

New Technical Notes

Macintosh



Developer Support

ColorSync Q&As

Imaging

Revised by: Developer Support Center

June 1993

Written by: Developer Support Center

June 1993

This Technical Note contains a collection of Q&As relating to a specific topic—questions you've sent the Developer Support Center (DSC) along with answers from the DSC engineers. While DSC engineers have checked the Q&A content for accuracy, the Q&A Technical Notes don't have the editing and organization of other Technical Notes. The Q&A function is to get new technical information and updates to you quickly, saving the polish for when the information migrates into reference manuals.

Q&As are now included with Technical Notes to make access to technical updates easier for you. If you have comments or suggestions about Q&A content or distribution, please let us know by sending an AppleLink to DEVFEEDBACK. Apple Partners may send technical questions about Q&A content to DEVSUPPORT for resolution.

New Q&As in this Technical Note:

ColorSync documentation

How Apple Color Printer uses ColorSync

ColorSync 1.0.2 fixes kNumColorsToMatch bug

ColorSync responders

MatchColors and profile handles for CMYK or RGB conversion

ColorSync documentation

Date Written: 2/8/93

Last reviewed: 4/1/92

Do you have any documentation that describes ColorSync in more detailed than “The ColorSync Utilities” on the Developer CD? I want to develop a ColorSync-aware printer driver and application.

The “ColorSync Utilities” document on the Developer CD is a preliminary draft. Apple is updating it to include more sample code and descriptive explanations. The final document will be included as a chapter in Apple's forthcoming *Inside Macintosh: QuickDraw* reference, which will be available later this year.

“ColorSync: A Tuning Fork for Color,” in the February issue of *Apple Direct*, provides a ColorSync overview. Also, the Print Hints column in the June 1993 issue of *develop*, “ColorSync and Printing,” addresses ColorSync implementation issues for products such as yours.

How Apple Color Printer uses ColorSync

Date Written: 2/8/93

Last reviewed: 4/1/92

What's the mechanism the Apple Color Printer driver uses for ColorSync?

The Apple Color Printer uses the low-level ColorSync color-matching calls to perform color matching in the print bottleneck routines. Thus, color matching happens before rendering so that rendering always occurs with matched colors. For more information, see the section called "What does a printer driver have to do?" in the Print Hints column of the June 1993 issue of *develop*.

ColorSync 1.0.2 fixes kNumColorsToMatch bug

Date Written: 1/20/93

Last reviewed: 4/1/92

I tried calling CMMatchColors with different numbers of colors to match; 10,000 worked fine, but 50,000 or greater crashed with a bus error. Is this a bug?

This is a bug in ColorSync 1.0 and 1.0.1. The "for" loop inside the Apple CMM uses a short rather than a long. It's been fixed for version 1.0.2.

ColorSync responders

Date Written: 1/18/93

Last reviewed: 4/1/92

Which ColorSync responders can I rely on? The ColorSync cdev as I understand it yields the system responder. I don't have anything else (for example, Color Printer driver); how do I get a monitor and printer responder?

The ColorSync documentation doesn't discuss responders very well. A system profile responder is always available if ColorSync is installed. It can be used only to set the current system profile and to get the current system profile. A printer profile isn't registered normally and has to be registered by the printer driver when requested to do so with a PrGeneral call.

For more information, please read "Syncing up with ColorSync" in issue 14 of *develop*.

MatchColors and profile handles for CMYK or RGB conversion

Date Written: 1/18/93

Last reviewed: 4/1/92

How do I get the right ProfileHandles to convert CMYK to RGB data and vice versa via the low-level MatchColors call? All routines now are returning "Responder errors" (-180 and -182), a description that doesn't help much at the moment.

—

To convert CMYK to RGB, you need to have a proper source profile specifying that the data is in CMYK format (dataType = "CMYK"), and a proper destination profile specifying that the data is in RGB format (dataType = "RGB "). You can use ProfileMaker to modify a current profile (that is, 13" RGB) to create the CMYK format; or, you can also use the current system profile obtained by calling GetProfile.