Connection Guide

> **Note:** For local printing, you must install the printer software (drivers) before connecting the USB cable.

Installing printer and software for local printing using Windows

1 Launch the *Software and Documentation* CD that shipped with the printer.

2 Click **Install Printer and Software**.

> **Note:** Some Windows operating systems require that you have administrative access to install printer software (drivers) on the computer.

3 Click **Agree** to accept the license agreement.

4 Select **Suggested**, and then click **Next**.

The Suggested option is the default installation for local setup. If you need to install utilities, change settings, or customize device drivers, select **Custom**. Follow the instructions on the computer screen.

5 Select **Local Attach**, and then click **Finish**.

> **Note:** It may take a few minutes for the drivers to completely load.

6 Close the *Software and Documentation* CD installer application.

7 Connect the USB cable. Be sure to match the USB symbol on the cable to the USB symbol on the printer.

> **Note:** Only Windows 98 SE, Windows Me, Windows 2000, Windows XP, and Windows Server 2003 operating systems support USB connections. Some UNIX, Linux, and Macintosh computers also support USB connections. See the computer operating system documentation to see if your system supports USB.

8 Plug one end of the printer power cord into the socket at the back of the printer and the other end into a properly grounded outlet.

9 Turn on the printer.

Plugging in the USB cable and turning on the printer prompts the Windows operating system to run the plug and play screens to install the printer as a new hardware device. The installation of printer software (drivers) done in step 1 should satisfy the plug and play requirements. When plug and play is finished, a printer object will appear in your Printers folder.

> **Note:** After the printer completes its internal tests, the `Ready` message indicates that the printer is ready to receive jobs. If you see a message other than `Ready` on the display, see the *Software and Documentation* CD for instructions on clearing the message.

10 Send a test page to print.

Using a parallel or serial cable

For detailed instructions, see the *User's Guide* on the *Software and Documentation* CD that shipped with the printer.

Local printing with Mac or UNIX/Linux

For detailed instructions, see the *User's Guide* on the *Software and Documentation* CD that shipped with the printer.

Installing printer and software for network printing using Windows

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

2 Connect the printer to a LAN drop or hub using an ethernet cable that is compatible with your network.

3 Plug one end of the printer power cord into the socket at the back of the printer and the other end into a properly grounded outlet.

4 Turn on the printer.

   Note: After the printer completes its internal tests, the `Ready` message indicates that the printer is ready to receive jobs. If you see a message other than `Ready` on the display, see the publications CD for instructions on clearing the message.

5 Go to a computer on the same network, and launch the *Software and Documentation* CD that shipped with the printer.

6 Click **Install Printer and Software**.

7 Click **Agree** to accept the license agreement.

8 Select **Suggested**, and then click **Next**.

9 Select **Network Attach**, and then click **Next**.

10 Select your printer model from the list, and then click **Next**.

11 Select your printer port from the list, and then click **Finish** to complete the installation. A printer object is created in the Printers folder on the computer.

   If your printer port is not listed, click **Add Port**. Enter the information requested to create a new printer port. Select the option to create an Enhanced TCP/IP Network Port. Other port options will not give you full functionality.

12 Send a test page to print.

Other network cabling options

The following may also be available as network options for the printer. More information is available in the *User's Guide* on the *Software and Documentation* CD that shipped with the printer.

- Fiber optic internal print servers
- Ethernet internal print servers
- Wireless internal print servers
- Ethernet external print servers
- Wireless external print servers

Detailed instructions for installation are shipped with the product.

Network printing using Mac, UNIX/Linux, or NetWare

For information about this support, see the *User's Guide* on the *Software and Documentation* CD that shipped with the printer.

You can find some additional information on the *Software and Documentation* CD that shipped with the printer. Launch the *Software and Documentation* CD, and click **View Documentation**.

Color quality guide

This Color Quality guide helps users understand how operations available on the printer can be used to adjust and customize color output.

Quality Menu

Use this menu selection to change settings that affect print quality and save toner.

Menu selection	Purpose	Values	
`Print Mode`	To determine whether images are printed in a monochrome grayscale or in color.	Color*	
		Black Only	
`Color Correction`	To adjust the printed color to better match the colors of other output devices or standard color systems. Due to the differences between additive and subtractive colors, certain colors that appear on the monitor are impossible to duplicate on the printer.	Auto*	Applies different color conversion tables to each object on the printed page, depending on the type of object and how the color for each object is specified.
		Off	No color correction is implemented.
		Manual	Allows customization of the color conversion tables applied to each object on the printed page, depending on the type of object and how the color for each object is specified. Customization is performed using the selections available under the Manual Color menu item.
`Print Resolution`	To select the quality of printed output.	1200 dpi	
		4800 CQ*	
`Toner Darkness`	To lighten or darken printed output and conserve toner.	1 to 5	**4*** is the default setting. Select a lower number to lighten the printed output or save toner.
`Color Saver`	To conserve toner in graphics and images yet maintain high quality text. The amount of toner used to print graphics and images is reduced; however, text is printed with default toner usage. If selected, this setting overrides Toner Darkness settings. Color Saver is not supported in PPDS, and partially supported by the PCL emulation driver.	On	
		Off*	

