Adobe

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stop the press

ADOBE TECHNICAL ISSUES & SOLUTIONS

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Past issues of *Stop the Press*

If you need a past issue of this newsletter, you can download at: http://www.adobe.com/supportservice/usergroup/newsletter.html

To save the file(s) to your hard disk, hold down the Shift (Windows/UNIX) or Option (Macintosh) key as you click on the file you want.

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Y2K-compliance and Adobe products

Adobe Software

With the countdown to December 31, 1999 underway, we wanted to let you know about Adobe's plans for Y2K-compliance. This article presents the steps the company is taking and tells you where to go on the Adobe Web site for more information. It includes these sections:

- **Background information.** Describes where Adobe's products fit in the broader industry-wide Y2K problem.
- **Adobe-specific Y2K information.** Summarizes the steps Adobe is taking toward compliance.
- **Y2K information on Adobe.com.** Explains where to look on Adobe's Web site for up-to-date information and what our policies are for responding to Y2K inquiries.

Background information

Decades ago, when engineers were busy setting up mainframes and supercomputers, the shortcut of recording the date with just the last two digits of the year seemed smart because each line of code was costly. Now, however, that shortcut could cost certain industries billions in reallocated resources. Fortunately, the graphic design software industry enjoys a comfortable distance from the heart of this problem. The date is not as critical, for example, to the average designer sitting before a two-year-old PC as it is to an airport controller directing a plane to a secure landing or to a bank manager with time-locked safes.

The casualties of the Y2K crisis could be companies using outdated, date-heavy hardware like mainframes or their own in-house applications. These include government agencies, banks and financial institutions, airport controllers, manufacturing plants, and some engineering firms. When the clocks turn over to January 1, 2000, these computers could revert back to 1900 or even shut down entirely. The estimated impact of the Y2K transition runs from a widespread bug with an easily remedied bite to a $100 billion-dollar blow to the global economy.

The secret to success during this transition is foresight and planning. While Adobe is one of the companies taking steps to test its products, National Public Radio estimates that 10 percent of U.S. companies have yet to take the appropriate testing measures. Arthur Levitt, the Chairman of the U.S. Securities and Exchange Commission (SEC), is pressing companies to take immediate action, pointing out that "no firm, large or small, can afford to ignore this problem."

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Adobe-specific Y2K information

As described earlier, recent concern about the impact of the Year 2000 on computer systems arises because some applications and operating systems use two digits rather than four digits to represent and store the year in a date field (e.g., 01/01/01 for January 1, 2001). Software relying on two-digit identifiers for dates may not work as expected after December 31, 1999. Adobe software currently generates all date information, such as creation dates, modification dates, and time/date stamps, using the date value provided by the operating system (e.g., Microsoft Windows®, Apple Macintosh). The versions of Adobe software listed in the Product List on the Adobe Year 2000 Web pages and all subsequent releases of these products (if any) should be unaffected by the change to the year 2000 and will accurately represent date information within the constraints of the operating systems, unless otherwise indicated.

Please note that Adobe cannot review and test discontinued products or versions of Adobe products prior to those listed on the Web site. If you have a prior version of a current Adobe product and Year-2000 compliance is critical to you, we strongly encourage you to upgrade to the current version. For upgrade information in the United States or Canada, please contact your local distributor or call Adobe at (800) 833-6687. For international pricing, please contact your local distributor. Upgrade information for each product is also available at the respective product pages on Adobe's Web site.

Furthermore, Adobe cannot provide any warranties specific to Year-2000 readiness because this matter depends on several factors, including software from other vendors, most particularly the operating system. Because Adobe software currently supports the date value set by the operating system, users should confirm that their operating systems are, or will be, Year-2000 compliant. The limited warranty for Adobe products is defined in the end-user license agreement for each Adobe product. The information provided herein does not constitute an extension of any such warranty.

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Y2K information on Adobe.com

For additional information on the measures Adobe is taking to prepare for the Year 2000, visit our Year 2000 product support page: (http://www.adobe.com/newsfeatures/year2000/main.html). Because of the large number of inquiries, Adobe cannot process customer questionnaires or surveys relating to their particular Year-2000 compliance efforts, or respond to written requests for detailed information. However, we recognize that you may require a record of the Year-2000 information. Therefore, we have provided a PDF file on our Web site that contains a letter signed by our Senior Vice President of Worldwide Products & Marketing as well as a list of products to which the letter applies. In an effort to conserve expense and natural resources, Adobe respectfully requests that you refrain from directing additional written inquiries, questionnaires, or surveys to our offices. The information posted on our Web site represents all of the information that we have at this time. ◆

Working with Adobe software running on a Mac OS 8.5x system

Adobe Software

In the November 28,1998 issue of *Stop the Press*, we published an article that summed up a few known issues and workarounds for running Adobe software on Mac OS 8.5x. We have since confirmed reports of two additional issues.

