

Monaco ColorWorks User Guide

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Congratulations

Congratulations on your purchase of Monaco ColorWorks—a color management utility that simplifies the way ICC (International Color Consortium) profiles are used to soft proof and print images.

Monaco ColorWorks is a free utility that is included with MonacoEZcolor. With Monaco ColorWorks you can:

- perform simple color balance and tonal edits to your images
- apply ICC device profiles
- soft-proof and print images

Monaco ColorWorks can be used with non-ICC compliant applications such as Adobe Photoshop Elements 2.0 to create a full color managed solution.

Using the Documentation

This guide contains information on the installation and use of Monaco ColorWorks software. It provides instructions for using Monaco ColorWorks along with Adobe Photoshop Elements to create a full color management solution.

<i>Read...</i>	<i>To learn about...</i>
Preface	using the documentation
Chapter 1	system requirements, installation
Chapter 2	ColorWorks overview
Chapter 3	workflows for applying profiles
Chapter 4, On-line Help	application functionality

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Installation

Monaco ColorWorks is a free utility that is installed along with MonacoEZcolor software.

Minimum System Requirements

Macintosh

Power PC® Processor

Mac OS software versions 9.1-9.x

-32 MB of available RAM

-50 MB of hard-disk space

Mac OS X version 10.4.1 or higher††

-128 MB of available RAM

-64 MB of hard-disk space

24-bit display

USB port

Windows

Pentium® PC or faster processor

Microsoft® Windows 98SE/2000/ME/XP

32 MB of available RAM

50 MB of available hard-disk space

24-bit display card with LUT support*

USB port

* Some Windows video cards do not allow system level support of color management.

†† Monaco ColorWorks requires Mac OS X version 10.1.4 or later to run in native mode. If you desire to run in native mode, check your system version number and update if necessary before installing Monaco ColorWorks. You can use the Software Update utility in System Preferences to perform automatic updates to your system.

Adobe Photoshop versions 5.0 and greater support color management and can be used to apply profiles to your images. Adobe Photoshop Elements 2.0 has limited color management support and does not support soft-proofing. If you are using Adobe Photoshop Elements and desire to implement full color management, you must upgrade to the full version or use Monaco ColorWorks.

Software Installation

For the most up-to-date installation instructions, refer to the Release Notes on the MonacoEZcolor CD.

I ColorWorks Overview

The technology behind color management has evolved in recent years. Currently, most imaging and page layout applications are ICC compliant, meaning they can control how color is displayed and printed by using device profiles.

Unfortunately, while the technology used to create device profiles has been simplified, the process of configuring ICC compliant applications to use profiles is still confusing. To complicate matters, individual applications can have several methodology(s) for *applying* profiles, making the color management attempt a frustrating task.

Limited versions of imaging software are often bundled with printers and scanners today in an effort to add value to their product offerings. While providing image processing functionality, most of these applications offer minimal color management capability, if any at all. Monaco ColorWorks, a free utility that is included with MonacoEZcolor profiling software, was created to fill this gap. Using Monaco ColorWorks, you can scan images, apply device profiles, adjust overall lightness, contrast, saturation or color balance, and accurately soft-proof or print an image. If basic image manipulation (resizing, cropping, etc.) is required, another imaging application can be used for these tasks with Monaco ColorWorks used for final color editing, soft-proofing and printing.

Displaying and Printing Images Accurately

Monaco ColorWorks uses device profiles to accurately display (soft-proof) and print images. The reliability of a soft-proof is dependent upon three factors—the quality of your monitor, your device profiles, and the ambient lighting conditions surrounding your viewing area.

When using Monaco ColorWorks, *always work under the same lighting conditions that were used when you created your monitor profile.*

2 Workflows for Using Profiles

This chapter provides workflows for using the Monaco ColorWorks utility to color manage an image from scanning through soft-proofing and printing. If your image requires scaling, cropping, or other image manipulation, choose a workflow that uses Adobe Photoshop Elements 2.0 along with Monaco ColorWorks.