Menu selection	Purpose	Values	
`RGB Brightness`	To assist in making brightness, contrast, and saturation adjustments to color output.	-6, -5, -4, -3, -2, -1, 0*, 1, 2, 3, 4, 5, 6	**-6** is the maximum decrease **6** is the maximum increase **0** is the default setting
`RGB Contrast`	These functions do not affect files where CMYK color specifications are being used. See **Frequently asked questions (FAQ) about color printing** in the *User's Guide* on the publications CD for more information on color specifications.	0*, 1, 2, 3, 4, 5	**0** is the default setting **5** is maximum increase
`RGB Saturation`		0*, 1, 2, 3, 4, 5	**0** is the default setting **5** is the maximum increase
`Color Balance`	To provide users with the ability to make subtle color adjustments to printed output by increasing or decreasing the amount of toner being used for each color plane individually.	Cyan	**-5**, **-4**, **-3**, **-2**, **-1**, **0***, **1**, **2**, **3**, **4**, **5** **-5** is the maximum decrease **5** is the maximum increase
		Magenta	
		Yellow	
		Black	
		Reset Defaults	Sets values for Cyan, Magenta, Yellow, and Black to **0** (zero).
`Color Samples`	To assist users in selecting colors to be printed. Users can print color samples pages for each of the RGB and CMYK color conversion tables used in the printer. The color samples pages consist of a series of colored boxes along with the RGB or CMYK combination that creates the color observed for each particular box. These pages can be useful in helping users decide which RGB or CMYK combinations to use in their software applications to create the desired printed color output. The printer Embedded Web Server interface, which is only available on network models, offers users more flexibility. It lets users print Detailed Color Samples.	sRGB Display	Prints RGB samples using sRGB Display color conversion tables.
		sRGB Vivid	Prints RGB samples using sRGB Vivid color conversion tables.
		Display—True Black	Prints RGB samples using Display—True Black color conversion tables.
		Vivid	Prints RGB samples using Vivid color conversion tables.
		Off—RGB	Color conversion is implemented.
		US CMYK	Prints CMYK samples using US CMYK color conversion tables.
		Euro CMYK	Prints CMYK samples using Euro CMYK color conversion tables.
		Vivid CMYK	Prints CMYK samples using Vivid CMYK color conversion tables.
		Off—CMYK	No color conversion is implemented.

Menu selection	Purpose	Values	
Manual Color	To let users customize the RGB or CMYK color conversions applied to each object on the printed page. Color conversion of the data specified using RGB combinations can be customized based on object type (text, graphics, or image) through the printer operator panel.	RGB Image	**sRGB Display***—Applies a color conversion table to produce output that approximates the colors displayed on a computer monitor. **sRGB Vivid**—Increases color saturation for the sRGB Display color conversion table. Preferred for business graphics and text. **Display**—**True Black**—Applies a color conversion table to produce output that approximates the colors displayed on a computer monitor while using only black toner for neutral gray colors. **Vivid**—Applies a color conversion table that produces brighter, more saturated colors. **Off**—No color conversion is implemented.
		RGB Text RGB Graphics	**sRGB Display** **sRGB Vivid*** **Display—True Black** **Vivid** **Off**
		CMYK Image CMYK Text CMYK Graphics	**US CMYK*** (country/region-specific factory default values)— Applies a color conversion table to approximate SWOP color output. **Euro CMYK*** (country/region-specific factory default values)— Applies a color conversion table to approximate EuroScale color output. **Vivid CMYK**—Increases color saturation for the US CMYK color conversion table. **Off**—No color conversion is implemented.
Color Adjust	Automatic color adjust will occur periodically during printing. Color adjustment can be manually started by this operation.	No selections exist for this operation. Press ⊘ to initiate this operation.	

Menu selection	Purpose	Values	
Enhance Fine Lines	A selection to enable a print mode preferable for certain files containing fine line detail, such as architectural drawings, maps, electronic circuit diagrams, and flow charts. Enhance Fine Lines is not a menu item. This setting is only available on the PCL emulation driver, PostScript driver, or on the printer Embedded Web Server.	On	In the driver, enable the check box.
		Off*	In the driver, disable the check box.

Solving color quality problems

This section helps answer some basic color-related questions and describes how some of the features provided in the Quality Menu can be used to solve typical color problems.

> **Note:** Read the quick reference page entitled "Print quality and troubleshooting guide" which provides solutions for common print quality problems, some of which may affect the color quality of the printed output.

Frequently asked questions (FAQ) about color printing

What is RGB color?

Red, green, and blue light can be added together in various amounts to produce a large range of colors observed in nature. For example, red and green light can be combined to create yellow light. Televisions and computer monitors create colors in this manner. RGB color is a method of describing colors by indicating the amount of red, green, and blue light needed to reproduce a particular color.

What is CMYK color?

Cyan, magenta, yellow, and black inks or toners can be printed in various amounts to produce a large range of colors observed in nature. For example, cyan and yellow can be combined to create green. Printing presses, inkjet printers, and color laser printers create colors in this manner. CMYK color is a method of describing colors by indicating the amount of cyan, magenta, yellow, and black needed to reproduce a particular color.

How is color specified in a document to be printed?

Software applications typically specify document color using RGB or CMYK color combinations. Additionally, they commonly let users modify the color of each object in a document. Since the procedures to modify colors vary depending on the application, see the software application Help section for instruction.

How does the printer know what color to print?

When a user prints a document, information describing the type and color of each object in the document is sent to the printer. The color information is passed through color conversion tables that translate the color into appropriate amounts of cyan, magenta, yellow, and black toner needed to produce the desired color. The object type information lets different color conversion tables be used for different types of objects. For example, it is possible to apply one type of color conversion table to text while applying a different color conversion table to photographic images.

Should I use the PostScript or PCL emulation driver for the best color? What driver settings should I use for the best color?

The PostScript driver is strongly recommended for best color quality. The default settings in the PostScript driver provide preferred color quality for the majority of printouts.

Why doesn't the printed color match the color I see on the computer screen?

The color conversion tables used in Auto `Color Correction` mode generally approximate the colors of a standard computer monitor. However, because of technology differences that exist between printers and monitors, there are many colors that can be generated on a computer screen that cannot be physically reproduced on a color laser printer. Color match can also be affected by monitor variations and lighting conditions. See the response to the question "How can I match a particular color (such as a color in a corporate logo)?" on page 6 for recommendations on how the printer Color Samples pages may be useful in solving certain color-matching problems.

The printed page appears tinted. Can I slightly adjust the color?