Adobe PageMaker 6.5x—Unable to access CMS Setup when running on Mac OS 8.5x

Issue

When you click the CMS Setup button after choosing File > Preferences in PageMaker 6.5x for the Macintosh (running Mac OS 8.5x), a Type 1 or Type 2 system error may occur, forcing you to restart. We've also heard reports that the Color Management Preferences dialog box sometimes appears with one or more blank popup menus.

Note: If you've enabled CMS in PageMaker 6.5x and set New Items Use to ColorSync or Kodak, you may receive similar system errors or blank popup menus when you place TIFF images, choose Element > CMS Source, or print a color-managed document.

Solution

Type 1 or Type 2 system error messages both indicate a low memory state. To resolve this, do one of the following:

Reduce the number of device profiles in the ColorSync Profiles directory inside the System folder. (We recommend a maximum of 25 device profiles.)

Or

Free up more memory on the system by:

- Quitting other open applications.
- Turning off some of the active extensions and control panels in your System folder.

Additional information

Customers reporting this problems have had as many as two hundred or more profiles installed. The problem occurs because PageMaker does not have enough memory available to parse and display such large lists of installed device profiles. What's more, for most workflows, there's no reason to have that many profiles installed in the System folder.

If you're doing color-profile testing and you need to have additional profiles installed, try the following :

1. Organize sets of device profiles in named folders (outside the System folder).
2. Make an alias for each named folder.
3. Place one alias at time in the ColorSync Profiles folder in the System folder. (To display a different set of profiles, close PageMaker, swap out the alias, and then restart PageMaker.)

This technique lets you quickly load a desired set of device profiles on an as-needed-basis, while maintaining a comprehensive set of profiles on your computer. ◆

Adobe Illustrator 8.0—Unable to access preferences when running on Mac OS 8.5x

Issue

Typing Command+K or choosing File > Preferences > General two or more times in Illustrator 8.0 running on Mac OS 8.5 or 8.51 may lock up the computer or cause a bus error, forcing you to restart the computer. Customers reporting this problem have noted that the problem only seems to occur if they access the General preferences two or more times during the same application session. Accessing these preferences only once doesn't seem to cause the problem.

Workaround

If you've already changed your General preferences and need to change them again, save your work, close and restart Illustrator 8.0, and then specify new preferences. ◆

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PostScript color management—What is it and when should you use it?

Adobe PostScript and Photoshop

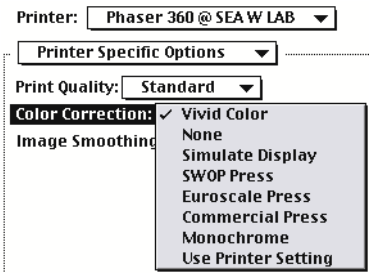
Adobe Technical Support has asked us to write an article about PostScript color management, which is used in Adobe Photoshop 5.0x and other programs to map device-dependent colors to a desktop PostScript printer's CMYK color space. This article defines PostScript color management and explains when and how to use it to print Photoshop images on a PostScript color desktop printer or proofing device.

PostScript Level 2 and color management

PostScript Level 2 includes support for mapping the device-dependent color space of your RGB monitor to the device-dependent color space of your CMYK PostScript color printer. PostScript Level 2 handles the RGB-to-CMYK mapping at the printer instead of on your computer, using the RGB color source information and the printer's CMYK output color information. Without PostScript color management, the RGB colors would not properly map to the printer's smaller CMYK color space, resulting in unexpected color shifts. The alternative to printer-based color mapping is host-based—the source color information is mapped to the printer's color space before the RIP interprets it.

The PostScript model uses the CIEXYZ color space (a cousin of CIELAB) as a reference color space to map the RGB source color to the printer's CMYK output color space. In order to do this, PostScript uses a Color Space Array (CSA), which is the PostScript version of an ICC source profile, and a Color Rendering Dictionary (CRD), which is the PostScript version of an output profile. A CSA typically represent an RGB or LAB source color space. A CRD always represents a printer's CMYK color space.

Note: A PostScript Level 2 color printer using PostScript version 2016 and higher has one default CRD. Also, a CRD is not the same as the printer-specific color correction options in some printing devices, such as those displayed here for a Tektronix Phaser 360 under the Printer Specific Options.