Choose...	To...
Workflow 1	use ColorWorks to scan, soft-proof, and print an image
Workflow 2	use ColorWorks to soft-proof and print a previously scanned image
Workflow 3	use Adobe Photoshop Elements to scan an image and ColorWorks to soft-proof and print the image

Workflow Assumptions

These workflows assume the following:

- printing is to a non-PostScript printer using an RGB printer profile
- you are using a profiled monitor in a controlled viewing environment. Remember to *always* color correct images using the same lighting conditions that were used to create your monitor profile.
- you have profiles for your scanner and printer

Workflow I: Using Monaco ColorWorks to Scan and Print An Image

Use this workflow to scan, soft-proof, and print an image using MonacoColorWorks. This workflow assumes your image does not require scaling, cropping, or other image manipulation.

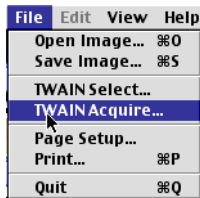
What you need to get started:

- Monaco ColorWorks software
- an original image
- a profiled scanner that supports TWAIN Acquire
- a profiled printer
- a profiled monitor. To ensure an accurate soft-proof, remember to *always* color correct images using the same lighting conditions that were used to create your monitor profile.

Workflow I: Detailed Steps



1. Launch **Monaco ColorWorks**.
2. Select **TWAIN Acquire** from the File menu.

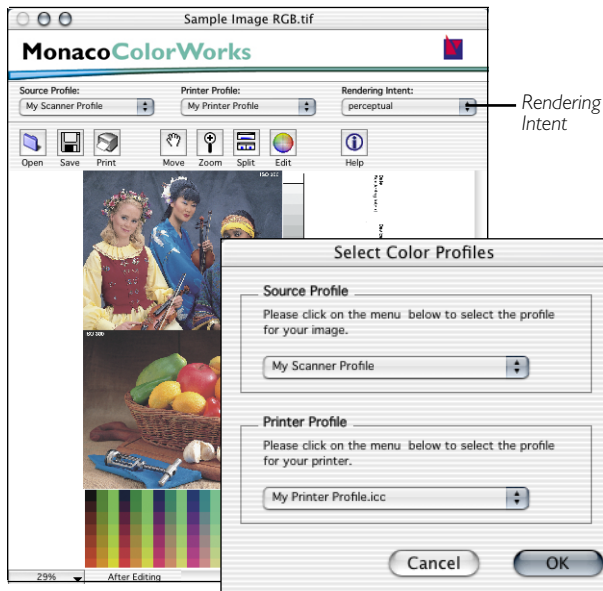


Your scanner application opens.

3. Position your image in the scanner per manufacturer instructions and choose **Prescan** or **Preview** in the software.
4. Turn off any color management options that may appear in your scanner software. With the exception of resolution, choose the same scanner settings that were used when you created your scanner profile. If you alter the

original scanner settings, the soft-proof will not accurately reflect the scan.

5. Crop and scale the image as desired.
6. Scan the image and close the scanner application if it doesn't automatically close. The scanned image appears in the ColorWorks editing window and the *Select Color Profiles* dialog box appears.



7. In the *Select Color Profiles* dialog box, select:
 - your **scanner profile** from the *Source Profile* list
 - your **printer profile** from the *Printer Profile* list
8. Click **OK** to close the dialog box.
9. Select a **rendering intent** from the *Rendering Intent* list in the ColorWorks editing window.
10. Using the available tools, color correct the image as desired (optional).

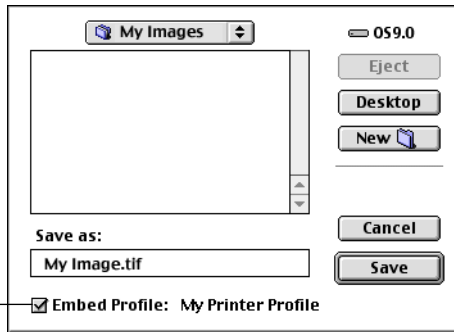
Printer profiles are created for specific paper and ink combinations and cannot be interchanged.

11. Load the same paper that was used to create the printer profile into the printer's input tray.
12. Click the **Print** icon or select **Print** from the File menu and print the image using the same settings that were used to print the printer patches when you created your printer profile.