Sometimes a user may consider printed pages to appear tinted (for example, everything printed seems to be too red). This can be caused by environmental conditions, paper type, lighting conditions, or user preference. In these instances, `Color Balance` may be used to create more preferable color. Color Balance provides the user with the ability to make subtle adjustments to the amount of toner being used in each color plane. Selecting positive (or negative) values for cyan, magenta, yellow, and black under the Color Balance menu will slightly increase (or decrease) the amount of toner used for the chosen color. For example, if a user believes the overall printed page to be too red, then decreases to both magenta and yellow could potentially improve color preference.

Is it possible to increase the gloss in the printed output?

Obtain additional gloss by printing using the 1200 dpi Print Resolution Setting.

My color transparencies seem dark when projected. Is there anything I can do to improve the color?

This problem most commonly occurs when projecting transparencies with reflective overhead projectors. To obtain the highest projected color quality, transmissive overhead projectors are recommended. If a reflective projector must be used, then adjusting `Toner Darkness` settings to 1, 2, or 3 will lighten the transparency. Be sure to print on the recommended type of color transparencies. For more information, see "Understanding paper and specialty media guidelines" in the *User's Guide* on the *Software and Documentation* CD.

`Color Saver` must be `Off` to adjust `Toner Darkness`.

What is Manual Color Correction?

The color conversion tables applied to each object on the printed page when using the default Auto `Color Correction` setting generate preferred color for the majority of documents. Occasionally, a user may want to apply a different color table mapping. This customization is accomplished using the Manual Color menu and the Manual Color Correction setting.

Manual Color Correction applies the RGB and CMYK color conversion table mappings as defined in the Manual Color menu. Users may select any of five different color conversion tables available for RGB objects (sRGB Display, Display—True Black, sRGB Vivid, Off, and Vivid) and any of four different color conversion tables available for CMYK objects (US CMYK, Euro CMYK, Vivid CMYK, and Off).

> **Note:** The Manual Color Correction setting is not useful if the software application does not specify colors with RGB or CMYK combinations, or in certain situations where the software application or the

computer operating system adjusts the colors specified in the application through color management.

How can I match a particular color (such as a color in a corporate logo)?

Occasionally, users have a need for the printed color of a particular object to closely match a specific color. A typical example of this is when a user is trying to match the color of a corporate logo. While instances can occur in which the printer cannot exactly reproduce the desired color, users should be able to identify adequate color matches for the majority of cases. The `Color Samples` menu item can provide useful information in helping to solve this particular type of color-matching problem.

The nine Color Samples values correspond to color conversion tables in the printer. Selecting any of the Color Samples values generates a multiple-page printout consisting of hundreds of colored boxes. Either a CMYK or RGB combination is located on each box, depending on the table selected. The observed color of each box is obtained by passing the CMYK or RGB combination labeled on the box through the selected color conversion table.

The user can examine the color samples pages and identify the box whose color is the closest to the desired color. If the user finds a box whose color is close to the desired color match, but the user would like to scan the colors in that area in more detail, then the user can access the Detailed Color Samples by using the printer Embedded Web Server interface, which is only available on network models.

The color combination labeled on the box can then be used for modifying the color of the object in a software application. The software application Help section provides instructions for modifying the color of an object. Manual `Color Correction` may be necessary to utilize the selected color conversion table for the particular object.

Which Color Samples pages to use for a particular color-matching problem depends on the Color Correction setting being used (Auto, Off, or Manual), the type of object being printed (text, graphics, or images), and how the color of the object is specified in the software application (RGB or CMYK combinations). When the printer `Color Correction` setting is set to `Off`, the color is based on the print job information; no color conversion is implemented. The following table identifies which Color Samples pages to use.

Color specification of object being printed	Classification of object being printed	Printer Color Correction setting	Color Samples pages to print and use for color matching
RGB	Text	Auto	sRGB Vivid
		Manual	Manual Color RGB Text Setting
	Graphic	Auto	sRGB Vivid
		Manual	Manual Color RGB Graphics Setting
	Image	Auto	sRGB Display
		Manual	Manual Color RGB Image Setting

Color specification of object being printed	Classification of object being printed	Printer Color Correction setting	Color Samples pages to print and use for color matching
CMYK	Text	Auto	US CMYK or EURO CMYK
		Manual	Manual Color CMYK Text Setting
	Graphic	Auto	US CMYK
		Manual	Manual Color CMYK Graphics Setting
	Image	Auto	US CMYK
		Manual	Manual Color CMYK Image Setting

Note: The Color Samples pages are not useful if the software application does not specify colors with RGB or CMYK combinations. Additionally, certain situations exist where the software application or the computer operating system adjusts the RGB or CMYK combinations specified in the application through color management. The resulting printed color may not be an exact match of the Color Samples pages.

What are Detailed Color Samples and how do I access them?

This information applies to network models only.

Detailed Color Samples are pages similar to the default pages of color samples accessible from the Quality Menu on the printer operator panel or from the Configuration Menu in the printer Embedded Web Server. The default color samples accessed by these methods have an increment value of 10 percent for Red (R), Green (G), and Blue (B) values. Collectively, these values are known as RGB color. If the user finds a value on the pages that is close, but would like to scan more colors in a nearby area, the user can use the Detailed Color Samples to input the desired color value and a more specific or lower increment value. This lets the user print multiple pages of colored boxes that surround a specific color of interest.

To access the pages of Detailed Color Samples, use the printer Embedded Web Server interface. Select the Color Samples option within the Configuration Menu. Nine color conversion table options and three buttons called Print, Detailed, and Reset are shown on the options screen.

If the user selects a color conversion table and presses the **Print** button, the printer prints the default color samples pages. If the user selects a color conversion table and presses the **Detailed** button, a new interface becomes available. The interface lets the user enter individual R, G, and B values of the specific color of interest. The user can also enter an increment value that defines the difference between the RGB value that each color box differs by. If the user selects **Print**, a printout generates which consists of the user-specified color and the colors that exist near this color based on the increment value.

