



Tech Info Library

CLW 12/600 PS: Color Matching W/ Quark Xpress (12/95)

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TOPIC -----

I am having some trouble matching colors from Quark Xpress and Adobe Illustrator to my Color LaserWriter 12/600 PS printer. When I print a CMYK color made of 50% Cyan, 30% Magenta, and 30% Yellow, I get a bluish color from the printer instead of the gray color I see on the screen. Why don't the colors from my applications match what I am seeing from the printer?

DISCUSSION -----

Color matching between various input and output devices is very difficult, although the use of Color Management Systems (CMS) can help tremendously. By using raw CMYK values in Quark without using a CMS, the color seen on the monitor is produced based on what Quark believes the color should look like on a monitor. When printed, there is no CMS to do the "mapping" of CMYK values to the output device's color space (in this case the Color LaserWriter 12/600 PS), so the printed colors do not match the monitor.

ColorSync 2.0, emerging as one of the larger industry standard Color Management Systems, would help greatly in your case. Basically, a CMS is needed to do the mapping from one device color space to another. In this case from the input device's color space (your monitor) to the output device's color space (your Color LaserWriter 12/600 PS printer). Since ColorSync 2.0 is only the "enabling" technology (this is true of any CMS), it relies heavily on the applications and device manufacturers to integrate their products with ColorSync. This means is two things:

1) The application being used must be ColorSync-compliant and allow the printer driver to use the profiles specified by ColorSync.

The application being used should NOT generate its own PostScript code, which in turn bypasses ColorSync. If it generates its own CMYK color values, then the output colors will NOT match the monitor as the application is specifying colors based on its own internal color tables, and not tables created by ColorSync using the device profiles.

Quark Xpress 3.x is currently NOT ColorSync/ICC compliant, though the next

version due out next year will be fully ICC (ColorSync 2.0 format) compliant. Current Quark 3.x customers can purchase Helios Xtension which provides ColorSync compatibility for Quark 3.x.

One free piece of software that would help you is the "Pantone files for the Color LW 12/600". The PANTONE support files enable you to load the PANTONE color table already "calibrated" for your Apple Color LaserWriter 12/600 PS printer as a usable color palette in the most popular Pantone-licensed desktop publishing programs (files for Quark Xpress are included). Custom CMYK combinations for almost every color in the PANTONE MATCHING SYSTEM® can be selected. The only exceptions are specialty colors such as metallics, fluorescents and double impressions. Using any of the colors in the Pantone palette provided in these application files will produce very close color match on the Color LaserWriter 12/600.

The Pantone support files are free and can be located online at:

Apple SW Updates

US

Macintosh

Printing

LaserWriter

PANTONE for Color LW.sea

2) You must have an ICC format profile for all input and output devices you are using.

The ICC format profile (ColorSync 2.0 format profile) for devices has been accepted by the ICC (International Color Consortium) as the device profile format standard. The profiles should be located in:

System Folder

Preferences

ColorSync Profiles

An ICC profile for the Color LaserWriter 12/600 is automatically installed in the ColorSync Profile folder with the printer installer disks (LaserWriter 8.3). Your monitor profile should be selected in the ColorSync System Profile control panel. When ColorSync 2.0 is installed, ICC format profiles are installed for all the Apple monitors.

Getting the Best Color Matching Results

To get the best results printing out of ColorSync, we would suggest:

- Select a "Page-white" monitor in the "ColorSync System Profile" control panel if you are using an Apple monitor, or you don't have an ICC profile for your monitor.
- When selecting Print, click the Options button and choose ColorSync Color

Matching, or PostScript Color Matching in the Print popup field, and Color LW 12/600 PS Profile in the Printer Profile popup field.

- Use the Pantone files for Quark Xpress to select the desired colors.
- If the Pantone files are not used, then the Helios Xtension software should be used.
- If neither of the above are used, you should specify colors in Quark Xpress using RGB values. This allows ColorSync 2.0 to do the conversion to CMYK values using the Color LaserWriter 12/600 PS profile.

Most applications currently have "patches" to be more ICC profile aware, though Apple suspects that within the next 6 months to a year more applications will start becoming fully ICC-compliant.

Note:

Third-party Color Management Systems, such as the Kodak CMS which is automatically installed with Photoshop 3.0.4, have the potential to severely affect ColorSync's performance. If other you use another CMS, then the color matching done with those systems is NOT based on the profiles selected within ColorSync. They should be disabled if ColorSync is being used.

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