Prints from ink jet printers require a one hour drying time. The color may not accurately reflect the screen image before this time period.



13. Click the **Save** (disk) icon or select **Save Image** from the File menu.



Embed Profile

14. Name and save the image with **Embed Profile** checked.

In the future when you open the image to print, select your printer profile as both your Source Profile and your Printer Profile in the *Select Color Profiles* dialog box.

Workflow 2: Using Monaco ColorWorks to Print a Previously Scanned Image

Use this workflow to soft-proof and print a previously scanned image using Monaco ColorWorks.

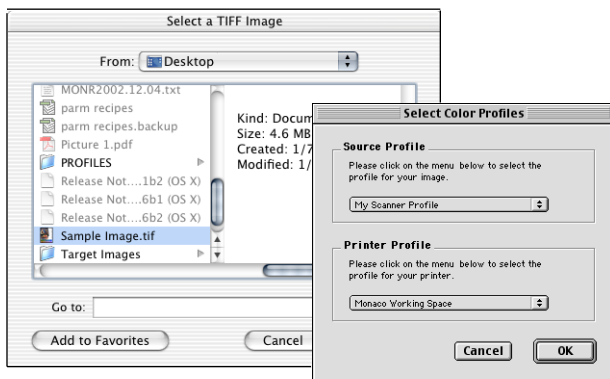
What you need to get started:

- Monaco ColorWorks software
- an image previously scanned and saved in TIFF format
- a profiled printer
- a profiled monitor. To ensure an accurate soft-proof, remember to *always* color correct images using the same lighting conditions that were used to create your monitor profile.



Workflow 2: Detailed Steps

1. Launch **Monaco ColorWorks**.
2. Click the **Open** (folder) icon. The *Select a TIFF Image* dialog box opens.

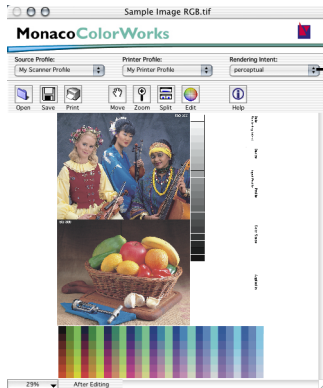


3. Locate, select, and open the TIFF file for your image. The *Select Color Profiles* dialog box opens.
4. In the *Select Color Profiles* dialog box, select:

- a **source profile** for the image from the *Source Profile* list. If the image was directly saved after scanning, select your scanner profile as your source profile.
- your **printer profile** from the *Printer Profile* list

Your image appears in the ColorWorks editing window.

5. Select a **rendering intent** from the *Rendering Intent* list.



6. Using the available tools, color correct the image as desired (optional).
7. Load the same paper that was used to create the printer profile into the printer's input tray. Printer profiles are created for specific paper and ink combinations and cannot be interchanged.

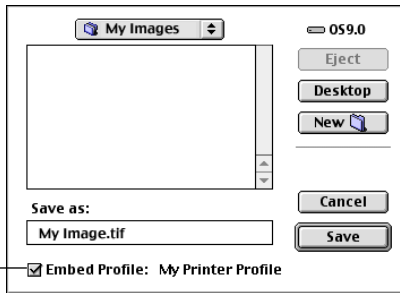


8. Click the **Print** icon or select **Print** from the File menu, and print the image using the same settings that were used to print the printer patches when you created your printer profile.

Prints from ink jet printers require a one hour drying time. The color may not accurately reflect the screen image before this time period.



9. Click the **Save** (disk) icon or select **Save Image** from the File menu.



Embed Profile

10. Name and save the image with **Embed Profile** checked.
11. In the future when you open the image to print, select your printer profile as both your *Source Profile* and your *Printer Profile* in the *Select Color Profiles* dialog box.

Workflow 3: Using Monaco ColorWorks with Adobe Photoshop Elements

This workflow uses Monaco ColorWorks to scan the image, Adobe Photoshop Elements 2.0 to print the image, or Monaco ColorWorks to soft-proof and print the image.

