Epson® Professional Imaging

Managing Color

Printing with ICC Profiles
Copyright Notice

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Seiko Epson Corporation. The information contained herein is designed only for use with this Epson product. Epson is not responsible for any use of this information as applied to other equipment.

Neither Seiko Epson Corporation nor its affiliates shall be liable to the purchaser of this product or third parties for damages, losses, costs, or expenses incurred by purchaser or third parties as a result of: accident, misuse, or abuse of this product or unauthorized modifications, repairs, or alterations to this product, or (excluding the U.S.) failure to strictly comply with Seiko Epson Corporation's operating and maintenance instructions.

Seiko Epson Corporation shall not be liable for any damages or problems arising from the use of any options or any consumable products other than those designated as Original Epson Products or Epson Approved Products by Seiko Epson Corporation.

Responsible Use of Copyrighted Materials

Epson encourages each user to be responsible and respectful of the copyright laws when using any Epson product. While some countries' laws permit limited copying or reuse of copyrighted material in certain circumstances, those circumstances may not be as broad as some people assume. Contact your legal advisor for any questions regarding copyright law.

Trademarks

EPSON and Epson Stylus are registered trademarks, and EPSON Exceed Your Vision is a registered logomark of Seiko Epson Corporation.

General Notice: Other product names used herein are for identification purposes only and may be trademarks of their respective owners. Epson disclaims any and all rights in those marks.

This information is subject to change without notice.
Introduction

For the most precise color in your prints, you can use profiles designed specifically for your printer model and paper type. Basic profiles are installed with your printer driver, and you may also have downloaded Premium ICC profiles from Epson when you installed your printer software.

To print using Premium ICC profiles with Adobe® Photoshop® CC, CS6, CS5, or Adobe Photoshop Lightroom®, follow the instructions in these sections for your operating system:

- “Windows 8 and Windows 7” below
- “Mac OS X 10.8 and 10.7” on page 20

Windows 8 and Windows 7

Follow the instructions in these sections:

- “Printing with Adobe Photoshop CC or CS6” below
- “Printing with Adobe Photoshop CS5” on page 8
- “Printing with Adobe Photoshop Lightroom” on page 14

Printing with Adobe Photoshop CC or CS6

First set up your color management environment in Photoshop and assign a profile to your image. Then select your print settings and print.

Note:
Assigning a profile to your image doesn’t alter it, only the interpretation of it by your software and how it appears on your monitor and in a printout. This is the best way to improve the color balance and contrast in your image.
Setting Up the Photoshop Environment

1. Open Photoshop.
2. Select Edit > Color Settings.

3. Select North America Prepress 2 from the Settings menu to set Adobe RGB (1998) as the RGB working space and activate all profile messages.
4. Click OK.

Follow the steps in the next section to open the photo you want to print and assign a profile to it.

Assigning a Profile to Your Photo

1. Open the photo you want to print.
2. If you see an Embedded Profile Mismatch message, select Use the embedded profile (instead of the working space) and click OK.
If you see a Missing Profile message, select **Assign working RGB: Adobe RGB (1998)** and click **OK**. When your image appears, evaluate the color balance and contrast as displayed on your monitor. If it looks incorrect, select **Edit > Assign Profile**.

**Note:**
If you see a dialog box regarding the appearance of layers, click **OK**.

Select one of the following as the **Profile** setting:
- A different RGB working space (or Profile), such as **sRGB IEC61966-2.1**
- A camera profile for your digital camera
- A scanner profile for your scanner

Also select the **Preview** checkbox so you can see the effects of your profile choice on the screen.

**Tip:**
This is most effective when your monitor is calibrated using a hardware device such as the X-Rite® ColorMunki™ Display, i1 Display Pro, or Datacolor® Spyder™.

3. Click **OK**.
4. Select **File**, then select **Print**.
5. Select your Epson professional printer in the Printer list.
6. Under Color Handling, select **Photoshop Manages Colors**.

7. Under Printer Profile, select a profile for your printer and the paper you'll use. If you're printing with Epson Premium ICC profiles, select the profile that also matches the print quality you want to use.

