description
Eco-Mode Off Energy Paper Energy/Paper	Note: Off is the factory default setting.
Quiet Mode Off On	Note: Off is the factory default setting.
Run Initial Setup Yes No	Before running the Setup wizard, the default setting is Yes, but after running the wizard, the default setting is No.

Menu item	Description
Alarm Cartridge Alarm Off Single	The display shows a message when the toner is low. Notes: <ul style="list-style-type: none"> • Off is the factory default setting. The Toner is low message will appear as a warning. • Single means the Toner is low message will appear and the indicator light will blink red.
Timeouts Power Saver Disabled 1–240	Sets the amount of time in minutes the printer waits after a job is printed before it goes into a reduced power state Notes: <ul style="list-style-type: none"> • 60 minutes is the factory default setting. • Disabled does not appear unless Energy Conserve is Off.
Timeouts Print Timeout Disabled 1–255	Sets the amount of time in seconds the printer waits to receive an end-of-job message before canceling the remainder of the print job Notes: <ul style="list-style-type: none"> • 90 seconds is the factory default setting. • When the timer expires, any partially printed page still in the printer is printed, and then the printer checks to see if any new print jobs are waiting. • Print Timeout is available only when using PCL. This setting has no effect on PostScript emulation print jobs.
Timeouts Wait Timeout Disabled 15–65535	Sets the amount of time in seconds the printer waits for additional data before canceling a print job Notes: <ul style="list-style-type: none"> • 40 seconds is the factory default setting. • Wait Timeout is available only when the printer is using PostScript emulation. This setting has no effect on PCL emulation print jobs.
Print Recovery Auto Continue Disabled 5–255	Lets the printer automatically continue printing from certain offline situations when not resolved within the specified time period Notes: <ul style="list-style-type: none"> • Disabled is the factory default setting. • 5–255 is a range of time in seconds.
Print Recovery Jam Recovery On Off Auto	Specifies whether the printer reprints jammed pages Notes: <ul style="list-style-type: none"> • Auto is the factory default setting. The printer reprints jammed pages unless the memory required to hold the pages is needed for other printer tasks. • On sets the printer to always reprint jammed pages. • Off sets the printer to never reprint jammed pages.

Menu item	Description
Print Recovery Page Protect On Off	Lets the printer successfully print a page that may not have printed otherwise Notes: <ul style="list-style-type: none"> • Off is the factory default setting. Off prints a partial page when there is not enough memory to print the whole page. • On sets the printer to process the whole page so that the entire page prints.
Factory Defaults Do Not Restore Restore Now	Returns the printer settings to the factory default settings Notes: <ul style="list-style-type: none"> • Do Not Restore is the factory default setting. Do Not Restore keeps the user-defined settings. • Restore Now returns all printer settings to the factory default settings except those in the USB and parallel menu. All downloads stored in RAM are deleted.

Setup menu

Menu item	Description
Printer Language PS Emulation PCL Emulation	Sets the default printer language Notes: <ul style="list-style-type: none"> • PostScript emulation uses a PS interpreter for processing print jobs. PCL emulation uses a PCL interpreter for processing print jobs. • The factory default printer language is PCL Emulation. • Setting a printer language as the default does not prevent a software program from sending print jobs that use another printer language.
Print Area Normal Whole Page	Sets the logical and physical printable area Notes: <ul style="list-style-type: none"> • Normal is the factory default setting. When attempting to print data in the non-printable area defined by the Normal setting, the printer clips the image at the boundary. • The Whole Page setting allows the image to be moved into the non-printable area defined by the Normal setting, but the printer will clip the image at the Normal setting boundary. • The Whole Page setting affects only pages printed using a PCL 5e interpreter. This setting has no effect on pages printed using the PCL XL or PostScript interpreter.
Download Target RAM	Sets the storage location for downloads Notes: <ul style="list-style-type: none"> • RAM is the factory default setting. • Storing downloads in RAM is temporary.

Menu item	Description
Resource Save On Off	Specifies how the printer handles temporary downloads, such as fonts and macros stored in RAM, when the printer receives a job that requires more memory than is available Notes: <ul style="list-style-type: none"> Off is the factory default setting. Off sets the printer to retain the downloads only until memory is needed. Downloads are deleted to process print jobs. The On setting retains the downloads during language changes and printer resets. If the printer runs out of memory, then downloads are not deleted.
Print All Order Alphabetically Newest First Oldest First	Sets the order in which the print jobs are printed. Note: Alphabetically is the factory default setting.

Finishing menu

Menu item	Description
Sides (Duplex) 2-sided 1-sided	Specifies whether duplex (2-sided) printing is set as the default for all print jobs Notes: <ul style="list-style-type: none"> 1-sided is the factory default setting. To set 2-sided printing from the software program, for Windows users, click File → Print, and then click Properties, Preferences, Options, or Setup. For Macintosh users, choose File > Print, and then adjust the settings from the print dialog and pop-up menus.
Duplex Binding Long Edge Short Edge	Defines the way duplexed pages are bound and how the printing on the back of the page is oriented in relation to the printing on the front of the page Notes: <ul style="list-style-type: none"> Long Edge is the factory default setting. Long Edge specifies that binding be placed on the left edge of portrait pages and the top edge of landscape pages. Short Edge specifies that binding be placed on the top edge of portrait pages and the left edge of landscape pages.
Copies 1–999	Specifies a default number of copies for each print job Note: 1 is the factory default setting.
Blank Pages Do Not Print Print	Specifies whether blank pages are inserted in a print job Note: Do Not Print is the factory default setting.

Menu item	Description
Collate Off (1,1,1,2,2,2) On (1,2,1,2,1,2)	Stacks the pages of a print job in sequence when printing multiple copies Notes: <ul style="list-style-type: none"> • On is the factory default setting, so the pages will be printed sequentially. • Both settings print the entire job the same number of times.
Separator Sheets None Between Copies Between Jobs Between Pages	Specifies whether blank separator sheets are inserted Notes: <ul style="list-style-type: none"> • None is the factory default setting. • Between Copies inserts a blank sheet between each copy of a print job if Collate is On. If Collation is Off, a blank page is inserted between each set of printed pages, such as after all page 1s and after all page 2s. • Between Jobs inserts a blank sheet between print jobs. • Between Pages inserts a blank sheet between each page of the print job. This setting is useful when printing transparencies or inserting blank pages in a document for notes.
Separator Source Tray <x> Multi-Purpose Feeder	Specifies the paper source for separator sheets Notes: <ul style="list-style-type: none"> • Tray 1 (standard tray) is the factory default setting. • Multi-Purpose Feeder appears as a value only if it is a supported option on the printer and if Configure MP is set to Cassette.
N-up (pages-side) Off 2-Up 3-Up 4-Up 6-Up 9-Up 12-Up 16-Up	Specifies that multiple-page images be printed on one side of a sheet of paper. Notes: <ul style="list-style-type: none"> • Off is the factory default setting. • The number selected is the number of page images that will print per side.
N-up Ordering Horizontal Reverse Horizontal Reverse Vertical Vertical	Specifies the positioning of multiple-page images when using N-up (pages-sides) Notes: <ul style="list-style-type: none"> • Horizontal is the factory default setting. • Positioning depends on the number of images and whether the images are in portrait or landscape orientation.
Orientation Auto Landscape Portrait	Specifies the orientation of a multiple-page sheet Notes: <ul style="list-style-type: none"> • Auto is the factory default setting. The printer chooses between portrait and landscape. • Landscape uses long edge. • Portrait uses short edge.

Menu item	Description
N-up Border None Solid	Prints a border around each page image when using N-up (pages-sides) Note: None is the factory default setting.

Quality menu

Menu item	Description
Print Resolution 300 dpi 600 dpi 1200 dpi 1200 IQ 2400 IQ	Specifies the printed output resolution Note: 600 dpi is the factory default setting.
Toner Darkness 1–10	Lightens or darkens the printed output Notes: <ul style="list-style-type: none"> • 8 is the factory default setting. • Selecting a smaller number can help conserve toner.
Enhance Fine Lines On Off	Enables a print mode preferable for files such as architectural drawings, maps, electrical circuit diagrams, and flow charts Notes: <ul style="list-style-type: none"> • Off is the factory default setting. • To set Enhance Fine Lines, with a document open, click File → Print, and then click Properties, Preferences, Options, or Setup for Windows users. For Macintosh users, choose File> Print, and then adjust the settings from the print dialog and pop-up menus.
Gray Correction Auto Off	Choose whether to apply Gray Correction on printed gray images. The Auto setting automatically applies Gray Correction, and Off does not. Note: Off is the factory default setting.
Pixel Boost Off Fonts Horizontally Vertically Both directions	Choose whether to make characters more distinct and definite. Pixel Boost may be needed when using certain fonts. Note: Off is the factory default setting.
Brightness -6–6	Adjusts or darkens printed output and conserves toner Note: 0 is the factory default setting.
Contrast 0–5	Adjusts the contrast of printed objects Note: 0 is the factory default setting.

PostScript menu

Menu item	Description
Print PS Error On Off	Prints a page containing the PostScript error Note: Off is the factory default setting.
Font Priority Resident Flash/Disk	Establishes the font search order Notes: <ul style="list-style-type: none"> Resident is the factory default setting. A formatted flash memory option card must be installed in the printer and operating properly for this menu item to be available. The flash memory option cannot be Read/Write, Write, or password-protected. Job Buffer Size must not be set to 100%.

PCL Emul menu

Menu item	Description
Font Source Resident Download Flash All	Specifies the set of fonts available Notes: <ul style="list-style-type: none"> Resident is the factory default setting. It shows the factory default set of fonts downloaded into RAM. Download appears only if downloaded fonts exist. It shows all the fonts downloaded into RAM. Flash appears only if a flash option containing fonts is installed. A flash option must be properly formatted and cannot be Read/Write, Write, or password protected. All shows all fonts available to any option.
Font Name <x>	Lets you view or change the setting from a selection list
Symbol Set <x>	Lets you view or change the setting from a selection list
PCL Emulation Settings Point Size 1.00–1008.00	Changes the point size for scalable typographic fonts Notes: <ul style="list-style-type: none"> 12 is the factory default setting. Point Size refers to the height of the characters in the font. One point equals approximately 1/72 of an inch. Point sizes can be increased or decreased in 0.25-point increments.

Menu item	Description
PCL Emulation Settings Pitch 0.08–100	Specifies the font pitch for scalable monospaced fonts Notes: <ul style="list-style-type: none"> • 10 is the factory default setting. • Pitch refers to the number of fixed-space characters per inch (dpi). • Pitch can be increased or decreased in 0.01-dpi increments. • For nonscalable monospaced fonts, the pitch appears on the display but cannot be changed.
PCL Emulation Settings Orientation Portrait Landscape	Specifies the orientation of text and graphics on the page Notes: <ul style="list-style-type: none"> • Portrait is the factory default setting. • Portrait prints text and graphics parallel to the short edge of the page. • Landscape prints text and graphics parallel to the long edge of the page.
PCL Emulation Settings Lines per Page 1–255 60 64	Specifies the number of lines that print on each page Notes: <ul style="list-style-type: none"> • 60 is the US factory default setting. 64 is the international default setting. • The printer sets the amount of space between each line based on the Lines per Page, Paper Size, and Orientation settings. Select the desired Paper Size and Orientation before setting Lines per Page.
PCL Emulation Settings A4 Width 198 mm 203 mm	Sets the printer to print on A4-size paper Notes: <ul style="list-style-type: none"> • 198 mm is the factory default setting. • The 203-mm setting sets the width of the page to allow the printing of eighty 10-pitch characters.
PCL Emulation Settings Auto CR after LF On Off	Specifies whether the printer automatically performs a carriage return (CR) after a line feed (LF) control command Note: Off is the factory default setting.
PCL Emulation Settings Auto LF after CR On Off	Specifies whether the printer automatically performs a line feed (LF) after a carriage return (CR) control command Note: Off is the factory default setting.

Menu item	Description
Tray Renumber Assign MP Feeder Off None 0–199 Assign Tray <x> Off None 0–199 Assign Manual Paper Off None 0–199 Assign Man Env Off None 0–199	Configures the printer to work with printer software or programs that use different source assignments for trays, drawers, and feeders Notes: <ul style="list-style-type: none"> • Off is the factory default setting. • None is not an available selection. It is displayed only when it is selected by the PCL 5 interpreter. • None ignores the Select Paper Feed command. • 0–199 allows a custom setting to be assigned.
Tray Renumber View Factory Def None	Displays the factory default setting assigned to each tray, drawer, or feeder
Tray Renumber Restore Defaults Yes No	Returns all tray, drawer, and feeder assignments to the factory default settings

Using the Finishing menu

Use the Finishing menu to adjust settings for such features as Collate, Separator Sheets, and N-up (Multipage) printing. You can use the settings to collate pages, to insert separator sheets between print jobs, and to print up to 16 images on a single page.

If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. One of these utilities installs with the printer software.

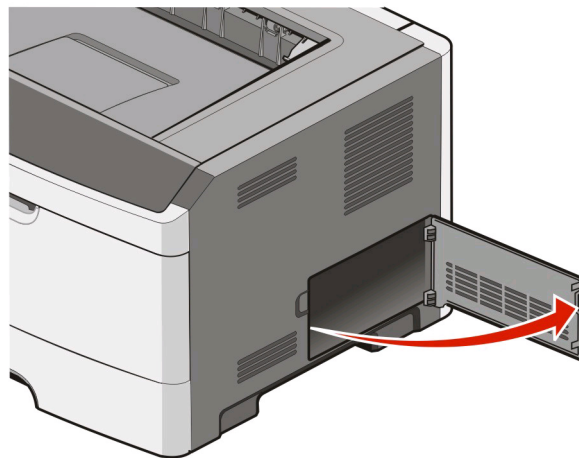
Additional printer setup

Installing internal options

Accessing the system board to install internal options

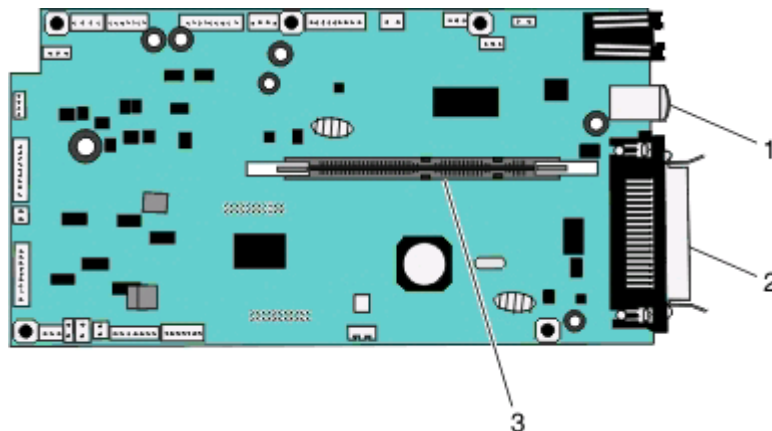
CAUTION—SHOCK HAZARD: When accessing the system board, turn the printer off, and then unplug the power cord from the wall outlet before continuing. If you have other devices attached to the printer, then turn them off as well and unplug any cables going to the printer.

- 1 As you face the printer, the system board door is on the right side. Open the system board door.



- 2 Use the following illustration to locate the appropriate connector.

Warning—Potential Damage: System board electronic components are easily damaged by static electricity. Touch a metal surface on the printer before touching any system board electronic components or connectors.



1	USB port
2	Parallel connector
3	Memory card connector

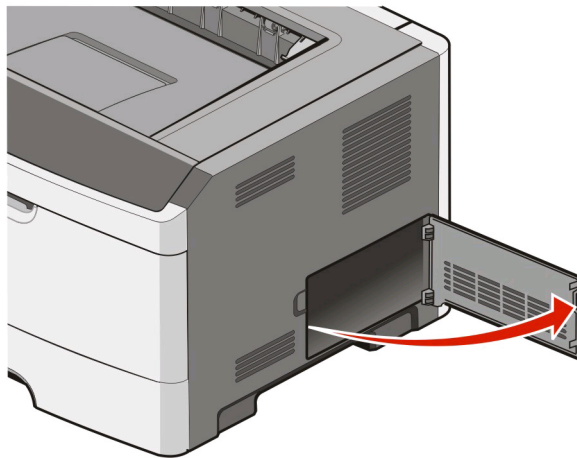
Installing a memory card

CAUTION—SHOCK HAZARD: If you are accessing the system board or installing optional hardware or memory devices sometime after setting up the printer, then turn the printer off, and unplug the power cord from the wall outlet before continuing. If you have any other devices attached to the printer, then turn them off as well, and unplug any cables going into the printer.

Warning—Potential Damage: System board electronic components are easily damaged by static electricity. Touch a metal surface on the printer before touching any system board electronic components or connectors.

An optional memory card can be purchased separately and attached to the system board. To install the memory card:

- 1 Turn the printer off.
- 2 Access the system board.



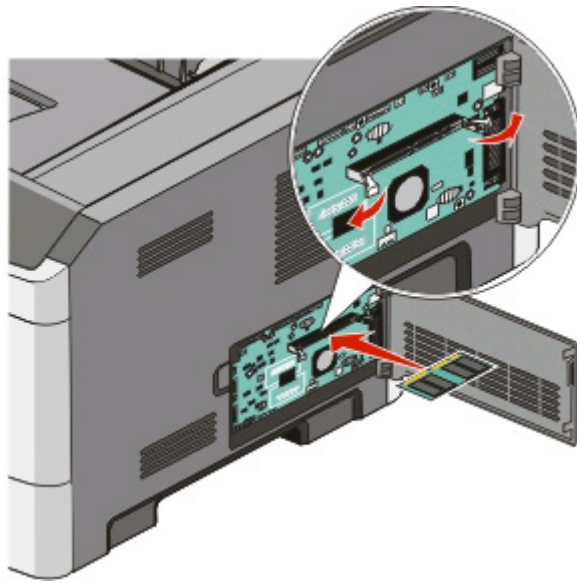
- 3 Unpack the memory card.

Note: Avoid touching the connection points along the edge of the card.

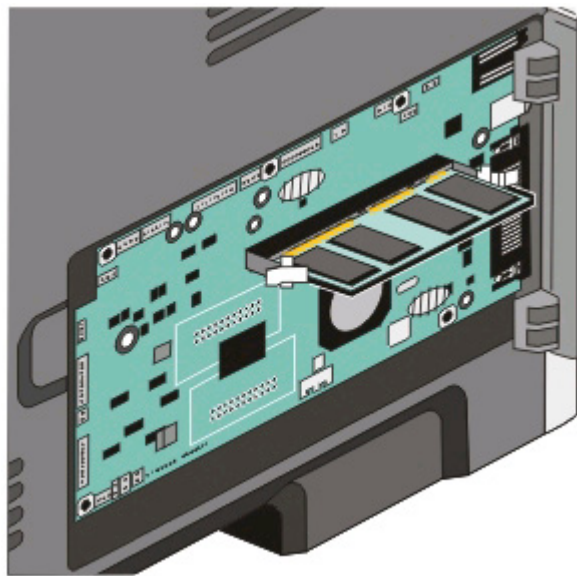
- 4 Align the memory card with its connector on the system board.
- 5 Push open the latches on both ends of the memory connector.


Warning—Potential Damage: Memory cards are easily damaged by static electricity. Touch a grounded metal surface before you touch a memory card.

Note: Memory cards designed for other printers may not work with your printer.



- 6 Push the memory card into the connector until the latches *snap* into place. It may require some force to fully seat the card.



- 7 Ensure that each latch fits over the notch on each end of the card.
- 8 Close the system board door.
- 9 Turn the printer back on.
- 10 In *Windows Vista*[®]:
 - a Click  → **Control Panel**.
 - b Click **Hardware and Sound**.
 - c Click **Printers**.

In *Windows® XP and 2000*:

- a Click **Start**→ **Control Panel**.
- b Double-click **Printers and Other Hardware**.
- c Double-click **Printers and Faxes**.

11 Right-click the **Dell 2230d Laser Printer** icon.

12 Click **Properties**.

13 Click **Install Options**.

Note: Memory cards designed for other printers may not work with your printer.

14 Click **Ask Printer**.

15 Click **OK**.

16 Click **OK**, and then close the Printers folder.

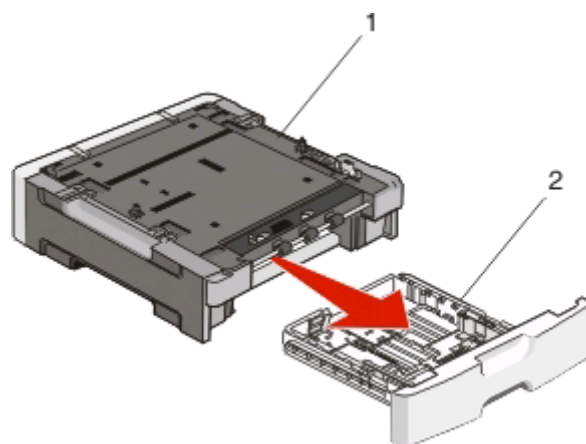
Installing hardware options

Installing a 250- or 550-sheet drawer

An optional drawer attaches under the printer. A drawer consists of two parts: a tray and a support unit. The printer supports one optional drawer; you can install a 250- or 550-sheet drawer.