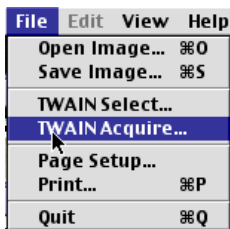
What you need to get started:

- Monaco ColorWorks software
- Adobe Photoshop Elements software
- an original image
- a profiled scanner that supports TWAIN Acquire
- a profiled printer
- a profiled monitor. To ensure an accurate soft-proof, remember to *always* color correct images using the same lighting conditions that were used to create your monitor profile.

Workflow 3: Detailed Steps

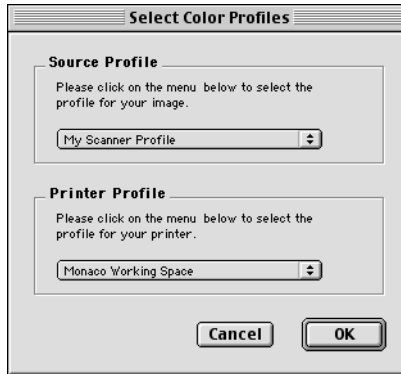


1. Launch **Monaco ColorWorks**.
2. Select **TWAIN Acquire** from the File menu.



3. Scan an image using the same scanner settings previously used to profile your scanner in MonacoEZcolor. You may change the resolution setting, but all other settings must be duplicated exactly, or your scanner profile will render color inaccurately.

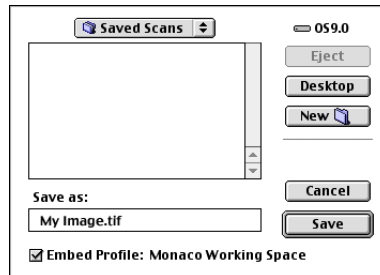
- When the *Select Color Profiles* window appears, select your **scanner profile** as your *Source Profile*, **Monaco Working Space** as your *Printer Profile*, and click **OK**.



The scanned image appears in the editing window.



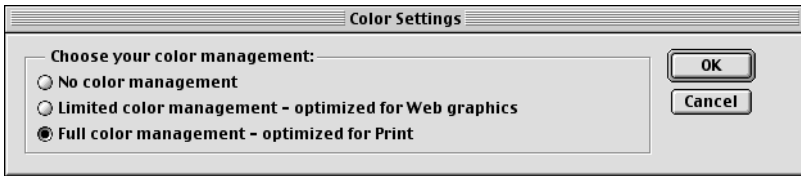
- Click the **Save** (disk) icon or select **Save Image** from the File menu.
- With **Embed Profile** checked, name and save the image. Close Monaco ColorWorks.



Edit the Image in Photoshop Elements

- Launch **Adobe Photoshop Elements**.

2. Select **Color Settings** from the **Edit** menu (Mac OS 9, Windows), or the **Photoshop Elements** menu (Mac OS X).



3. Select **Full color management** in the Color Settings dialog box, then click **OK**.

This option enables your embedded profile to be used by Photoshop Elements. **It does not allow you to see an accurate soft-proof of your final print.**

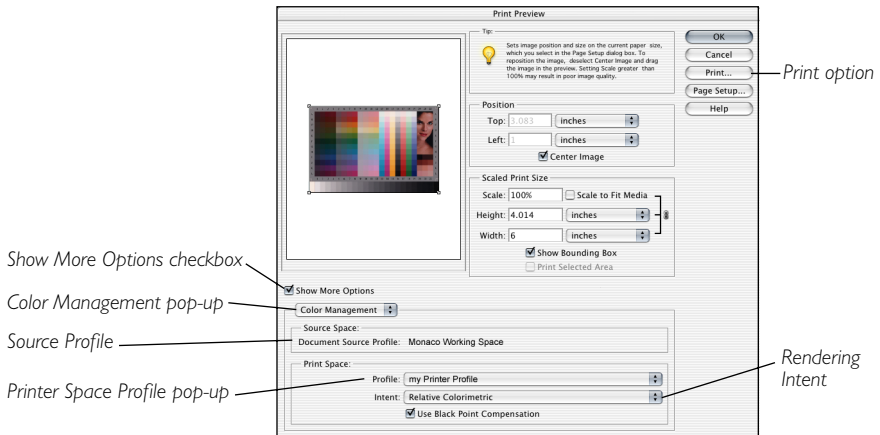
4. Open the image you saved in Monaco ColorWorks.
5. Edit the image as desired.
6. Select **Save As** from the File menu. With **Embed Color Profile** (Mac OS) or **ICC Profile** (Windows) checked, name and save the image as a TIFF with no compression applied.