Printer Specific Color Correction options

PostScript color management methods

There are three methods for color-managing printing on color desktop printers or proofing devices; however, only two use the PostScript color management model. The first is host-based—the colors are mapped to the printer's color space on the computer, while the other two are managed at the printer.

Method 1—The source and printer profiles are converted to a CSA and CRD respectively and then they're transformed into the printer's CMYK color space on the computer. Use this method when your computer has considerably more processing power than your printer.

Method 2—The source and printer profile are converted to a CSA and CRD respectively and included in the resulting PostScript file. Then the printer performs the color transformation, using the CIEXYZ reference color space to map the CSA to the CRD for an RGB-to-CMYK color transformation. This method releases your computer more quickly, allowing you to do other tasks while the printer performs the RGB-to-CMYK color transformation.

Method 3—The source color-space profile is converted into a CSA. Unlike methods 1 or 2, the printer profile is not converted to a CRD. Instead, the CSA is all that is included in the resulting PostScript file. The printer-resident default CRD is used to complete the color transformation

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from the CSA (using the CIEXYZ reference color space) into the printer's CRD. This method allows you to send your unmapped, color-managed images to a variety of PostScript color printers without having each device profile. This method is known as "distribute and print."

How and when to use PostScript color management in Photoshop 5.0x

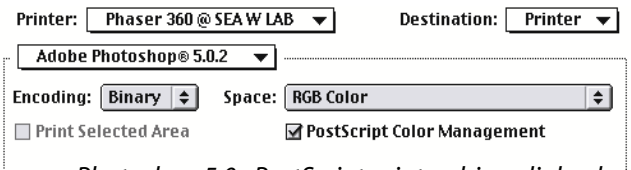
You'll encounter two opportunities to use PostScript color management in Photoshop 5.0x:

- Printing directly from the application.
- Saving as an EPS file for printing from other applications.

First, let's begin with printing directly from Photoshop 5.0x to a PostScript color desktop printer. Then we'll cover saving your EPS files with PostScript color management information.

Printing from Photoshop 5.0x

When you choose File > Print in Photoshop 5.0x and you're using a PostScript printer driver, such as AdobePS 8.5.1, select Adobe Photoshop 5.0x from the popup menu (as shown in the screen shot below). The default selection in the Space popup menu is the color model and profile associated with that particular working color space in Photoshop 5.0x. For example, the screen shot below shows RGB Color. This indicates that the open image is an RGB image. You'll also notice a selected option called PostScript Color Management below the Space popup menu. This checkbox controls whether the final color transformation takes place on your computer or on your color desktop printer. When checked, the printer performs the color transformation. You can do printer-based color conversions for RGB and LAB images; however, we don't recommend doing this when printing CMYK images directly from Photoshop 5.0x. For additional information, see "Some practical advice" on page 7.



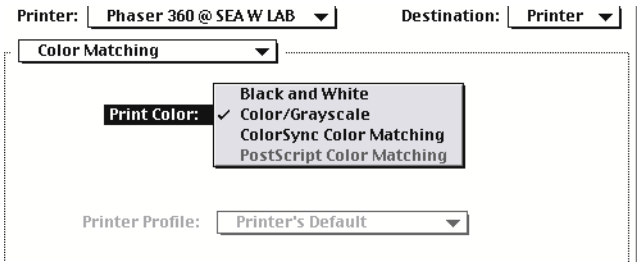
Photoshop 5.0x PostScript printer driver dialog box

Note: The selections you make for Space and the checkbox for enabling/disabling PostScript Color Management work independently of each other.

Method 1—If you want to use Method 1 (performing color transformations on your computer), then do the following:

1. For Space, select the printer profile for your PostScript color printer.
2. Deselect PostScript Color Management.
3. In the Color Matching printer driver dialog box, leave the default selection of Color/Grayscale.

Note: If you select something other than Color/Grayscale for Color Matching, you run the risk of color-managing your image twice, which we don't recommend.



Photoshop 5.0x Color Matching printer driver dialog box

Method 2—If you want to use Method 2 for RGB or LAB images (converting source and printer profiles to CSAs and CRDs but sending untransformed color data to the printer), then do the following:

1. For Space, select the printer profile for your PostScript color printer.
2. Select PostScript Color Management.
3. In the Color Matching printer driver dialog box, leave the default selection of Color/Grayscale.