⚠ CAUTION—SHOCK HAZARD: If you are installing a drawer after setting up the printer, turn off the printer, and unplug the power cable before continuing.

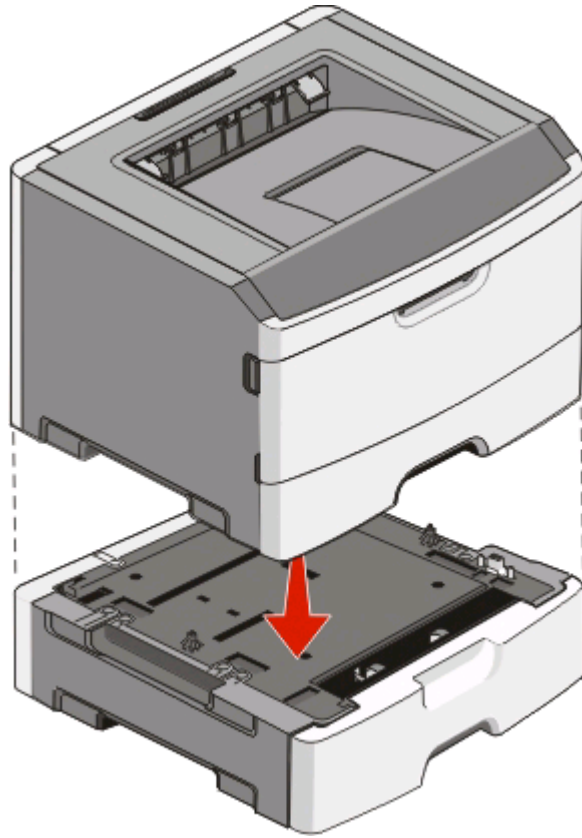
- 1** Turn the printer off.
- 2** Unpack the drawer, and remove any packing material.
- 3** Remove the tray from the support unit.




1	Support unit
2	Tray

- 4** Remove any packing material and tape from inside the tray.



- 5 Insert the tray into the support unit.
- 6 Place the drawer in the location chosen for the printer.
- 7 Align the holes in the printer with the positioning posts on the drawer, and lower the printer into place.

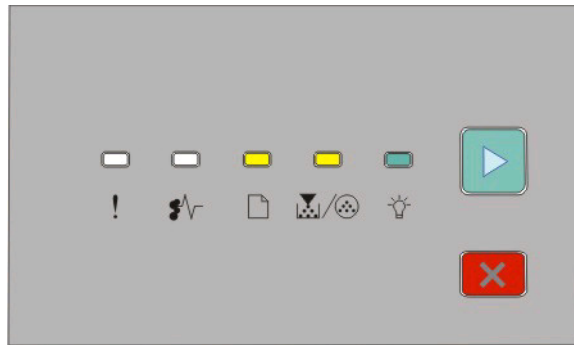


- 8 Turn the printer back on.
- 9 In *Windows Vista*:
 - a Click  → **Control Panel**.
 - b Click **Hardware and Sound**.
 - c Click **Printers**.
- In *Windows XP and 2000*:
 - a Click **Start** → **Control Panel**.
 - b Double-click **Printers and Other Hardware**.
 - c Double-click **Printers and Faxes**.
- 10 Right-click the **Dell 2230d Laser Printer** icon.
- 11 Click **Properties**.
- 12 Click **Install Options**.
- 13 Click **Ask Printer**.
- 14 Click **OK**.
- 15 Click **OK**, and then close the Printers folder.

Printing the printer settings configuration sheet

The printer settings configuration sheet shows the current configuration settings. It also provides instructions on how to navigate through the configuration menus to select and save new settings. To print the printer settings configuration sheet:


- 1 Turn the printer off.
- 2 Open the front door.
- 3 Press and hold  as you turn the printer on.
All the lights cycle.
- 4 Release .
- 5 Close the front door.
The light sequence representing the home menu appears.





Home Menu

 - On

 - On

 - On

 - On

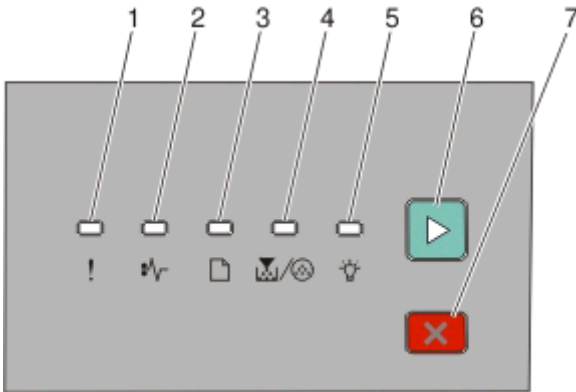
- 6 Press  until all the lights cycle.
The printer settings configuration sheet prints.

Note: The sheet prints only when the home menu light sequence is on.








Interpreting the printer control panel lights




Understanding the printer control panel light sequences

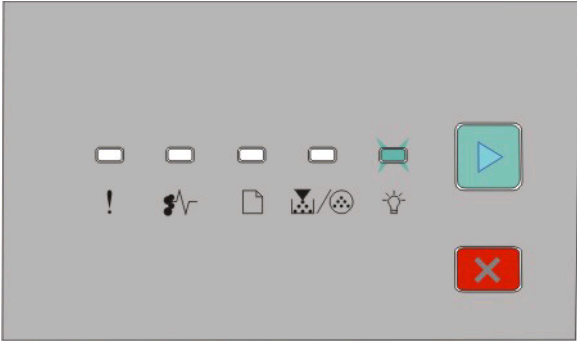
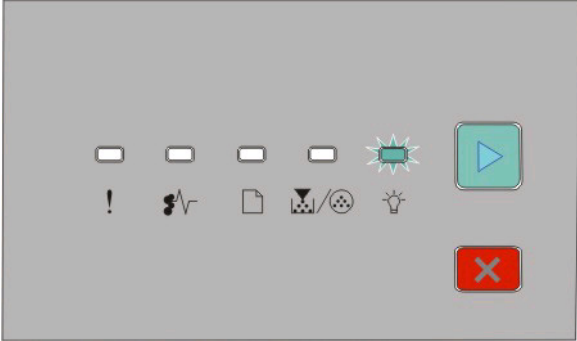


Understanding the primary light sequences
















Printer control panel	Lights and buttons
 <p>The diagram shows a grey control panel with six indicator lights and two buttons. Callouts 1-5 point to the lights, callout 6 points to the green play button, and callout 7 points to the red stop button. Below the lights are icons: an exclamation mark, a paper with a lightning bolt, a document, a paper with a lightning bolt and a circle with a slash, and a lightbulb.</p>	<ul style="list-style-type: none"> 1 Error 2 Jam 3 Load paper 4 Toner 5 Ready 6 Continue 7 Stop

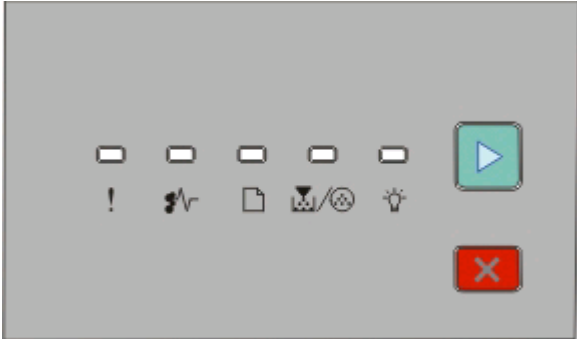
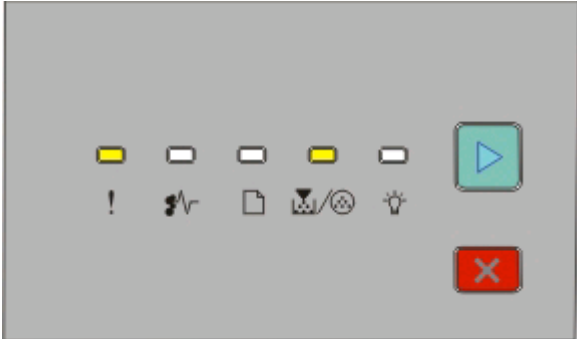
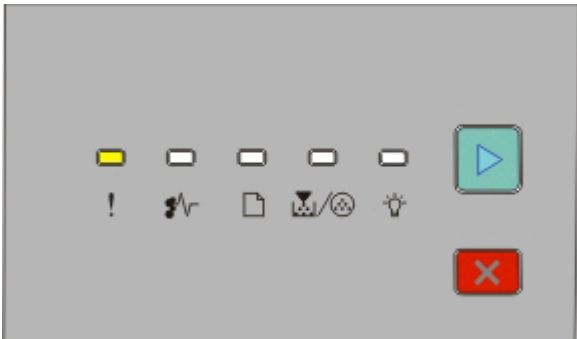
The printer control panel features six lights and two buttons. The lights can be on, off, blinking, or blinking slowly.




Light sequence	What you can do
 <p>The diagram shows the same control panel as above, but with a light sequence. The first five lights (Error, Jam, Load paper, Toner, Ready) are all blinking yellow. The Continue button (play icon) is blinking blue. The Stop button (red X) is not lit.</p> <p>Service Error  - Blinking  - Blinking  - Blinking  - Blinking  - Blinking  - Blinking</p>	<p>Turn the printer off and then on again. If the lights are still blinking, contact Dell at support.dell.com.</p>











Light sequence	What you can do
 <p>Replace PC Kit</p> <p>! - Blinking</p> <p>⌚/⊗ - Blinking</p> <p>▶ - On</p>	<p>Replace the photoconductor kit. For more information, see “Replacing the photoconductor kit” on page 91.</p>
 <p>Ready</p> <p>💡 - On (green)</p>	<p>Send a job to print.</p>
 <p>Power Saver</p> <p>💡 - On (yellow)</p>	<p>Send a job to print.</p>

Light sequence	What you can do
 <p>Hex Trace Ready 💡 - Slowly Blinking</p>	<p>Use Hex Trace to troubleshoot printing problems.</p>
 <p>Busy 💡 - Blinking</p>	<p>Wait or press .</p>
 <p>Flushing Buffer ⚠️ - Blinking 💡 - Blinking</p>	<p>Wait until the printer returns to the Ready state.</p>





Light sequence	What you can do
 <p>Waiting  - On  - On</p>	<p>Wait for the light sequence to clear.</p>
 <p>Canceling job  - On  - On  - On  /  - On  - On  - On</p>	<p>Wait for the light sequence to clear.</p>
 <p>Invalid Engine Code  - On  - On</p>	<p>Press and release . To avoid this light sequence in the future, ensure that you use a valid code when programming the printer.</p>

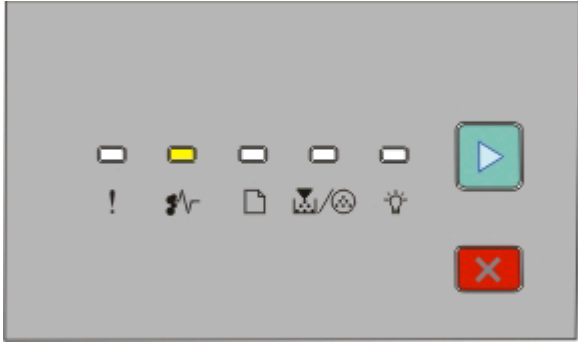



Light sequence	What you can do
 <p>Not ready ▶ - On</p>	<p>Press and release either ▶ or ✕ to return to the Ready state.</p>
 <p>Cartridge region mismatch ! - On ⚠/⊗ - On</p>	<p>Replace the toner cartridge with one suitable for your region. For more information, see “Replacing the toner cartridge” on page 89.</p>
 <p>Front door is open ! - On</p>	<p>Close the front door.</p>

Light sequence	What you can do
 <p>No paper in Tray 1 or Tray 2</p> <p>☐ - On</p> <p>▶ - On</p>	<p>Load paper in Tray 1 or Tray 2.</p>
 <p>No paper in manual feeder</p> <p>☐ - On</p>	<p>Load paper in the manual feeder.</p>
 <p>Remove paper from the standard exit bin</p> <p>☐ - Blinking</p>	<p>Remove printed pages from the standard exit bin, and then press and release ▶ to clear the light sequence and continue printing.</p>

Light sequence	What you can do
 <p data-bbox="147 558 326 674">Cartridge is low   - On  - On</p>	<ul data-bbox="1101 212 1463 611" style="list-style-type: none"> • Press and release  to clear the light sequence and continue processing the print job. • With the printer turned off, remove the toner cartridge and shake it to extend its life. • Replace the toner cartridge, and then turn the printer on. For more information, see “Replacing the toner cartridge” on page 89.
 <p data-bbox="147 1052 354 1167">PC Kit life warning   - Blinking  - On</p>	<ul data-bbox="1101 701 1463 989" style="list-style-type: none"> • Press and release  to clear the light sequence and continue processing the print job. • Replace the photoconductor kit. For more information, see “Replacing the photoconductor kit” on page 91.

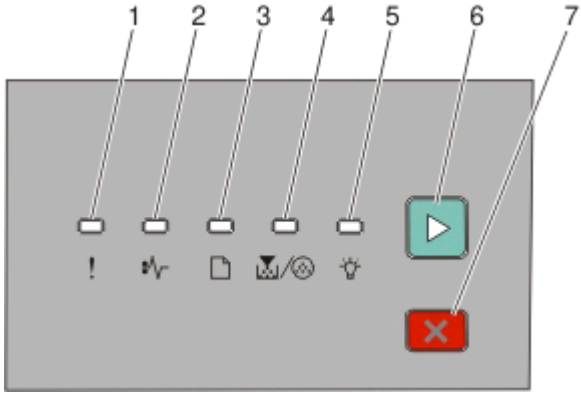
The following light sequences show that there is a secondary error code or secondary jam code to read:

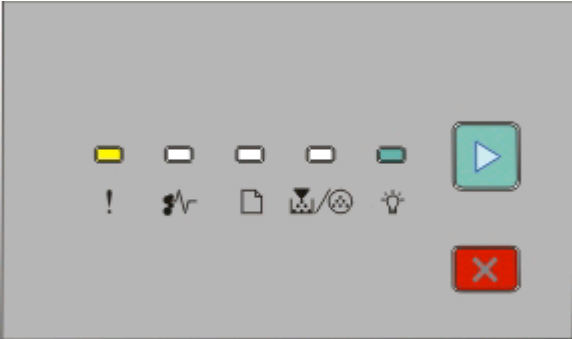
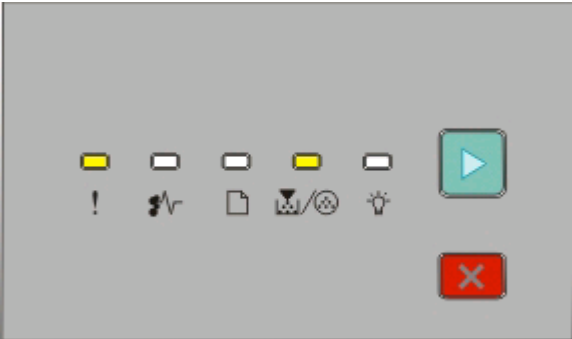
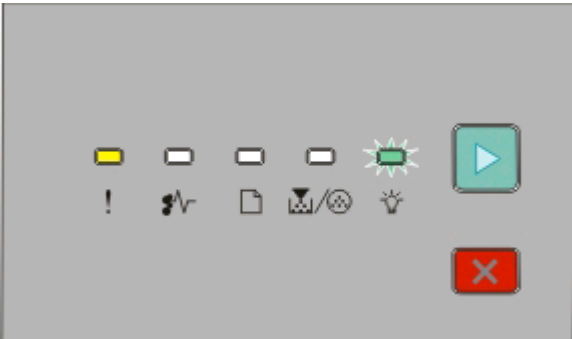
Light sequence	What you can do
 <p data-bbox="147 1665 315 1730">Printer error  - On  - On</p>	<p data-bbox="1019 1314 1430 1465">Press  twice quickly to see the secondary error code. For more information, see “Understanding the secondary error light sequences” on page 46.</p>









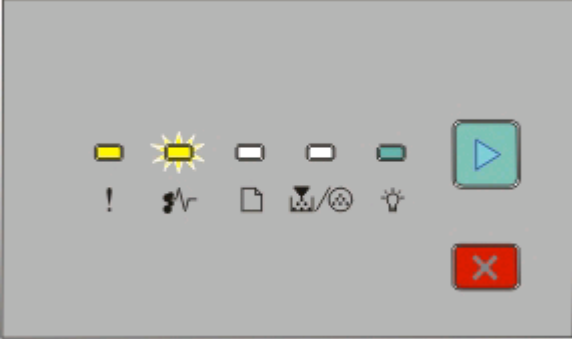



Light sequence	What you can do
 <p>Paper jam  - On  - On</p>	<p>Press  twice quickly to see the secondary paper jam code. For more information, see “Understanding the secondary paper jam light sequences” on page 50.</p>


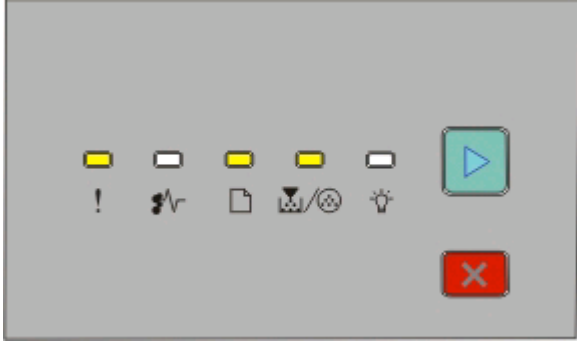
Understanding the secondary error light sequences

When the  and  lights are on simultaneously, press  twice quickly to see the secondary error code.

Printer control panel	Lights and buttons
	<ul style="list-style-type: none"> 1 Error 2 Jam 3 Load paper 4 Toner 5 Ready 6 Continue 7 Stop

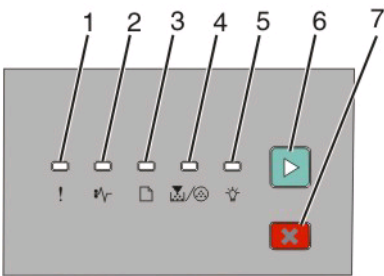
Light sequences	What you can do
 <p>Complex page, some data may not have printed</p> <p>! - On ⚡ - On ▶ - On</p>	<ul style="list-style-type: none"> • Simplify the page by reducing the amount of text, graphics, fonts, or macros. • Set Page Protect to On. • Print the page that may not have printed. For more information, see “Print Recovery” on page 26. • Install additional printer memory. For more information, see “Installing a memory card” on page 34.
 <p>Insufficient memory to collate job</p> <p>! - On ⚡/⊕ - On ▶ - On</p>	<ul style="list-style-type: none"> • Press ▶ to collate the remaining pages of the job. • Press ✕ to cancel the print job. • Simplify the page by reducing the amount of text, graphics, fonts, or macros. • Install additional printer memory. For more information, see “Installing a memory card” on page 34.
 <p>Insufficient memory to support Resource Save feature</p> <p>! - On ⚡ - Blinking ▶ - On</p>	<p>Install additional printer memory. For more information, see “Installing a memory card” on page 34</p>

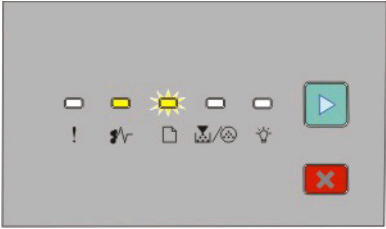

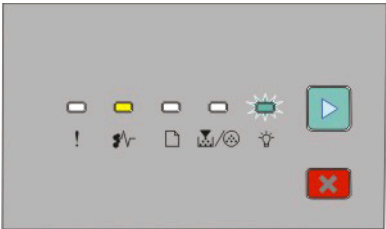
Light sequences	What you can do
 <p>Invalid engine code</p> <ul style="list-style-type: none">  - On  - On  - On 	<p>Download valid engine code to the internal print server.</p>
 <p>Cartridge region mismatch</p> <ul style="list-style-type: none">  - On  - Blinking  - On 	<p>Replace the toner cartridge with one that is suitable for your region. For more information, see “Replacing the toner cartridge” on page 89.</p>
 <p>Invalid refill, Change cartridge</p> <ul style="list-style-type: none">  - On  - Blinking  - On 	<p>Replace the toner cartridge. For more information, see “Replacing the toner cartridge” on page 89.</p>


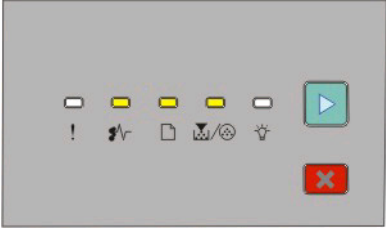

Light sequences	What you can do
 <p>Replace missing or defective cartridge</p> <p>! - On ⚡ - Blinking 🖨️/🔄 - On</p>	<p>Replace the toner cartridge. For more information, see “Replacing the toner cartridge” on page 89.</p>
 <p>Cartridge part number not supported by device</p> <p>! - On 📄 - On 🖨️/🔄 - On</p>	<p>Remove the toner cartridge and replace it with a supported toner cartridge. For more information, see “Replacing the toner cartridge” on page 89.</p>

Understanding the secondary paper jam light sequences

When the ⚡ and 📄 lights are on, a paper jam has occurred. Press and release ▶ twice quickly to display the secondary jam light sequence which can help pinpoint the site of the jam. Be sure to check all areas of the printer to ensure all the paper is removed. Once the jam is cleared, press ▶ to continue printing.