8. For the Rendering Intent, select **Relative Colorimetric**.

   **Note:**  
   If your image contains very saturated colors, select **Perceptual**. This reduces the color saturation so that the colors fit within the printer's color gamut.

9. Select the **Black Point Compensation** checkbox.

10. Click the **Print Settings** button.

    Follow the steps in the next section to select print settings to match the profile and print.

**Printing Your Color-Managed Photo**

1. Select the **Source** and **Media Type** settings for the paper you'll use for the print.

2. Select **Quality Options** as the Print Quality setting.

   You see a window like this one:

   ![Quality Options Window](image)

   3. If you are using an Epson Premium ICC profile, set the **Print Quality** setting to match your profile.
4. Turn off the High Speed and Edge Smoothing options, if they are available, then click OK to close the Quality Options window.

5. Select Custom as the Mode setting, then choose Off (No Color Adjustment) from the drop-down menu.

Note: Make sure that you select Off (No Color Adjustment). If you don’t, the printer driver will apply additional correction to the image, producing inaccurate results.

6. Click OK.
7. Select the correct orientation for your photo.

8. Click Print to print your photo.

If you get unexpected results, see “Solving Color Management Problems” on page 34.

**Printing with Adobe Photoshop CS5**

First set up your color management environment in Photoshop and assign a profile to your image. Then select your print settings and print.

**Note:**
Assigning a profile to your image doesn’t alter it, only the interpretation of it by your software and how it appears on your monitor and in a printout. This is the best way to improve the color balance and contrast in your image.
Setting Up the Photoshop Environment

1. Open Photoshop.
2. Select Edit > Color Settings.
3. Select North America Prepress 2 from the Settings menu to set Adobe RGB (1998) as the RGB working space and activate all profile messages.
4. Click OK.

Follow the steps in the next section to open the photo you want to print and assign a profile to it.

Assigning a Profile to Your Photo

1. Open the photo you want to print.
2. If you see an Embedded Profile Mismatch message, select Use the embedded profile (instead of the working space) and click OK.
   
   If you see a Missing Profile message, select Assign working RGB: Adobe RGB (1998) and click OK. When your image appears, evaluate the color balance and contrast as displayed on your monitor. If it looks incorrect, select Edit > Assign Profile.
Select one of the following as the Profile setting:

■ A different RGB working space (or Profile), such as sRGB IEC61966-2.1
■ A camera profile for your digital camera
■ A scanner profile for your scanner

Also select the Preview checkbox so you can see the effects of your profile choice on the screen.

**Tip:**
This is most effective when your monitor is calibrated using a hardware device such as the X-Rite ColorMunki Display, i1 Display Pro, or Datacolor Spyder.

3. Click OK.
4. Select File, then select Print.
5. Select your Epson professional printer in the Printer list, then select Color Management.

6. Under Color Handling, select Photoshop Manages Colors.
7. Under Printer Profile, select a profile for your printer and the paper you'll use. If you're printing with Epson Premium ICC profiles, select the profile that also matches the print quality you want to use.
8. For the Rendering Intent, select **Relative Colorimetric**.

   **Note:**
   If your image contains very saturated colors, select **Perceptual**. This reduces the color saturation so that the colors fit within the printer’s color gamut.

9. Select the **Black Point Compensation** checkbox.

10. Click the **Print Settings** button.

Follow the steps in the next section to select print settings to match the profile and print.

**Printing Your Color-Managed Photo**

1. Select the **Source** and **Media Type** settings for the paper you’ll use for the print.

2. Select **Quality Options** as the Print Quality setting.
   You see a window like this one:

3. If you are using an Epson Premium ICC profile, set the **Print Quality** setting to match your profile.

4. Turn off the **High Speed** and **Edge Smoothing** options, if they are available, then click **OK** to close the Quality Options window.
5. Select **Custom** as the Mode setting, then choose **Off (No Color Adjustment)** from the drop-down menu.