This process can be duplicated for Cyan (C), Magenta (M), Yellow (Y), and Black (K) color conversion tables, too. Collectively, these values are known as CMYK color. The default increment is 10 percent for Black and 20 percent for Cyan, Magenta, and Yellow. The increment value defined by the user for Detailed Color Samples applies to Cyan, Magenta, Yellow, and Black.

Information guide

There are numerous publications available to help in understanding the printer and its functions.

Help menu pages

There are Help menu reference pages resident in the printer. They are available by printing them from the Help menu. Select to print each individually, or select **Print All** to print all of them.

Select this menu item in the Help menu:	... to print (... for):
Print All	All the guides
Color Quality	*Color quality guide* for adjusting and customizing color output
Print Quality	*Print quality and troubleshooting guide* for resolving issues
Printing Guide	*Printing guide* for loading media
Supplies Guide	*Supplies guide* for ordering supplies
Media Guide	*Media guide* for sizes supported based on sources
Print Defects	*Print defects guide* to determine the part causing a repetitive defect
Menu Map	*Menu map* to list menus and menu items available
Information Guide (this page)	This page to locate additional information
Connection Guide	*Connection guide* for information on connecting the printer as a local or network printer
Moving Guide	*Moving the printer* for instructions on safely moving the printer

Setup sheet

The *Setup* sheet packaged with the printer provides information about setting up the printer and its options.

Publications CD

The *Software and Documentation* CD contains a *User's Guide* and a *Menus and Messages Guide*, and the appropriate printer drivers to get the printer up and running. It may also contain printer utilities, screen fonts, and additional documentation.

The *User's Guide* provides information about loading media, ordering supplies, troubleshooting, clearing jams, and removing options. It also includes administrative support information.

The *Menus and Messages Guide* provides information on changing the printer settings for each available menu item. It describes the items and values available.

Other languages

The *User's Guide*, *Setup* sheet, *Menus and Messages Guide*, and Help menu pages are also available in other languages on the *Software and Documentation* CD.

Moving guide

Follow these guidelines to move the printer to another location.

CAUTION: The printer weighs 48–82 kg (105–181 lb). It requires at least three (3) people to lift it safely. Use the printer handholds to lift it, do not lift by the front of the printer, and make sure your fingers are not under the printer when you set it down.

CAUTION: Follow these guidelines to avoid injuring yourself or damaging the printer:

- Always use at least three people to lift the printer.
- Always turn off the printer using the power switch before moving it.
- Disconnect all cords and cables from the printer before moving it.
- Remove all printer options before moving the printer. Place the options in the original packaging.

    Note: Damage to the printer caused by improper moving is not covered by the printer warranty.

Moving the printer and options to another location

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

- Keep the printer in an upright position.
- Any cart used to move the printer must be able to support the full footprint of the printer and remain stable during the move. Any cart used to move the options must be able to support the dimensions of the options and remain stable during the move.
- Severe jarring movements may cause damage to the printer and options, and must be avoided.

Menu map

A number of menus are available to make it easy to change printer settings. This menu map shows the menus and menu items available. Some menu items may not be available based on the printer model or options installed. For more information about menu items, see the *Menus and Messages Guide* on the *Software and Documentation* CD.

Supplies Menu
Cyan Cartridge
Magenta Cartridge
Yellow Cartridge
Black Cartridge
Waste Toner Box
Fuser
ITU

Paper Menu
Default Source
Paper Size/Type
Configure MP
Substitute Size
Paper Texture
Paper Weight
Paper Loading
Custom Types
Universal Setup
Bin Setup

Reports
Menu Settings Page
Device Statistics
Network Setup Page
Wireless Setup Page
Profiles List
Netware Setup Page
Print Fonts
Print Directory
Print Demo

Settings
Setup Menu
Finishing Menu
Quality Menu
Utilities Menu
PDF Menu
PostScript Menu
PCL Emul Menu
PPDS Menu
HTML Menu
Image Menu

Network/Ports
TCP/IP
IPv6
Wireless
Standard Network and Network [x]
Standard USB and USB [x]
Parallel [x]
Serial [x]
Netware
AppleTalk
LexLink
USB Direct

Security
Max Invalid PIN
Job Expiration

Help
Print All
Color Quality
Print Quality
Printing Guide
Supplies Guide
Media Guide
Print Defects
Menu Map
Information Guide
Connection Guide
Moving Guide

Printer operator panel

Use the operator panel to change printer settings, cancel print jobs, print reports, and check the status of supplies. The operator panel displays troubleshooting information when appropriate.

