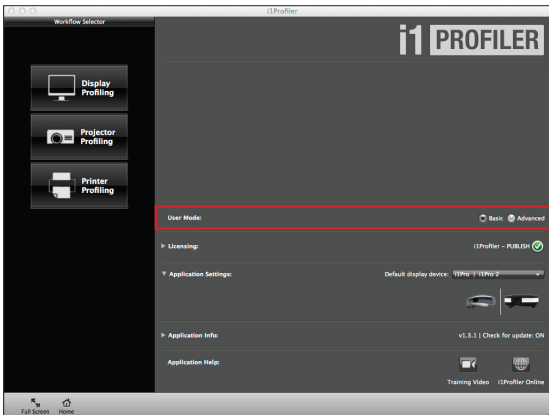# CREATING AN RGB PRINTER PROFILE WITH i1PROFILER

INTRODUCTION

i1Profiler makes it easier than ever before to print and create a custom RGB printer profile for your printer. While both Basic and Advanced modes in i1Profiler will produce great profiles, the Advanced mode allows for greater control of your settings and should only be used by advanced users. This document will explain and walk you through the process of creating a RGB printer profile using Basic mode.

i1Profiler will also disable color management in your print driver for you. If you will be printing your target from another machine, this document also describes how to print using the "Adobe Color Printer Utility."
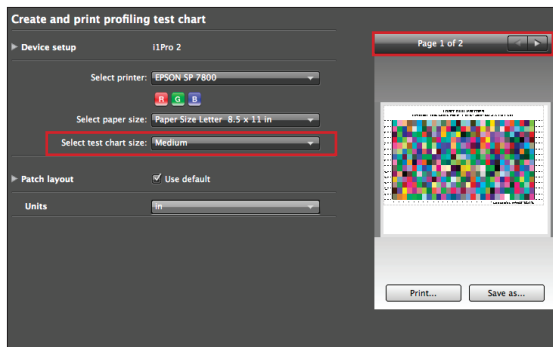
SETTING UP YOUR PROFILING TARGET IN i1PROFILER

1. From the i1Profiler main screen, set the "User Mode" to "Basic" by clicking the **Basic** radio button.

2. Under the "Workflow Selector" in the left pane, click the **Printer Profiling** icon.

3. On the next screen, click the "Select printer" pull-down and choose the printer you wish to profile.

4. Click the **Select paper size** pull-down and select the paper size that is loaded in your printer.

5. Under the "Select test chart size" pull-down, you will see three options: **Small**, **Medium** and **Large**. In general, the larger the test chart, the longer it will take to read the patches, but the more accurate the profile will be. Depending on your paper size, this can also affect the number of pages that print.

6. Once your settings have been set, you are ready to print. Now you have two options.

    •   To continue creating an RGB printer profile through i1Profiler click **Print...** and go to the section below that describes your printer's settings.

    •   If you need to print your target from another system or location without i1Profiler installed, select **Save as...** to save your chart as a TIFF and continue to the section titled "Printing your Target with Adobe Color Printer Utility."

This document includes separate sections for printing with Epson, HP, Canon, and the Adobe Color Printer Utility. You can skip any section that does not apply to you.
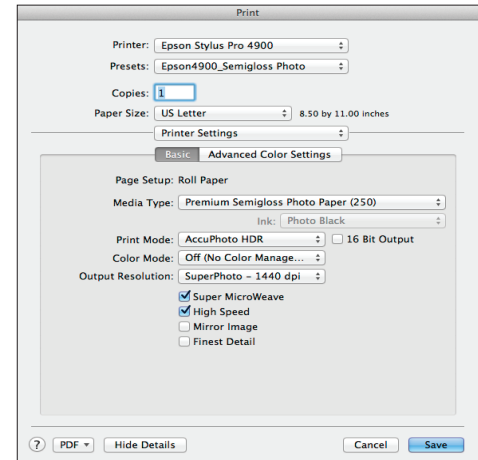
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Printing your Target with an Epson Printer

The following settings should be adjusted in your print driver and will affect how your color will print. These same settings must be set again later when you are ready to print with your profile. The exact setting names may vary depending on your Epson driver version. It is important to make sure all color conversion is turned off.

1. From the "Layout" pull-down menu, select **Color Matching**. This will be grayed out to indicate color management is disabled, but in other applications it may not be and should be set to **EPSON Color Controls**. If you do not see the "Layout" pull-down menu, click **Show Details** on the bottom of the print dialog.