Printer control panel	Lights and buttons
	<ol style="list-style-type: none"> 1 Error 2 Jam 3 Load paper 4 Toner 5 Ready 6 Continue 7 Stop

Light sequence	What you can do to access the jam
 <p>231.yy Paper jam</p> <p>! - On</p> <p>☐ - Blinking</p> <p>▶ - On</p>	<p>Open the front door, and then open the rear door.</p>
 <p>233.yy Paper jam</p> <p>! - On</p> <p>☐ - Blinking</p> <p>☒/☒ - Blinking</p> <p>▶ - On</p>	<p>Try one or more of the following:</p> <ul style="list-style-type: none"> • Remove Tray 1. • Open the front door, and then open the rear door.
 <p>234.yy Paper jam</p> <p>! - On</p> <p>💡 - Blinking</p> <p>▶ - On</p>	<p>Try one or more of the following:</p> <ul style="list-style-type: none"> • Remove Tray 1. • Open the front door, and then open the rear door.

Light sequence	What you can do to access the jam
 <p>235.yy Paper jam</p> <p>! - On</p> <p>☐ - Blinking</p> <p>💡 - Blinking</p> <p>▶ - On</p>	<p>Try one or more of the following:</p> <ul style="list-style-type: none"> • Clear the jam at the standard exit bin. • Load paper supported by the duplex function. For more information, see “Paper sizes supported by the printer” on page 68.
 <p>24x.yy Paper jam</p> <p>! - On</p> <p>☐ - On</p> <p>⚙️/⚙️ - On</p> <p>▶ - On</p>	<p>Try one or more of the following:</p> <ul style="list-style-type: none"> • Remove Tray 1. • Remove the photoconductor kit and toner cartridge unit. • Remove Tray 2.
 <p>24x.yy Paper jam</p> <p>! - On</p> <p>☐ - On</p> <p>💡 - On</p> <p>▶ - On</p>	<p>Try one or more of the following:</p> <ul style="list-style-type: none"> • Remove Tray 1. • Remove the photoconductor kit and toner cartridge unit. • Remove Tray 2.

Light sequence	What you can do to access the jam
<div data-bbox="354 205 737 430" data-label="Image"> </div> <p data-bbox="147 447 342 478">251.yy Paper jam</p> <ul style="list-style-type: none"> <li data-bbox="147 485 240 516">! - On <li data-bbox="147 527 282 558">! - On <li data-bbox="147 569 240 600">! - On <li data-bbox="147 611 240 642">▶ - On 	<p data-bbox="954 205 1455 237">Clear the paper jam from the manual feeder.</p>

Note: For more information, see “Clearing jams” on page 97.

Loading paper and specialty media

This section explains how to load the 250- and 550-sheet trays, and the manual feeder. It also includes information about setting the paper size and paper type.

Setting the paper size and paper type

Ensure that the settings for the trays reflect the size and type of paper loaded in the trays. The factory default paper type setting is plain paper, so the paper type setting must be set manually for all trays that do not contain plain paper.

If the printer is connected to a computer by a USB or parallel cable, use one of the following utilities to access the Paper menu, depending on your operating system:

- On a Windows computer, access the Paper menu through the Local Printer Settings Utility.
- On a Macintosh computer, access the Paper menu through the Printer Settings.

Note: The Paper Size and Type settings will be saved until you reset factory default settings. If you would like to override the Paper Size and Type settings for a special print job, do one of the following:

- For Windows users, click **File → Print**, and then click **Properties, Preferences, Options, or Setup**.
- For Macintosh users, choose **File > Print**, and then adjust the settings from the print dialog and pop-up menus.

Configuring Universal paper settings

The Universal Paper Size is a user-defined setting that lets you print on paper sizes that are not preset in the printer menus. Defining a specific height and width measurement for the Universal paper size, in the portrait orientation, allows the printer to support the size. Specify all of the following Universal size settings for your paper:

- Units of measure (inches or millimeters)
- Portrait Width
- Portrait Height

Note: The smallest supported Universal size is 76.2 x 127 mm (3 x 5 in.); the largest is 216 x 356 mm (8.5 x 14 in.).

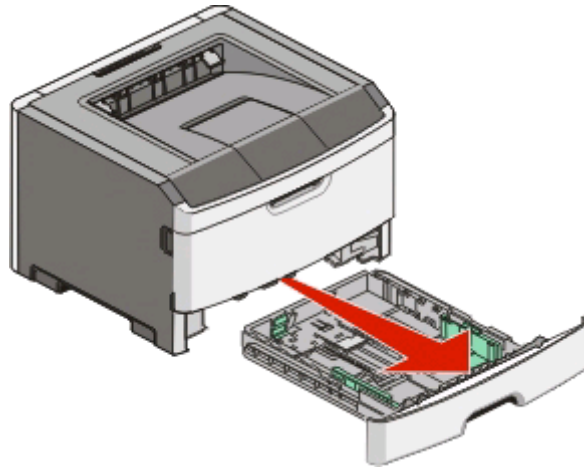
- If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. One of these utilities installs with your printer software. Under the Paper menu, select **Universal** in the Paper Size selection box for the tray that will contain the Universal paper.

Loading the standard 250-sheet tray

The printer has two trays to select from: the standard tray (Tray 1), also known as the 250-sheet tray, and either the optional 250-sheet tray or the optional 550-sheet tray (Tray 2). Only one optional drawer (which includes an optional tray) may be attached to the printer at a time.

Proper paper loading prevents jams and facilitates trouble-free printing.

- 1 Pull the tray completely out.



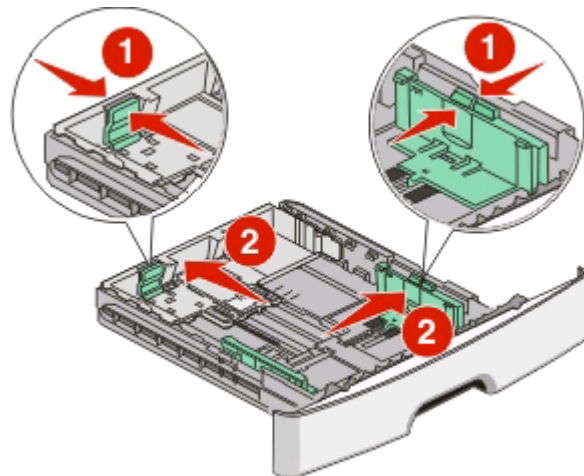
Do not remove trays while a job prints or when the Busy light sequence appears on the printer control panel. Doing so may cause a jam.



Busy

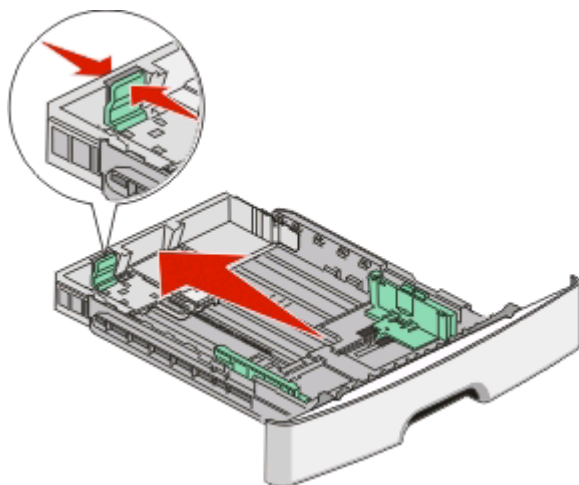
💡 - Blinking

- 2 Squeeze the width guide tabs, and then slide them to the sides of the tray. The width guides move in unison.
- 3 Squeeze the length guide tabs together, and then slide the length guide to the correct position for the paper size being loaded.



Loading paper and specialty media

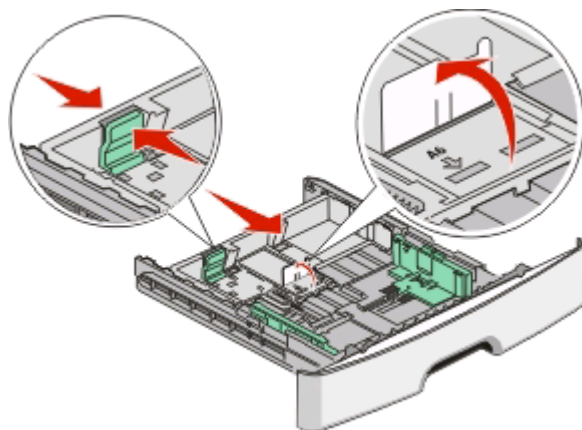
If you are loading a longer size of paper like A4 or legal, squeeze the length guide tabs and slide the length guide backwards to the position for the length of paper you are loading. The tray extends backwards.



If you are loading A6-size paper:

- a** Squeeze the length guide tabs together as shown, and slide the length guide toward the center of the tray to the A6 size position.
- b** Raise the A6 length guide.

Note: The standard tray accommodates only 150 sheets of A6-size paper.

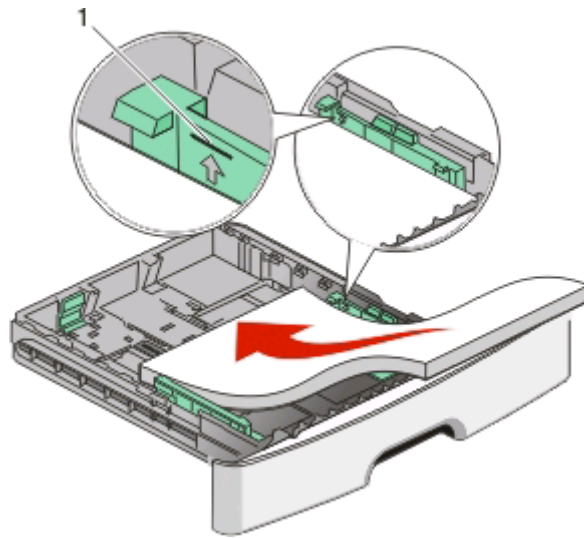


- 4** Flex the sheets back and forth to loosen them, and then fan them. Do not fold or crease the paper. Straighten the edges on a level surface.



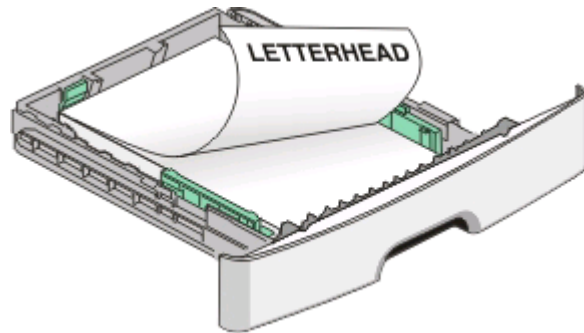
- 5** Load the paper stack toward the back of the tray as shown with the recommended print side facedown.

Note: Notice the maximum fill line. Do not try to overload the tray. Do not load A6-size paper to the maximum fill line; the tray holds only 150 sheets of A6-size paper.

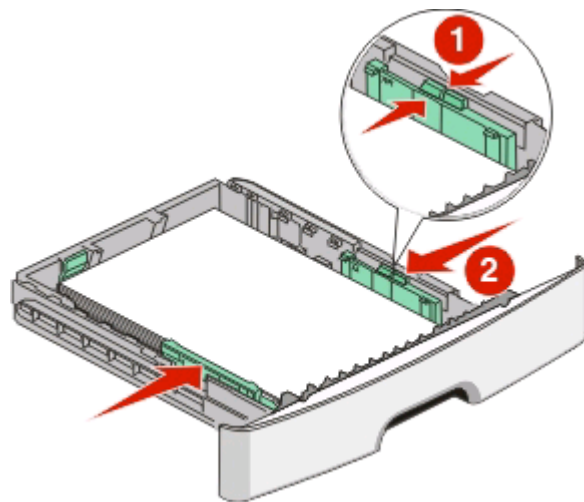


1 Maximum fill line

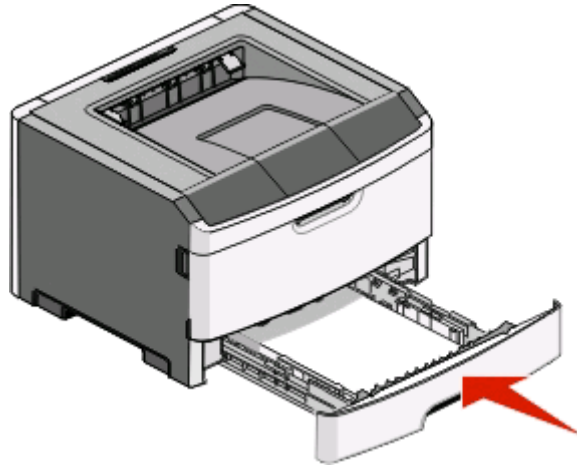
Note: When loading letterhead, place the top edge of the sheet toward the front of the tray. Load the letterhead with the design placed facedown.



6 Squeeze the width guide tabs on the right guide, and slide the width guides to lightly touch the side of the stack.



7 Insert the tray.



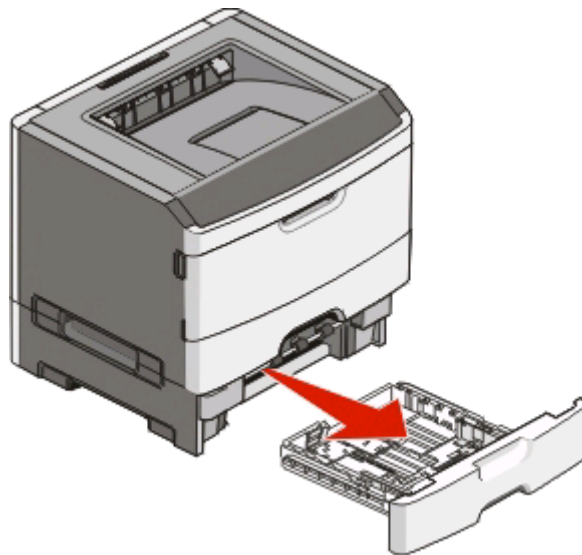
8 If a different type of paper was loaded than the type previously loaded in the tray, change the Paper Type setting. For more information, see “Setting the paper size and paper type” on page 55.

Note: The difference between the standard 250-sheet tray and the optional 250- and 550-sheet trays is that the standard tray accommodates up to 150 sheets of A6-size paper, so the width guides slide farther to the center of the tray.

Loading the optional 250- or 550-sheet tray

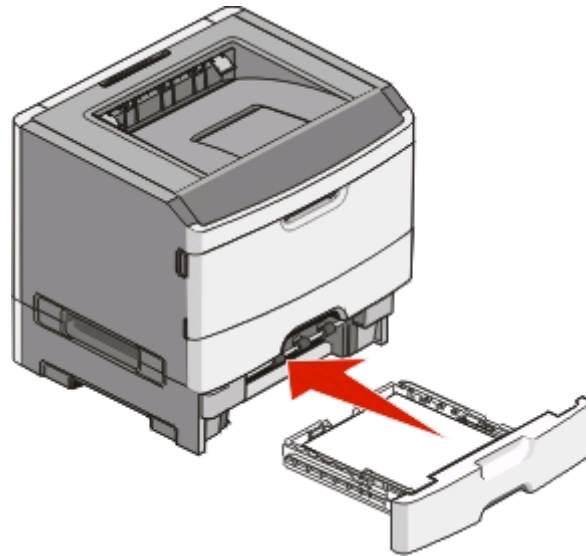
Only one optional drawer, which includes either a 250- or 550-sheet tray, may be attached to the printer at a time. Regardless of the number of sheets in the optional tray, it is referred to as Tray 2.

1 Pull the tray completely out.



2 See “Loading the standard 250-sheet tray” on page 55 to complete the steps for loading a tray. An optional tray is loaded in the same way that the standard tray is loaded.

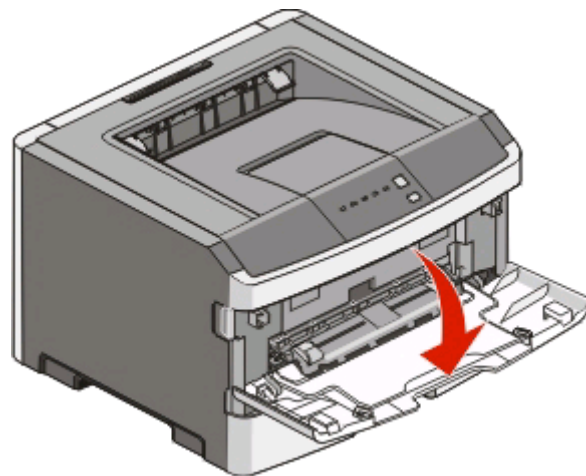
3 Insert the tray.




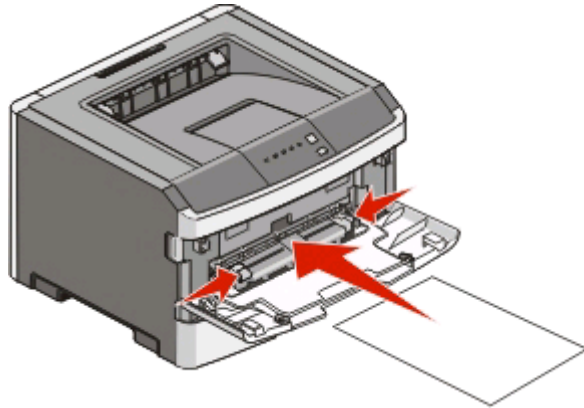
Using the manual feeder

The manual feeder is located inside the manual feeder door of the printer and can feed only one sheet of paper at a time. You can use the manual feeder to quickly print on paper types or sizes that are not currently loaded in the tray.

1 Open the manual feeder door.

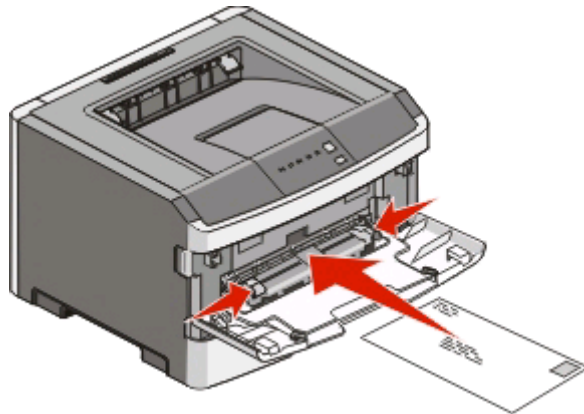


2 When the  light is lit, load the paper faceup into the center of the manual feeder.



Notes:

- Load letterhead faceup, with the top of the sheet entering first.
- Load envelopes with the flap side down and with the stamp area as shown.



3 Feed paper into the manual feeder only to the point where its leading edge can contact the paper guides.

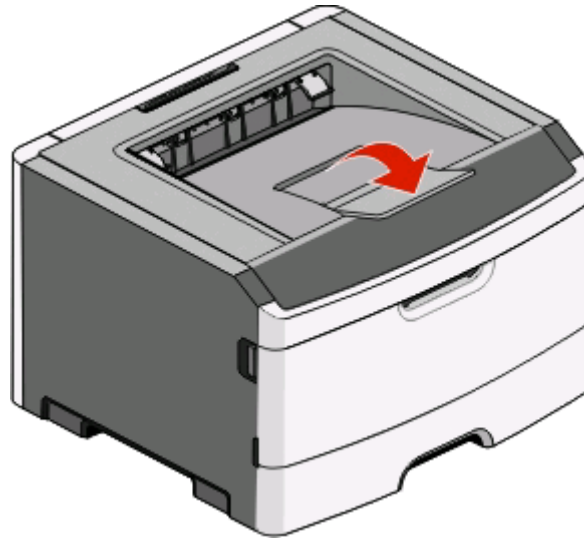
4 Adjust the paper guides to the paper width.

Warning—Potential Damage: Do not force the paper into the feeder. Forcing the paper causes jams.