To print the image from Adobe Photoshop Elements 2.0, continue with the workflow. To further edit the image in Monaco ColorWorks or to view a soft proof of the image before printing, skip the next section and continue with *Print Method 2: Print the Image from Monaco ColorWorks*.

Print Method 1: Print the Image from Adobe Photoshop Elements 2.0

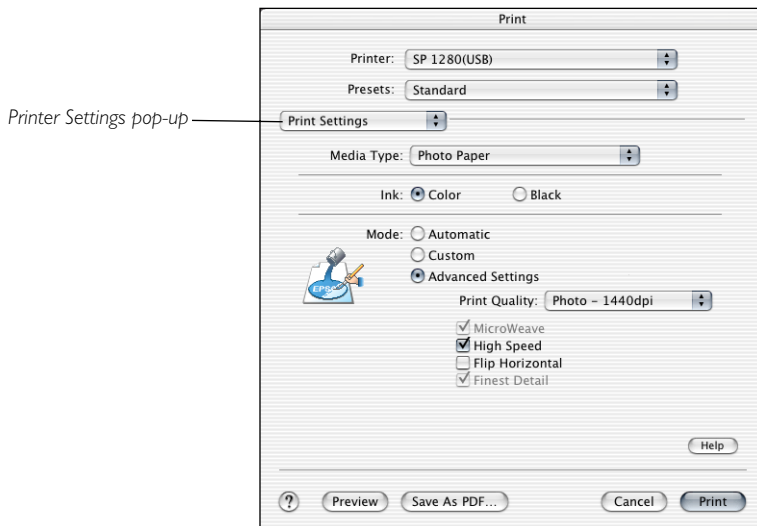
1. Select **Print Preview** from the **File** menu.
2. Check the **Show More Options** box to expand the window.
3. Select **Color Management** from the pop-up list.

Monaco Working Space is displayed in the Elements print dialog box as the *Source Space*.

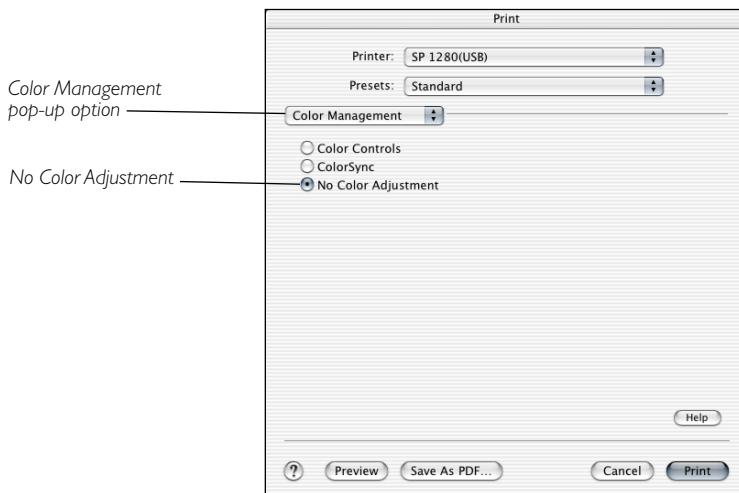


4. Select **your printer profile** from the *Print Space*>*Profile*: pop-up list. When the image prints, Photoshop will convert it from the *Source Space* (Monaco Working Space) to the *Print Space* (your printer's color space).
5. Select your desired **rendering intent** from the *Intent*: pop-up list
6. Check **Use Black Point Compensation** and click the **Print** button in the top of the dialog box.

The *Print* dialog box appears.



7. Select the *Printer Settings* pop-up option and configure the dialog box with the proper media and ink settings.
8. Change the pop-up option to *Color Management*.

