



Color Managed Workflow

for EPSON Scanners and Printers

PMA Preview Edition

EPSON



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for EPSON® Scanners and Printers

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Printed on recycled paper 2/03

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The EPSON Perfection® 3200 scanner and your EPSON® photo printer form an ideal system for reproducing photography and fine art. With these outstanding tools, you expect the highest quality color output. That's why we've created this booklet. It gives you all the tips and techniques you need to optimize color on your EPSON system.

Monitors, scanners, and printers each use different technologies to reproduce color. Different color technologies mean that the devices have different color ranges or *gamuts*. Each one can produce certain colors that the others can't.

The good news is that a color-managed workflow can help you match colors as closely as possible. By following the instructions in this booklet, you can achieve effective color reproduction using your EPSON Perfection 3200 scanner and EPSON photo printer.

The Art and Science of Color

Each device in your computer system has a different color "language." Color management translates these languages into a universal form of communication, or *device-independent* color model. By using a common language, a color-managed workflow lets you convert an image from one color model to another.

Profiles describe the color gamut of various devices and the color space of individual images. With the information in profiles, color management tools determine the best method for "mapping" out-of-gamut colors. The result is that you get consistent, predictable color reproduction.

This booklet provides you with the step-by-step instructions you need to create accurate profiles for your scanner, monitor, and printer.

All the components you need to build a color-managed workflow are included in the EPSON Perfection 3200 Pro software bundle:

- MonacoEZcolor offers an easy, effective means of building profiles for your scanner, printer, and monitor.
- LaserSoft® SilverFast® provides powerful tools to deliver great scans that need little or no correction after scanning.
- Adobe® Photoshop® Elements 2.0 lets you manipulate your images until they're just right, then hand off the color correctly to your EPSON printer.

In this booklet, we'll walk you through the process of building the profiles you need, configuring SilverFast to pass the color along to Adobe Photoshop Elements, and applying the profiles to ensure that your prints contain the color you expect.

Profiling Your Scanner and Printer

The starting point in building the workflow is to create profiles for your scanner and printer. MonacoEZcolor lets you build a scanner and printer profile in a single session. The first step is to print the printer profiling target from MonacoEZcolor.

Note: You need to create a separate profile for each combination of ink, paper, and printer settings. When you use the profile to make a print, you need to ensure that you're printing on the same paper, with the same inks, using the same printer settings you used to print the target.

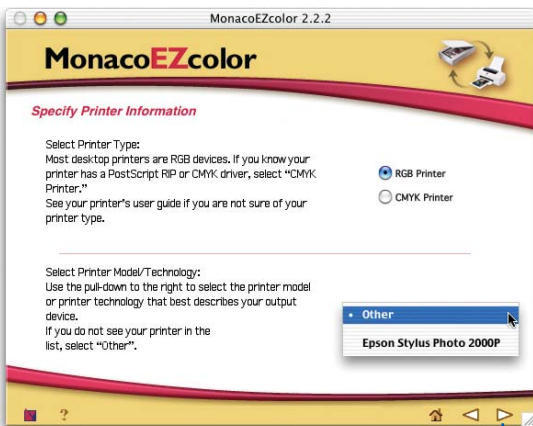
Printing the Printer Profiling Target

- 1 Launch MonacoEZcolor. The welcome screen appears:



- 2 Click **Create Printer Profile**.
MonacoEZcolor provides you with some general guidelines to observe during the profile creation process. If you aren't sure how to follow these guidelines, don't worry—just follow the steps provided here.

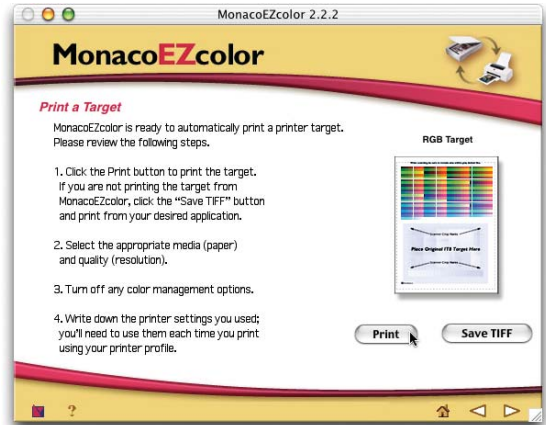
- 3 Click the right arrow at the lower-right of the MonacoEZcolor screen to proceed. The following screen appears:



Click here to proceed

- 4 For any EPSON printer, click **RGB Printer**. From the Printer Model/Technology pop-up menu, choose **Other** for any EPSON printer, or choose **EPSON Stylus Photo 2000P** if this is the printer you're using.

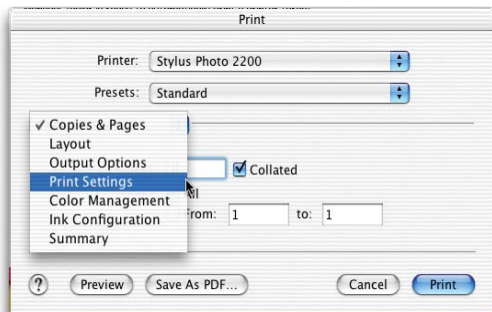
- 5 Click the right arrow to proceed. The Print Target screen appears:



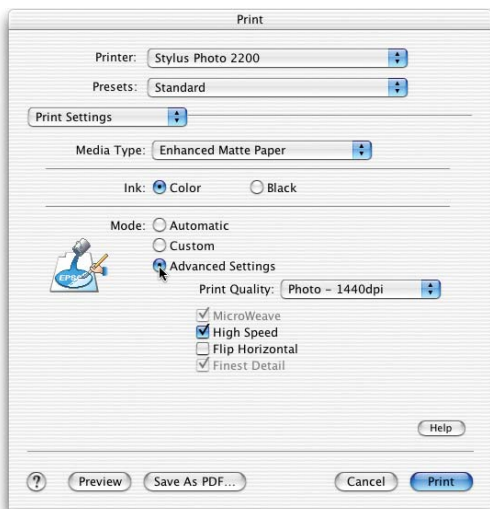
- 6 Make sure your EPSON printer is selected as the current printer, and the paper you want to profile is loaded. Then click **Print**.

***Tip:** If you plan on profiling multiple papers, or the same paper at multiple resolutions, click **Save TIFF** to save the target as a file named "RGB Print Patches.tif". Printing the target is always the first step in building a printer profile. If you have the target saved as a TIFF, you can print it without having to go through the introductory screens in MonacoEZcolor.*

MonacoEZcolor advises you to record the settings you'll make in the printer driver, so you can apply them when you use the profile. When you click **OK**, the print window appears:



7 Choose **Print Settings** from the options pop-up menu. The print settings appear:



8 Choose the paper type you want to profile from the Media Type list—for example, Enhanced Matte Paper. Then click **Advanced Settings** and choose your desired print settings. Most of the time, the default settings work well.

9 Once you've made your selections, choose **Color Management** from the Options menu. The color management settings appear:



10 Click **No Color Adjustment** to ensure that the driver doesn't alter the colors in the profiling target. Then click **Print**.

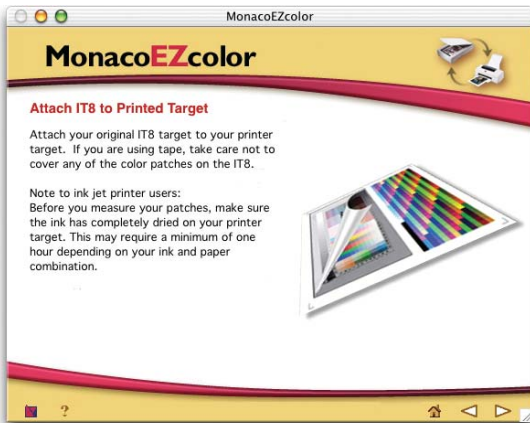
Once you've printed the target, you're ready to proceed to the next part of the process: using SilverFast to scan both the scanner and printer targets.

***Tip:** For an accurate printer profile, make sure you let the printer target dry for at least an hour to reach its final, stable color. Some paper-and-ink combinations take longer to dry than others. If you wait until the next day, you can be sure the target has reached its final color.*

Preparing the Printer and Scanner Targets

The next step is to scan the printer and scanner targets in a single image. MonacoEZcolor will use this scan to build the profiles.