Using the standard exit bin and paper stop

The standard exit bin holds up to 150 sheets of 20 lb paper. It collects print jobs facedown. The standard exit bin includes a paper stop that keeps paper from sliding out the front of the bin as it stacks. The paper stop also aids in neater stacking of the paper.

To open the paper stop, pull it so it flips forward.



Notes:

- Do not leave the paper stop in the open position if you are printing on transparencies. Doing so may cause creases in the transparencies.
- When moving the printer to another location, make sure the paper stop is closed.

Linking and unlinking trays

Linking trays

Tray linking is useful for large print jobs or multiple copies. When one linked tray is empty, paper feeds from the next linked tray. When the Size and Type settings are the same for any trays, the trays are automatically linked. The Size and Type settings for all trays must be set from the Paper menu.

To initiate tray linking from a locally connected printer:

- On a Windows computer, access the Paper menu through the Local Printer Settings Utility.
- On a Macintosh computer, access the Paper menu through the Printer Settings.

Unlinking trays

Unlinked trays have settings that are *not* the same as the settings of any other tray. To unlink a tray using the Paper menu, change the Paper Type and Paper Size settings of that tray so that they do not match the settings of any other tray.

To unlink trays from a locally connected printer, do one of the following:

- On a Windows computer, access the Paper menu through the Local Printer Settings Utility. Then, change the Paper Type and Paper Size settings of the tray so that they do not match the settings of any other tray.
- On a Macintosh computer, access the Paper menu through the Printer Settings. Then, change the Paper Type and Paper Size settings of the tray so that they do not match the settings of any other tray.

Warning—Potential Damage: Do not assign a Paper Type name that does not accurately describe the type of paper loaded in the tray. The temperature of the fuser varies according to the specified Paper Type. Paper may not be properly processed if an inaccurate Paper Type is selected.

Assigning a Custom Type <x> name

Assigning a Custom Type <x> name to a tray enables you to link or unlink it. Use the same Custom Type <x> name for each tray that you want to link. Only trays with the same custom names assigned will link.

If the printer is connected to a computer by a USB or parallel cable, use one of the following utilities to access the Paper menu and assign a Custom Type, depending on your operating system:

- On a Windows computer, access the Paper menu through the Local Printer Settings Utility.
- On a Macintosh computer, access the Paper menu through the Printer Settings.

1 Click **Settings**, and then click **Paper Menu**.

2 Click **Custom Name**, and then enter the name for the paper.

3 Click **Submit**.

4 Select a Custom Type.

5 Verify that the correct Paper Type is associated with the custom name.

Note: Plain Paper is the factory default Paper Type associated with all Custom Type <x> names and user-defined custom names.

6 Click **Submit**.

Paper and specialty media guide

Paper guidelines

Paper capacities

The capacities of the trays and the manual feeder are based on 75 g/m² (20 lb) paper.

Load up to	Notes
Tray 1 250 sheets of paper 150 sheets of A6-size paper 50 paper labels 50 transparencies	Vinyl, pharmacy, or dual-sided labels are not supported. Use paper labels only. Single-sided paper labels designed for laser printers are supported for occasional use.
Tray 2 250 or 550 sheets of paper 50 paper labels	Only one optional drawer may be installed on the printer at a time. The maximum amount of paper that can be loaded depends on whether you have an optional 250- or 550-sheet tray. Vinyl, pharmacy, or dual-sided labels are not supported. Use paper labels only. Single-sided paper labels designed for laser printers are supported for occasional use.
Manual feeder 1 sheet of paper 1 sheet of A6-size paper 1 transparency 1 sheet of card stock 1 envelope	Feed paper into the manual feeder only to the point where its leading edge can contact the paper guides. Do not force the paper into the feeder.

Paper characteristics

The following paper characteristics affect print quality and reliability. Consider these characteristics when evaluating new paper stock.

Weight

The printer trays can automatically feed paper weights up to 90 g/m² (24 lb bond) grain long paper. The manual feeder can automatically feed paper weights up to 163 g/m² (43 lb bond) grain long paper. Paper lighter than 60 g/m² (16 lb) might not be stiff enough to feed properly, causing jams. For best performance, use 75 g/m² (20 lb bond) grain long paper. For paper smaller than 182 x 257 mm (7.2 x 10.1 in.), we recommend 90 g/m² (24 lb) or heavier paper.

Note: Duplex printing is supported only for 60–90 g/m² (16–24 lb bond) paper.

Curl

Curl is the tendency for paper to curl at its edges. Excessive curl can cause paper feeding problems. Curl can occur after the paper passes through the printer, where it is exposed to high temperatures. Storing paper unwrapped in hot, humid, cold, or dry conditions, even in the trays, can contribute to paper curling prior to printing and can cause feeding problems.

Smoothness

Paper smoothness directly affects print quality. If paper is too rough, toner cannot fuse to it properly. If paper is too smooth, it can cause paper feeding or print quality issues. Always use paper between 100–300 Sheffield points; smoothness between 150–250 Sheffield points produces the best print quality.

Moisture content

The amount of moisture in paper affects both print quality and the ability of the printer to feed the paper correctly. Leave paper in its original wrapper until it is time to use it. This limits the exposure of paper to moisture changes that can degrade its performance.

Condition paper before printing by storing it in its original wrapper in the same environment as the printer for 24 to 48 hours before printing. Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick paper may also require a longer conditioning period.

Grain direction

Grain refers to the alignment of the paper fibers in a sheet of paper. Grain is either *grain long*, running the length of the paper, or *grain short*, running the width of the paper.

For 60–90 g/m² (16–24 lb bond) paper, grain long paper is recommended.

Fiber content

Most high-quality xerographic paper is made from 100% chemically treated pulped wood. This content provides the paper with a high degree of stability resulting in fewer paper feeding problems and better print quality. Paper containing fibers such as cotton can negatively affect paper handling.

Unacceptable paper

The following paper types are not recommended for use with the printer:

- Chemically treated papers used to make copies without carbon paper, also known as carbonless papers, carbonless copy paper (CCP), or no carbon required (NCR) paper
- Preprinted papers with chemicals that may contaminate the printer
- Preprinted papers that can be affected by the temperature in the printer fuser
- Preprinted papers that require a registration (the precise print location on the page) greater than ± 2.3 mm (± 0.9 in.), such as optical character recognition (OCR) forms

In some cases, registration can be adjusted with a software application to successfully print on these forms.

- Coated papers (erasable bond), synthetic papers, thermal papers
- Rough-edged, rough or heavily textured surface papers, or curled papers
- Recycled papers that fail EN12281:2002 (European)
- Paper weighing less than 60 g/m² (16 lb)
- Multiple-part forms or documents

Selecting paper

Using appropriate paper prevents jams and helps ensure trouble-free printing.

To help avoid jams and poor print quality:

- *Always* use new, undamaged paper.
- Before loading paper, know the recommended print side of the paper. This information is usually indicated on the paper package.
- *Do not* use paper that has been cut or trimmed by hand.
- *Do not* mix paper sizes, types, or weights in the same source; mixing results in jams.
- *Do not* use coated papers unless they are specifically designed for electrophotographic printing.

Selecting preprinted forms and letterhead

Use these guidelines when selecting preprinted forms and letterhead:

- Use grain long for 60 to 90 g/m² weight paper.
- Use only forms and letterhead printed using an offset lithographic or engraved printing process.
- Avoid papers with rough or heavily textured surfaces.

Use papers printed with heat-resistant inks designed for use in xerographic copiers. The ink must be able to withstand temperatures up to 230°C (446°F) without melting or releasing hazardous emissions. Use inks that are not affected by the resin in toner. Inks that are oxidation-set or oil-based generally meet these requirements; latex inks might not. When in doubt, contact the paper supplier.

Preprinted papers such as letterhead must be able to withstand temperatures up to 230°C (446°F) without melting or releasing hazardous emissions.

Using recycled paper and other office papers

- Low moisture content (4–5%)
- Suitable smoothness (100–200 Sheffield units, or 140–350 Bendtsen units, European)

Note: Some much smoother papers (such as premium 24 lb laser papers, 50–90 Sheffield units) and much rougher papers (such as premium cotton papers, 200–300 Sheffield units) have been engineered to work very well in laser printers, despite surface texture. Before using these types of paper, consult your paper supplier.

- Suitable sheet-to-sheet coefficient of friction (0.4–0.6)
- Sufficient bending resistance in the direction of feed

Recycled paper, paper of lower weight (<60 g/m² [16 lb bond]) and/or lower caliper (<3.8 mils [0.1 mm]), and paper that is cut grain-short for portrait (or short-edge) fed printers may have lower bending resistance than is required for reliable paper feeding. Before using these types of paper for laser (electrophotographic) printing, consult your paper supplier. Remember that these are general guidelines only and that paper meeting these guidelines may still cause paper feeding problems in any laser printer (for example, if the paper curls excessively under normal printing conditions).

Storing paper

Use these paper storage guidelines to help avoid jams and uneven print quality:

- For best results, store paper where the temperature is 21°C (70°F) and the relative humidity is 40%. Most label manufacturers recommend printing in a temperature range of 18 to 24°C (65 to 75°F) with relative humidity between 40 and 60%.
- Store paper in cartons when possible, on a pallet or shelf, rather than on the floor.
- Store individual packages on a flat surface.
- Do not store anything on top of individual paper packages.

Supported paper sizes, types, and weights

The following tables provide information on standard and optional paper sources and the types of paper they support.

Note: For an unlisted paper size, select the closest *larger* listed size.

Paper types and weights supported by the printer

The printer engine and the duplex path support 60–90 g/m² (16–24 lb) paper weights. The manual feeder supports 60–163 g/m² (16–43 lb) paper weights.

Paper type	250-sheet standard tray	250- or 550-sheet optional tray	Manual feeder	Duplex path
Paper	√	√	√	√
<ul style="list-style-type: none"> • Plain • Light • Heavy • Rough/Cotton • Recycled • Custom 				
Bond	√	√	√	√
Letterhead	√	√	√	√
Preprinted	√	√	√	√
Colored Paper	√	√	√	√
Card stock	X	X	√	X
Glossy paper	X	X	X	X
Paper labels¹	√	√	√	X
Transparencies	√	X	√	X
Envelopes (smooth)²	X	X	√	X

¹ Single-sided paper labels designed for laser printers are supported for occasional use. It is recommended to print 20 or fewer pages of paper labels a month. Vinyl, pharmacy, and dual-sided labels are not supported.

² Use envelopes that lie flat when individually placed on a table facedown.

Paper sizes supported by the printer

Paper size	Dimensions	Standard 250-sheet tray	Optional 250- or 550-sheet tray	Manual feeder	Duplex path
A4	210 x 297 mm (8.3 x 11.7 in.)	✓	✓	✓	✓
A5	148 x 210 mm (5.8 x 8.3 in.)	✓	✓	✓	X
A6¹	105 x 148 mm (4.1 x 5.8 in.)	✓	X	✓	X
Executive	184 x 267 mm (7.3 x 10.5 in.)	✓	✓	✓	X
Folio	216 x 330 mm (8.5 x 13 in.)	✓	✓	✓	✓
JIS B5	182 x 257 mm (7.2 x 10.1 in.)	✓	✓	✓	X
Legal	216 x 356 mm (8.5 x 14 in.)	✓	✓	✓	✓
Letter	216 x 279 mm (8.5 x 11 in.)	✓	✓	✓	✓
Oficio (Mexico)²	216 x 340 mm (8.5 x 13.4 in.)	✓	✓	✓	✓
Statement	140 x 216 mm (5.5 x 8.5 in.)	✓	✓	✓	X
Universal³	76.2 x 127 mm (3 x 5 in.) up to 216 x 356 mm (8.5 x 14 in.)	✓	✓	✓	X
B5 Envelope	176 x 250 mm (6.9 x 9.8 in.)	X	X	✓	X
C5 Envelope	162 x 229 mm (6.4 x 9 in.)	X	X	✓	X
DL Envelope	110 x 220 mm (4.3 x 8.7 in.)	X	X	✓	X
7 3/4 Envelope (Monarch)	98 x 191 mm (3.9 x 7.5 in.)	X	X	✓	X
9 Envelope	98 x 225 mm (3.9 x 8.9 in.)	X	X	✓	X

¹ A6 is supported only for grain long papers.

² This size setting formats the page for 216 x 356 mm (8.5 x 14 in.) unless the size is specified by the software application.

³ If a paper size you want to use is not listed, configure a Universal paper size. For more information, see "Configuring Universal paper settings" on page 55.

Paper size	Dimensions	Standard 250-sheet tray	Optional 250- or 550-sheet tray	Manual feeder	Duplex path
10 Envelope	105 x 241 mm (4.1 x 9.5 in.)	X	X	✓	X
Other Envelope	229 x 356 mm (9 x 14 in.)	X	X	✓	X

¹ A6 is supported only for grain long papers.

² This size setting formats the page for 216 x 356 mm (8.5 x 14 in.) unless the size is specified by the software application.

³ If a paper size you want to use is not listed, configure a Universal paper size. For more information, see “Configuring Universal paper settings” on page 55.

Setting up for local printing

Windows®

Some Windows operating systems may already include a printer driver that is compatible with the printer.

Note: Installing custom drivers do not replace the system driver. A separate printer object is created and appears in the Printers folder.


Operating System:	Use this type of cable:
Microsoft® Windows Server 2008 Windows Vista™ Windows XP Windows Server 2003 Windows 2000	USB or Parallel

Installing the Printer Drivers

Note: Windows Server 2008, Windows Vista, Windows XP, Windows Server 2003, and Windows 2000 require that you have administrative access to install printer drivers on your computer.

- 1 Insert the *Drivers and Utilities* CD.
The *Drivers and Utilities* CD launches the installation software automatically.
- 2 When the *Drivers and Utilities* CD screen appears, click **Personal Installation — Install the printer for use on this computer only**, and then click **Next**.
- 3 Select your printer from the drop-down menu.
- 4 Select **Typical Installation (recommended)**, and then click **Install**.
- 5 Click **Finish**, connect the printer to the computer using a USB or parallel cable, and turn on the printer.
The installation prompts you when the setup is completed.

Installing Additional Printer Drivers

- 1 Turn on your computer, and insert the *Drivers and Utilities* CD.
When the *Drivers and Utilities* CD launches, click **Cancel**.
- 2 In *Windows Vista* (default Start menu):
 - a Click  → **Control Panel**.
 - b Click **Hardware and Sound**.
 - c Click **Printers**.In *Windows XP* (default Start menu):
 - a Click **Start** → **Control Panel**.
 - b Double-click **Printers and Other Hardware**.

c Double-click **Printers and Faxes**.

In Windows XP (Classic Start menu): Click **Start**→ **Settings**→ **Printers and Faxes**.

In Windows Vista (Classic Start menu) and all other Windows versions: Click **Start**→ **Settings**→ **Printers**.

3 Double-click **Add Printer**.

The **Add Printer Wizard** opens.

4 Click **Next**.

5 Select **Local printer attached to this computer**, and then click **Next**.

You are prompted to attach the printer to the computer.

6 Select the port you want your printer to use, and then click **Next**.

7 Select **Have Disk**.

8 Browse to your CD drive, and select the correct directory for your operating system.

Note: If you installed the printer drivers from the *Drivers and Utilities* CD before you connected the printer to your computer, the PCL-XL driver for your operating system was installed by default.

Operating System	Software Path
Windows Server 2008	D:\Drivers\Print\Win_2kXP\, where D: is the letter of your CD-ROM.
Windows Vista	
Windows XP	
Windows Server 2003	
Windows 2000	

Note: After selecting the directory containing your printer drivers, you may be prompted for additional files in order to continue installation. Insert the operating system CD, and then click **OK**.

9 Click **Open**, and then click **OK**.

10 Select the type of driver you want to install (PCL, HBP, or PS) in the **Manufacturer** list, and the printer model in the **Printers** list, and then click **Next**.

11 Proceed through the rest of the **Add Printer Wizard**, and then click **Finish** to install the printer driver.

Installing Additional Printer Software

1 Turn on your computer, and insert the *Drivers and Utilities* CD.

The *Drivers and Utilities* CD should launch the installation software automatically.

2 Select **Additional Software Installation - Install the printer support software**, and then click **Next**.

3 Select the check boxes next to the printer software you want to install, and then click **Install**.

The software is installed on your computer.

Macintosh®

Macintosh OS 9 or later is required for USB printing. In order to print to a USB printer, create a Desktop Printer icon (Mac OS 9), or add the printer in Print Center or Printer Setup Utility (Mac OS X).

Mac OS X: Adding the Printer in Print Center or Printer Setup Utility

- 1** Install support for the printer on the computer.
 - a** Insert the *Drivers and Utilities* CD.
 - b** Double-click the installer package for the printer.
 - c** Continue past the Welcome screen and the Read me.
 - d** Click **Continue** after viewing the license agreement, and then click **Agree** to accept the terms of the agreement.
 - e** Select a destination for the installation, and then click **Continue**.
 - f** Click **Install** on the **Easy Install** screen.
 - g** Enter the administrator password, and then click **OK**.
The software is installed on the computer.
 - h** Quit the installer when it is finished.
- 2** Open **Print Center** (10.2) or **Printer Setup Utility** (10.3+), located in **/Applications/Utilities**.
- 3** *If the USB printer appears in the Printer List:* The printer has been set up successfully, and you can quit the application.
If the USB printer does not appear in the Printer List: Ensure that the USB cable is properly connected between the printer and the computer and that the printer is turned on. After the printer appears in the Printer List, the printer has been set up successfully and you can quit the application.

Mac OS 9: Creating a Desktop Printer With Desktop Printer Utility

- 1** Install support for the printer on the computer.
 - a** Insert the *Drivers and Utilities* CD.
 - b** Double-click the installer package for the printer.
 - c** Continue past the Welcome screen and the Read me.
 - d** Click **Continue** after viewing the license agreement, and then click **Agree** to accept the terms of the agreement.
 - e** Select a destination for the installation, and then click **Continue**.
 - f** Click **Install** on the **Easy Install** screen.
The software is installed on the computer.
 - g** Quit the installer when it is finished.
- 2** Open **Desktop Printer Utility**, usually located in **Applications:Utilities**.
- 3** Select **Printer (USB)**, and then click **OK**.
- 4** In the **USB Printer Selection** section, click **Change**.
If the printer does not appear in the **USB Printer Selection** list, ensure that the USB cable is properly connected between the printer and the computer, and that the printer is turned on.

5 Select the printer, and then click **OK**.

The printer appears in the **Printer (USB)** window.

6 In the **PostScript Printer Description (PPD) File** section, click **Auto Setup**.

Ensure that the printer PPD matches the printer model.

7 Click **Create**.

8 Click **Save**.

9 Enter a name for the printer, and then click **OK**.

The printer is saved as a Desktop Printer.

Linux[®]

Local printing is supported on many Linux platforms, such as Red Hat, SUSE, Debian[™] GNU/Linux, Ubuntu, Red Flag Linux, and Linspire.

Printer software packages and installation instructions are available on the *Drivers and Utilities* CD. All the printer software supports local printing using a parallel connection.

To launch the installation instructions for Linux:

1 Insert the *Drivers and Utilities* CD. If the *Drivers and Utilities* CD automatically launches, click **Cancel**.

2 Browse to **D:\unix\docs\, where **D:** is the letter of your CD-ROM drive.**

Software Overview

Use the *Drivers and Utilities* CD that came with your printer to install a combination of software applications, depending on your operating system.

Note: If you purchased your printer and computer separately, you must use the *Drivers and Utilities* CD to install these software applications.

Note: These software applications are not available with Macintosh®.

Status Monitor Center

Note: For the local Status Monitor Center to work properly, bidirectional communication support must be in place so the printer and computer can communicate. The Status Monitor Center only works when the printer is connected to a computer locally through a USB cable.

Use the Status Monitor Center to manage multiple Status Monitors.

- Double-click a printer name to open its Status Monitor, or select **Run** to open a Status Monitor for a particular printer.
- Select **Update** to change the appearance of the list of printers.

Local Printer Settings Utility

Use the Dell Local Printer Settings Utility to change and save printer settings not available from the printer software (for example, activating Alarm Control if you want the printer to sound an alarm when it needs attention).

Note: The Local Printer Settings Utility only works when the printer is connected to a computer locally through a USB or parallel cable.

The Dell Local Printer Setup Utility is installed automatically on your computer when you install the printer software. To access the utility:

- 1 Insert the *Drivers and Utilities* CD.
- 2 Select **Additional Software Installation**, and then click **Next**.
- 3 Select **Local Printer Settings Utility**, and then click **Install**.

After you install this utility, you can change settings of such controls as Toner Darkness, Power Saver, Paper Size, and Paper Type. Once selected, these settings apply to all print jobs, but you can use the printer software to change these settings for individual print jobs. Save settings from the toolbar by clicking **Actions → Apply Settings**. You can also save your settings in a command file to distribute to designated printers by clicking **Actions → Save As Command File**.

