



# ColorSync and Photoshop



While Adobe Photoshop® 5 brings the benefits of ColorSync color management into the mainstream, some initial input to the Photoshop default settings is required to customize it for design and print publishing. To avoid complications, follow the steps at right before opening or creating your first file.

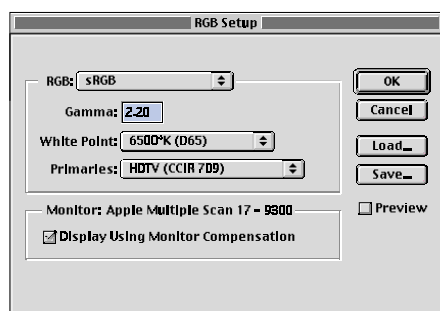
Start by selecting Color Settings from the File menu. The following four steps progress in the order of the Photoshop Color Settings options—RGB Setup, CMYK Setup, Grayscale Setup, and Profile Setup.

With these few steps, you can make device-independent color management part of your daily work life. Photoshop 5 will automatically embed, or write, ColorSync/ICC profiles in image files and establish a known “working” color space for each one. You’ll be able to count on color that looks the same on different workstations and across platforms.

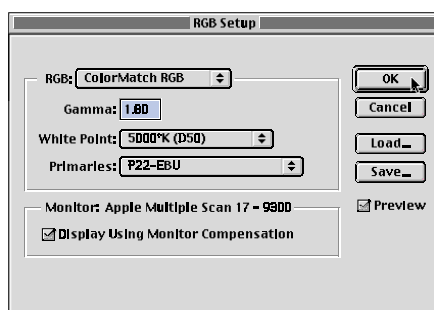
## Four Easy Steps

### 1. RGB Setup

With this release, Adobe has included predefined, device-independent RGB color spaces in which to work. In earlier versions, your RGB working space was your monitor, which led to color shifts between workstations and unpredictable results in print.



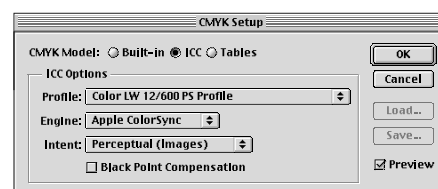
The default setting for RGB is “sRGB.” It is the native color space for some scanners, ink-jet printers, and PC monitors. Because of its smaller gamut, it is not recommended for the print publishing community.



- Select ColorMatch RGB or Apple RGB not sRGB, for print. ColorMatch RGB is based on the Radius PressView display and currently best fits the range of color reproducible in print and displayable on the monitor. If you prefer to use the same setting Adobe Photoshop 4 used as its default RGB working space, choose Apple RGB.
- Gamma, White Point, and Primaries automatically change to those shown.
- Check the box for Monitor Compensation so that real-time color conversion between the Photoshop working space and the monitor is in effect.

Provided that the people who are editing images keep their displays calibrated and use the same RGB working space, they will see the same color. Notice that Apple Multiple Scan 17-9300 is shown under Monitor. Photoshop provides for the conversion between ColorMatch RGB and the signal sent to your monitor, identified by the profile seen in your Monitors & Sound control panel.

### 2. CMYK Setup



- Select CMYK Setup.
- The default dialog box assumes you will use Photoshop separation tables when changing color modes from RGB to CMYK for print. Experienced users can make adjustments here.
- Beginners can get professional results using the ICC button.

For the Profile, select the actual printing device to account for color reproduction.

- Engine stands for the CMM (color management module) used to do a transformation; CMMs from Linotype, Agfa, Kodak, and Built-in (Adobe) are possible choices. Select ColorSync for conversions to CMYK; the choice is subjective.
- Intent stands for “rendering intent.” It should be left at Perceptual for color images.
- Until hardware and software allow users to find and set their monitor’s black point, leave Black Point Compensation unchecked or it might clip your gamut.

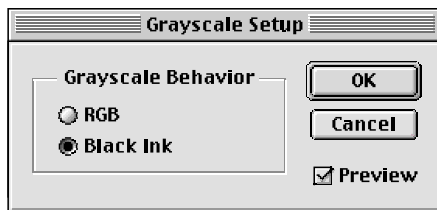
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## ColorSync and Photoshop continued...