- 1 In MonacoEZcolor, click the right arrow. The following screen appears:

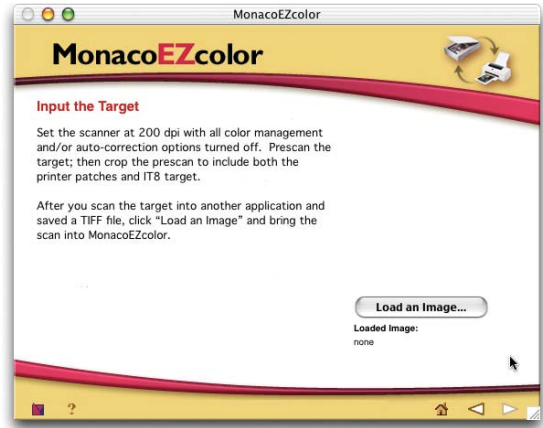


- 2 Follow the on-screen instructions to attach the reflective IT8 target included in the MonacoEZcolor package to the target you printed.

Note: If you use tape to attach the target, make sure the tape doesn't cover any of the color patches on the IT8.

- 3 Click the right arrow to proceed. Follow the on-screen instructions to place the printer and scanner targets on the scanner.

- 4 Click the right arrow to proceed. The following screen appears:

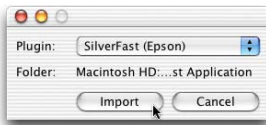


Caution: On some operating systems, MonacoEZcolor lets you scan directly into the application using the EPSON scanner plug-in. **Do not use this feature.** To create a profile that LaserSoft SilverFast can use correctly, you must scan the scanner and printer targets using SilverFast, as described in the following section.

Scanning the Targets with SilverFast

To build profiles, you must use special settings in SilverFast that are quite different from the ones used in normal scanning. You must scan the profiling target with all color management and color correction features turned off, following the instructions in this section.

- 1 Launch the standalone SilverFast application. You'll be prompted to import the SilverFast (Epson) plug-in, as shown. You can find the plug-in inside the SilverFast application folder.



Note: Your scanner must be connected to your computer and turned on before you can successfully import the scanner plug-in.

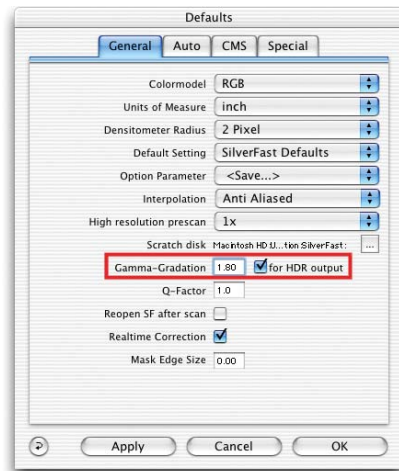
Next, you'll be prompted to enter your name, company, and serial number information. You'll find the SilverFast serial number on the back of the SilverFast package. Once you enter this information and click **OK**, SilverFast opens.

Before you scan the target, you need to make sure that SilverFast is configured correctly for the profile scan.

- 2 On the main SilverFast screen, click the **General** tab, and make sure the Scan Mode is set to **Normal (File)**, Original is set to **Reflective**, and Pos./Neg. is set to **Positive**, as shown:

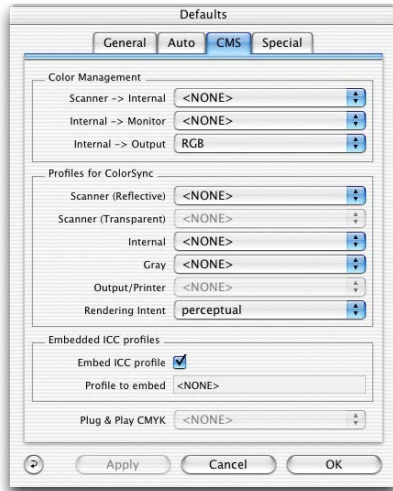


- 3 Once you've confirmed the settings, click the **Options** button. The SilverFast Defaults screen appears:



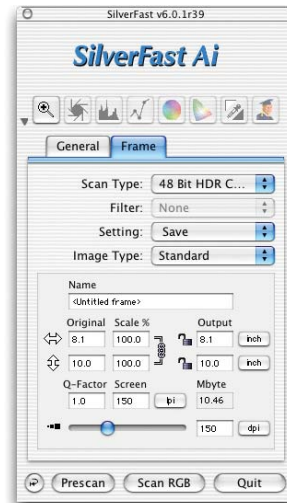
- 4 For Gamma-Gradation, enter **1.80**. Check for **HDR output**, then click the **CMS** tab.

The CMS Defaults screen appears:



- 5 Turn off all the color management options for the target scan. You need to do this whenever you scan a profiling target.
 - In the Color Management section, set Scanner->Internal and Internal->Monitor to <NONE>, and set Internal->Output to **RGB**.
 - In the Profiles for ColorSync section, set all profiles to <NONE>. You can leave the other settings at their defaults.
- 6 When you've completed all the settings, click **OK**.

- 7 On the main SilverFast screen, click the **Frame** tab. Set the Scan Type to **48-bit HDR Color**, and set the resolution slider to **150 dpi**, as shown:

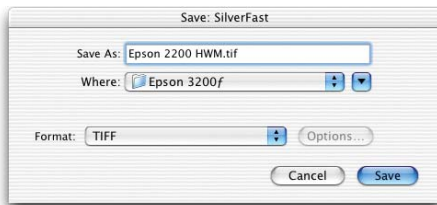


- 8 Once you've made your settings, click **Prescan**. The prescan image appears in SilverFast's scanner window:



9 Crop the prescan, using the dotted line surrounding the target as a rough guide. Don't worry if the scan is slightly skewed. But if the scan is more than 10 degrees or so from square, reposition the target and redo the prescan.

10 Click **Scan RGB** to make the final target scan. SilverFast prompts you to choose a location, file format, and file name for the scan, as shown:



11 Save the scan in TIFF format.

We recommend that you include the printer and paper type in the file name. If you profile multiple printers, or multiple papers on the same printer, you'll end up with many scans that look very similar. Including this information in the file name makes it easy to identify which scan belongs to which paper and printer combination.

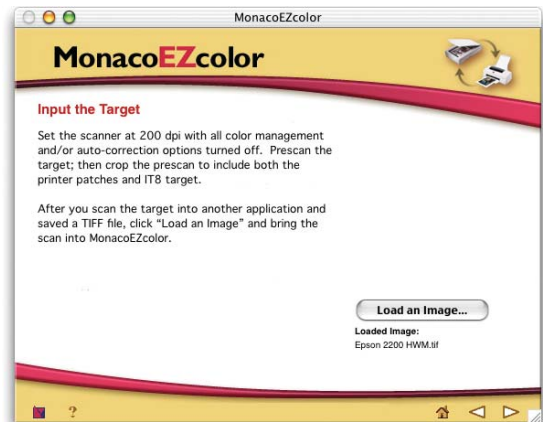
Once you've entered the information, click **Save** to start the scan. SilverFast scans the target and saves it in the specified location. You've completed the scanning process. Now you can return to MonacoEZcolor and build the profiles for your scanner and printer.

Building the Scanner and Printer Profiles

The final part of the profile-building process is loading the target scan into MonacoEZcolor, then naming, building, and saving the profiles.

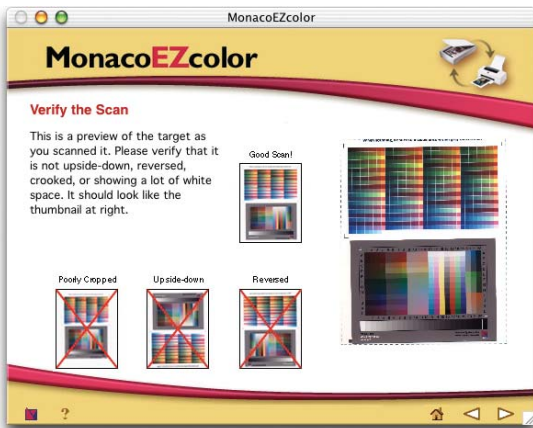
1 Return to MonacoEZcolor. If necessary, use the navigation arrows at the lower-right of the MonacoEZcolor screen to navigate to the screen shown below. Then click **Load an Image**, and load the target scan you created in the previous section.