You can change the following settings using the Dell Local Printer Settings Utility:

- Paper
- Finishing
- Quality
- Setup
- PCL Emulation

- PostScript
- Parallel
- USB

Paper	Finishing	Quality	Setup
<ul style="list-style-type: none"> • Paper Source • Paper Size • Paper Type • Custom Types • Substitute Size • Paper Texture • Paper Weight 	<ul style="list-style-type: none"> • Duplex Binding • Copies • Blank Pages • Collation • Separator Sheets • Separator Source • Multipage (pages/side) • Multipage Ordering • Orientation • Multipage Border 	<ul style="list-style-type: none"> • Print Resolution • Small Font Enhancer • Toner Darkness • Picture Grade 	<ul style="list-style-type: none"> • Printer Language • Jam Recovery • Display Language • Print Area • Alarm Control • Toner Alarm • Download Target • Power Saver • Print Timeout • Auto Continue • Wait Timeout • Resolution Reduction • Resource Save • Reset Control • Print Buffer Control • Page Protect • Eco Mode • Quiet Mode

PCL Emulation	PostScript	Parallel	USB
<ul style="list-style-type: none"> • A4 Width • Orientation • Auto CR After LF • Auto LF after CR • Lines Per Page 	<ul style="list-style-type: none"> • Print PS Error • Font Priority 	<ul style="list-style-type: none"> • PCL SmartSwitch • PS SmartSwitch • Advanced Status • Honor Init • Protocol • Parallel Buffer 	<ul style="list-style-type: none"> • PCL SmartSwitch • PS SmartSwitch • USB Buffer

Note: This utility is not supported in Windows x64 environments.

Driver Profiler

Use the Driver Profiler to create driver profiles that contain custom driver settings. A driver profile can contain a group of saved printer driver settings and other data for such things as:

- Print orientation and N-Up (document settings)
- Installation status of an output tray (printer options)
- User-defined paper sizes (custom papers)
- Simple text and watermarks
- Overlay references


- Font references
- Form associations

Dell Printer Alert Utility


Note: This application is not available with Windows 2000.

The Dell Printer Alert Utility informs you when there are errors requiring your intervention on your printer. When there is an error, a bubble appears telling you what the error is, and points you to the appropriate recovery information.


Note: For the Dell Printer Alert Utility to work properly, bidirectional communication support must be in place so the printer and computer can communicate. An exception is added to the Windows Firewall to allow this communication.

If you opted to install the Dell Printer Alert Utility with your printer software, the utility automatically launches when the software installation is completed. The utility is active if you see  in the System Tray.

To disable the Dell Printer Alert Utility:

- 1 From the System Tray, right click the  icon.
- 2 Select **Exit**.

To re-enable the Dell Printer Alert Utility:

- 1 *In Windows Vista (default Start menu):*
 - a Click  → **Programs**.
 - b Click **Dell Printers**.
 - c Click **Dell 2230d Laser Printer**.

In Windows XP and 2000:

Click **Start** → **Programs** or **All Programs** → **Dell Printers** → **Dell 2230d Laser Printer**.

- 2 Click **Printer Alert Utility**.

Installing the Optional XPS Driver

The XML Paper Specification (XPS) driver is an optional printer driver designed to make use of the advanced XPS color and graphics features that are only available for Windows Vista users. In order to use XPS features, you must install the XPS driver as an additional driver after you install your printer.

Note: Before installing the XPS driver, complete the steps on the *Setting Up Your Printer* poster to install the printer on your computer.

To install the driver:

- 1 Click  → **Control Panel**.
- 2 Under **Hardware and Sound**, click **Printer**, and then click **Add a Printer**.

3 From the **Add Printer** dialog box, choose one of the following:

- If you are using a USB connection, make sure the USB cable is connected to the computer and printer, and then do the following:
 - a** Click **Add a local printer**.
 - b** From the **Use an existing port:** drop-down menu, select **Virtual printer port for USB**, and then click **Next**.

4 Click **Have disk**.

The **Install From Disk** dialog box opens.

5 Click **Browse**, and then navigate to the XPS driver files on your computer:

- a** Click **Computer**, and then double-click **(C:)**.
- b** Double-click **Drivers**, and then double-click **PRINTER**.
- c** Double-click the folder that has your printer model number, and then double-click **Drivers**.
- d** Double-click **xps**, and then click **Open**.
- e** From the **Install From Disk** dialog box, click **OK**.

6 Click **Next** on the following two dialog boxes.

For more information on the XPS driver, see the XPS **readme** file on the *Drivers and Utilities* CD. The file is located in the **xps** folder with the setupxps batch file (D:\Drivers\xps\readme).

Dell Toner Management System

Printing Status Window

Note: For the Printing Status Window to work properly, bidirectional communication support must be in place so the printer and computer can communicate. An exception is added to the Windows® Firewall to allow this communication.

The Printing Status window displays the status of the printer (Printer Ready, Printer Offline, and Error-Check Printer) and the name of the job when you send a job to print.


The Printing Status window also displays the level of toner so you can:

- Monitor the toner level for your printer.
- Click **Order Supplies** to order replacement toner cartridges.

Dell Printer Supplies Reorder Application

The Order Supplies dialog box can be launched from the Printing Status window, the Programs window, or the desktop icon.

You can order toner by phone or from the Web.

- If ordering online, launch the Dell Printer Supplies Reorder Application:
 - 1** *In Windows Vista (default Start menu):*
 - a** Click  → **Programs**.
 - b** Click **Dell Printers**.
 - c** Click **Dell 2230d Laser Printer**.

In Windows XP and 2000:

Click **Start**→ **Programs** or **All Programs**→ **Dell Printers**→ **Dell 2230d Laser Printer**.

2 Click **Dell Printer Supplies Reorder Application**.

The **Order Supplies** dialog box opens.

3 If **Multiple Printers Found** launches, select the printer you are ordering the supplies for.

4 Follow the instructions on the screen.

- If ordering from the Web, click the link under the **Order Online** heading.
- If ordering by phone, call the number that appears under the **Order by Phone** heading.

Printing

This chapter covers printing, printer reports, and job cancelation. Selection and handling of paper and specialty media can affect how reliably documents print. For more information, see “Avoiding jams” on page 97 and “Storing paper” on page 67.

Printing a document

- 1 Load paper into a tray or feeder.
- 2 From the Paper menu, set the Paper Type and Paper Size based on the paper that is loaded.
- 3 Do one of the following:

For Windows users

- a With a document open, click **File → Print**.
- b Click **Properties, Preferences, Options, or Setup**.
- c From the Form Source list box, select the source containing the paper you loaded.
- d From the Form Type list box, select the paper type.
- e From the Form Size list box, select the paper size.
- f Click **OK**, and then click **Print**.

For Macintosh users

In Mac OS X:

- a Customize the settings as needed in the Page Setup dialog.
 - 1 With a document open, choose **File > Page Setup**.
 - 2 From the Paper Size pop-up menu, choose a paper size or create a custom size to match the loaded paper.
 - 3 Click **OK**.
- b Customize the settings as needed in the Print dialog:
 - 1 With a document open, click **File > Print**.
If necessary, click the disclosure triangle to see more options.
 - 2 From the print options or Copies & Pages pop-up menu, choose **Printer Features**.
 - 3 From the Feature Sets pop-up menu, choose **Paper**.
 - 4 From the Paper type pop-up menu, choose a paper type.
 - 5 Click **Print**.

In Mac OS 9:

- a Customize the settings as needed in the Page Setup dialog:
 - 1 With a document open, choose **File > Page Setup**.
 - 2 From the Paper pop-up menu, choose a paper size or create a custom size to match the loaded paper.
 - 3 Click **OK**.

- b** Customize the settings as needed in the Print dialog:
 - 1** With a document open, choose **File > Print**.
 - 2** Select a Paper Source option, and then choose the tray loaded with the appropriate paper.
 - 3** Click **Print**.

Printing on both sides of the paper

If you want to print two-sided pages for every print job, or for most print jobs, then select Duplex in the Finishing menu. To access the Finishing menu, do one of the following:

- If the printer is connected to a computer by USB or parallel cable, then open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. One of these utilities installs with the printer software.
- For occasional two-sided printing, you can request two-sided printing in the printer software. Do one of the following, depending on your operating system:

For Windows users

- 1** With a document open, click **File → Print**.
- 2** Click **Properties, Preferences, Options, or Setup**.
- 3** Under the Page Layout tab, select **2-sided printing (duplex)**.
- 4** Select **Long edge** or **Short edge**.
- 5** Click **OK**.

For Macintosh users

- 1** With a document open, choose **File > Print**.
If necessary, click the disclosure triangle to see more options.
- 2** From the print options, Copies & Pages, or General pop-up menu, choose **Layout**.
- 3** From the Two-Sided pop-up menu, choose a duplex setting.
- 4** Click **Print**.

Setting Jam Recovery

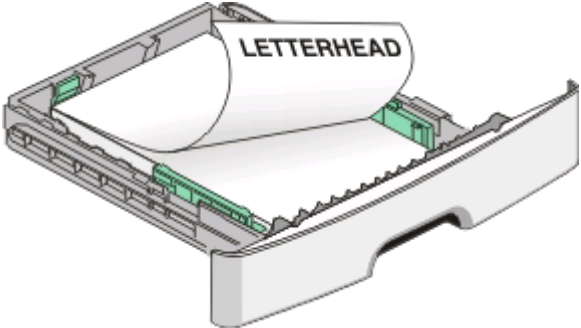
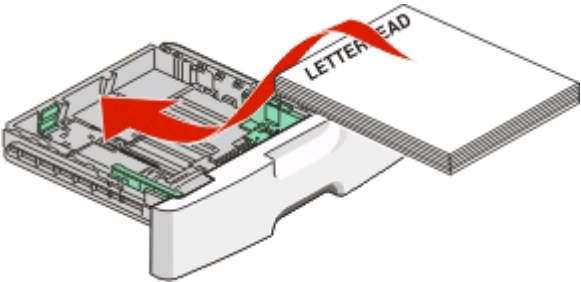
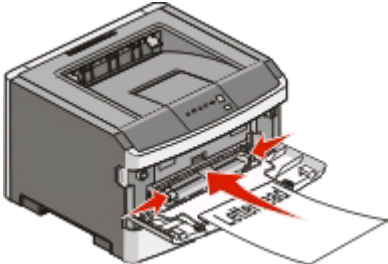
To ensure that a page will reprint after a paper jam, set Jam Recovery to Auto or On.

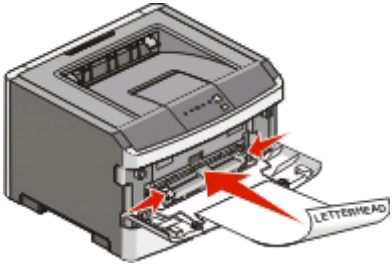
If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. Under the Setup menu, ensure that Jam Recovery is set to Auto or On.

Printing specialty documents

Tips on using letterhead

Page orientation is important when printing on letterhead. Use the following table to determine which direction to load the letterhead:

Source or process	Print side and paper orientation
<ul style="list-style-type: none"> • Standard 250-sheet tray • Optional 250-sheet tray • Optional 550-sheet tray 	<p>Printed letterhead design is placed facedown. The top edge of the sheet with the logo is placed at the front of the tray.</p> 
<p>Duplex (two-sided) printing from trays</p>	<p>Printed letterhead design is placed faceup. The top edge of the sheet with the logo is placed at the rear of the tray.</p> 
<p>Manual feeder (simplex printing)</p>	<p>Preprinted letterhead design is placed faceup. The top edge of the sheet with the logo should enter the manual feeder first.</p> 
<p>Note: Check with the manufacturer or vendor to determine whether the chosen preprinted letterhead is acceptable for laser printers.</p>	

Source or process	Print side and paper orientation
Manual feeder (duplex printing)	<p>Preprinted letterhead design is placed facedown. The top edge of the sheet with the logo should enter the manual feeder last.</p> 
<p>Note: Check with the manufacturer or vendor to determine whether the chosen preprinted letterhead is acceptable for laser printers.</p>	

Tips on using transparencies

Print samples on the transparencies being considered for use before buying large quantities.

When printing on transparencies:

- Feed transparencies from the standard 250-sheet tray or the manual feeder.
- Use transparencies designed specifically for laser printers. Check with the manufacturer or vendor to ensure that the transparencies are able to withstand temperatures up to 175° C (350° F) without melting, discoloring, offsetting, or releasing hazardous emissions.

Note: Transparencies can be printed at a temperature up to 180° C (356° F) if Transparency Weight is set to Heavy and Transparency Texture is set to Rough. Select these settings in the Paper menu using a local utility.

- To prevent print quality problems, avoid getting fingerprints on the transparencies.
- Before loading transparencies, fan the stack to prevent sheets from sticking together.

Tips on using envelopes

Print samples on the envelopes being considered for use before buying large quantities.

When printing on envelopes:

- Use envelopes designed specifically for laser printers. Check with the manufacturer or vendor to ensure the envelopes can withstand temperatures up to 210°C (410°F) without sealing, wrinkling, curling excessively, or releasing hazardous emissions.
- For the best performance, use envelopes made from 90 g/m² (24 lb bond) paper. Use up to 105 g/m² (28 lb bond) weight for envelopes as long as the cotton content is 25% or less. All-cotton envelopes must not exceed 90 g/m² (24 lb bond) weight.
- Use only new envelopes.
- To optimize performance and minimize jams, do not use envelopes that:
 - Have excessive curl or twist
 - Are stuck together or damaged in any way
 - Have windows, holes, perforations, cutouts, or embossing
 - Have metal clasps, string ties, or folding bars
 - Have an interlocking design
 - Have postage stamps attached

- Have any exposed adhesive when the flap is in the sealed or closed position
- Have bent corners
- Have rough, cockle, or laid finishes
- Adjust the width guides to fit the width of the envelopes.

Note: A combination of high humidity (over 60%) and the high printing temperature may wrinkle or seal envelopes.

Tips on using labels

Print samples on the labels being considered for use before buying large quantities.

Note: Use only paper label sheets. Vinyl, pharmacy, and dual-sided labels are not supported.

When printing on labels:

- Use labels designed specifically for laser printers. Check with the manufacturer or vendor to verify that:
 - The labels can withstand temperatures up to 210°C (410°F) without sealing, excessive curling, wrinkling, or releasing hazardous emissions.

Note: Labels can be printed at a higher fusing temperature up to 220°C (428°F) if Label Weight is set to Heavy. Select this setting using the Embedded Web Server, or from the printer control panel Paper menu.
 - Label adhesives, face sheet (printable stock), and topcoats can withstand up to 25 psi (172 kPa) pressure without delaminating, oozing around the edges, or releasing hazardous fumes.
- Do not use labels with slick backing material.
- Use full label sheets. Partial sheets may cause labels to peel off during printing, resulting in a jam. Partial sheets also contaminate the printer and the cartridge with adhesive, and could void the printer and cartridge warranties.
- Do not use labels with exposed adhesive.
- Do not print within 1 mm (0.04 in.) of the edge of the label, of the perforations, or between die-cuts of the label.
- Be sure adhesive backing does not reach to the sheet edge. Zone coating of the adhesive at least 1 mm (0.04 in.) away from edges is recommended. Adhesive material contaminates the printer and could void the warranty.
- If zone coating of the adhesive is not possible, remove a 1.6 mm (0.06 in.) strip on the leading and driver edge, and use a non-oozing adhesive.
- Portrait orientation works best, especially when printing bar codes.

Tips on using card stock

Card stock is heavy, single-ply specialty media. Many of its variable characteristics, such as moisture content, thickness, and texture, can significantly impact print quality. Print samples on the card stock being considered for use before buying large quantities.

When printing on card stock:

- Make sure the Paper Type is Card Stock.
- Select the appropriate Paper Texture setting.
- Be aware that preprinting, perforation, and creasing may significantly affect the print quality and cause jams or other paper handling problems.
- Check with the manufacturer or vendor to ensure the card stock can withstand temperatures up to 210°C (410°F) without releasing hazardous emissions.
- Do not use preprinted card stock manufactured with chemicals that may contaminate the printer. Preprinting introduces semi-liquid and volatile components into the printer.
- Use grain short card stock when possible.

Printing a booklet

- 1 Click the **Page Layout** tab.
- 2 Click **More Page Layout Options**.
- 3 Click **Booklet**.
- 4 Click **OK**.


Notes:

- The booklet feature automatically enables 2-sided printing with short-edge control, so any 2-sided printing options must be set before selecting the booklet function. After Booklet is selected, the 2-sided printing options remain at the last setting used.
- Booklet options are unavailable if the duplex unit is installed on the printer but not added to the Installed Options.

Printing information pages

Printing the menu settings page

Print the menu settings page to review the current menu settings and to verify that the printer options are installed correctly. To print the menu settings:

- 1 Ensure that the  light is on.

- 2 Press .



The menu settings page prints.

On the menu settings page:

- Under the Paper Menu, check what papers are listed under Custom Types.

Printing the print quality test pages

Print the print quality test pages to isolate print quality problems.

- 1 Turn the printer off, and then open the front door.
- 2 Press and hold  while turning the printer on.
- 3 Release .
- 4 Close the front door. The home menu light sequence appears.






 - On

 /  - On

 - On



 - On

- 5 Press and release  until you see the light sequence for print quality test pages, as indicated on the printer settings configuration page.
- 6 Press and hold  until all the lights cycle.
After a few minutes, the print quality test pages print. The pages include:
 - An information page that contains information about the printer, the toner cartridge, the margin settings, and the minimum stroke width, and a graphic for evaluating the print quality
 - Two pages to evaluate how well the printer is capable of printing various types of graphics
- 7 Examine the pages to determine the quality of printing. If there are problems, see “Solving print quality problems” on page 114.
To return to the home menu, press and hold  until all the lights cycle. To exit the menus, turn the printer off.

Canceling a print job


To cancel a print job, do one of the following:

From the printer control panel

- 1 Press  to cancel the current print job.
- 2 Wait for the  light to appear before re-sending the print job.

For Windows users

In Windows Vista:

- 1 Click .
- 2 Click **Control Panel**.
- 3 Click **Hardware and Sound**.
- 4 Click **Printers**.
- 5 Double-click the printer icon.
- 6 Select the job to cancel.
- 7 From the keyboard, press **Delete**.

In Windows XP:

- 1 Click **Start**.
- 2 From **Printers and Faxes**, double-click the printer icon.
- 3 Select the job to cancel.
- 4 From the keyboard, press **Delete**.

From the Windows taskbar:

When you send a job to print, a small printer icon appears in the right corner of the taskbar.

- 1 Double-click the printer icon.
A list of print jobs appears in the printer window.
- 2 Select a job to cancel.
- 3 From the keyboard, press **Delete**.

For Macintosh users

In Mac OS X version 10.5:

- 1 From the Apple menu, choose **System Preferences**..
- 2 Click **Print & Fax**, and then double-click the printer you are printing to.
- 3 From the printer window, select the job to cancel.
- 4 From the icon bar at the top of the window, click the **Delete** icon.

In Mac OS X versions 10.2 through 10.4:

- 1 Choose **Applications > Utilities**, and then double-click **Print Center** or **Printer Setup Utility**.
- 2 Double-click the printer icon.
- 3 From the printer window, select the job to cancel.
- 4 From the icon bar at the top of the window, click the **Delete** icon.

In Mac OS 9:

When you send a job to print, the printer icon for your selected printer appears on the desktop.

- 1 Double-click the printer icon.
- 2 From the printer window, select the job to cancel.
- 3 Click the trash icon.


Maintaining the printer

Periodically, certain tasks are required to maintain optimum print quality.

Ordering supplies

Printer attached locally to a computer

1 In *Windows Vista*® (default Start menu):

- a Click  → **Programs**.
- b Click **Dell Printers**.
- c Click **Dell 2230d Laser Printer**.

In *Windows*® *XP* and *2000*:

Click **Start** → **Programs** or **All Programs** → **Dell Printers** → **Dell 2230d Laser Printer**.

2 Click **Dell Printer Supplies Reorder Application**.

The **Order Supplies** window opens.

3 Click the link under the Order Online heading.

Cleaning the exterior of the printer

1 Make sure that the printer is turned off and unplugged from the wall outlet.



CAUTION—SHOCK HAZARD: To avoid the risk of electric shock when cleaning the exterior of the printer, unplug the power cord from the wall outlet and disconnect all cables to the printer before proceeding.

2 Remove all paper from the printer.

3 Dampen a clean, lint-free cloth with water.

Warning—Potential Damage: Do not use household cleaners or detergents, as they may damage the finish of the printer.

4 Wipe only the outside of the printer.

Warning—Potential Damage: Using a damp cloth to clean the interior may cause damage to your printer.