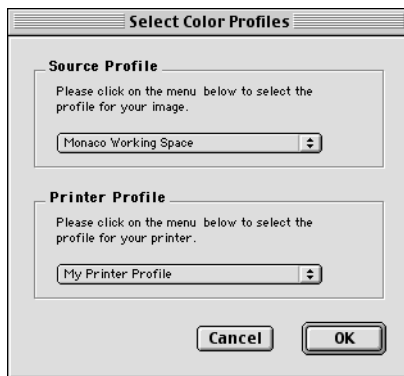


- Turn off color management in the driver by selecting **No Color Adjustment**. This prevents the driver from reapplying the profile.

Print Method 2: Print the Image from Monaco ColorWorks



- Launch **Monaco ColorWorks** and open the image you saved in Elements.
- When the *Select Color Profiles* dialog box appears, select **Monaco Working Space** as the *Source Profile* and your **printer profile** as the *Printer Profile*, and click **OK**.



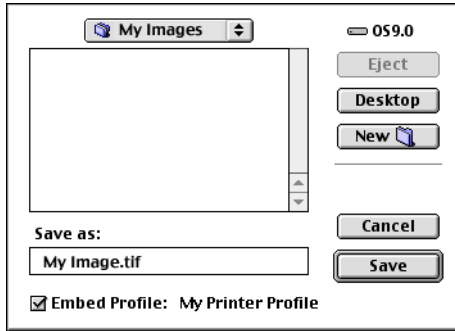
The selected image appears in the ColorWorks editing window.

- Select a **rendering intent** from the *Rendering Intent* list. The preview image should display an accurate soft proof of how your image will print.
- You can continue to edit the image in Monaco ColorWorks, or if you are happy with the color, click **Print**.

Disable any color management options in your print driver. ColorWorks will automatically apply the appropriate profiles. Be sure to use the same paper and settings that you used when you created your printer profile using MonacoEZcolor.



5. Click the **Save** icon or select **Save Image** from the File menu and make sure the **Embed Profile** box is *checked*. Type a name for the image, and select **Save**. Close Monaco ColorWorks.



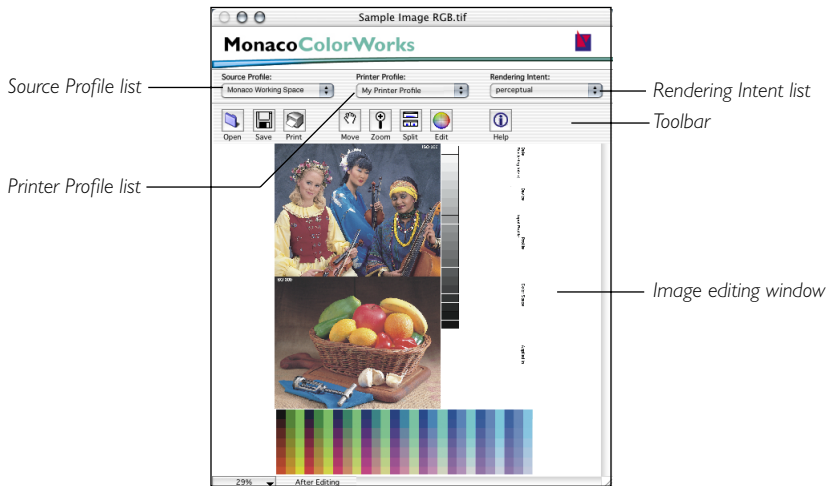
The image is saved in the color space of the printer. In the future when you open the image to print, select your printer profile as both your *Source Profile* and your *Printer Profile* in the *Select Color Profiles* dialog box.

3 Using ColorWorks

This chapter explains the features and menu option contained in the software.

Using the Image Editing Window

Monaco ColorWorks consists of a main image editing window and a toolbar for accessing editing functions.



Scanning an Image

You can scan images using Monaco ColorWorks using any scanner that has a compatible Photoshop plug-in module or that supports TWAIN.

Before attempting to scan an image, be sure your scanner is connected and the necessary drivers and software for your scanner have been installed. You should be familiar with using your scanner and its software before attempting to scan images using Monaco ColorWorks.

If you have problems with scanning, contact your device manufacturer.