![Printer Properties](image)

**Note:**
Make sure that you select **Off (No Color Adjustment)**. If you don’t, the printer driver will apply additional correction to the image, producing inaccurate results.

6. Click OK.
7. Select the correct orientation for your photo.

8. Click **Print** to print your photo.

If you get unexpected results, see “Solving Color Management Problems” on page 34.
Printing with Adobe Photoshop Lightroom

This section explains how to set up your printing environment in Lightroom.

Selecting Color Management Options

1. Open Lightroom.
2. Select the photo you want to print.
3. Click the Page Setup button.
4. Make sure your Epson professional printer is selected.
5. Select the Size of your paper, the Source you’ll use to load it, and the correct Orientation for your photo.

6. Click OK.

7. Scroll down to the Print Job panel in Lightroom.

8. Under Color Management in the Print Job panel, select Other as the Profile setting.
9. In the window that appears, select the profiles you want to add to the Profile list that correspond to the printer and the papers you’ll use.

If you’re printing with Epson Premium ICC profiles, select the profiles that also match the Print Quality you want to use.

10. Click OK.
11. Under **Profile**, select the profile for the paper you’re going to print on. If you’re printing with Epson Premium ICC profiles, select the profile that also matches the print quality you want to use.

12. For the Rendering Intent, select **Relative**.

   **Note:**
   If your image contains very saturated colors, select **Perceptual**. This reduces the color saturation so that the colors fit within the printer’s color gamut.

13. Click the **Print** button to print your photo.

Follow the steps in the next section to select print settings to match the profile and print.
Printing Your Color-Managed Photo

1. Make sure your Epson professional printer is selected, then click the Preferences or Properties button.

2. Select the Source and Media Type settings for the paper you’ll use for the print.

3. Select Quality Options as the Print Quality setting.
   
   You see a window like this one:

   ![Quality Options Window]

4. Turn off the High Speed and Edge Smoothing options, if they are available, then click OK to close the Quality Options window.
5. Select Custom as the Mode setting, then choose Off (No Color Adjustment) from the drop-down menu.

![Image of settings menu with Custom and Off options highlighted]

**Note:**
Make sure that you select Off (No Color Adjustment). If you don’t, the printer driver will apply additional correction to the image, producing inaccurate results.

6. Click OK to print.

If you get unexpected results, see “Solving Color Management Problems” on page 34.
Mac OS X 10.8 and 10.7

Follow the instructions in these sections:

- “Printing with Adobe Photoshop CC or CS6” below
- “Printing with Adobe Photoshop CS5” on page 24
- “Printing with Adobe Photoshop Lightroom” on page 29

Printing with Adobe Photoshop CC or CS6

First set up your color management environment in Photoshop and assign a profile to your image. Then select your print settings and print.

Note:
Assigning a profile to your image doesn’t alter it, only the interpretation of it by your software and how it appears on your monitor and in a printout. This is the best way to improve the color balance and contrast in your image.

Setting Up the Photoshop Environment

1. Open Photoshop.
2. Select Edit > Color Settings.
3. Select North America Prepress 2 from the Settings menu to set Adobe RGB (1998) as the RGB working space and activate all profile messages.

4. Click OK.

Follow the steps in the next section to open the photo you want to print and assign a profile to it.

**Assigning a Profile to Your Photo**

1. Open the photo you want to print.

2. If you see an Embedded Profile Mismatch message, select *Use the embedded profile (instead of the working space)* and click OK.

   If you see a Missing Profile message, select *Assign working RGB: Adobe RGB (1998)* and click OK. When your image appears, evaluate the color balance and contrast as displayed on your monitor. If it looks incorrect, select *Edit > Assign Profile*.

   **Note:**
   If you see a dialog box regarding the appearance of layers, click OK.

   Select one of the following as the Profile setting:

   - A different RGB working space (or Profile), such as sRGB IEC61966-2.1
   - A camera profile for your digital camera
   - A scanner profile for your scanner

   Also select the *Preview* checkbox so you can see the effects of your profile choice on the screen.