Display panel

Back

Menu

Stop

Indicator light

Navigation buttons

Numeric pad

USB Direct interface
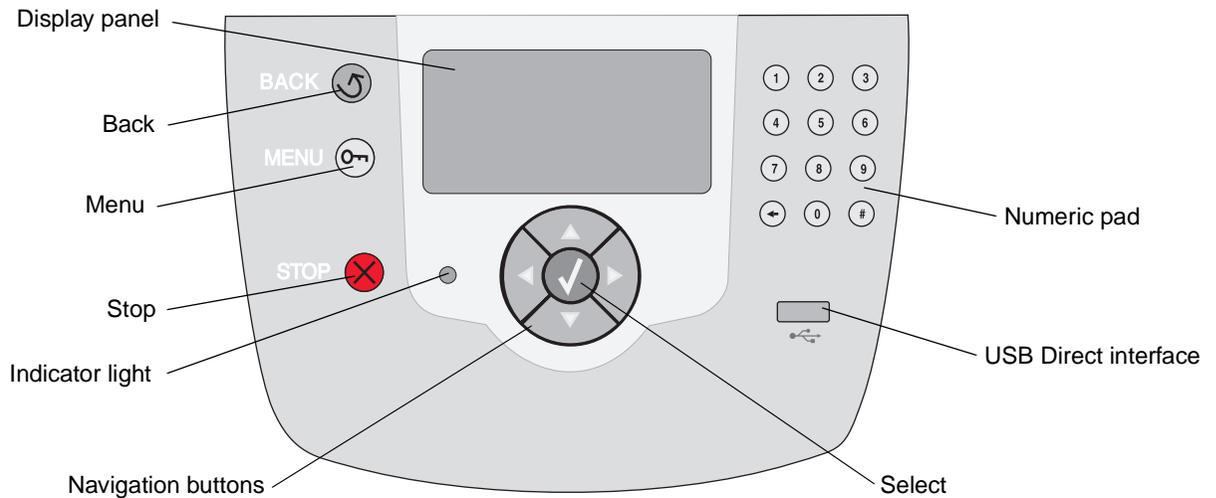
Select

For more information on the operator panel, see the *User's Guide* on the *Software and Documentation* CD.

Media guide

The printer supports the following media sizes. Select custom sizes up to the maximum specified for the Universal setting.

Legend	✓ — supported with size sensing	† — supported without size sensing[*]		✗ — unsupported			
Media size Dimensions	Dimensions	500-sheet trays	Multipurpose feeder	Optional high capacity feeder	Optional duplex unit	Optional envelope drawer	Optional banner tray
A3	297 x 420 mm (11.7 x 16.5 in.)	✗	✗	✗	✗	✗	✗
A4	210 x 297 mm (8.27 x 11.7 in.)	✓	†	✓	✓	✗	✗
A5	148 x 210 mm (5.83 x 8.27 in.)	✓	†	✓	✓	✗	✗
JIS B4	257 x 364 mm (10.1 x 14.3 in.)	✗	✗	✗	✗	✗	✗
JIS B5	182 x 257 mm (7.17 x 10.1 in.)	✓	†	✓	✓	✗	✗
Letter	215.9 x 279.4 mm (8.5 x 11 in.)	✓	†	✓	✓	✗	✗
Legal	215.9 x 355.6 mm (8.5 x 14 in.)	✓	†	✓	✓	✗	✗
Executive	184.2 x 266.7 mm (7.25 x 10.5 in.)	✓	†	✓	✓	✗	✗
Folio	216 x 330 mm (8.5 x 13 in.)	†	†	✗	✓	✗	✗
Statement	139.7 x 215.9 mm (5.5 x 8.5 in.)	†	†	✗	✓	✗	✗
Tabloid	279 x 432 mm (11 x 17 in.)	✗	✗	✗	✗	✗	✗
Universal[**]	69.85 x 127 mm to 297 x 1219.2 mm (2.75 x 3.5 in. to 11.69 x 48 in.)	✓	†	✗	†	✗	✗
Banner	210 to 215.9 mm wide by up to 1219.2 mm long (8.27 to 8.5 inches wide by up to 48 inches long)	✗	†	✗	✗	✗	✓

[*] Supported as selected paper with tray size sensing turned off in the appropriate trays.

[**] When selected, the page is formatted for 215.9 x 355.6 mm (8.5 x 14 in.) unless otherwise specified.

Legend	✓ — supported with size sensing		† — supported without size sensing*		✗— unsupported		
Media size Dimensions	**Dimensions**	**500-sheet trays**	**Multipurpose feeder**	**Optional high capacity feeder**	**Optional duplex unit**	**Optional envelope drawer**	**Optional banner tray**
7 3/4 Envelope (Monarch)	98.4 x 190.5 mm (3.875 x 7.5 in.)	✗	†	✗	✗	†	✗
9 Envelope	98.4 x 225.4 mm (3.875 x 8.9 in.)	✗	†	✗	✗	†	✗
10 Envelope	104.8 x 241.3 mm (4.12 x 9.5 in.)	✗	†	✗	✗	†	✗
DL Envelope	110 x 220 mm (4.33 x 8.66 in.)	✗	†	✗	✗	†	✗
C5 Envelope	162 x 229 mm (6.38 x 9.01 in.)	✗	†	✗	✗	†	✗
B5 Envelope	176 x 250 mm (6.93 x 9.84 in.)	✗	†	✗	✗	†	✗
Other Envelope***	104.8 mm x 210 mm to 215.9 mm x 355.6 mm 4.125 in. x 8.27 in. to 8.5 in. x 14 in.)	✗	†	✗	✗	†	✗
* Supported as selected paper with tray size sensing turned off in the appropriate trays.							
** When selected, the page is formatted for 215.9 x 355.6 mm (8.5 x 14 in.) unless otherwise specified.							

Storing media

Use the following guidelines for proper media storage. These help avoid media feeding problems and uneven print quality:

- For best results, store media in an environment where the temperature is approximately 21°C (70°F) and the relative humidity is 40%.
- Store cartons of media on a pallet or shelf, rather than directly on the floor.
- When storing individual packages of media out of the original carton, make sure they rest on a flat surface so the edges do not buckle or curl.
- Do not place anything on top of the media packages.

Avoiding jams hints

The following hints can help avoid jams:

- Use only recommended paper or specialty media (referred to as media).
- Do not overload the media sources. Make sure the stack height does not exceed the maximum height indicated by the load line labels in the sources.

- Do not load wrinkled, creased, damp, or curled media.

- Flex, fan, and straighten media before you load it.

- Do not use media that has been cut or trimmed by hand.

- Do not mix media sizes, weights, or types in the same media source.

- Make sure the recommended print side is face down when loading 500-sheet trays, and face up when loading the multipurpose feeder or the high capacity feeder, for simplex (single-sided) printing.

- Keep media stored in an acceptable environment. See "Storing Media."

- Do not remove trays during a print job.

- Push all trays in firmly after loading them.

- Make sure the guides in the trays are properly positioned for the size of media loaded. Make sure the guides are not placed too tightly against the stack of media.