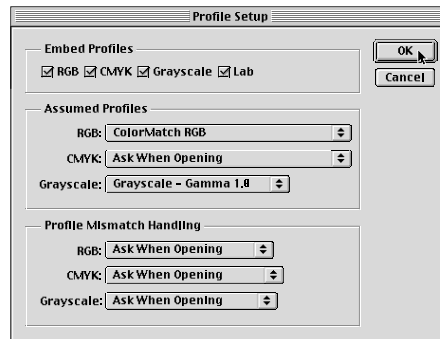
### 3. Grayscale Setup

- Select Grayscale Setup.
- RGB Grayscale provides a composite gray, made up of equal amounts of red, green, and blue signals. There is no compensation for dot gain. It is the setting to use when images will appear on the Web.
- Black Ink Grayscale is based on Photoshop separation tables. Its gray behaves like the black plate of a CMYK file, including compensation for dot gain. It is the preferred setting when images will be printed.



### 4. Profile Setup

Photoshop must be told when you want it to embed profiles, if at all, and how to account for missing or different color profiles when an image is opened.



Choose to embed profiles for all color spaces in the top region of the dialog box—RGB, CMYK, Grayscale, and LAB (CIE L\*a\*b\*). Check all boxes under Embed Profiles. Exceptions to the “always embed” rule include the following:

- Images that will exist in a user interface that requires very specific colors
- Pictures bound for the Web that use a limited palette of colors
- Test targets used for calibrating and characterizing color capture and output devices

#### Get ColorSync Free

ColorSync is free with every Macintosh computer. Download the latest version—along with sample profiles, plug-ins, and sample AppleScripts from the ColorSync web site at [www.apple.com/colorsync](http://www.apple.com/colorsync).

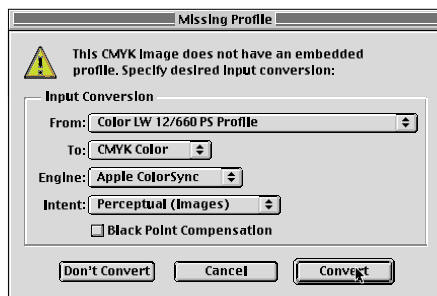
#### Get More Details

For a more detailed explanation of new color management features in Photoshop 5, visit the Adobe web site: [www.adobe.com/supportservice/custsupport/techguide/pshop/main.html](http://www.adobe.com/supportservice/custsupport/techguide/pshop/main.html).

## Profile Exceptions

### Opening Images Without Profiles

When opening images without an embedded profile, Photoshop gives you two choices for tagging images in the Assumed Profiles interface. Either set the Profile Setup to automatically tag and convert untagged images if you know where they were last edited, or select Ask When Opening to decide on a case-by-case basis. The Ask When Opening option posts the following dialog box when you open an untagged image.



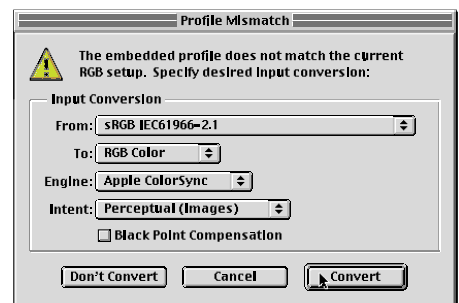
- Set the From value to show the last device that displayed or printed the image.
- Set the To value to show the color space in which you will open the image. Your settings for RGB and CMYK Setups take effect.

- Engine, or color management module (CMM), is the method used for the conversion. Start with ColorSync.
- Intent should be left at Perceptual for color images.
- Do not check the Black Point Compensation box.

### Opening an Image with a Profile Mismatch

When you open a tagged image for which the last user had a different working color space, there is a Profile Mismatch. Tell Photoshop how to handle this situation for RGB, CMYK, and Grayscale images. The default setting is to convert automatically to the current RGB working space; this is not recommended. The Ask When Opening option gives you a chance to see the previous working space and make an informed choice when the following dialog box appears.

- The From value shows the image's current working space, sRGB.



- Set the To value to your chosen working space for RGB, CMYK, or Grayscale.
- Set the Engine to ColorSync.
- Set the Intent to Perceptual.
- Do not check the Black Point Compensation box.

### Caution

When performing a profile-to-profile conversion on an image, such as one tagged for Matchprint CMYK going to Color LaserWriter CMYK, work with a copy of an original file. Currently, the tag that specifies the origin is not preserved in the conversion, and you might experience some variance in color.