   **Tip:**
   This is most effective when your monitor is calibrated using a hardware device such as the X-Rite ColorMunki Display, i1 Display Pro, or Datacolor Spyder.

3. Click OK.
4. Select File > Print.

5. Select your Epson professional printer in the Printer pop-up menu.

6. Under Color Handling, select *Photoshop Manages Colors*.

7. Under Printer Profile, select a profile for your printer and the paper you'll use. If you’re printing with Epson Premium ICC profiles, select the profile that also matches the print quality you want to use.

8. For the Rendering Intent, select *Relative Colorimetric*.

   **Note:**
   If your image contains very saturated colors, select *Perceptual*. This reduces the color saturation so that the colors fit within the printer’s color gamut.

9. Select the *Black Point Compensation* checkbox.

10. Click the *Print Settings* button.

    Follow the steps in the next section to select print settings to match the profile and print.
Printing Your Color-Managed Photo

1. Select your Epson professional printer in the Printer list.

2. Click Show Details or ▼ to expand the Print window, if necessary.

3. Select the Paper Size and media path settings that match the paper you’re printing on.
   
   **Tip:**
   If you’re using a fine art paper, make sure you choose the correct media path or the media type selections will be grayed-out.

4. Click Layout on the pop-up menu and select Print Settings (Mac OS X 10.8) or Printer Settings (Mac OS X 10.7).

5. Select the Media Type setting for the paper you’ll use for the print.
   
   **Note:**
   The Color Settings (Mac OS X 10.8) or Color Mode (Mac OS X 10.7) will show Off (No Color Adjustment).

6. If you are using an Epson Premium ICC profile, set the Print Quality (Mac OS X 10.8) or Output Resolution (Mac OS X 10.7) setting to match your profile.
7. Click Save.
8. Select the correct orientation for your photo.

9. Click Print to print your photo.
If you get unexpected results, see “Solving Color Management Problems” on page 34.

**Printing with Adobe Photoshop CS5**
First set up your color management environment in Photoshop and assign a profile to your image. Then select your print settings and print.

**Note:**
Assigning a profile to your image doesn’t alter it, only the interpretation of it by your software and how it appears on your monitor and in a printout. This is the best way to improve the color balance and contrast in your image.
Setting Up the Photoshop Environment

1. Open Photoshop.
2. Select Edit > Color Settings.

![Color Settings Dialog]

3. Select North America Prepress 2 from the Settings menu to set Adobe RGB (1998) as the RGB working space and activate all profile messages.

4. Click OK.

Follow the steps in the next section to open the photo you want to print and assign a profile to it.

Assigning a Profile to Your Photo

1. Open the photo you want to print.
2. If you see an Embedded Profile Mismatch message, select Use the embedded profile and click OK.

If you see a Missing Profile message, select Assign working RGB: Adobe RGB (1998) and click OK. When your image appears, evaluate the color balance and contrast as displayed on your monitor. If it looks incorrect, select Edit > Assign Profile.

Select one of the following as the Profile setting:

- A different RGB working space (or Profile), such as sRGB IEC61966-2.1
- A camera profile for your digital camera
- A scanner profile for your scanner

Also select the Preview checkbox so you can see the effects of your profile choice on the screen.

**Tip:**
This is most effective when your monitor is calibrated using a hardware device such as the X-Rite ColorMunki Display, i1 Display Pro, or Datacolor Spyder.

3. Click OK.
4. Select File > Print.

![Print settings](image)

5. Select your Epson professional printer in the Printer pop-up menu.
7. Under Color Handling, select Photoshop Manages Colors.
8. Under Printer Profile, select a profile for your printer and the paper you'll use. If you're printing with Epson Premium ICC profiles, select the profile that also matches the print quality you want to use.
9. For the Rendering Intent, select Relative Colorimetric.
Note:
If your image contains very saturated colors, select Perceptual. This reduces the color saturation so that the colors fit within the printer’s color gamut.

10. Select the Black Point Compensation checkbox.
11. Click the Print Settings button.

Follow the steps in the next section to select print settings to match the profile and print.