- Make sure all cables that connect to the printer are correctly attached. See the *Setup* sheet for more information.

- If a jam occurs, clear the entire media path. See the *User's Guide* for information on the media path.

Printing guide

Get the most out of your printer by properly loading the trays and setting the types and sizes. Never mix paper types within a tray.

> **Note:** Paper Size does not need to be adjusted when auto size sensing is enabled. Auto size sensing is enabled by default for printer trays, but is not available for the multipurpose feeder.

Loading paper

Your printer supports a wide variety of paper types, sizes, and weights. Both standard and optional trays are marked with maximum stack height indicators.

To help prevent jams:

- Flex all stacks of print media back and forth to loosen them, and then fan them before loading. Do not fold or crease the print media. Straighten the edges of the stack on a level surface.

- Do not exceed the maximum stack height. Overfilling may cause jams.

Loading a 500-sheet tray

1 Remove the tray and place it on a flat, level surface.

2 Squeeze the front guide lever and slide the guide to the front of the tray.
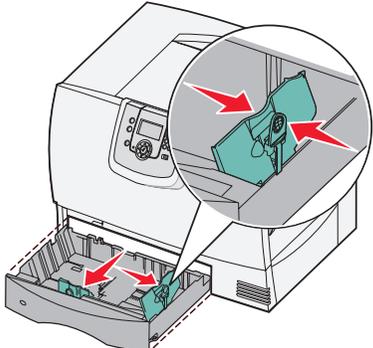
3 Squeeze the side guide lever and slide the guide to the correct position for the size paper you are loading.

4 Flex the sheets back and forth to loosen them, and then fan them.

   Do not fold or crease the paper. Straighten the edges of the stack on a level surface.

5 Place the paper in the tray as shown, print side down.

   Do not load bent or wrinkled paper.

   Maximum stack height indicator
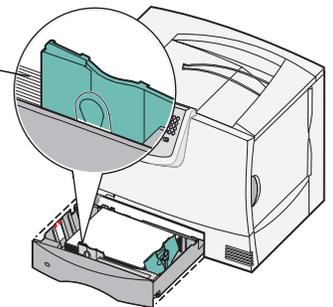
> **Note:** Do not exceed the maximum stack height. Overfilling the tray may cause jams.

6 Squeeze the front guide lever and slide the guide until it firmly touches the stack of paper.

7 Reinstall the tray.

   Make sure the tray is pushed completely into the printer.
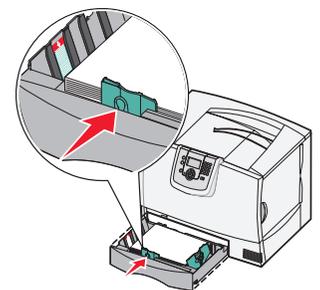
Loading the multipurpose feeder

You can use the multipurpose feeder one of two ways:

- **Paper tray**—As a paper tray, you can load paper or specialty media in the feeder with the intention of leaving the media in the feeder.
- **Manual bypass feeder**—As a manual bypass feeder, you can send a print job to the feeder while specifying the type and size of media from your computer. The printer then prompts you to load the appropriate print media before it prints.

To load the multipurpose feeder:

1 Open the multipurpose feeder.

2 Squeeze the paper guide lever and slide the guide all the way toward the front of the printer.
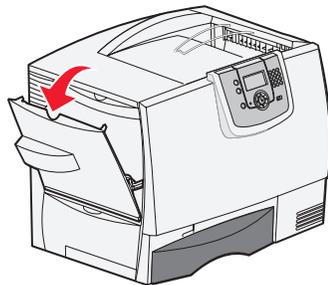
3 Flex the sheets back and forth to loosen them, and then fan them. Do not fold or crease the print media. Straighten the edges of the stack on a level surface.
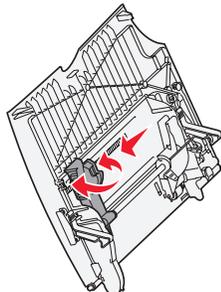
4 Arrange the stack of paper or specialty media correctly for the size, type, and print method you are using.

5 Place the paper or specialty media, print side up, along the left side of the multipurpose feeder, and then push it in as far as it will easily go.
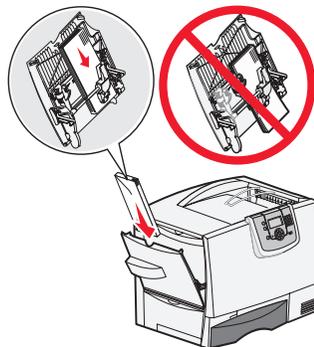
Do not force the media.

   Note: Do not exceed the maximum stack height. Overfilling the feeder may cause jams.

6 Squeeze the paper guide lever and slide the guide until it lightly touches the side of the stack.
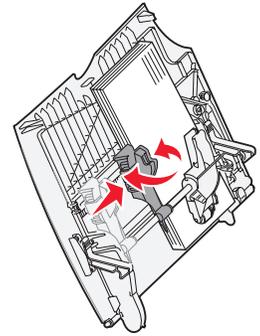
7 If you are loading a different type of media than was previously loaded in the tray, change the Paper Type setting for that tray on the operator panel.

Loading other input options

For information about loading other input options, see the *Software and Documentation* CD that came with the printer.

Set Paper Type and Paper Size

If you have set Paper Type and Paper Size to the correct values, any trays containing the same type and size of paper are automatically linked by the printer.

   Note: If the type of the media you are loading is the same as the media previously loaded, you do not need to change the Paper Type setting.

To change the Paper Type and Paper Size setting:

1 Press ⊙ on the operator panel.

2 Press ▼ until you see √ `Paper Menu`, and then press √ .

3 Press ▼ until you see √ `Paper Size/Type`, and then press √ .

4 Press ▼ until the √ appears next to the source you want, and then press √ .

5 Press ▼ until the √ appears next to the media size you loaded, and then press √ .

6 Press ▶ until the √ appears next to the media type you loaded, and then press √ .

   `Submitting selection` appears on the operator panel.