The target's file name is displayed below the button, as shown:

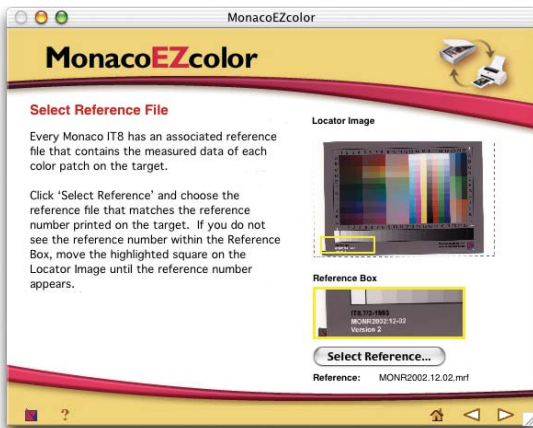


2 Click the right arrow at the lower-right to proceed.

The following screen appears:



- 3 After verifying that you've scanned the target correctly, click the right arrow to proceed. The following screen appears:



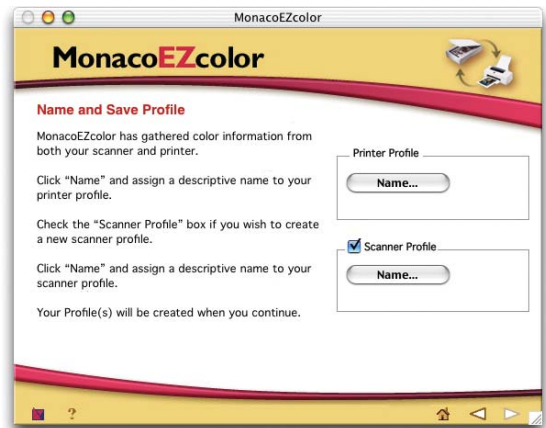
This screen lets you specify the reference file, which contains color measurements of the IT8 scanner target that MonacoEZcolor uses in calculating the profile.

- 4 Click **Select Reference** and load the reference file corresponding to the reference number on your IT8 target. (It's the number in white type at the lower left of the target.)

For example, the reference file for the target labeled "MONR2002:12-02" is named "MONR2002.12.02.mrf."

Once you've loaded the reference file, its name appears below the button.

- 5 Verify that the reference file name matches the reference number on the target, then click the right arrow to proceed. The following screen appears:



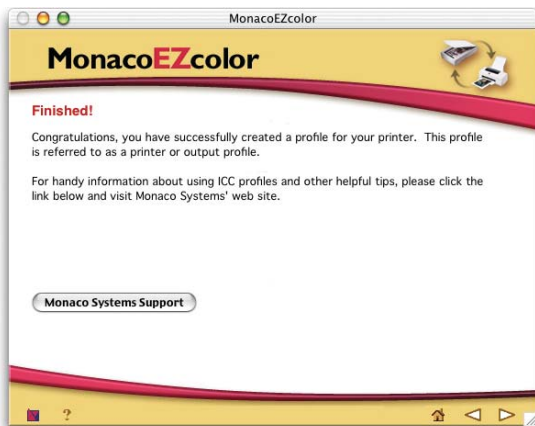
- 6 Click the **Name** button in the Printer Profile area, and enter a name for your printer profile. Then check **Scanner Profile**, click the **Name** button in the Scanner Profile area, and enter a name for your scanner profile.

Tip: Use descriptive profile names rather than the default names suggested by MonacoEZcolor. For example, you might name the profile for an EPSON Stylus® Photo 2200 using Enhanced Matte Paper "SP2200 EM."

Once you've entered names for the profiles, they appear under the respective **Name** buttons.

7 Click the right arrow to proceed. MonacoEZcolor displays a progress bar as it builds the scanner profile, then the printer profile.

Once the profiles are built, MonacoEZcolor displays the Finished screen, as shown:



You've now successfully built profiles for both your scanner (for reflective copy) and your printer (for the paper you used to print the target). Later in this booklet we'll show you how to use these profiles with SilverFast and Adobe Photoshop Elements 2.0 or Adobe Photoshop 7.0.1.

If you want to start using your profiles immediately, you can skip to "Scanning with LaserSoft SilverFast" on page 23. In the next sections, we show you how to build additional printer profiles for different papers, how to build a scanner profile for transparency scanning, and how to calibrate and profile your monitor.

Building Additional Printer Profiles

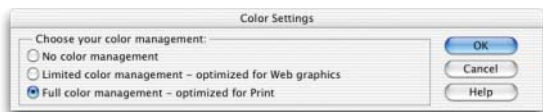
Remember that printer profiles are paper-specific, so you may need to build additional profiles for different paper stocks. You can follow the previously described procedure to build additional printer profiles. The only difference is that you don't need to check **Scanner Profile** in the Name and Save Profile screen (shown on page 8).

However, if you've already saved the printer target from MonacoEZcolor as a TIFF file, you can streamline the process slightly. First, you print the target from Adobe Photoshop Elements 2.0 or Adobe Photoshop 7.0.1. Next, you scan the printer and scanner targets in a single image using SilverFast. Then you use MonacoEZcolor to build the printer profile.

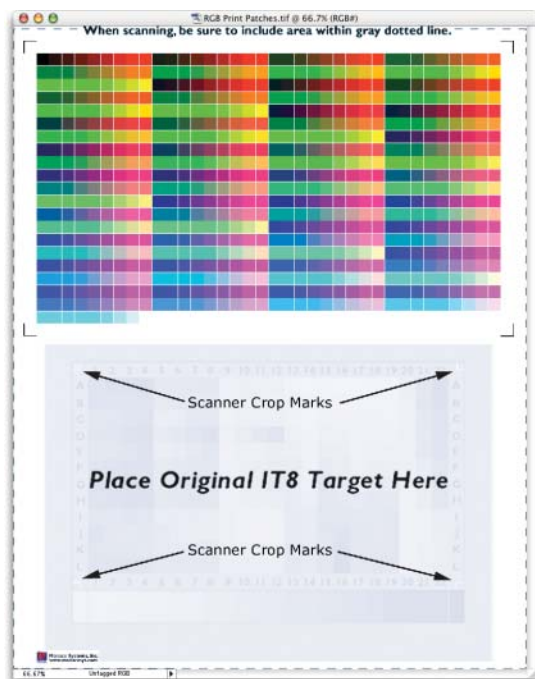
When printing profiling targets, make sure the color management features in both the host application and printer driver do not alter the color values in the target. The following sections offer step-by-step instructions for printing the target from Adobe Photoshop Elements 2.0 or Adobe Photoshop 7.0.1.

Printing the Printer Target from Adobe Photoshop Elements 2.0

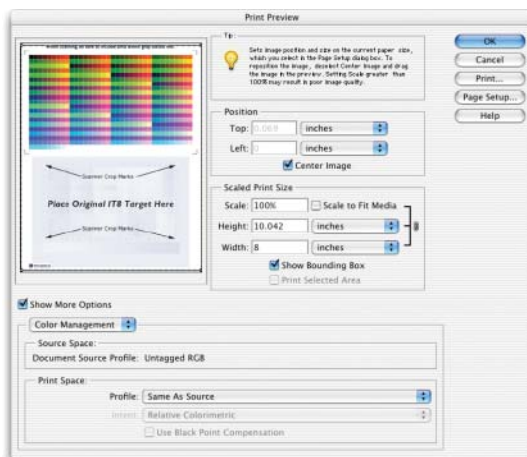
- 1 Launch Adobe Photoshop Elements 2.0.
- 2 Choose **Color Settings** from the Edit menu (Mac OS 9, Windows) or the Photoshop Elements menu (Mac OS X). The Color Settings dialog box appears:



- 3 Choose **Full color management — optimized for Print**, then click **OK**.
- 4 Choose **Open** from the File menu, browse to the **RGB Print Patches.tif** file you saved from MonacoEZcolor, and open it. The file appears on the screen:



- 5 Choose **Print Preview** from the File menu. The Print Preview dialog box appears:



- 6 If necessary, click **Page Setup** to change the paper size and orientation. Make sure **Show More Options** is checked, then choose **Color Management** from the pop-down menu. In the Print Space section, choose **Same As Source** from the Profile menu, then click **Print**. The print window appears:



- 7 Choose **Print Settings** from the options pop-up menu.