Printing Your Color-Managed Photo
1. Select your Epson professional printer in the Printer list.
2. Click Show Details or ▼ to expand the Print window, if necessary.
3. Select the Paper Size and media path settings that match the paper you’re printing on.
   Tip:
   If you’re using a fine art paper, make sure you choose the correct media path or the media type selections will be grayed-out.
4. Click Layout on the pop-up menu and select Print Settings (Mac OS X 10.8) or Printer Settings (Mac OS X 10.7).
5. Select the Media Type setting for the paper you’ll use for the print.
Note:
The Color Settings (Mac OS X 10.8) or Color Mode (Mac OS X 10.7) will show Off (No Color Adjustment).

6. If you are using an Epson Premium ICC profile, set the Print Quality (Mac OS X 10.8) or Output Resolution (Mac OS X 10.7) setting to match your profile.

7. Click Save.
8. Select the correct orientation for your photo.

9. Click Print to print your photo.

If you get unexpected results, see “Solving Color Management Problems” on page 34.

**Printing with Adobe Photoshop Lightroom**

This section explains how to set up your printing environment in Lightroom.

**Selecting Color Management Options**

1. Open Lightroom.
2. Select the photo you want to print.
3. Click the Page Setup button.

4. Select your Epson professional printer in the Format for pop-up menu.

5. Select the Paper Size and media path settings that match the paper you’re printing on.
   
   **Tip:**
   
   If you’re using a fine art paper, make sure you choose the correct media path or the media type selections will be grayed-out.

6. Select the correct Orientation for your photo.
7. Click OK.
8. Scroll down to the Print Job panel in Lightroom.
9. Under Color Management in the Print Job panel, select Other as the Profile setting.

10. In the window that appears, select the profiles you want to add to the Profile list that correspond to the printer and the papers you’ll use.
If you're printing with Epson Premium ICC profiles, select the profiles that also match the print quality you want to use.

11. Click OK.

12. Under Profile, select the profile for the paper you're going to print on. If you're printing with Epson Premium ICC profiles, select the profile that also matches the print quality you want to use.

13. For the Rendering Intent, select Relative.

   **Note:**
   If your image contains very saturated colors, select Perceptual. This reduces the color saturation so that the colors fit within the printer’s color gamut.

14. Click the Print button.

Follow the steps in the next section to select print settings to match the profile and print.

**Printing Your Color-Managed Photo**

1. Select your Epson professional printer in the Printer list.

2. Click Show Details or ▼ to expand the Print window, if necessary.
3. Click **Layout** on the pop-up menu and select **Print Settings** (Mac OS X 10.8) or **Printer Settings** (Mac OS X 10.7).

4. Select the Media Type setting for the paper you’ll use for the print.

   **Note:**
   The Color Settings (Mac OS X 10.8) or Color Mode (Mac OS X 10.7) will show Off (No Color Adjustment).

5. If you are using an Epson Premium ICC profile, set the **Print Quality** (Mac OS X 10.8) or **Output Resolution** (Mac OS X 10.7) setting to match your profile.

6. Click **Save**, then click **Print** to print your photo.

   If you get unexpected results, see “Solving Color Management Problems” on page 34.
Solving Color Management Problems

If you selected the wrong combination of source profile, printer profile, and color management settings, you'll get unexpected results. Try these solutions:

■ If your printed image is darker than expected, you may have turned off color management in both the application and the Epson printer driver.

In Photoshop, return to the printing instructions for Windows or Mac OS X 10.8 and 10.7. Make sure the Document option is not set to Untagged RGB. Also make sure you selected the correct profile for your printer in the Profile menu.

In Lightroom, make sure you selected the profile for the paper you're going to print on as the Profile setting. If you're printing with Epson Premium ICC profiles, select the profile that also matches the print quality you selected.

■ If your printed image is lighter than expected, you may have turned on color management in both Photoshop and the Epson printer driver.

Make sure the Off (No Color Adjustment) Mode setting is selected in Windows or Mac OS X 10.8 and 10.7 to turn off color management in your Epson printer driver.