To scan an image using a Photoshop plug-in or TWAIN interface:

1. Choose the scanner name from the **File>TWAIN Acquire** submenu.
 - If you don't see the plug-in for your scanner, choose **Select Plug-in folder**, locate and highlight the plug-in folder, and click **Choose**.
 - If you don't see the TWAIN device, select **File>TWAIN>Select**, then the device you wish to use.
2. When your scanner software appears, scan your image using the same settings you used to create your scanner profile.

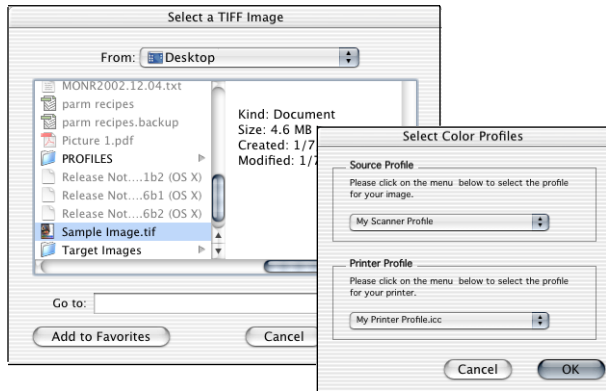
Opening an Image

ColorWorks can open any RGB or CMYK TIFF image.

To open an image:



1. Click the **Open** icon, or select **Open TIFF** from the File menu. The *Select a TIFF Image* dialog box opens.



2. Locate and select a TIFF file.
3. Click **Choose**. The *Select Color Profiles* dialog box opens.
4. Select a **Source Profile** for your image. If you scanned your image select your scanner profile. For more information on choosing a Source Profile, see *Choosing a Source Profile* later in this chapter.
5. Select your **Printer Profile**, and click **OK**. The selected image appears in the editing window.

Choosing a Source Profile

When you open or scan an image into ColorWorks, you are prompted to select a source profile for the image from the *Select Color Profiles* dialog box. In general, the last profile associated with the image is the source profile. If the image contains an embedded profile, ColorWorks will automatically use the embedded profile.

<i>Choose this profile</i>	<i>when image was...</i>
scanner	scanned directly into ColorWorks
scanner	scanned using a scanner application and directly opened into ColorWorks
Monaco Working Space	previously saved from ColorWorks with Monaco Working Space embedded as the <i>Printer Profile</i>
printer	previously saved from Monaco ColorWorks with the printer profile embedded

If after you open an image you desire to use a different source profile, select a new profile by holding the mouse down over the **Source Profile** list in the editing window.

Choosing a Printer Profile

Monaco ColorWorks can use any RGB or CMYK printer profile to print images.

ColorWorks prompts you to select a printer profile from the *Select Color Profiles* dialog box each time you open an image. If after you open an image, you desire to use a different printer profile, select the new profile by holding the mouse down over the **Printer Profile** list in the editing window.

<i>Choose this profile</i>	<i>when image will be...</i>
printer	printed directly from ColorWorks

<i>Choose this profile</i>	<i>when image will be...</i>
Monaco Working Space	saved for further editing in Adobe Photoshop Elements

If you will be editing your image in another application, and returning to ColorWorks to apply your printer profile, select Monaco Working Space as your printer profile. This will enable ColorWorks to embed an RGB (Monaco Working Space) profile when you save the image. When you reopen the image in ColorWorks, select your printer profile from the Printer Profile list.

Choosing a Rendering Intent

A rendering intent determines how color is compressed during gamut-to-gamut color conversions. Each rendering intent has its own method of color conversion; for example, an entire source gamut can be shifted to fit into a destination gamut, or only the out-of-gamut colors can be forced to shift while ignoring colors that fall within gamut. Rendering intents are user selectable and the visual results differ depending on which rendering intent is used. When you select a rendering intent, you are instructing the software to display and print the image using that rendering intent.

The rendering intent you choose depends on the intended use of the image. Monaco ColorWorks can use any of three rendering intents that are stored in an output profile.

- The **Perceptual** rendering intent aims to compress color so that the resulting color relationships are perceived as natural to the human eye. Perceptual compresses the entire color gamut and shifts all colors into the printable color gamut. This intent is most often used to print photographic images.
- The **Saturation** rendering intent aims to maintain original image color saturation when converting into printer color space. This conversion method trades off accurate color to produce vivid color by preserving relative saturation while allowing hues to shift. Select this intent to print charts,

graphs, business graphics, or when saturated colors are important.