The print settings appear:



- 8 Choose the paper type you want to profile from the Media Type list—for example, Enhanced Matte Paper. Then click **Advanced Settings** and choose your desired print settings. Most of the time, the default settings work well.

- 9 Once you've made your selections, choose **Color Management** from the Options menu. The Color Management settings appear:



- 10 Click **No Color Adjustment** to ensure that the driver doesn't alter the colors in the profiling target. Then click **Print**.

If you see a warning that some PostScript-specific settings will be ignored, click **OK**.

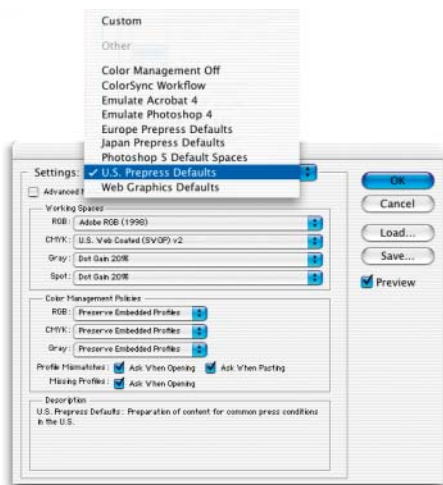
- 11 Quit Adobe Photoshop Elements. When prompted to save changes to the RGB Print Patches.tif file, click **Don't Save**.

Once you've printed the target, you're ready to proceed to the next part of the process: using SilverFast to scan both the scanner and printer targets. See pages 4 to 9 for step-by-step instructions.

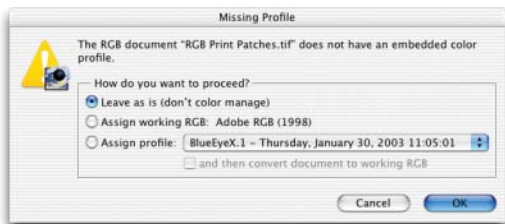
Tip: For an accurate printer profile, make sure you let the printer target dry for at least an hour to reach its final, stable color. Some paper-and-ink combinations take longer to dry than others. If you wait until the next day, you can be sure the target has reached its final color.

Printing the Printer Target from Adobe Photoshop 7.0.1

- 1 Launch Adobe Photoshop 7.0.1.
- 2 Choose **Color Settings** from the Edit menu (Mac OS 9, Windows) or the Photoshop menu (Mac OS X). The Color Settings dialog box appears:



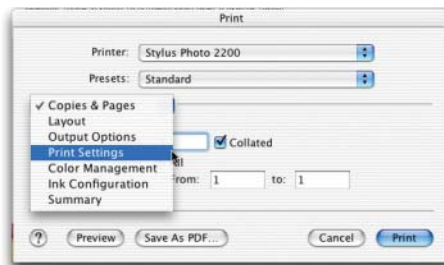
- 3 For Settings, choose **U.S. Prepress Defaults**, then click **OK**.
- 4 Choose **Open** from the File menu, browse to the RGB Print Patches.tif file you saved from MonacoEZcolor, and open it. The Missing Profile warning appears:



- 5 Choose **Leave as is (don't color manage)**, then click **OK**. The RGB Print Patches.tif file appears.
- 6 Choose **Print with Preview** from the File menu. The Print Preview dialog box appears:

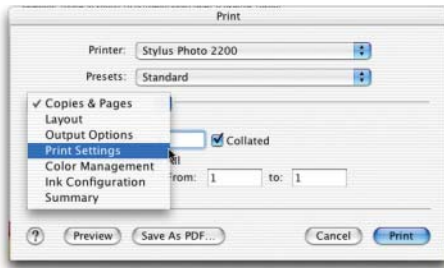


- 7 If necessary, click **Page Setup** to change the paper size and orientation. Make sure **Show More Options** is checked, then choose **Color Management** from the pop-down menu. In the Print Space section, choose **Same As Source** from the Profile menu, then click **Print**. The Print window appears:



- 8 Choose **Print Settings** from the options pop-up menu.

The Print Settings appear:



- 9 Choose the paper type you want to profile from the Media Type list—for example, Enhanced Matte Paper. Then click **Advanced Settings** and choose your desired print settings. Most of the time, the default settings work well.

- 10 Once you've made your selections, choose **Color Management** from the Options menu. The Color Management settings appear:



- 11 Click **No Color Adjustment** to ensure that the driver doesn't alter the colors in the profiling target. Then click **Print**.
If you see a warning that some PostScript-specific settings will be ignored, click **OK**.

- 12 Quit Adobe Photoshop. When prompted to save changes to the RGB Print Patches.tif file, click **Don't Save**.

Once you've printed the target, you're ready to proceed to the next part of the process: using SilverFast to scan both the scanner and printer targets.

***Tip:** For an accurate printer profile, make sure you let the printer target dry for at least an hour to reach its final, stable color. Some paper-and-ink combinations take longer to dry than others. If you wait until the next day, you can be sure the target has reached its final color.*

Preparing the Targets

To build a printer profile, MonacoEZcolor needs a single scanned image containing both the printer profiling target and the scanner IT8 profiling target. So whenever you build a printer profile, you must attach the scanner IT8 target to the printer target in the location marked on the printer target.

If you use tape to attach the target, make sure that it never touches the color patches, and avoid touching the color patches when you handle the target.

Once you've prepared the targets, you're ready to scan them with SilverFast and use MonacoEZcolor to build your profiles. Follow the instructions on pages 4 to 9.

Building a Scanner Profile for Transparencies

To scan transparencies, you need to use a different profile from the one you use for reflective copy such as photographic prints. This section provides step-by-step instructions for building a scanner transparency profile.

First, you'll scan the transparency target included with MonacoEZcolor using SilverFast, then you'll load the scan into MonacoEZcolor and build the profile.

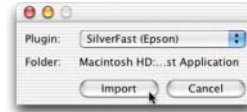
Locate the 4x5 transparency IT8.7/1 target included in the MonacoEZcolor package, and load it in your scanner's 4x5 film holder. The target must be loaded face-down in the holder ("wrong-reading" or mirror-image as viewed from above). Handle the target carefully by its edges to avoid getting fingerprints or smudges on the color patches.

Then place the holder on the scanner glass, with the large arrow on the holder pointing to the right rear of the scanner glass. Then close the lid.

Scanning the Transparency Target

To build a transparency profile, you must use special settings in SilverFast, similar to those used in building the reflective profile. You must scan the profiling target with all color management and color correction features turned off, following the instructions in this section.

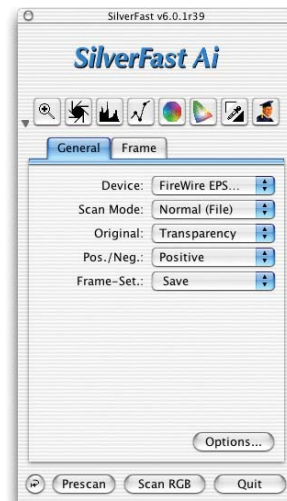
- 1 Launch the standalone SilverFast application. You'll be prompted to import the SilverFast (Epson) plug-in, as shown. You can find the plug-in inside the SilverFast application folder.



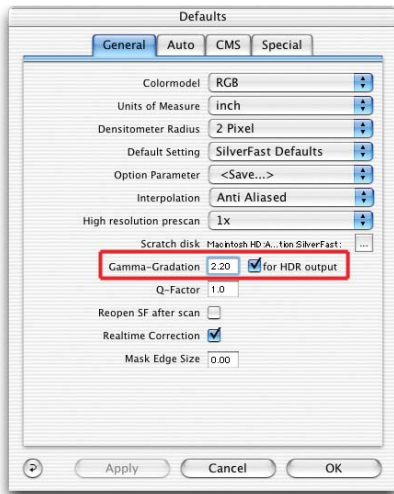
Note: Your scanner must be connected to your computer and turned on before you can successfully import the scanner plug-in.

Before you scan the target, you need to make sure that SilverFast is configured correctly for the profile scan.

