

# Color quality guide

## Quality menu

Use	To
<b>Print Mode</b> Color Black Only	Specify whether to print images in color. <b>Note:</b> Color is the factory default setting.
<b>Color Correction</b> Auto Off Manual	Adjust the color output on the printed page. <b>Note:</b> Auto is the factory default setting.
<b>Print Resolution</b> 1200 dpi 4800 CQ	Specify the output resolution in dots per inch (dpi) or in color quality (CQ). <b>Note:</b> 4800 CQ is the factory default setting.
<b>Toner Darkness</b> 1–5	Lighten or darken the output. <b>Note:</b> 4 is the factory default setting.
<b>Enhance Fine Lines</b> On Off	Enable a print mode preferable for files such as architectural drawings, maps, electrical circuit diagrams, and flow charts. <b>Note:</b> Off is the factory default setting.
<b>Color Saver</b> On Off	Reduce the amount of toner used for graphics and images. <b>Notes:</b> <ul style="list-style-type: none"> <li>Off is the factory default setting.</li> <li>On overrides the Toner Darkness setting.</li> </ul>
<b>RGB Brightness</b> -6 to 6	Adjust the brightness of the output. <b>Note:</b> 0 is the factory default setting.
<b>RGB Contrast</b> 0–5	Adjust the contrast of the output. <b>Note:</b> 0 is the factory default setting.
<b>RGB Saturation</b> 0–5	Adjust saturation in color outputs. <b>Note:</b> 0 is the factory default setting.
<b>Color Balance</b> Cyan -5 to 5 Magenta -5 to 5 Yellow -5 to 5 Black -5 to 5 Reset Defaults	Enable an equal balance of colors in the output. <b>Note:</b> 0 is the factory default setting.

Use	To
<b>Color Samples</b> sRGB Display sRGB Vivid Display—True Black Vivid Off—RGB US CMYK Euro CMYK Vivid CMYK Off—CMYK	Print sample pages for each of the RGB and CMYK color conversion tables used in the printer.
<b>Manual Color</b> RGB Image RGB Text RGB Graphics	Customize the RGB color conversions. Select from the following options: Vivid sRGB Display Display—True Black sRGB Vivid Off  <b>Notes:</b> <ul style="list-style-type: none"> <li>• sRGB Display is the factory default setting for RGB Image.</li> <li>• sRGB Vivid is the factory default setting for RGB Text and RGB Graphics.</li> </ul>
<b>Manual Color (continued)</b> CMYK Image CMYK Text CMYK Graphics	Customize the CMYK color conversions. Select from the following options: US CMYK Euro CMYK Vivid CMYK Off  <b>Note:</b> US CMYK is the U.S. factory default setting. Euro CMYK is the international factory default setting.
<b>Color Adjust</b>	Initiate a recalibration of color conversion tables and allow the printer to make adjustments for color variations in output.
<b>Spot Color Replacement</b>	Assign specific CMYK values to named spot colors. <b>Note:</b> This menu is available only on the Embedded Web Server.
<b>RGB Replacement</b>	Match the colors of the output with that of the original document. <b>Note:</b> This menu is available only on the Embedded Web Server.

## 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 can be combined to create yellow. Televisions and computer monitors create colors in this manner. RGB color is a method of describing colors by indicating the amount of red, green, or blue needed to produce a certain 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 programs typically specify the document color using RGB or CMYK color combinations. Additionally, they let users modify the color of each object in a document. For more information, see the help information of your operating system.

## How does the printer know what color to print?

When a user prints a document, information describing the type and color of each object is sent to the printer. The color information is passed through color conversion tables that translate the color into the appropriate amounts of cyan, magenta, yellow, and black toner needed to produce the color you want. The object information determines the application of color conversion tables. 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.