7 Press ↺ until the printer returns to the `Ready` state.

Printing on specialty media (transparencies, labels, and so on)

Follow these instructions when you want to print on media such as transparencies, card stock, glossy paper, labels, or envelopes.

1 Load the print media as specified for the tray you are using. See **"Loading paper"** on page 1 for help.

2 From the printer operator panel, set the Paper Type and Paper Size according to the print media you loaded. See "Set Paper Type and Paper Size" for help.

3 From the computer's software application, set the paper type, size, and source according to the media you loaded.

   a In your word processor, spreadsheet, browser, or other application, select **File ▸ Print**.

   b Click **Properties** (or **Options**, **Printer**, or **Setup**, depending on the application) to view the printer driver settings.

   c Click the **Paper** tab, and then select the tray containing the specialty media from the **Paper Tray** list box.

   d Select your media type (transparencies, envelopes, and so on) from the **Paper Type** list box.

   e Select the size of the specialty media from the **Paper Size** list box.

   f Click **OK**, and then send your print job as usual.

For more information about paper sizes, see the Media guide.

Supplies guide

The following tables list the part numbers for ordering new print cartridges, toner waste containers, fusers, or image transfer units (ITU).

Print cartridges

Visit the lexmark Web site at **www.lexmark.com** for print cartridge ordering information.

The following is a list of cartridges you can order.

C770 / C772	C772
- Black print cartridge - Cyan print cartridge - Magenta print cartridge - Yellow print cartridge - Black high yield print cartridge - Cyan high yield print cartridge - Magenta high yield print cartridge - Yellow high yield print cartridge - Black Return Program print cartridge - Cyan Return Program print cartridge - Magenta Return Program print cartridge - Yellow Return Program print cartridge - Black high yield Return Program print cartridge - Cyan high yield Return Program print cartridge - Magenta high yield Return Program print cartridge - Yellow high yield Return Program print cartridge	- Black extra high yield print cartridge - Cyan extra high yield print cartridge - Magenta extra high yield print cartridge - Yellow extra high yield print cartridge - Black extra high yield Return Program print cartridge - Cyan extra high yield Return Program print cartridge - Magenta extra high yield Return Program print cartridge - Yellow extra high yield Return Program print cartridge

Toner waste container

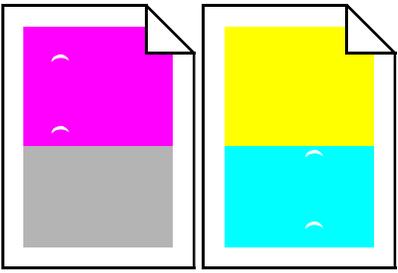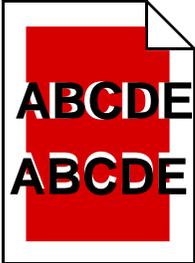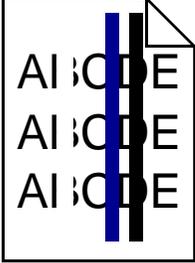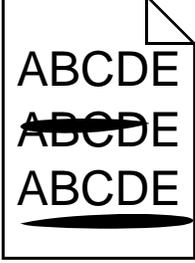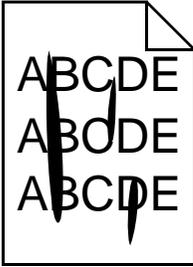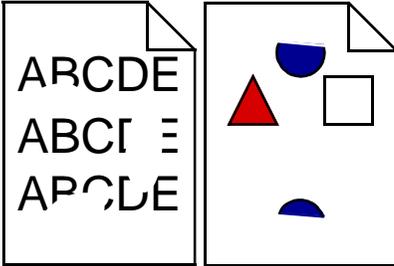To order a new toner waste container, order part number 10B3100.

Fuser or ITU

Refer to the part number listed on the fuser or ITU for the appropriate reordering number for these items.
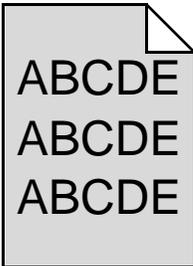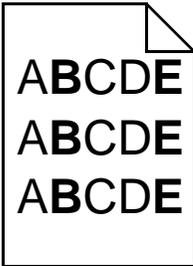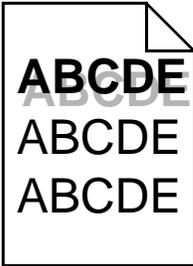
Print quality guide

You can solve many print quality problems by replacing a supply or maintenance item that has reached the end of its intended life. Check the operator panel for a message about a printer consumable.

Use the following table to find solutions to print quality problems.

Symptom	Cause	Solution
Repeating defects	Either the print cartridges are defective, the image transfer unit and transfer roller are defective, or the fuser is defective.	**Marks occur repeatedly only in one color and multiple times on a page:** Replace the cartridge if the defects occur every: – 48 mm (1.9 in.) – 97 mm (3.8 in.) **Marks occur down the page repeatedly in all colors:** • Replace the transfer roll if the defects occur every 60 mm (2.4 in.) • Replace the image transfer unit if the defects occur every 101 mm (4 in.) • Replace the fuser if the defects occur every 148 mm (5.8 in.) **Marks occur on every third or sixth page in any color:** Replace the image transfer unit.
Color misregistration	Color has shifted outside of the appropriate area or has been superimposed over another color area.	**Top to Bottom or Left to Right:** 1 Re-seat the cartridges by removing them from the printer and then reinserting them. 2 Adjust the Color Alignment under the Utilities Menu.
White or colored line	Either the print cartridges are defective, the image transfer unit and transfer roller are defective, or the fuser is defective.	1 Replace the color print cartridge causing the line. 2 If you still have the problem, replace the image transfer unit and transfer roller. 3 If you still have the problem, replace the fuser.
Streaked horizontal lines	The print cartridges, the transfer roller, image transfer unit, or fuser may be defective, empty, or worn.	Replace the print cartridge, the transfer roller, the image transfer unit, or fuser as needed. Print the repetitive defects guide to determine what needs to be replaced.