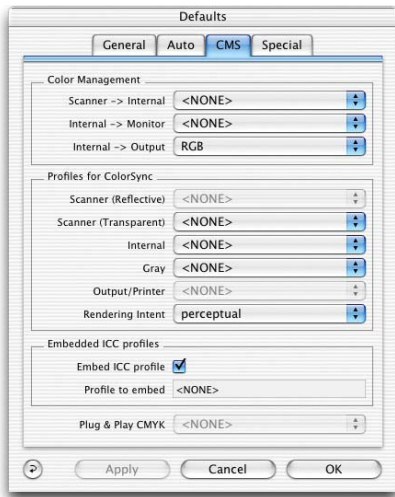
- 2 On the main SilverFast screen, click the **General** tab, and make sure the Scan Mode is set to **Normal (File)**, Original is set to **Transparency**, and Pos./Neg. is set to **Positive**, as shown:



- 3 Once you've confirmed the settings, click the **Options** button. The SilverFast Defaults screen appears:



- 4 For Gamma-Gradation, enter **2.20**. Check **for HDR output**, then click the **CMS** tab. The CMS Defaults screen appears:

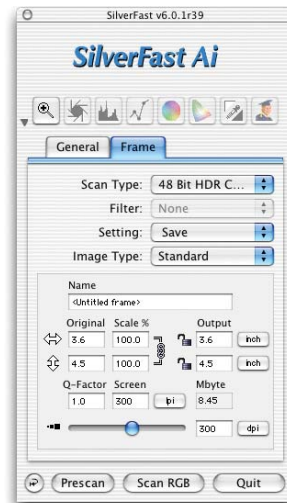


- 5 Turn off all the color management options for the target scan. You need to do this whenever you scan a profiling target.

- In the Color Management section, set Scanner->Internal and Internal->Monitor to **<NONE>**, and set Internal->Output to RGB.
- In the Profiles for ColorSync section, set all profiles to **<NONE>**. You can leave the other settings at their defaults.

- 6 When you've completed all the settings, click **OK**.

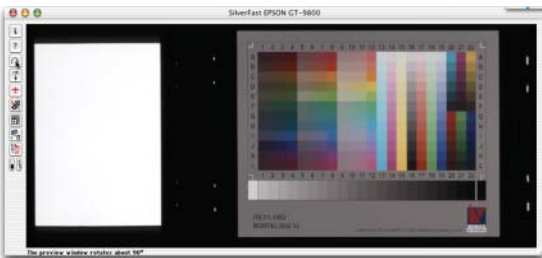
- 7 On the main SilverFast screen, click the **Frame** tab. Set the Scan Type to **48-bit HDR Color**, and set the resolution slider to **300 dpi**, as shown:



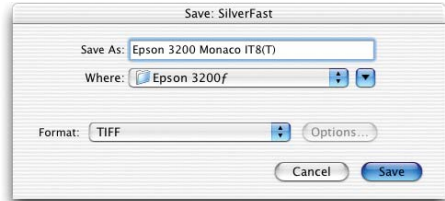
- 8 Once you've made your settings, click **Prescan**. The prescan appears in SilverFast's scanner window:



- 9 Crop the prescan to include only the target, then click the Rotate tool to rotate the image to the correct orientation, as shown:



- 10 Click **Scan RGB** to make the final target scan. SilverFast prompts you to choose a location, file format, and file name for the scan, as shown:



- 11 Save the scan in TIFF format. We recommend that you include the scanner and film type in the file name.

Once you've entered the information, click **Save** to start the scan. SilverFast scans the target and saves it in the specified location.

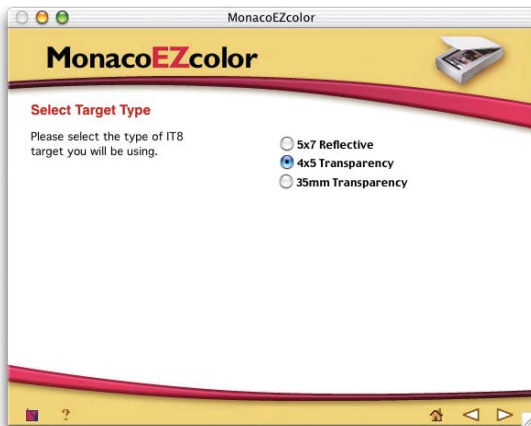
Building the Scanner Transparency Profile in MonacoEZcolor

Once you've scanned the target, you have everything you need to build the scanner profile in MonacoEZcolor, as described in this section.

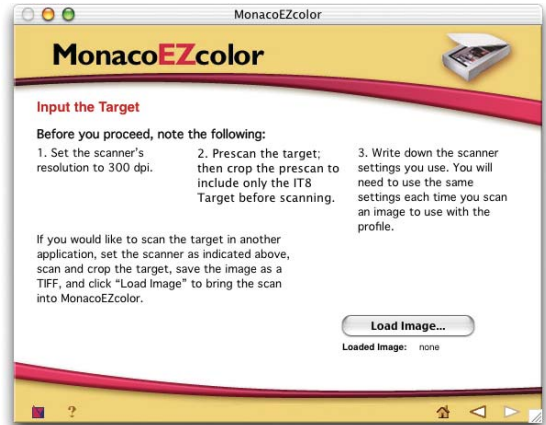
- 1 Launch MonacoEZcolor. The Welcome screen appears:



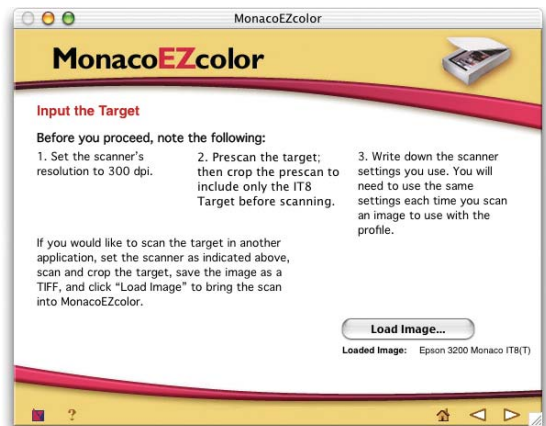
- 2 Click **Create Input Profile**, then click the right arrow to proceed. The intermediate screen contains hints about scanning the target, which you've already done, so you can skip it. The following screen appears:



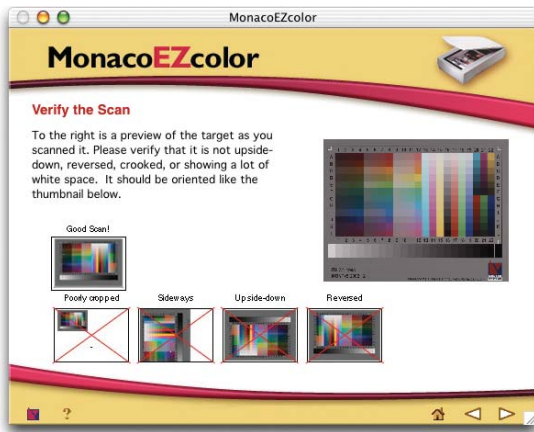
- 3 Choose **4x5 Transparency**. Then click the right arrow twice to proceed to **Input the Target**, as shown. (The intermediate screen covers steps that you've already performed, so you can skip them.)



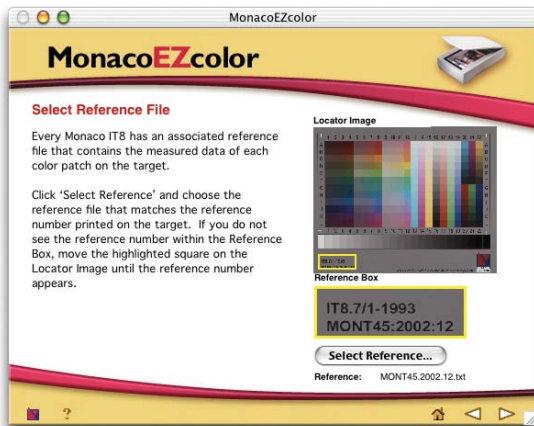
- 4 Click **Load Image**, and load the target scan you created in the previous section. The target's file name is displayed below the **Load Image** button, as shown:



- 5 Click the right arrow to proceed. The following screen appears:



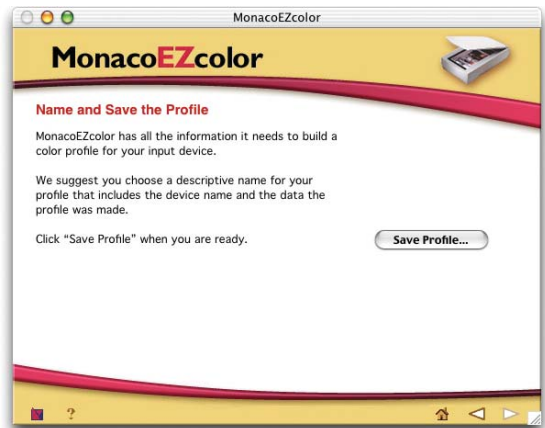
- 6 After verifying that you've scanned the target correctly, click the right arrow to proceed. The following screen appears:



This screen lets you specify the reference file, which contains color measurements of the IT8 scanner target that MonacoEZcolor uses in calculating the profile.