2. Next select **Printer Settings** from the same pull-down menu and set the following within the "Basic" tab:

   - Media Type: The type of media you select will determine the amount of ink that is laid down. To determine which to select, start by choosing a media name that is similar to the type of paper that is loaded in the printer.

   - Color Mode: These settings will be grayed out because color management is disabled. In other applications make sure this is set to off.

   - Output Resolution: Select the same output resolution that will be used in production.

   - Super MicroWeave, High Speed, Flip Horizontal and Finest Detail: If you check any of these boxes, you must mark them later when you use your profile.

   - Under the "Advanced Color Settings" tab, there should be text: **Epson Driver Color Management is Off**.

3. After you are finished choosing all settings, you can save them as a preset. This will allow you to quickly use them when printing from your applications. To save them as a preset:

   - Click the "Presets" pull-down and select **Save Current Settings as Preset...**

   - Give your preset a meaningful name that includes the printer, paper type and quality.

4. Once your settings have been set, click **Print**.

5. You are ready to generate your profile. Skip to the "Generating your ICC Profile in i1Profiler" section.
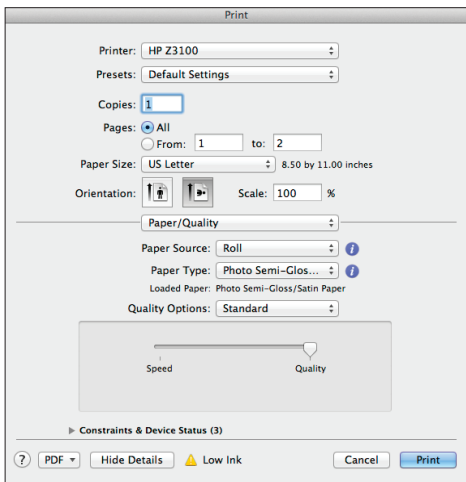
Printing your Target with an HP Printer

The following settings should be adjusted in your print driver and will affect how your color will print. These same settings must be set again later when you are ready to print with your profile. The exact setting names below may vary depending on your HP driver version. It is important to make sure all color conversion is turned off.

1. From the "Layout" pull-down menu:

   - Select **Color Matching**. This will be grayed out to indicate color management is disabled, but in other applications it may not be and should be set to **In printer**.

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- Select **Color Options** from the pull-down menu. Here you will receive a warning letting you know that printer color management features have been disabled. These settings should be left alone.

- Select **Paper/Quality** from the pull-down menu. Under "Paper Type" you should use a media type similar to what is in your printer. "Quality Options" should also match the same quality you will use in production.
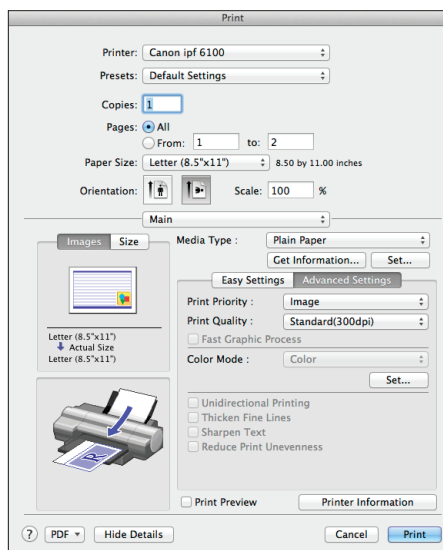

2. After you are finished choosing your settings, you can save them as a preset to allow you to use them quickly when printing from your applications. To save them as a preset:

   - Click the "Presets" pull-down and select **Save Current Settings as Preset...**

   - Give your preset a meaningful name that includes the printer, paper type and quality.

3. Once your settings have been set, click **Print**.

4. You are ready to generate your profile. Skip to the "Generating your ICC Profile in i1Profiler" section.

Printing your Target with a Canon Printer

The following settings should be adjusted in your print driver and will affect how your color will print. These same settings must be set again later when you are ready to print with your profile. The exact setting names below may vary depending on your Canon driver version. It is important to make sure all color conversion is turned off.

1. From the "Layout" pull-down menu, select **Color Matching**. This will be grayed out to indicate color management is disabled, but in other applications it may not be and should be set to **Vendor Matching**.

2. Next select "Main" from the pull-down menu and set the following:

   - **Media Type**: The type of media you select will determine the amount of ink that is laid down. To determine which to select, start by choosing a media name that is similar to the type of paper that is loaded in the printer.