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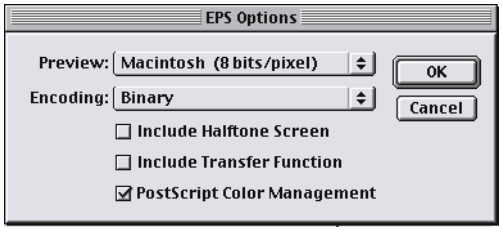
Continued from page 5 ***PostScript and Photoshop...***

Method 3—If you want to use Method 3 for RGB or LAB images (converting the source profile to a CSA and sending untransformed color data to the printer), then do the following:

1. For Space, leave the default selection unchanged. (Remember, that the popup menu defaults to the image's color model.)
2. Select PostScript Color Management.
3. In the Color Matching printer driver dialog box, leave the default selection of Color/Grayscale.

Saving as EPS from Photoshop 5.0x

Photoshop 5.0x now allows you to embed a CSA (representing your source profile) when you save your images as EPS files. Simply select the PostScript Color Management option in the EPS Options dialog box to automatically convert an embedded profile to a CSA. This option allows you to get color-managed printed output from page layout and graphics applications that cannot directly color manage EPS files.



EPS Options dialog box in Photoshop 5.0x

Some practical advice

We recommend researching and testing these techniques before preparing color proofs for a client or project on a strict deadline. All PostScript Level 2 color printers do not handle these color transformations the same way. For example, the CRDs that shipped with older models may not accurately characterize a CMYK color space given the colorants and paper you're using today. In addition, your color printer may have a default rendering intent and/or black generation that may not be ideal for proofing all of your CMYK images. If your research and testing lead to these conclusions, we recommend doing the following:

1. In Photoshop 5.0x, characterize your color printer's color space using the settings in the Built-in mode for CMYK Setup. Then switch to Tables mode and save these settings as an ICC profile. (For additional information on creating CMYK profiles, see the May 12, 1998 issue of *Stop the Press*.)
2. With your CMYK image open in Photoshop 5.0x, choose Image > Mode > Profile to Profile and select the following in the Profile to Profile dialog box:
   - **From**—Select the actual CMYK profile for your CMYK working color space.
   - **To**—Select the new customized printer profile.
   - **Engine**—Select Built-in to use the Adobe CMM.
   - **Rendering Intent**—Select Relative Colorimetric so that only your out-of-gamut colors are affected by this transformation.
   - **Black Point Compensation**—Enable this option to compensate for any potential black generation differences between your final CMYK output color space and the color proofer.
3. Click OK
4. Choose File > Print and select Adobe Photoshop 5.0x from the popup menu.
5. For Space, leave the CMYK selection and deselect the PostScript Color Management option.
6. In the Color Matching printer driver dialog box, leave the default selection of Color/Grayscale, and then click Print. ◆

Adobe Trapping Technology white paper available on Adobe's Web site

Adobe Trapping

As the graphic arts industry moves to an all-digital workflow, the way files are prepared and processed for print production is changing dramatically. Highly productive, automated tools are transforming our industry from a labor-intensive craft to a finely tuned manufacturing process. Automating tasks such as printing, spooling, OPI, and preflight is becoming a fundamental requirement in print operations. Plus, fast accurate trapping of complex printed pages plays a vital role in an all-digital workflow, one that's necessary for a profitable print operation.

Over the past few years, Adobe Systems has developed a full set of products to support this vision of an all-digital workflow. One of these offerings is Adobe trapping technology, which consists of three main components:

- **Trapping engine**—Adobe in-RIP trapping and the Adobe Portable Document Format (PDF) Trapper
- **Trapping standards for describing controls and results of trapping**—Adobe PostScript 3™ and Adobe Portable Job Ticket Format (PJTF) technologies
- **Trapping controls**—A consistent, easy to use interface for a prepress operators

Adobe Systems has now published a technical white paper entitled, *Adobe Trapping Technology*, describing its all-digital trapping solution. You'll find it at:
http://www.adobe.com/prodindex/postscript/PDFS/trapping.pdf

This white paper describes the specific technologies available from Adobe Systems and certified OEM partners, and explains how Adobe trapping technologies work with Adobe PostScript 3 and Adobe PostScript Extreme® technologies. This paper also describes both Adobe in-RIP trapping and Adobe PDF trapping workflows. Finally, the paper highlights some of the unique features and strengths of Adobe trapping technology and shows how you can control these settings.

This paper focuses only on trapping technology. For more information about Adobe PostScript Extreme or PDF files, refer to the AdobePostScript Extreme and the PDF for Prepress Workflow and Document Delivery white papers at:
http://www.adobe.com/prodindex/postscript/PDFS/Extreme.pdf
http://www.adobe.com/prodindex/postscript/PDFS/PDFps3.pdf ◆