- 7 Click **Select Reference** and load the reference file corresponding to the reference number on your IT8 target. (It's the number in black type at the lower left of the target.) For example, the reference file for the target labeled "MONT45:2002:12-02" is named "MONT45.2002.12.02.mrf." Once you've loaded the reference file, its file name appears below the button.

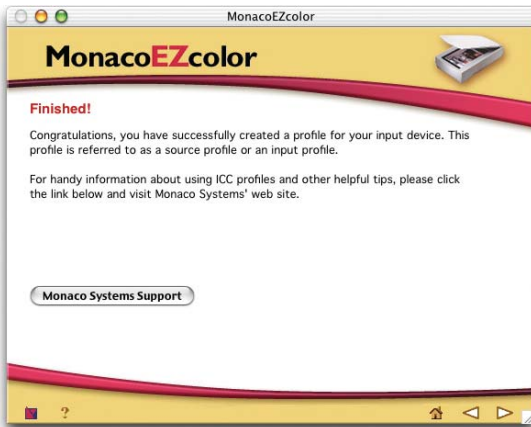
- 8 Verify that the reference file name matches the reference number on the target, then click the right arrow to proceed. The Name and Save Profile screen appears:



- 9 Click **Save Profile**, then enter a name for your scanner profile. You've already built a scanner profile, so you can leave the **Scanner Profile** box unchecked.

Tip: Use descriptive profile names rather than the default name suggested by MonacoEZcolor. For example, you might name the profile for scanning transparencies on the EPSON Perfection 3200 "Epson 3200 (T)."

MonacoEZcolor displays a progress bar as it builds the scanner profile. Once the profile is built, MonacoEZcolor displays the Finished screen, as shown:



You've now successfully built a profile for scanning transparencies. In the next section, we provide instructions for building a display profile to provide accurate color on your monitor. If you want to start using your profiles right away, you can skip to "Scanning with LaserSoft SilverFast" on page 23.

Building a Display Profile

A profile that accurately describes the behavior of your monitor is essential to making color management work. If you have a third-party calibrator that uses a measuring device, or you've purchased the MonacoOPTIX sensor for use with MonacoEZcolor, we recommend that you use these tools instead of the visual calibration described in this section.

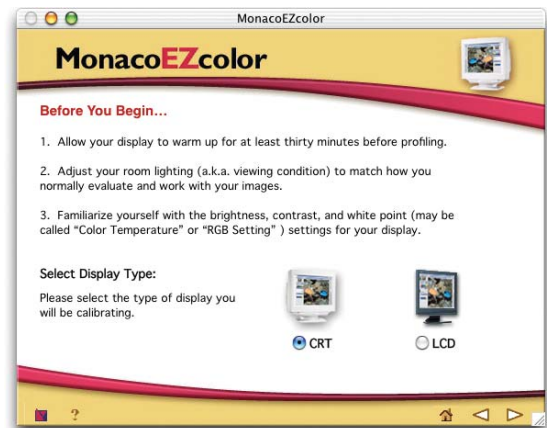
1 Launch MonacoEZcolor.



2 Click **Create Monitor Profile**.

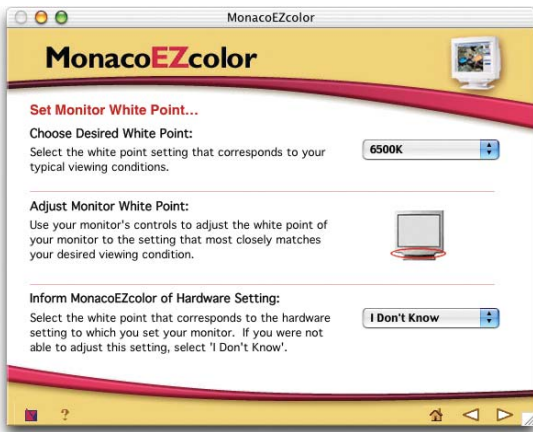
MonacoEZcolor checks for the presence of the MonacoOPTIX colorimeter, and presents you with a screen containing ordering information.

3 Click the right arrow to proceed with the visual calibration.



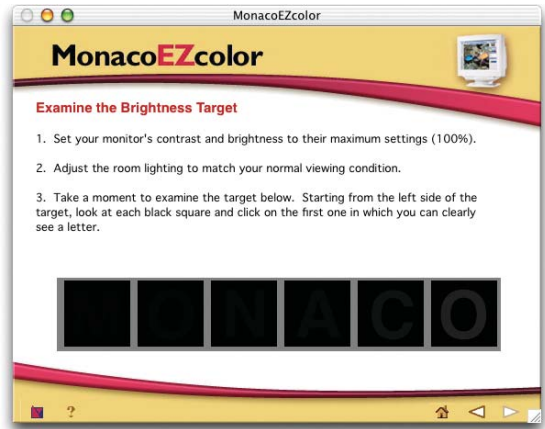
4 Read the general instructions on display warmup time, room lighting, and display controls. Then select your monitor type, and click the right arrow to proceed.

The Set Monitor White Point screen appears:

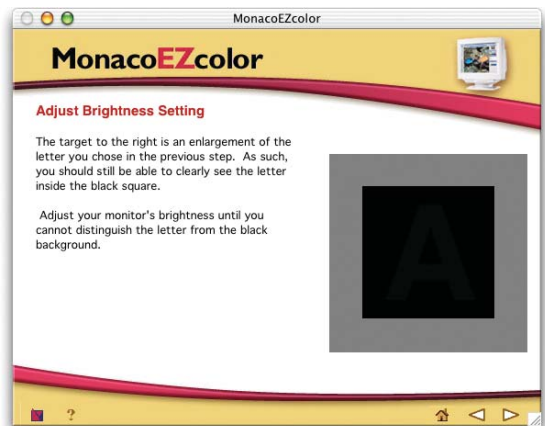


- 5 Choose **6500K** as the Desired White Point.
- If your monitor has adjustable white point settings, adjust them to 6500K, then choose **6500K** in the Hardware Setting area.
 - If your monitor does not offer adjustable white point settings, then choose **I Don't Know** in the Hardware Setting area.

- 6 Click the right arrow to proceed.
- If you chose CRT as your monitor type, the following screen appears.
 - If you chose LCD as your monitor type, skip to step 8 on page 21.

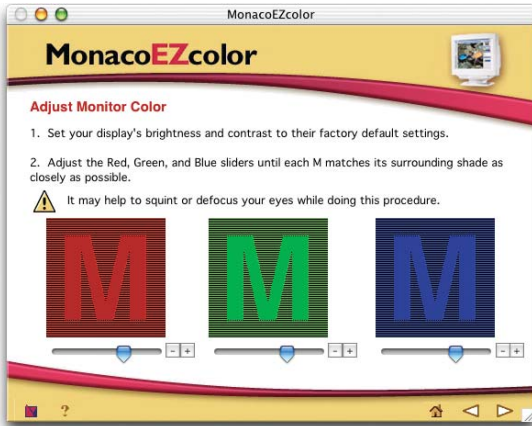


- 7 Click on the darkest square that lets you identify the letter clearly. The following screen appears:



8 Use your monitor's Brightness control to lower the brightness just to the point where you can no longer distinguish the letter from the background.