   - **Print Priority/Quality**: Select the same output resolution that will be used in production.
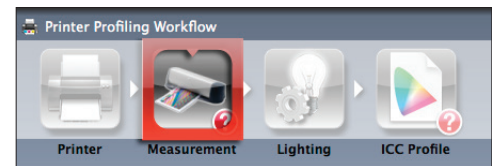

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- If you enable any other settings, you will also need to enable them later when you use your profile.

3. After you are finished selecting the settings, you can save them as a preset to allow you to quickly use them when printing from your applications. To save them as a preset:

   - Click the "Presets" pull-down and select **Save Current Settings as Preset...**

   - Give your preset a meaningful name that includes the printer, paper type and quality.

4. Once your settings have been set, click **Print**.

5. You are ready to generate your profile. Skip to the "Generating your ICC Profile in i1Profiler" section.
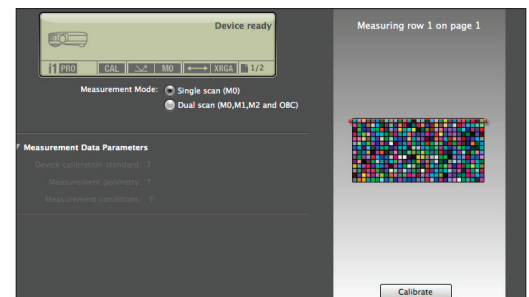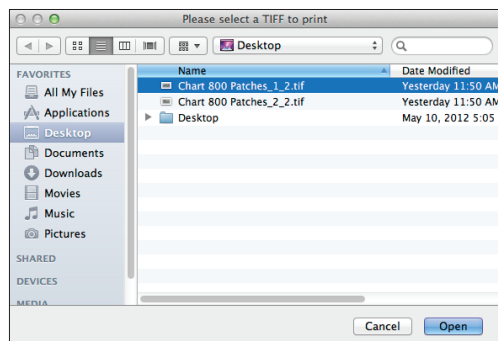
Printing your Target with Adobe Color Printer Utility

Since Adobe introduced CS5, the option for no color management has been removed from the Print dialog window. To print a target on a computer without i1Profiler installed, we recommend using the Adobe Color Printer Utility. This can be downloaded from:

http://kb2.adobe.com/cps/834/cpsid_83497.html

1. Once installed, launch the Adobe Color Printer Utility. You will be prompted to select a TIFF to print.

2. Navigate to the test chart you wish to print. Highlight it and click **Open**.

3. From the "File" menu, select **Print...**.

4. At this point, refer to the previous pages and follow the section corresponding to your printer to determine which settings to select.

5. Once you are finished selecting your settings, click **Print**.

6. You are ready to generate your profile. Continue with the "Generating your ICC Profile in i1Profiler" section.

GENERATING YOUR ICC PROFILE IN i1PROFILER

1. After your target has printed, either click the **Next** button, or click the **Measurement** button in the "Printer Profiling Workflow" to continue.

2. You will be prompted to calibrate your device. Simply select **Measure** to calibrate and begin measuring. Follow the on screen directions to read your test chart.

If you would like to learn more about how to read a target with an i1Pro or i1iO, please check out our free eLearning course at:

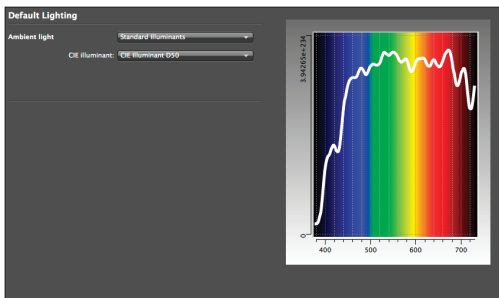http://www.xrite.com/top_services.aspx?segmentid=5&eventid=1096

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3. After your test chart has been measured, click the **Lighting** button under "Printer Profiling Workflow" to advance.

4. In the "Lighting" window, you can select the ambient light under which your prints will be viewed.

Reference

The graphic arts standard for viewing prints is D50 (5000K). If you are creating prints for a very specific lighting condition where the prints will be viewed under, ie: Fluorescent lighting, you can select that lighting condition here and the profile will adjust for that specific color temperature.