5 Make sure all areas of the printer are dry before beginning a new print job.

Storing supplies

Choose a cool, clean storage area for the printer supplies. Store supplies right side up in their original packing until you are ready to use them.

Do not expose supplies to:

- Direct sunlight
- Temperatures above 35°C (95°F)

- High humidity above 80%
- Salty air
- Corrosive gases
- Heavy dust

Conserving supplies

Conserving supplies using the printer menus

There are some settings you can change in the printer menus that will help you conserve toner and paper.

If the printer is connected to the computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. One of these utilities installs with the printer software.

Supply	Path to menu item	Purpose of menu item
Toner	From the Quality menu, you can adjust the Toner Darkness setting.	Lets you adjust the level of toner released on a sheet of paper or specialty media. The values range from 1 (lightest setting) to 10 (darkest setting) with 8 being the factory default setting.
Paper or specialty media	From the Finishing menu, you can adjust the N-up (Multipage Print) setting.	Lets you print two or more page images on one side of a sheet. Values for N-up are 2-Up, 3-Up, 4-Up, 6-Up, 9-Up, 12-Up, and 16-Up.
	From the Finishing menu, you can select Duplex.	Lets you print on both sides of a sheet of paper

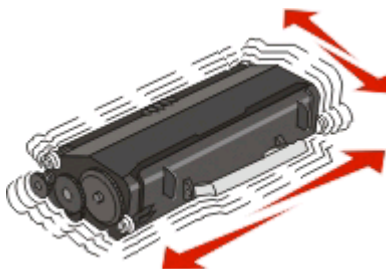
Conserving supplies when printing multiple copies

If you need to print several copies, you can conserve supplies by printing the first copy and checking it for accuracy before printing the remaining copies.

Extending the life of your toner cartridge

When the "Toner is low" light sequence appears or when the print becomes faded, you may be able to extend the life of the toner cartridge:

- 1 Remove the toner cartridge. For more information, see "Replacing the toner cartridge" on page 89.
- 2 Firmly shake the cartridge side-to-side and front-to-back several times to redistribute toner.



3 Reinsert the cartridge, and continue printing.

Note: Repeat this procedure multiple times until the print remains faded, and then replace the cartridge.

Replacing supplies

Replacing the toner cartridge

Light sequence

Toner is low



- On

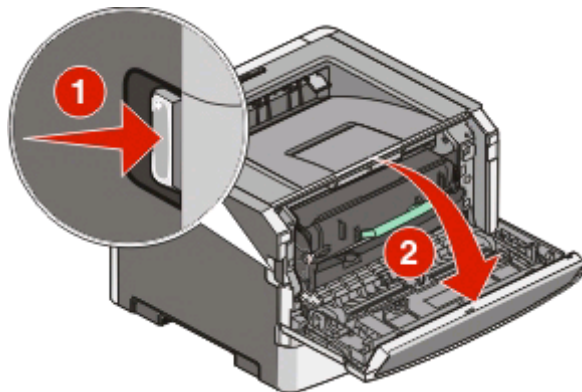
- On

When the “Toner is low” light sequence appears or when you experience faded print, remove the toner cartridge. Firmly shake it side-to-side and front-to-back several times to redistribute the toner, and then reinsert it and continue printing. When shaking the cartridge no longer improves the print quality, replace the toner cartridge.

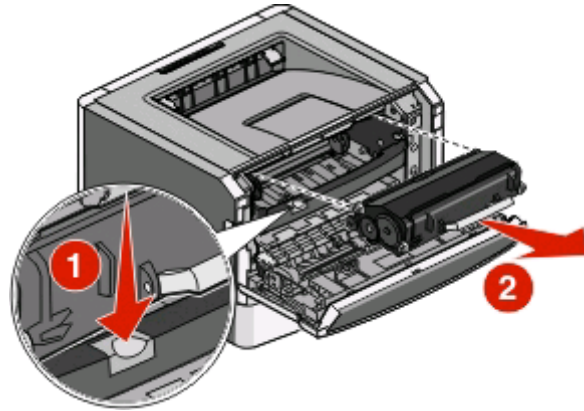
Note: You can estimate how much toner is left in your cartridge by printing a menu settings page. For more information, see “Printing the menu settings page” on page 84.

To replace the toner cartridge:

1 Open the front door by pressing the button on the left side of the printer and lowering the door.



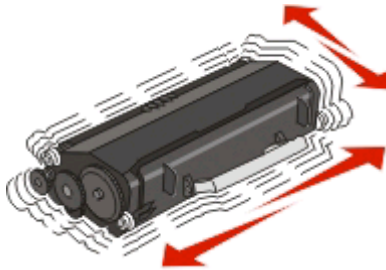
- 2 Press the button on the base of the photoconductor kit, and then pull the toner cartridge out using the handle.



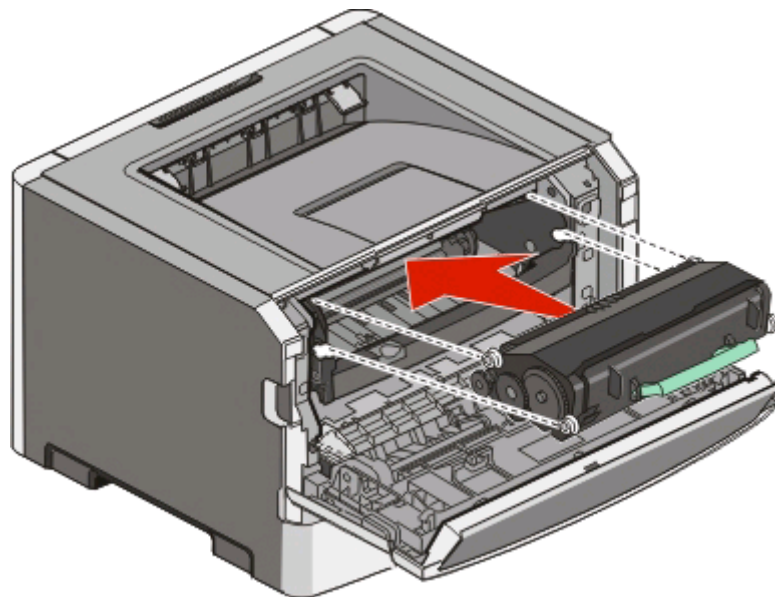
- 3 Unpack the new toner cartridge.

Warning—Potential Damage: When replacing a toner cartridge, do not leave the new cartridge exposed to direct light for an extended period of time. Extended light exposure can cause print quality problems.

- 4 Shake the cartridge in all directions to distribute the toner.



- 5 Install the new toner cartridge by aligning the rollers on the toner cartridge with the arrows on the tracks of the photoconductor kit. Push the toner cartridge in as far as it will go. The cartridge *clicks* into place when correctly installed.



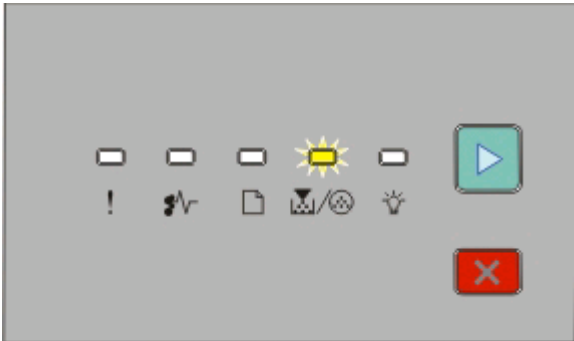
- 6 Close the front door.

Replacing the photoconductor kit

The printer notifies you when the photoconductor kit reaches a page maximum. The printer does this by displaying the “Photoconductor life warning” light sequence or the “Replace photoconductor” light sequence.

Light sequences

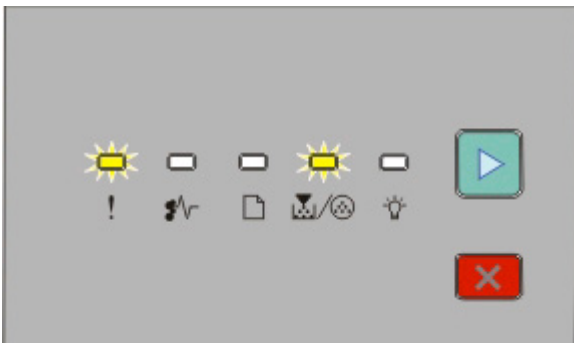
Photoconductor life warning



! - Blinking

▶ - On

Replace photoconductor



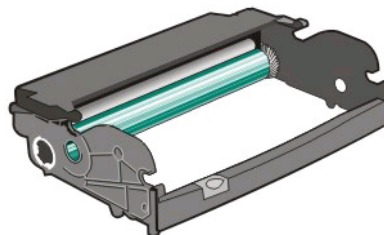
! - Blinking

! - Blinking

▶ - On

When you first receive either light sequence, you should immediately order a new photoconductor kit. While the printer may continue to function properly after the photoconductor kit has reached its official end-of-life, print quality significantly decreases.

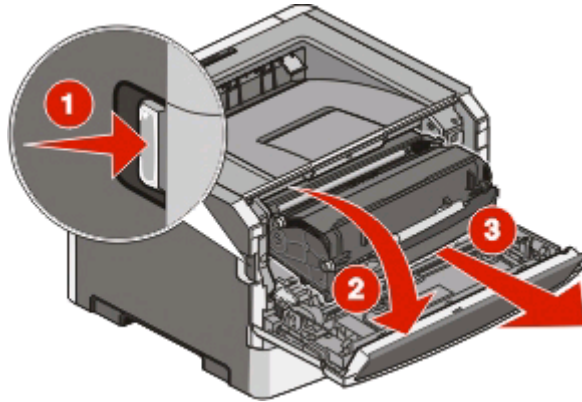
Note: The photoconductor kit is one item only.



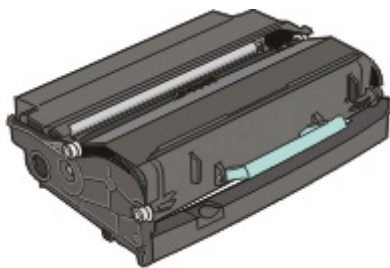
To replace the photoconductor kit:

- 1 Open the front door by pressing the button on the left side of the printer and lowering the front door.
- 2 Pull the photoconductor kit and toner cartridge together as a unit out of the printer by pulling on the toner cartridge handle.

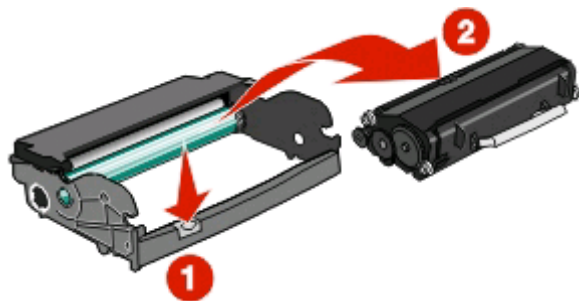
Note: The photoconductor kit and toner cartridge form a unit.



Place the unit on a flat, clean surface.

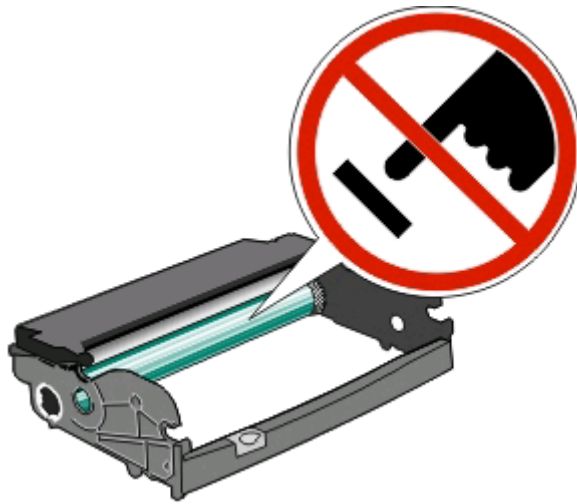


- 3 Press the button on the base of the photoconductor kit. Pull the toner cartridge up and out using the handle.

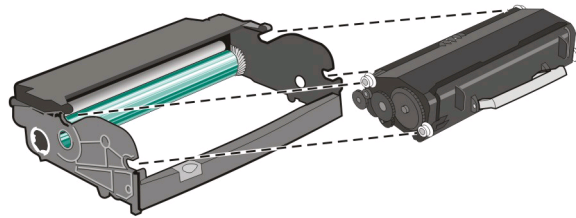


- 4 Unpack the new photoconductor kit.

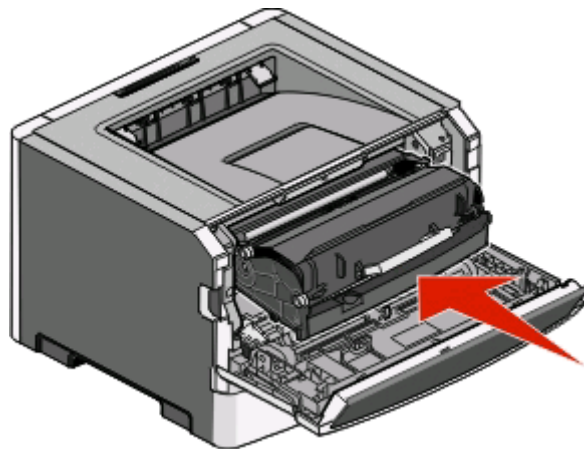
Warning—Potential Damage: Be careful not to touch the photoconductor drum. Doing so may affect the print quality of future print jobs.



- 5 Insert the toner cartridge into the photoconductor kit by aligning the rollers on the toner cartridge with the tracks. Push the toner cartridge in until it *clicks* into place.



- 6 Install the unit into the printer by aligning the arrows on the guides of the unit with the arrows in the printer. Push the unit as far as it will go.




- 7 After you replace the photoconductor kit, reset the photoconductor counter. To reset the counter, see the instruction sheet that came with the new photoconductor kit.

Warning—Potential Damage: Resetting the photoconductor counter without replacing the photoconductor kit may damage your printer and void your warranty.

- 8 Close the front door.

Moving the printer

Before moving the printer

 **CAUTION—POTENTIAL INJURY:** Follow these guidelines to avoid personal injury or printer damage:


- Turn the printer off using the power switch, and then unplug the power cord from the wall outlet.
- Disconnect all cords and cables from the printer before moving it.
- Lift the printer off of the optional drawer and set it aside instead of trying to lift the drawer and printer at the same time.

Note: Use the handholds located on both sides of the printer to lift it off the optional drawer.

- Make sure your fingers are not under the printer when you set it down.

Warning—Potential Damage: Damage to the printer caused by improper moving is not covered by the printer warranty.

Moving the printer to another location

 **CAUTION—POTENTIAL INJURY:** Before moving the printer, follow these guidelines to avoid personal injury or printer damage:

- Turn the printer off using the power switch, and then unplug the power cord from the wall outlet.
- Disconnect all cords and cables from the printer before moving it.
- Lift the printer off of the optional drawer and set it aside instead of trying to lift the drawer and printer at the same time.

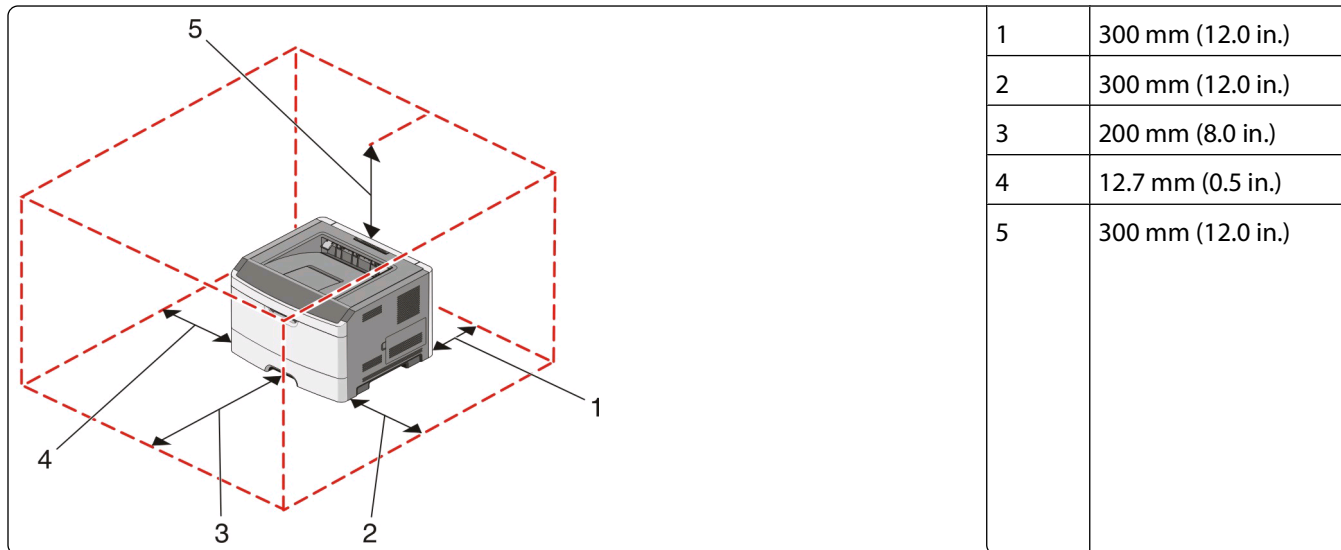
Note: Use the handholds located on both sides of the printer to lift it off the optional drawer.

The printer and options can be safely moved to another location by following these precautions:

- Any cart used to move the printer must have a surface able to support the full footprint of the printer. Any cart used to move the options must have a surface able to support the dimensions of the options.
- Keep the printer in an upright position.
- Avoid severe jarring movements.

Setting the printer up in a new location

When the printer is set up, allow clearance around it as shown.



Shipping the printer

When shipping the printer, use the original packaging or call the place of purchase for a relocation kit.

Administrative support

Adjusting Power Saver

Increase or decrease the number of minutes before the printer enters Power Saver mode.

If your printer is connected to a computer by a USB or parallel cable, use the Local Printer Settings Utility for Windows or Printer Settings for Macintosh.

- 1 Click **Setup**.
- 2 Ensure that the Power Saver check box is selected.
- 3 Clicking the small arrow buttons, increase or decrease the number of minutes before the printer enters Power Saver mode. Available settings range from 1–240 minutes.
- 4 From the menu bar, click **Actions → Apply Settings**.

Restoring the factory default settings

If your printer is connected to a computer by a USB or parallel cable, use the Local Printer Settings Utility for Windows or Printer Settings for Macintosh.

- 1 Open the utility.
- 2 Do one of the following:
 - From the Local Printer Settings Utility menu bar, click **Actions → Restore Factory Defaults**.
 - From Printer Settings, click **Factory Defaults**.

Warning—Potential Damage: Restore Factory Defaults returns all printer settings to the factory default settings except the Port menu settings. All downloads stored in RAM are deleted.

You can also restore factory default settings using the printer control panel. For instructions, print a printer settings configuration sheet.


Clearing jams

Avoiding jams

The following hints can help you avoid jams:

- Use only recommended paper or specialty media. For more information, see “Paper and specialty media guide” on page 64.
- Do not load too much paper. Make sure the stack height does not exceed the indicated maximum height.
- Do not load wrinkled, creased, damp, or curled paper.
- Flex, fan, and straighten paper before loading it.




- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same stack.
- Store the paper in an appropriate environment.
- Do not remove trays while the printer is printing. Wait for the  light to come on before removing a tray. The light sequence for loading paper also signals that the tray may be removed:



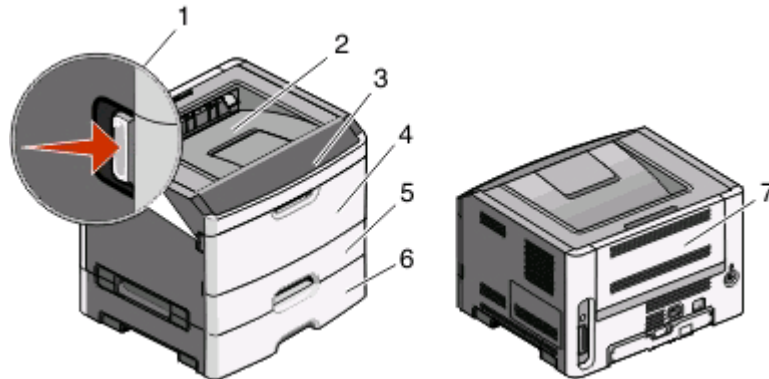
Load paper

 - On

- Do not load the manual feeder while the printer is printing. Wait for the  light to come on.
- Push all trays in firmly after loading paper.
- Make sure the guides in the trays are properly positioned, and are not pressing too tightly against the paper.
- Make sure all paper sizes and paper types are set correctly.
- Make sure all printer cables are attached correctly. For more information, see the setup documentation.