## What is manual color correction?

When manual color correction is enabled, the printer employs user-selected color conversion tables to process objects. However, Color Correction must be set to Manual, or no user-defined color conversion will be implemented. Manual color correction settings are specific to the type of object being printed (text, graphics, or images), and how the color of the object is specified in the software program (RGB or CMYK combinations).

### Notes:

- Manual color correction is not useful if the software program does not specify colors with RGB or CMYK combinations. It is also not effective in situations in which the software program or the computer operating system controls the adjustment of colors.
- When **Auto Color Correction** is selected, the color conversion tables will generate preferred colors used for the majority of the documents.

To manually apply a different color conversion table, do the following:

- 1 From the Quality menu on the printer control panel, select **Color Correction**, and then select **Manual**.
- 2 From the Quality menu on the printer control panel, select **Manual Color**, and then select the appropriate color conversion table for the affected object type.

Object type	Color conversion tables
RGB Image RGB Text RGB Graphics	<ul style="list-style-type: none"> <li>• <b>Vivid</b>—Produces brighter, more saturated colors and may be applied to all incoming color formats.</li> <li>• <b>sRGB Display</b>—Produces an output that approximates the colors displayed on a computer monitor. <b>Note:</b> Black toner usage is optimized for printing photographs.</li> <li>• <b>Display-True Black</b>—Produces an output that approximates the colors displayed on a computer monitor. This uses only black toner to create all levels of neutral gray.</li> <li>• <b>sRGB Vivid</b>—Provides an increased color saturation for the sRGB Display color correction. <b>Note:</b> Black toner usage is optimized for printing business graphics.</li> <li>• <b>Off</b>—No color correction is implemented.</li> </ul>

Object type	Color conversion tables
CMYK Image CMYK Text CMYK Graphics	<ul style="list-style-type: none"> <li>• <b>US CMYK</b>—Applies color correction to approximate the SWOP (Specifications for Web Offset Publishing) color output.</li> <li>• <b>Euro CMYK</b>—Applies color correction to approximate Euroscale color output.</li> <li>• <b>Vivid CMYK</b>—Increases the color saturation of the US CMYK color correction setting.</li> <li>• <b>Off</b>—No color correction is implemented.</li> </ul>

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

Nine types of Color Samples sets are available from the Quality menu on the printer control panel. These are also available from the Color Samples page of the Embedded Web Server. Selecting any sample set 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.

By examining Color Samples sets, you can identify the box whose color is the closest to the color you want. The color combination labeled on the box can then be used for modifying the color of the object in a software program. For more information, see the help information of your operating system.

**Note:** Manual color correction may be necessary to utilize the selected color conversion table for the particular object.

Selecting which Color Samples set to use for a particular color-matching problem depends on the Color Correction setting being used, the type of object being printed, and how the color of the object is specified in the software program. When Color Correction is set to Off, the color is based on the print job information, and no color conversion is implemented.

**Note:** The Color Samples pages are not useful if the software program does not specify colors with RGB or CMYK combinations. Additionally, certain situations exist in which the software program or the computer operating system adjusts the RGB or CMYK combinations specified in the program 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?

Detailed color samples sets are available only through the Embedded Web Server of a network printer. A detailed Color Samples set contains a range of shades that are similar to a user-defined RGB or CMYK value. The likeness of the colors in the set is dependent on the value entered in the RGB or CMYK Increment box.

To access a detailed Color Samples set from the Embedded Web Server, do the following:

- 1 Open a Web browser, and then type the printer IP address in the address field.

**Note:** If you do not know the IP address or printer name, then you can:

- View the information on the printer home screen, or in the TCP/IP section in the Networks/Ports menu.
- Print a network setup page or menu settings page, and then locate the information in the TCP/IP section.

- 2 Click **Configuration > Color Samples > Detailed Options**.

- 3 Select a color conversion table.

- 4 Enter the RGB or CMYK color number.

- 5 Enter an increment value from 1 to 255.

**Note:** The closer the value is to 1, the narrower the color sample range will appear.

- 6 Click **Print**.