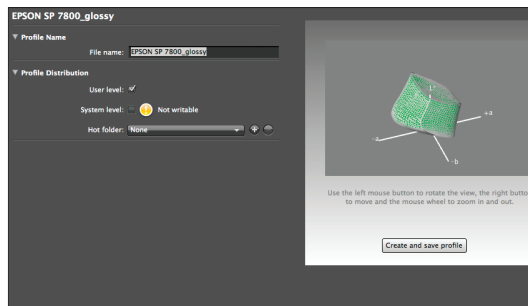The majority of the time you will want to select the standard **D50**.

5. Select the **ICC Profile** button from the "Printer Profiling Workflow" to finish creating your profile.

6. Give your profile a meaningful name. This should include the printer name, the paper type, and any additional settings that you used in the print driver.

Reference

On a Mac there are two locations you can save a profile: on the User level if you don't want anyone else to have access to it, or on a System level if you wish to have this profile

available to any user on the computer. Once you select one of these choices, the profile will automatically be placed in your profiles list in your desktop publishing applications. You also have a Hot Folder option that will allow you to save the profile in an additional location. This can be useful if you want to share the profile with others using the printer, or want easy access for e-mail or posting on a server.

7. After giving your profile a name and selecting the distribution level, click the **Create and save profile** button.

8. After your profile has been created you will see a 3D Lab plot of your profile. Check it for sharp spike, holes, and other imperfections that could represent a poor profile.

USING YOUR NEW PROFILE

Once you have created your new printer profile, you can use it to print from Adobe® Photoshop®, or another design application.
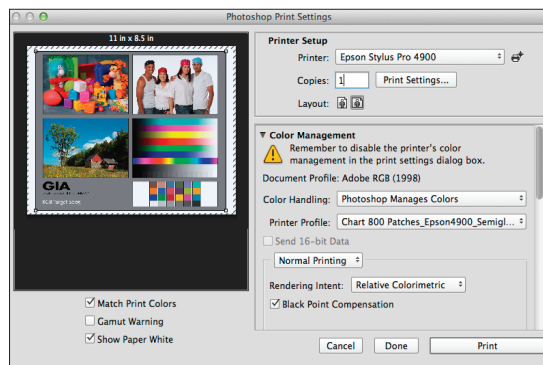
How to Print From Photoshop

If you print from Photoshop, follow these steps to apply color management. When using your profile, be sure to use the same printer driver settings as when you originally printed the profiling target.

1. In the Photoshop "Print" dialog, under "Color Handling," select **Photoshop Manages Colors**.

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2. Select the profile you created under "Printer Profile" and choose a Rendering Intent.

3. In Photoshop's "Print" window, click the **Print Settings...** button to change your Print Driver Settings. Use your saved presets or the same settings you set in the "Printer Settings" window when creating your profile. You will want to make sure all color management is still off.

5. Once you have matched your print settings, click **Save** from the Print Driver, then **Print** from Photoshop.

How to Print From Other Design Applications

Unlike Photoshop, applications such as Adobe InDesign® will not automatically disable color management in the "Color Matching" window of your print driver. When printing from these applications utilizing your new custom profile, follow these instructions:

1. Open your file and select **File > Print**.

2. From the "Color Management" tab, set "Color Handling" to **Let application determine colors**.

Set the "Printer Profile" to your new custom profile.

3. At the bottom of the Print Dialog window, select **Setup...** in Adobe Illustrator and **Printer...** in Adobe InDesign to set up the print driver.

4. Select the "Layout" pull-down and choose **Color Matching**. This should be set to either of the following depending on your driver: **EPSON Color Controls, In printer**, or **Vender Matching**. Never use ColorSync to manage colors.

5. If you saved your presets when you profiled your printer, use the "Presets" pull-down and select the saved presets for your printer, media type, and print quality.

6. If you did not save your presets, you will want to make sure your settings are the same as before. Set all of the same settings you used when printing your target, including the Paper Type and Quality. Also make sure that "Color Mode" or similar settings are set to **Off (No Color Management)**.

7. After you have made all changes in the application color management window and the printer driver, you can now print your document.

FOR MORE INFORMATION

X-Rite Color Services offers a variety of classroom, onsite, seminar and online training opportunities. These courses are highly interactive and taught using the latest equipment and software. If you would like to learn more about color management or the advanced features of i1Profiler, check out our Color Control Freak eLearning course at:

http://www.xrite.com/top_services.aspx?segmentid=5&eventid=907

For information on a variety classroom, custom on-site, and highly interactive on-line training options, see X-Rite's Color Services web site at http://www.xritecolorservices.com

Contact us at:

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