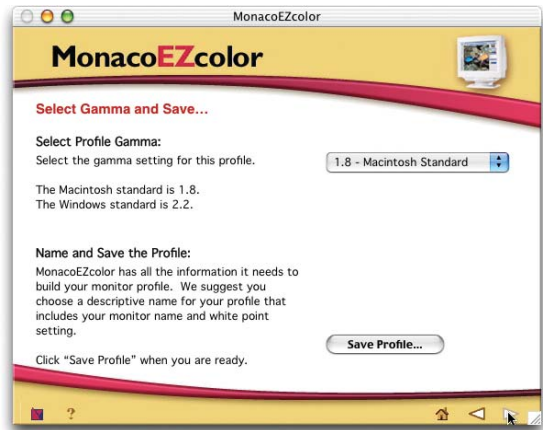
Once you've made the adjustments to your satisfaction, click the right arrow to proceed. The following screen appears:



9 Adjust the sliders until the letters blend with the background squares.

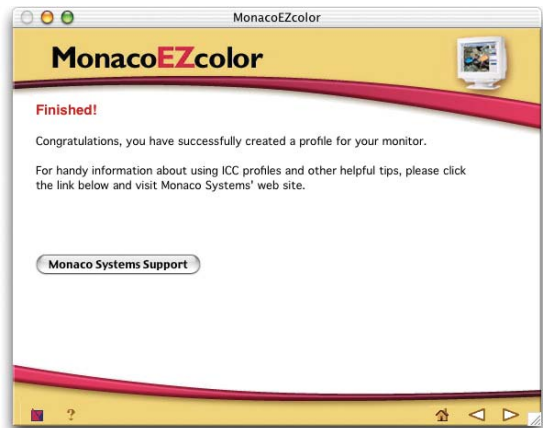
Tip: The blue slider is often difficult to adjust because it's much more difficult to see subtle changes in blue than in red or green. If you set your desktop pattern to a neutral gray (which is a good idea anyway for color work), you can see the effects of the blue slider more clearly on the gray desktop than you can on the blue square in the target. It makes the gray appear more yellow or more blue as you move it. Move the slider until the gray desktop appears neutral.

When you've adjusted the color to your satisfaction, click the right arrow to proceed. The following screen appears:



10 Select the desired gamma. Typically, Macintosh users should select 1.8, and Windows users should select 2.2. Then click **Save Profile**.

MonacoEZcolor prompts you to name your profile. Once you've done so, MonacoEZcolor builds the profile and registers it with the operating system as your display profile. When this process is complete, the Finished screen appears:



You've now successfully built a profile for your monitor. In the following sections, we'll show you how to load the profiles you've created into your scanning applications—and use them to communicate color accurately from scan to print.

Configuring Color Management in Your Host Application

In these sections, we'll show you how to use the profiles you built in the previous sections to ensure accurate, predictable color.

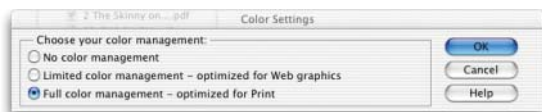
First, we'll explain how to configure color management in your host application. Next, we'll explain how to load profiles into SilverFast to ensure that it communicates color correctly to the host application. Finally, we'll explain how to use profiles to get great prints from your EPSON printer.

Configuring Adobe Photoshop Elements 2.0

Adobe Photoshop Elements offers simple but effective color management. To configure Adobe Photoshop Elements for the EPSON scan-to-print workflow, follow these simple steps:

- 1 Choose **Color Settings** from the Edit menu (Mac OS 9, Windows), or the Photoshop Elements menu (Mac OS X).

The Color Settings window appears:



- 2 Choose **Full color management — optimized for Print**, then click **OK**.

Choosing this option sets Photoshop Elements to use the Adobe RGB (1998) color space for all your work. Adobe RGB (1998) is large enough to hold all the colors you can print on your EPSON printer. The other two options offered by Photoshop Elements, sRGB (Web graphics) and monitor RGB (No color management), are smaller color spaces that can clip some printable colors.

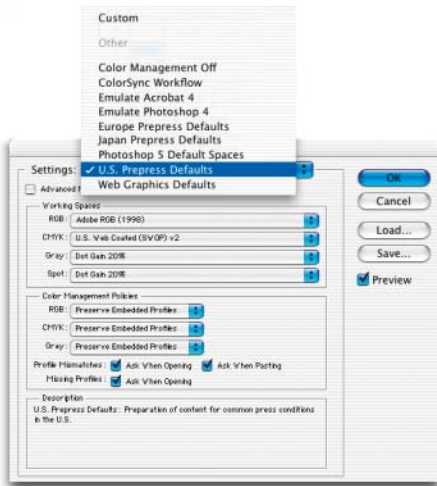
That's all you need to do to configure Photoshop Elements for the workflow. If you plan to use both Photoshop Elements and Photoshop, read the following section. Otherwise, you can skip ahead to "Scanning with LaserSoft SilverFast" on page 23.

Configuring Adobe Photoshop 7.0.1

Adobe Photoshop offers powerful but sometimes complicated color management features. To configure Adobe Photoshop for the EPSON Scan-to-Print workflow, follow these simple steps.

- 1 Choose **Color Settings** from the Edit menu (Mac OS 9, Windows), or the Photoshop Elements menu (Mac OS X).

The Color Settings window appears:



- 2 For Settings, choose **U.S. Prepress Defaults**, then click **OK**.

Choosing this option sets Photoshop to use the Adobe RGB (1998) color space for all your RGB work. Adobe RGB (1998) is large enough to hold all the colors you can print on your EPSON printer.

That's all you need to do to configure Photoshop for the workflow.

Scanning with LaserSoft SilverFast

The instructions given for configuring SilverFast apply whether you're using the standalone SilverFast application or the SilverFast Import plug-in. The procedure is identical for both. However, the settings for scanning reflective copy are slightly different from those for scanning transparencies.

Reflective Scanning with SilverFast

- 1 Launch the SilverFast application, or open the File menu and choose **Import> SilverFast (Epson)** in Photoshop or Photoshop Elements. SilverFast appears:



- 2 On the main SilverFast screen, click the **General** Tab. Make sure that Original is set to **Reflective** and Pos./Neg. is set to **Positive**, then click the **Options** button.

The SilverFast Defaults screen appears:



- 3 Make sure Gamma-Gradation is set to **1.80**, then click the CMS tab. The CMS Defaults screen appears:



- 4 Make the following settings so that SilverFast can communicate color correctly to your host application.

- In the Color Management Section, set Scanner->Internal to **ColorSync**, set Internal->Monitor to **Automatic**, and set Internal->Output to **RGB**.

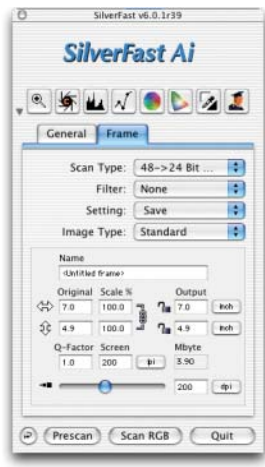
When you see the following warning, click **OK**. The next settings you make will change the SilverFast Internal profile to Adobe RGB (1998) to match the host application.



- In the Profiles for ColorSync section, set the Scanner (Reflective) Profile to the profile you created for reflective scanning with MonacoEZcolor. For the Internal profile, choose **Adobe RGB (1998)**. If you see the warning again, click **OK**. You can leave the other settings at their defaults.

- 5 When you've completed all the settings, click **OK**.

- 6 On the main SilverFast screen, click the **Frame** tab. Set the Scan Type to **48->24-bit Color**, as shown:



You're ready to scan!

- 7 Click the **Prescan** button to initiate a prescan.
Once the Prescan is done, you can set the crop and resolution as needed, and use SilverFast's powerful color-correction tools to make any desired enhancements to your image. For details on using SilverFast's image-correction features, see the SilverFast manual.
Once you've configured SilverFast, you won't need to change these options.

In the next section, we'll show you how to configure SilverFast for transparency scanning.