Symptom	Cause	Solution
Streaked vertical lines ABCDE ABCDE ABCDE	• Toner is smeared before fusing to the paper. • The print cartridge is defective.	• If paper is stiff, try feeding from another tray. • Replace the color print cartridge causing the streaks.
Print irregularities ABCDE ABCDE ABCDE	• Paper has absorbed moisture due to high humidity. • You are using paper that does not meet the printer specifications. • The image transfer unit and transfer roller are worn or defective. • The fuser is worn or defective.	• Load paper from a fresh package in the paper tray. • Avoid textured paper with rough finishes. • Make sure the printer's paper type, paper texture, and paper weight settings match the type of paper you are using. • Replace the image transfer unit and transfer roller. • Replace the fuser.
Print too light	• Paper settings may be incorrect. • The Toner Darkness setting is too light. • You are using paper that does not meet the printer specifications. • The print cartridges are low on toner. • The print cartridges are defective or have been installed in more than one printer.	• Make sure the printer's paper type, paper texture, and paper weight settings match the type of paper you are using. • Select a different Toner Darkness setting from the printer driver before sending the job to print. • Perform a Color Adjust in the Utilities Menu. • Load paper from a new package. • Avoid textured paper with rough finishes. • Make sure the paper you load in the trays is not damp. • Replace the print cartridges.
Print too dark	• The Toner Darkness setting is too dark. • The print cartridges are defective.	• Select a different Toner Darkness setting from the printer driver before sending the job to print. • Replace the print cartridges.
Transparency print quality is poor (Print has inappropriate light or dark spots, toner is smeared, horizontal or vertical light bands appear, or color does not project.)	• You are using transparencies that do not meet the printer specifications. • The Paper Type setting for the tray you are using is set to something other than Transparency.	• Use only transparencies recommended by the printer manufacturer. • Make sure the Paper Type setting is set to Transparency.

Symptom	Cause	Solution
Toner specks	• The print cartridges are defective. • The transfer roller is worn or defective. • The image transfer unit is worn or defective. • The fuser is worn or defective. • Toner is in the paper path.	• Replace the print cartridges. • Replace the transfer roller. • Replace the image transfer unit. • Replace the fuser. • Call for service.
Toner rubs off the paper easily when you handle the sheets	• The Type setting is wrong for the type of paper or specialty media you are using. • The Texture setting is wrong for the type of paper or specialty media you are using. • The Weight setting is wrong for the type of paper or specialty media you are using. • The fuser is worn or defective.	• Change Paper Type to match the paper or specialty media you are using. • Change Paper Texture from Normal to Smooth or Rough. • Change Paper Weight from Plain to CardStock (or other appropriate weight). • Replace the fuser.
Gray background ABCDE ABCDE ABCDE	• The Toner Darkness setting is too dark. • The print cartridges are defective.	• Select a different Toner Darkness setting from the printer driver before sending the job to print. • Replace the print cartridges.
Uneven print density ABCDE ABCDE ABCDE	• The print cartridges are defective. • The transfer roller is worn or defective. • The image transfer unit is worn or defective.	• Replace the print cartridges. • Replace the transfer roller. • Replace the image transfer unit.
Ghost Images ABCDE ABCDE ABCDE	The toner level is low in the print cartridges.	• Make sure the Paper Type setting is correct for the paper or specialty media you are using. • Replace the print cartridges.
Clipped images (Some of the print is cut off on the sides, top, or bottom of the paper.)	Guides in the selected tray are set for a different size paper than what is loaded in the tray.	Move the guides in the tray to the proper positions for the size loaded.

Symptom	Cause	Solution
Incorrect margins	• Guides in the selected tray are set for a different size paper than what is loaded in the tray. • Auto size sensing is set to **off**, but you loaded a different size paper in a tray. For example, you inserted A4 size paper into the selected tray but did not set the Paper Size to A4.	• Move the guides in the tray to the proper positions for the size loaded. • Set the Paper Size to match the media in the tray.
Skewed print (Print is inappropriately slanted.)	• Guides in the selected tray are not in the correct position for the paper size loaded in the tray. • You are using paper that does not meet the printer specifications.	Move the guides in the tray to the proper positions for the size loaded. See "Media Specifications" in the *User's Guide* on the *Software and Documentation* CD.
Blank pages	One or more print cartridges are defective or empty.	Replace the defective print cartridges.
Solid color pages	• The print cartridges are defective. • Your printer requires servicing.	• Replace the print cartridges. • Call for service.
The paper curls badly once it prints and exits to a bin	• The Type, Texture, and Weight settings are not appropriate for the type of paper or specialty media you are using. • The paper has been stored in a high humidity environment.	• Change Paper Type, Paper Texture, and Paper Weight to match the paper or specialty media loaded in the printer. • Load paper from a fresh package. • Store paper in its original wrapper until you use it. • See "Storing paper" in the *User's Guide* on the *Software and Documentation* CD.

Repetitive defects guide

Match a set of repeating defects on a print job to the marks on one of the vertical lines. The line that best matches the defects on the print job indicates which particular part is causing the defect.

For example, the distance between these two marks represents a repeating defect that occurs every 96 mm, which means the print cartridge is the component that needs replacing.

Change cartridge

48 mm
(1.9 in.)

Change cartridge

97 mm
(3.8 in.)

Change ITU

101 mm
(4.0 in.)

Change ITU transfer roll

59.4 mm
(2.3 in.)

Change fuser

148 mm
(5.8 in.)

Change fuser

120 mm
(4.7 in.)