- **Colorimetric** remaps out-of-gamut colors to the closest reproducible color of the printer without affecting other in-gamut colors.

To choose a rendering intent:

1. Click and hold the mouse over the **Rendering Intent** list.
2. Select the rendering intent you desire to use.

If you are using ColorWorks to evaluate a printer profile for editing in MonacoEZcolor, select **Perceptual**.

Viewing Before and After Edits

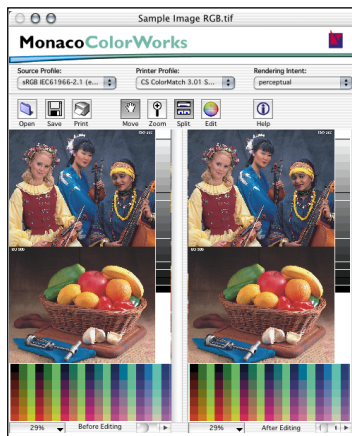
Monaco ColorWorks allows you to view your image with and without edits by splitting your view of the editing window. When you split the view, the left view displays your original image before editing, the right view displays the edited image.

To split the view of the image in the editing window:



1. Click the **Split** icon, or select **Split** from the View menu.

The editing window splits into two views.



2. Click, hold, and drag the mouse over the lower right corner of the window, to resize the window.

Magnify or Demagnify an Image

To magnify an image, select the Zoom tool, click in the preview image. To zoom out, hold down Alt (Windows) or Option (Macintosh) and click.

Alternately, you can hold the mouse down over the magnification percent list located in the lower left corner of the editing window.

Moving an Image in the Editing Window



To view a different area of the image:

1. Select the **Move** tool.
2. Drag the mouse over the preview image.

Note: the Move tool is only functional when the preview image is enlarged beyond the edges of the editing window.

Editing Tonal Relationships

Use the tonal tools to adjust overall lightness, contrast, or saturation.

To use a tonal tool: move the desired slider to the right to increase the affect throughout the image, or to the left to decrease the affect throughout the image. If you are using a Windows system, you must click Apply to see a tonal shift.

How do I know which tool to use?

When you evaluate the image, look for the following:

1. If the overall image is too light or too dark, use the Lightness slider to adjust the image.

2. If the brightest areas (highlights) are too light and the darkest areas (shadows) are too dark, use the Contrast slider to decrease overall contrast in the image.
3. If the overall image is flat (brightest areas appear too dark and darkest areas appear too light), use the Contrast slider to increase overall contrast in the image.
4. If the overall color is too pastel, use the Saturation slider to increase the saturation in the image.
5. If the overall color in the print is too intense, use the Saturation slider to decrease the saturation in the image.

Printing an Image

To print an image:



1. Load the paper associated with the printer profile in the printer input tray.
2. Click the **Print** icon, or select **Print** from the File menu.
3. Disable any available color management options in your printer driver. Monaco ColorWorks will automatically apply the profile selected in the *Printer Profile* list. If you are unsure where the color management options are located in your printer driver, contact your device manufacturer.
4. Select the same media and resolution settings that you used to create the profile.
5. Print the image.

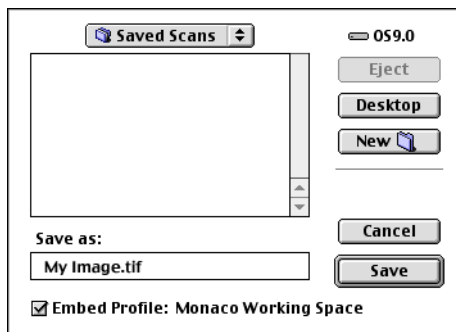
Saving an Image

Monaco ColorWorks saves images in TIFF format.

To save an image:



1. Click the **Save** icon, or select **Save Image** from the File menu. A standard dialog opens.



2. Type a file name and choose a location to save the file.
3. By default, an image will have its printer profile embedded upon saving a file. If you desire not to embed your printer profile, uncheck the **Embed Profile** check box.
4. Click **Save**.