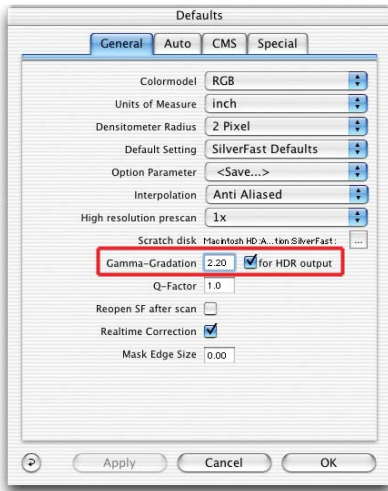
Transparency Scanning with SilverFast

- 1 Launch the SilverFast application, or open the File menu and choose **Import>SilverFast (Epson)** in Photoshop or Photoshop Elements. SilverFast appears:



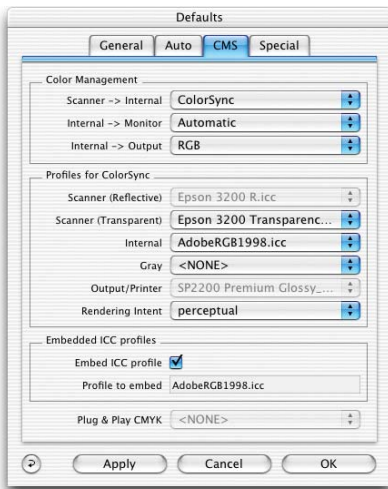
- 2 On the main SilverFast screen, click the General Tab and set Original to **Transparency**. To scan positive transparencies, set Pos./Neg. to **Positive**. To scan negatives, set it to **Negative**.
- 3 When you've made your settings, click the **Options** button.

The SilverFast Defaults screen appears:



- 4 Verify that the Gamma-Gradation value is set to **2.20**. (If you set it while building a transparency profile, SilverFast remembers the setting.) Then click the **CMS** tab.

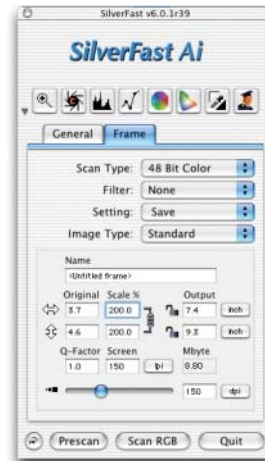
The CMS Defaults screen appears:



- 5 If you've already configured SilverFast for reflective scanning, the only change you need to make is to enter the profile you created for transparency scanning under **Scanner (Transparent)**.

Otherwise, make sure that the other settings are as shown. If necessary, refer to “Reflective Scanning with SilverFast” on page 23.

- 6 When you've completed all the settings, click **OK**.
- 7 On the main SilverFast screen, click the **Frame** tab. Set the Scan Type to **48->24-bit Color**, as shown:



You're ready to scan!

- 8 Click the **Prescan** button.
- Once the Prescan is done, you can set the crop and resolution as needed, and use SilverFast's powerful color-correction tools to make any desired enhancements to your image. For details on using SilverFast's image-correction features, see the SilverFast manual.
- Once you've configured SilverFast, you won't need to change these options. SilverFast automatically remembers the required Gamma-Gradation settings for reflective and transparency, and automatically uses the correct profile for each.

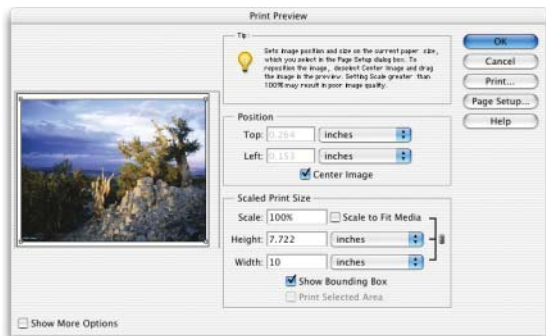
In the next section, we'll show you how to print your images, using the printer profiles you created with MonacoEZcolor.

Using Color Management with Your EPSON Printer

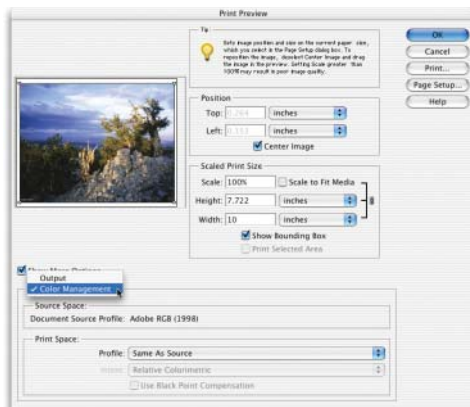
Once you have a scanned and corrected image ready to print, you'll configure your host application to translate the color to your printer profile. Then you'll turn off the color management features in the printer driver to prevent a second, unnecessary conversion from happening.

- 1 In Photoshop or Photoshop Elements, open the File menu and choose **Print with Preview**.

The Print with Preview dialog box appears, as shown. (The dialog boxes look slightly different in Photoshop and Photoshop Elements, but they offer identical functionality.)

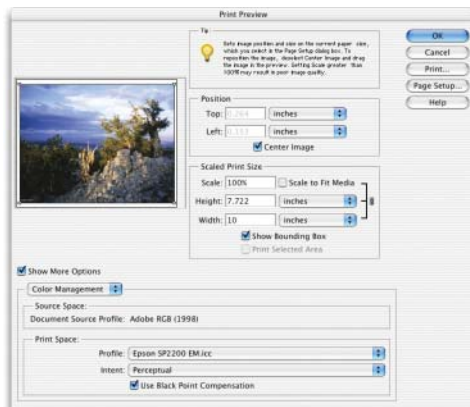


- 2 If necessary, click the **Page Setup** button to change the page size or orientation. Click **More Options**, then choose **Color Management**. Additional options appear:



- 3 In the **Print Space** section, choose the printer profile you created for your printer and paper. Then choose an **Intent** and a **Black Point Compensation** setting.

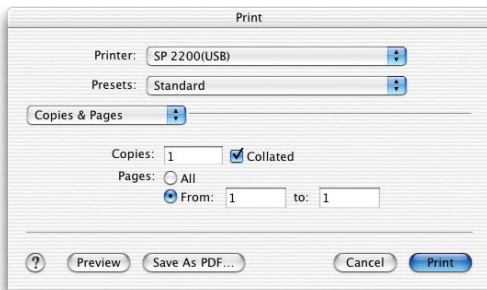
For most images, we recommend either **Perceptual** or **Relative Colorimetric** intent, with **Use Black Point Compensation** checked, as shown:



Loading the printer profile in Print Space tells Photoshop to convert the data sent to the printer from the document source profile to your printer profile.

The conversion is applied only to the print stream, leaving the source document untouched. One advantage of this approach is that you can easily print the same document to many different outputs by simply changing the profile in the print space.

- 4 Once you've made your settings, click the **Print** button. The Print window appears:

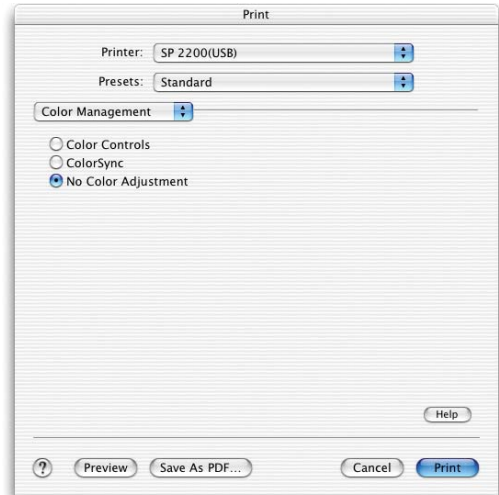


- 5 Choose **Print Settings** from the Options pop-up menu. The Print settings appear:



- 6 Make sure the settings for Media Type and Print Quality are the same as the ones you used for the target when you built your printer profile. Remember, profiles are specific to a paper type and resolution.

- 7 When you've made your settings, choose **Color Management**. The Color Management settings appear:



- 8 Click **No Color Adjustment**. (If you don't do this, the printer driver will perform an additional correction to the image data, usually with disappointing results.) Then click **Print**.

Your EPSON printer produces a color-managed print that matches your image as closely as is physically possible.

Using the Workflow

Once you've configured the various components in the workflow, you won't need to change most of the settings. SilverFast will automatically use the correct profiles for transparency and reflective scanning and will automatically deliver the color in Adobe RGB (1998).

The only profile setting you need to change regularly is the printer profile. You need to match the profile to the printer and paper setting you're using for the print at hand. If you always use the same paper, you don't even need to change that.

Building the workflow demands a significant initial investment of time and effort. But that investment will reward you with accurate, predictable color—for every image you print.