Accessing jam areas

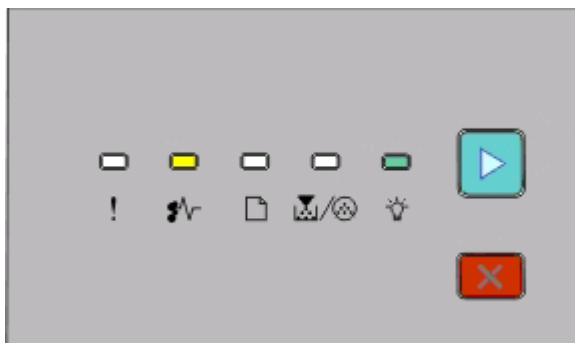
Open doors and remove trays to access jam areas. The following illustration shows possible jam areas:



Access point	Description
1	Push button to open the front door. Inside this door is the unit housing the toner cartridge and photoconductor kit.
2	Standard exit bin
3	Front door
4	Manual feeder door
5	Standard 250-sheet tray (Tray 1)
6	Optional tray (Tray 2)
7	Rear door

Understanding jam lights and access locations

The following table lists the jam lights and messages and provides brief instructions for how to access each jam. More detailed instructions follow.



200.yy Paper jam

- On

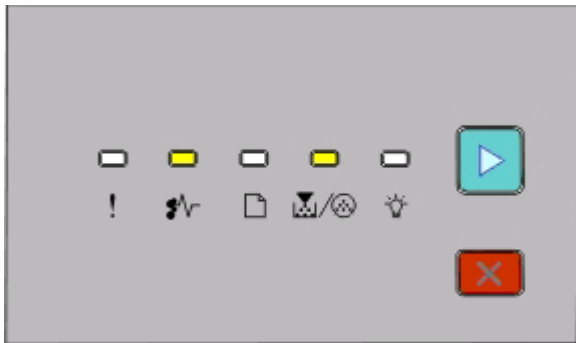
- On

- On

Clearing jams

Try one of the following:

- Remove Tray 1.
- Open the front door, and then remove the photoconductor kit and toner cartridge unit.



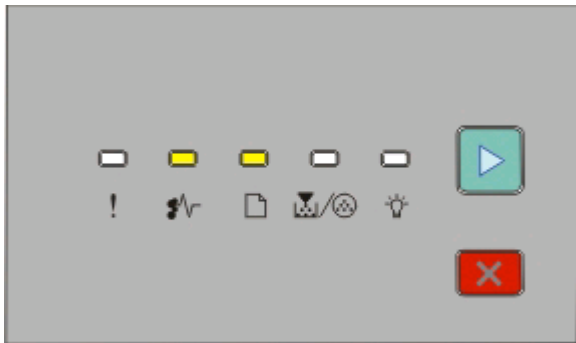
201.yy Paper jam

⚡ - On

📄/⚡ - On

▶ - On

Open the front door, and then remove the photoconductor kit and toner cartridge unit.



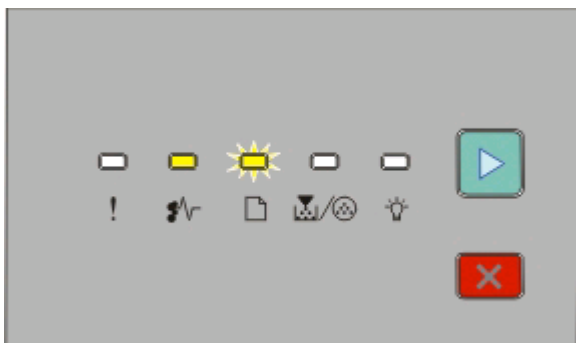
202.yy Paper jam

⚡ - On

📄 - On

▶ - On

Open the front door, and then open the rear door.



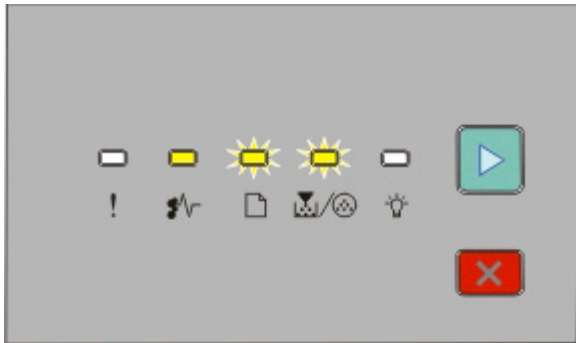
231.yy Paper jam

! - On

! - Blinking

! - On

Open the front door, and then open the rear door.



233.yy Paper jam

! - On

! - Blinking

! - Blinking

! - On

Try one of the following:

- Remove Tray 1.
- Open the front door, and then open the rear door.



234.yy Paper jam

! - On

! - Blinking

! - On

Try one of the following:

- Open the front door, and then open the rear door.
- Remove Tray 1.



235.yy Paper jam

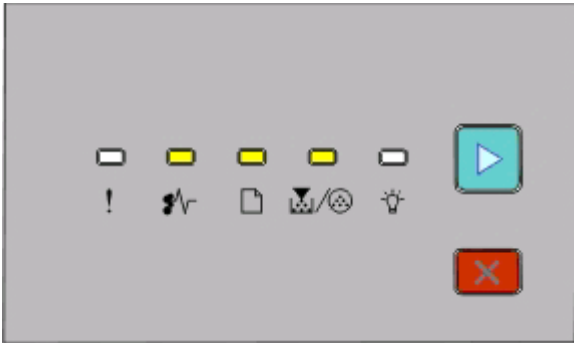
⚡ - On

📄 - Blinking

💡 - Blinking

▶ - On

Remove the jam from the standard exit bin.



24x.yy Paper jam

⚡ - On

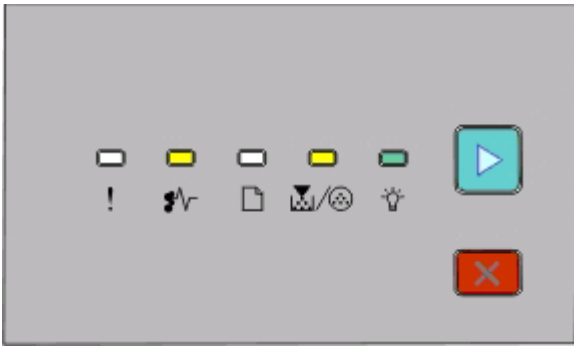
📄 - On

📄/⚡ - On

▶ - On

Try one of the following:

- Remove Tray 1.
- Open the front door, and then remove the photoconductor kit and toner cartridge unit.
- Remove Tray 2.



251.yy Paper jam

⚡ - On

📄/🚫 - On

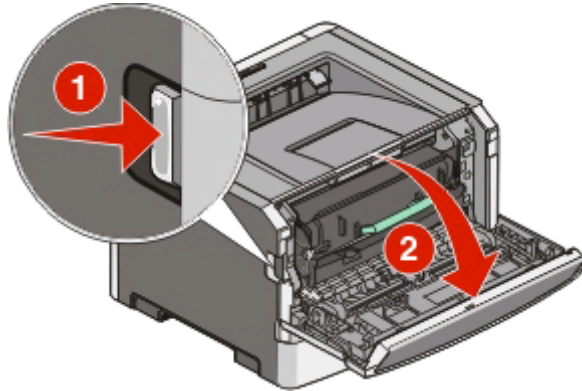
💡 - On

▶ - On

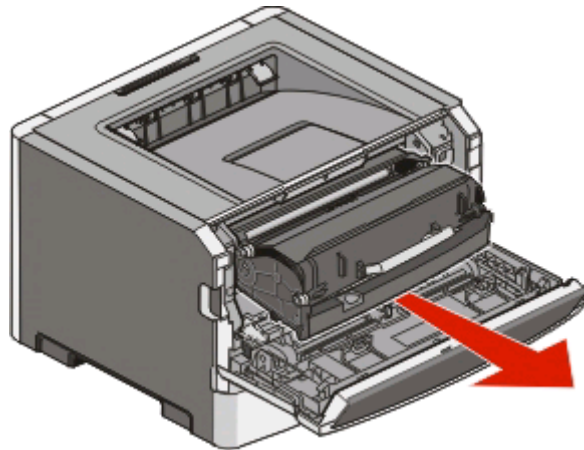
Remove the jam from the manual feeder.

Clearing jams behind the photoconductor kit and toner cartridge

1 Push the release button, and then lower the front door.



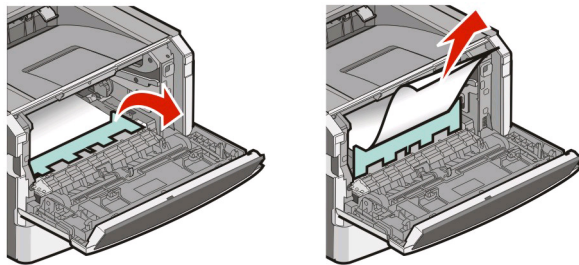
- 2 Lift and pull the unit containing the photoconductor kit and the toner cartridge out of the printer. Set the unit aside on a flat, clean surface.



Warning—Potential Damage: Do not touch the photoconductor on the underside of the photoconductor kit. Use the cartridge handle whenever you are holding the cartridge.

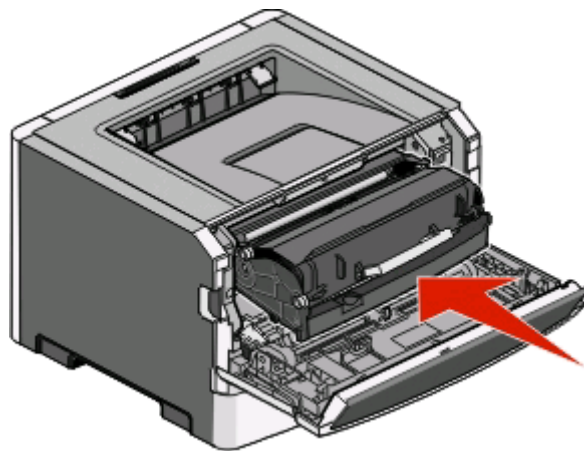
CAUTION—HOT SURFACE: The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching.


- 3 Remove the jammed paper.



Note: If the paper is not easy to remove, then open the rear door to remove the paper.

- 4 Align and reinstall the unit.

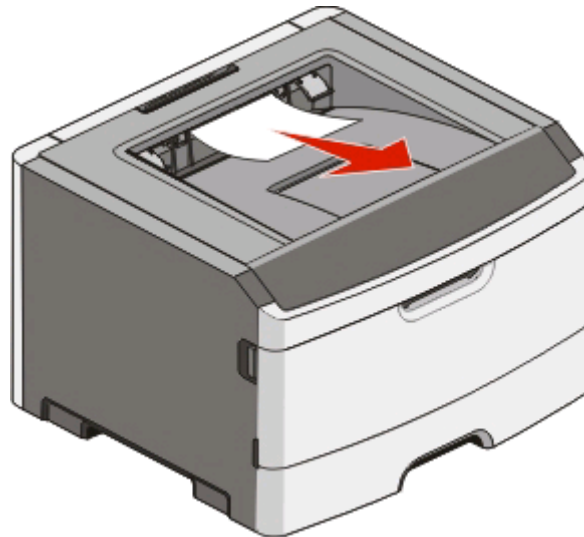


- 5 Close the front door.
- 6 Press  to continue printing.

Clearing jams from the standard exit bin

A paper size that is not supported for duplex printing can jam the standard exit bin.

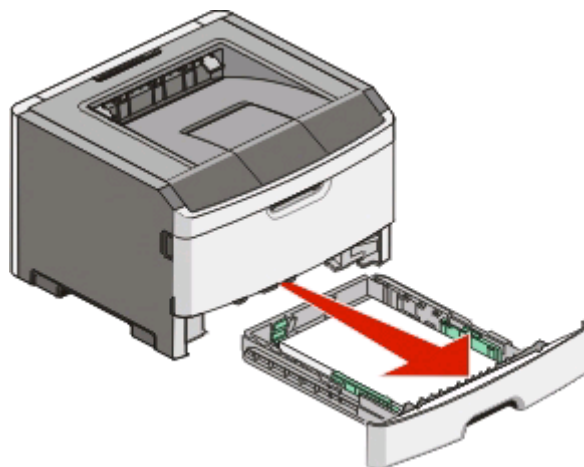
To remove the jam, gently pull the sheet straight out of the standard exit bin.



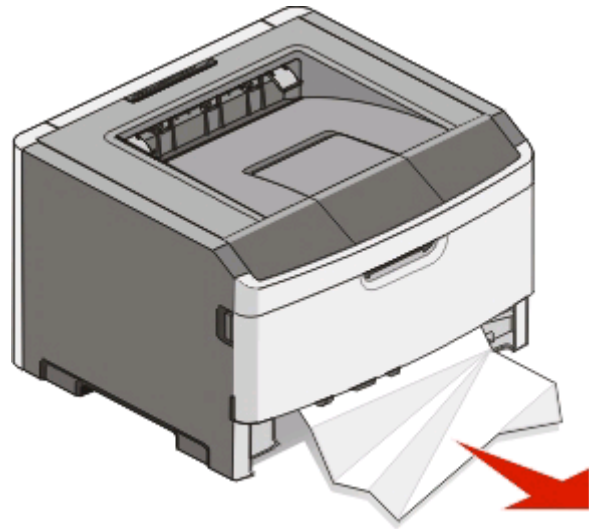
Clearing jams from Tray 1

To see whether paper is jammed in or behind Tray 1, the standard tray:

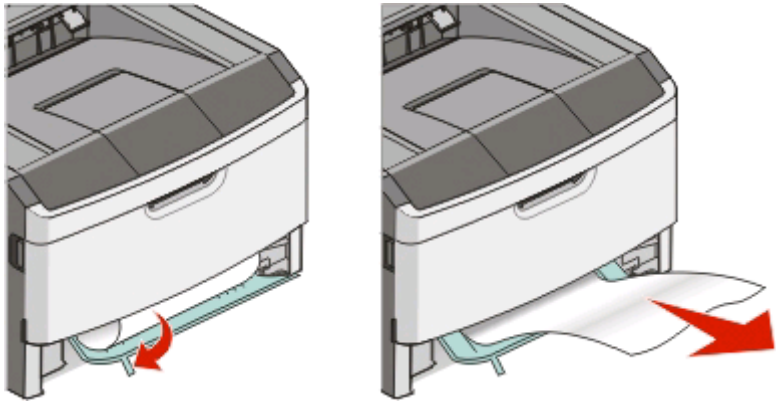
- 1 Remove Tray 1.



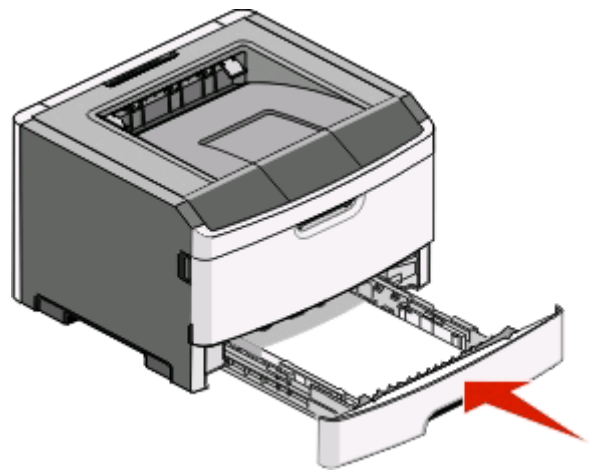
2 Remove the jammed paper.



3 If necessary, depress the lever to free the paper and remove the jam.



4 Insert the tray.

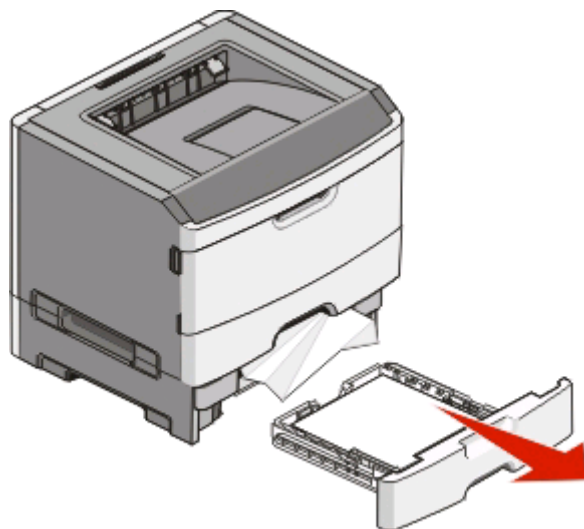


5 Press  to continue printing.

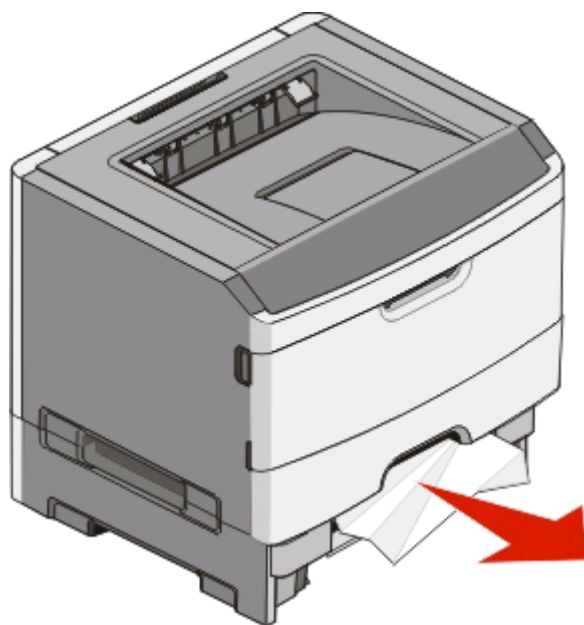
Clearing jams from Tray 2

To see whether paper is jammed in or behind Tray 2:

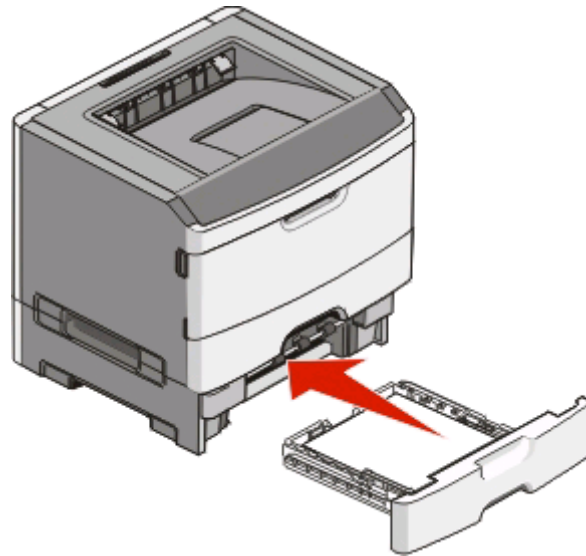
- 1 Remove Tray 2.



- 2 Remove the jammed paper.

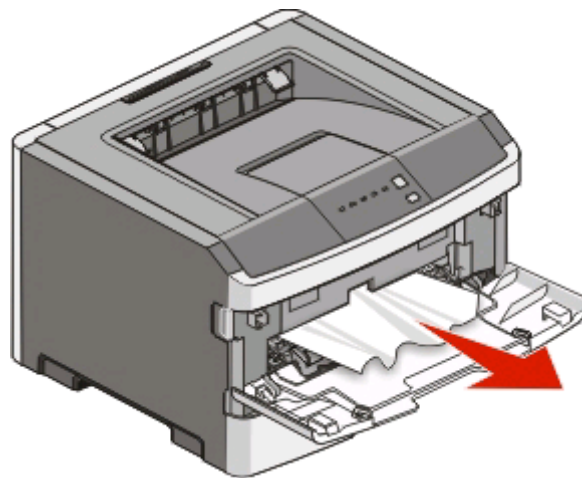


3 Insert the tray.



4 Press  to continue printing.

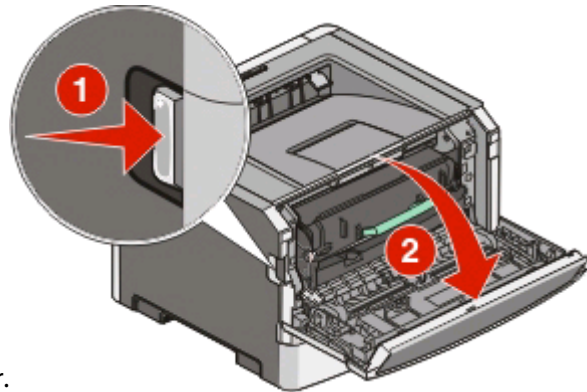
Clearing jams in the manual feeder



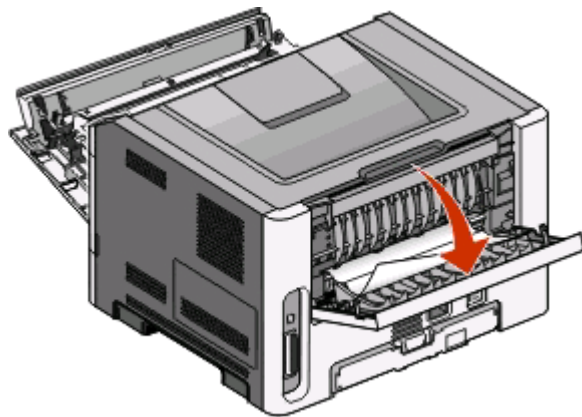
Paper jammed in the manual feeder can usually be grasped and pulled straight out. If the jam cannot be removed this way, check for jammed paper behind the photoconductor kit and toner cartridge unit. For more information, see “Clearing jams behind the photoconductor kit and toner cartridge” on page 102.

Clearing jams behind the rear door


If the paper is exiting the printer, pull the paper out. If the paper is not exiting the printer:

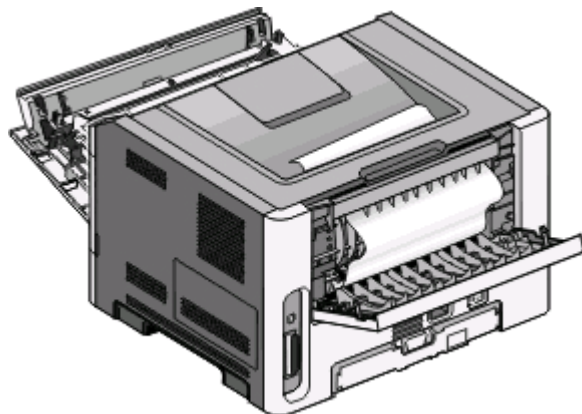


- 1 Push the release button, and then lower the front door.
- 2 Pull open the rear door.

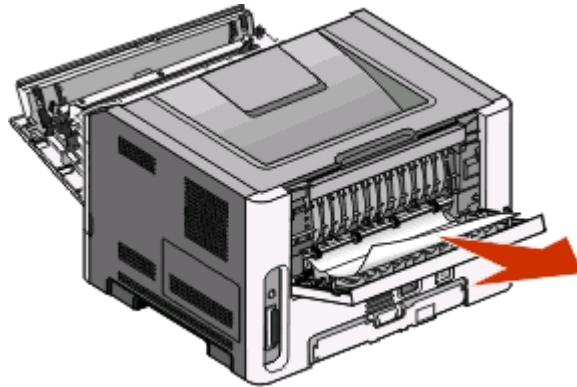


The paper may be jammed with one end caught in the standard exit bin.


 **CAUTION—HOT SURFACE:** The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching.



3 Remove the jammed paper.



4 Close both the front and rear doors.

5 Press  to continue printing.

Troubleshooting

Solving basic printer problems

If there are basic printer problems, or the printer is unresponsive, ensure the following:

- The power cord is plugged into the printer and a properly grounded electrical outlet.
- The electrical outlet is not turned off by any switch or breaker.
- The *Ground Fault Circuit Interrupter* (GFCI) has not tripped.
- The printer is not plugged into any surge protectors, uninterrupted power supplies, or extension cords.
- Other electronic equipment plugged into the outlet is working.
- The printer is turned on. Check the printer power switch.
- The printer cable is securely attached to the printer and the host computer, print server, or option.
- All options are properly installed.
- The printer driver settings are correct.


Once you have checked each of these possibilities, turn the printer off, wait for about 10 seconds, and then turn the printer back on. This often fixes the problem.

Solving printing problems

Jobs do not print

Try one or more of the following:

VERIFY THAT THE PRINTER IS READY TO PRINT

Ensure that the  light is on before sending a job to print.

CHECK TO SEE IF THE STANDARD EXIT BIN IS FULL

Remove the stack of paper from the standard exit bin.

CHECK TO SEE IF THE TRAY IS EMPTY

Load paper in the tray.

ENSURE THAT YOU ARE USING A RECOMMENDED **USB OR PARALLEL CABLE**

For more information, contact Dell at support.dell.com.

ENSURE THAT THE PRINTER CABLES ARE SECURELY CONNECTED

Check that the cables are firmly connected to the printer. For more information, see the setup documentation that came with the printer.

Multiple-language PDFs do not print

The documents contain unavailable fonts.

- 1 Open the document you want to print in Adobe Acrobat.
- 2 Click the printer icon.
The Print dialog appears.
- 3 Select **Print as image**.
- 4 Click **OK**.

Job takes longer than expected to print

The job is too complex.

Reduce the complexity of your print job by eliminating the number and size of fonts, the number and complexity of images, and the number of pages in the job.

Job prints from the wrong tray or on the wrong paper

Try one or more of the following:

CHECK THE PAPER SIZE AND PAPER TYPE SETTINGS

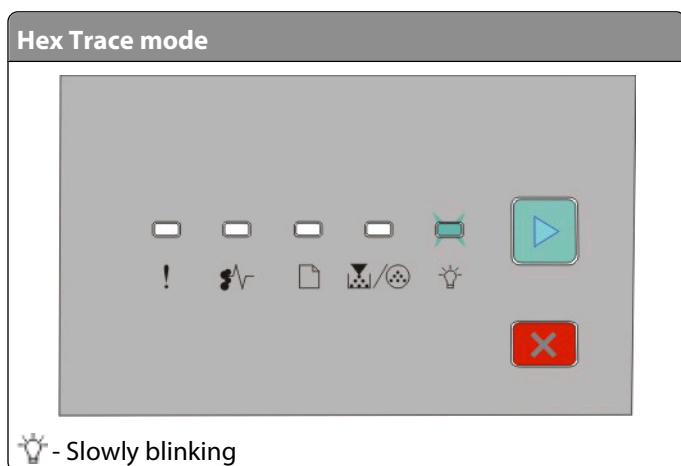
If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh.

From the Paper menu, ensure that the Paper Size and Paper Type settings match the paper loaded in the trays.

CHECK THE PAPER TAB SETTINGS IN YOUR OPERATING SYSTEM

Open Print Properties in a Windows operating system or the print dialog in a Macintosh operating system. Ensure that the input options settings for Paper Size, Paper Tray, and Paper Type correspond with the paper loaded in the tray.

Incorrect characters print



Make sure the printer is not in Hex Trace mode. If the “Hex Trace mode” light sequence appears, you must exit Hex Trace mode before you can print your job. To exit Hex Trace mode, turn the printer off and back on.

Tray linking does not work

Make sure to do all of the following:

- Load both Tray 1 and Tray 2 with the same paper size and type.
- From Print Properties or the print dialog, change the Paper source to Automatically select.

Large jobs do not collate

Try one or more of the following:

CHECK THE COLLATE SETTING

If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh.

From the Finishing menu, ensure that Collate is On. To access the Finishing menu, do one of the following:

CHECK THE PAPER TAB SETTINGS IN YOUR OPERATING SYSTEM

Open Print Properties in a Windows operating system or the print dialog in a Macintosh operating system. Ensure that the “Page layout” setting for “Collate copies” is On, or that the Collate check box is selected.

Note: Clearing the Collate check box overrides the setting in the Finishing menu.

REDUCE THE COMPLEXITY OF THE PRINT JOB

Reduce the complexity of the print job by eliminating the number and size of fonts, the number and complexity of images, and the number of pages in the job.

ENSURE THAT THE PRINTER HAS ENOUGH MEMORY

Add printer memory. For more information, see “Installing a memory card” on page 34.

Solving option problems

Option does not operate correctly or quits after it is installed

These are possible solutions. Try one or more of the following:

RESET THE PRINTER

Turn the printer off, wait for about 10 seconds, and then turn the printer on.

CHECK TO SEE IF THE OPTION IS CONNECTED TO THE PRINTER

- 1** Turn the printer off.
- 2** Unplug the printer.
- 3** Check the connection between the option and the printer.

MAKE SURE THE OPTION IS INSTALLED

Print a menu settings page and check to see if the option is listed in the Installed Options list. If the option is not listed, reinstall it.

MAKE SURE THE OPTION IS SELECTED

From the program you are using, select the option. Mac OS 9 users should make sure the printer is set up in the Chooser.

Drawers

These are possible solutions. Try one or more of the following:

MAKE SURE THE PAPER IS LOADED CORRECTLY

- 1** Pull the tray completely out.
- 2** Check for paper jams or misfeeds.
- 3** Make sure the guides are aligned against the edges of the paper.
- 4** Insert the tray.

RESET THE PRINTER

Turn the printer off, wait about 10 seconds, and then turn the printer on.

Memory card

Make sure the memory card is securely connected to the printer system board.

Solving paper feed problems

Paper frequently jams

Try one or more of the following:

CHECK THE PAPER

FLEX, FAN, AND STRAIGHTEN THE PAPER BEFORE LOADING IT IN THE TRAY



ENSURE THAT THERE IS NOT TOO MUCH PAPER IN THE TRAY

The stack of paper you load must not exceed the maximum stack height indicated in the tray.

CHECK THE GUIDES

Move the guides in the tray to the correct positions for the paper size loaded.

THE PAPER MAY HAVE ABSORBED MOISTURE DUE TO HIGH HUMIDITY

- Load paper from a fresh package.
- Store paper in its original wrapper until you use it.

Paper jam lights remain on after jam is cleared

The paper path is not clear. Clear jammed paper from the entire paper path, and then close any open doors.

Page that jammed does not reprint after the jam is cleared

Jam Recovery is set to Off.



If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. From the Setup menu, ensure that **Jam Recovery** is set to Auto or On.

Solving print quality problems

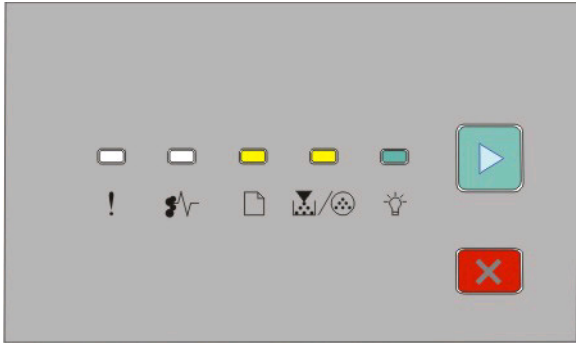
The information in the following topics may help you solve print quality problems. If these suggestions still do not correct the problem, call Customer Support. You may have a printer part that requires adjustment or replacement.

Isolating print quality problems

Print the print quality test pages to isolate print quality problems.

- 1 Turn the printer off, and then open the front door.
- 2 Press and hold  while turning the printer on.
- 3 Release .

4 Close the front door. The light sequence that represents the Home menu appears.



- On

- On

- On

- On

5 Press and release until you see the light sequence for print quality test pages, as indicated on the printer settings configuration sheet.

6 Press and hold until all lights cycle.

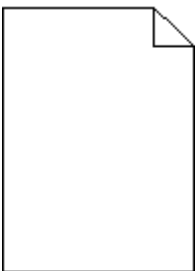
After a few minutes, the print quality test pages print. The pages include:

- An information page containing information about the device, the cartridge, margin settings, and minimum stroke width, and a graphic for evaluating the print quality
- Two pages for assessing how well the printer is capable of printing various types of graphics

7 Examine the pages to determine the quality of printing. If there are problems, see "Solving print quality problems" on page 114.

To return to the Home menu, press and hold until all the lights cycle. To exit the menus, turn the printer off.

Blank pages



Try one or more of the following:

- Remove and reinstall the toner cartridge.
- Remove and reinstall the photoconductor kit.

If the printer still prints blank pages, it may need to be serviced. For more information, contact Customer Support.

Characters have jagged or uneven edges



If you are using downloaded fonts, verify that the fonts are supported by the printer, the host computer, and the software program.

Clipped images

Try one or more of the following:

CHECK THE PAPER GUIDES

Move the guides in the tray to the correct positions for the paper size loaded.

CHECK THE PAPER SIZE SETTING

Ensure that the Paper Size setting matches the paper loaded in the tray.

Gray background



If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh.

From the Quality menu, select a reduced Toner Darkness setting before sending the job to print.

Ghost images



Try one or more of the following:

THE PHOTOCONDUCTOR KIT MAY BE DEFECTIVE

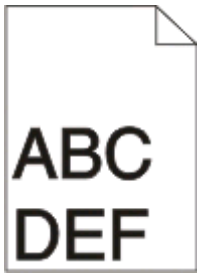
Replace the photoconductor kit. For more information, see “Replacing the photoconductor kit” on page 91.

CHECK THE PAPER SIZE AND PAPER TYPE SETTINGS

If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh.

From the Paper menu, change the paper size and paper type settings to match the paper loaded in the tray.

Incorrect margins



CHECK THE PAPER GUIDES

Move the guides in the tray to the correct positions for the paper size loaded.

CHECK THE PAPER SIZE SETTING

Make sure the Paper Size setting matches the paper loaded in the tray.

CHECK THE PAGE SIZE SETTING

Before sending the job to print, specify the correct page size in Print Properties or the software program.

Paper curl

Try one or more of the following:

CHECK THE PAPER TYPE SETTING

Ensure that the Paper Type setting matches the paper loaded in the tray.

THE PAPER MAY HAVE ABSORBED MOISTURE DUE TO HIGH HUMIDITY

Try one or more of the following:

- Load paper from a fresh package.
- Store paper in its original wrapper until you use it.

Print is too dark



Try one or more of the following:

CHECK THE DARKNESS, BRIGHTNESS, AND CONTRAST SETTINGS

The Toner Darkness setting is too dark, the Brightness setting is too dark, or the Contrast setting is too high.

- From Print Properties, change these settings.

Note: This solution applies to Windows users only.

- From the Quality menu, change these settings.

THE PAPER MAY HAVE ABSORBED MOISTURE DUE TO HIGH HUMIDITY

- Load paper from a fresh package.
- Store paper in its original wrapper until you use it.

CHECK THE PAPER

Avoid textured paper with rough finishes.

CHECK THE PAPER TYPE SETTING

Ensure that the Paper Type setting matches the paper loaded in the tray.

THE TONER CARTRIDGE MAY BE DEFECTIVE

Replace the toner cartridge. For more information, see “Replacing the toner cartridge” on page 89.

Print is too light



Try one or more of the following:

CHECK THE DARKNESS, BRIGHTNESS, AND CONTRAST SETTINGS

The Toner Darkness setting is too light, the Brightness setting is too light, or the Contrast setting is too low.

- From Print Properties, change these settings.

Note: This solution applies to Windows users only.

- From the Quality menu, change these settings.

THE PAPER MAY HAVE ABSORBED MOISTURE DUE TO HIGH HUMIDITY

- Load paper from a fresh package.
- Store paper in its original wrapper until you use it.

CHECK THE PAPER

Avoid textured paper with rough finishes.

CHECK THE PAPER TYPE SETTING

Ensure that the Paper Type setting matches the paper loaded in the tray.

THE TONER MAY BE LOW

When the toner is low light sequence appears or when the print becomes faded, order a new toner cartridge.

THE TONER CARTRIDGE MAY BE DEFECTIVE

Replace the toner cartridge. For more information, see "Replacing the toner cartridge" on page 89.

Skewed print

CHECK THE PAPER GUIDES

Move the guides in the tray to the correct positions for the paper size loaded.

CHECK THE PAPER

Make sure you are using paper that meets the printer specifications.

Toner fog or background shading appears on the page

Try one or more of the following:

THE TONER CARTRIDGE MAY BE DEFECTIVE

Replace the toner cartridge. For more information, see "Replacing the toner cartridge" on page 89.

THERE IS TONER IN THE PAPER PATH

Contact Customer Support.

Toner rubs off



Try one or more of the following:

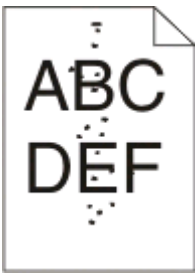
CHECK THE PAPER TYPE SETTING

Ensure that the Paper Type setting matches the paper loaded in the tray.

CHECK THE PAPER TEXTURE SETTING

Ensure that the Paper Texture setting matches the paper loaded in the tray.

Toner specks



Try one or more of the following:

THE TONER CARTRIDGE MAY BE DEFECTIVE

Replace the toner cartridge. For more information, see “Replacing the toner cartridge” on page 89.

THERE IS TONER IN THE PAPER PATH

Contact Customer Support.

Transparency print quality is poor

CHECK THE TRANSPARENCIES

Use only the recommended transparencies. For more information, see “Tips on using transparencies” on page 82.

CHECK THE PAPER TYPE SETTING

Load the transparencies, and ensure that the Paper Type setting is set to Transparency.

Streaked horizontal lines



Try one or more of the following:

THE TONER MAY SMEAR WHEN PAPER IS FED FROM A SPECIFIC SOURCE


From Print Properties, the print dialog, or the printer control panel, select another tray or feeder to feed the paper for the job.

THE TONER CARTRIDGE MAY BE DEFECTIVE

Replace the toner cartridge. For more information, see “Replacing the toner cartridge” on page 89.

ENSURE THAT THE PAPER PATH IS CLEAR

Paper could be caught between the photoconductor kit and the fuser. Check the paper path around the fuser area.

 **CAUTION—HOT SURFACE:** The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching.

Clear any paper you see.

THERE MAY BE EXCESS TONER IN THE PAPER PATH

Contact Customer Support.

Streaked vertical lines



Try one or more of the following:

THE TONER MAY SMEAR WHEN PAPER IS FED FROM A SPECIFIC SOURCE

From Print Properties, the Print dialog, or the printer control panel, select another tray or feeder to feed paper for the job.


THE TONER CARTRIDGE IS DEFECTIVE

Replace the toner cartridge. For more information, see “Replacing the toner cartridge” on page 89.

ENSURE THAT THE PAPER PATH IS CLEAR

Paper could be caught between the photoconductor kit and the fuser. Check the paper path around the fuser area.

Warning—Potential Damage: Do not touch the photoconductor on the underside of the photoconductor kit. Use the cartridge handle whenever you are holding the cartridge.

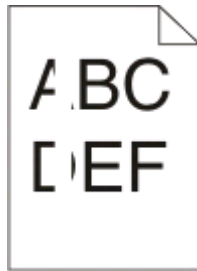
 **CAUTION—HOT SURFACE:** The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching.

Clear any paper you see.

THERE MAY BE EXCESS TONER IN THE PAPER PATH

Contact Customer Support.

Solid black or white streaks appear on transparencies or paper



Try one or more of the following:

ENSURE THAT THE FILL PATTERN IS CORRECT

If the fill pattern is incorrect, choose a different fill pattern from your software program.

CHECK THE PAPER TYPE

- Try a different type of paper.
- Use only the recommended transparencies.
- Ensure that the Paper Type setting matches what is loaded in the tray or feeder.
- Ensure that the Paper Texture setting is correct for the type of paper or specialty media loaded in the tray or feeder.

ENSURE THAT THE TONER IS DISTRIBUTED EVENLY WITHIN THE TONER CARTRIDGE

Remove the toner cartridge and shake it from side to side to redistribute the toner and to extend the life of the cartridge, and then reinstall it.

THE TONER CARTRIDGE MAY BE DEFECTIVE OR LOW ON TONER

Replace the used toner cartridge with a new one. For more information, see “Replacing the toner cartridge” on page 89.

Appendix

Dell Technical Support Policy

Technician-assisted technical support requires the cooperation and participation of the customer in the troubleshooting process and provides for restoration of the Operating System, application software and hardware drivers to the original default configuration as shipped from Dell, as well as the verification of appropriate functionality of the printer and all Dell-installed hardware. In addition to this technician assisted technical support, online technical support is available at Dell Support. Additional technical support options may be available for purchase.

Dell provides limited technical support for the printer and any Dell-installed software and peripherals. Support for third-party software and peripherals is provided by the original manufacturer, including those purchased and/or installed through Software & Peripherals (DellWare), ReadyWare, and Custom Factory Integration (CFI/DellPlus).

Contacting Dell

You can access Dell Support at **support.dell.com**. Select your region on the WELCOME TO DELL SUPPORT page, and fill in the requested details to access help tools and information.

You can contact Dell electronically using the following addresses:

- World Wide Web

www.dell.com/

www.dell.com/ap/ (Asian/Pacific countries only)

www.dell.com/jp/ (Japan only)

www.euro.dell.com (Europe only)

www.dell.com/la/ (Latin American and Caribbean countries)

www.dell.ca (Canada only)

- Anonymous file transfer protocol (FTP)

ftp.dell.com

Log in as user: anonymous, and use your email address as your password.

- Electronic Support Service

mobile_support@us.dell.com

support@us.dell.com

la-techsupport@dell.com (Latin America and Caribbean countries only)

apsupport@dell.com (Asian/Pacific countries only)

support.jp.dell.com (Japan only)

support.euro.dell.com (Europe only)

- Electronic Quote Service

apmarketing@dell.com (Asian/Pacific countries only)

sales_canada@dell.com (Canada only)

Warranty and Return Policy

Dell Inc. ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. For information about the Dell warranty for your printer, refer to the *Product Information Guide*.

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