# Printing With a Color Profile version Mar 2012

To print an image using a color ICC profile, follow the steps in the appropriate section depending on your operating system. To install profiles on Windows, right click on the profiles and select 'Install Profile'. To install profiles on Mac, drag and drop the profiles to the Library> ColorSync> profiles folder.

# Macintosh OSX and Windows (With Photoshop CS5)

### **Opening an Image**

- 1. Open Adobe Photoshop CS5
- 2. Select Edit> Color Settings as shown below

Color Settings		
Unsynchronized: Your Creative Suite synchronized for consistent color.	applications are not	ОК
Settings: Custom	\$	Cancel
Working Spaces		Load
RGB: Adobe RGB (1998	)	Save
CMYK: U.S. Sheetfed Coa	ted v2	
Gray: Gray Gamma 2.2	•	Fewer Options
Spot: Dot Gain 20%	\$	Preview
- Color Management Policies		
RGB: Convert to Workin	g RGB 🔷 🗘	
CMYK: Preserve Embedde	ed Profiles ≑	
Gray: Convert to Workin	ig Gray 🔷	
Profile Mismatches: 🗹 Ask When Opening 📈 Ask When Pasting		
Missing Profiles: 🗹 Ask When Open	ing	
Conversion Options		
Engine: Adobe (ACE)	<b>\$</b>	
Intent: Relative Colorime	tric 🗘	
Use Black Point Compensation		
Use Dither (8-bit/channel images)		
Compensate for Scene-referred Profiles		
Advanced Controls		
Desaturate Monitor Colors By:	20 %	
Blend RGB Colors Using Gamma:	1.00	
- Description		
Working Spaces: The working space spec	cifies the working color profile for each	
color model. (A color profile defines now a color's numeric values map to its visual appearance.) The working space is used for documents that are not		
color-managed, and for newly created documents that are color-managed.		

- 3. Select the settings as shown above. We use Gray Gamma 2.2 for Piezography, and your needs may be different. We recommend Adobe RGB 1998 for inkjet printing.
- 4. Click OK to close the Color Settings window
- 5. Open a photo to print
- 6. If the message "Embedded Profile Mismatch" shown below appears, select "Convert document's colors to the working space and hit OK

Embedded Profile Mismatch	
	The document "refill-carts-7900.psd" has an embedded color profile that does not match the current RGB working space.
	Embedded: sRGB IEC61966-2.1
	Working: Adobe RGB (1998)
<ul> <li>What would you like to do?</li> <li>Use the embedded profile (instead of the working space)</li> <li>Convert document's colors to the working space</li> <li>Discard the embedded profile (don't color manage)</li> </ul>	
	Cancel OK

7. If the message "Missing Profile" shown below appears, select "Assign working RGB: Adobe RGB (1998)" and hit OK

Missing Profile			
The document "refill-carts-7900.psd" does not have an embedded RGB profile. What would you like to do? Leave as is (don't color manage) Assign working RGB: Adobe RGB (1998)			ofile.
	Assign profile: sRGB IEC61966-2.1		
and then convert document to working RGB			
Cancel OK		$\bigcirc$	

#### **Selecting Your Print Settings**

1. If you like, you can preview the image thru the profile by selecting View> Proof Setup> Custom. Select the printer profile in the Device to Simulate pull down list and Relative Colorimetric as the Rendering Intent and the black Point Compensation checked. If you simulate paper color and black ink, your on screen display will be closer to that of a print rather than the high contrast of the display. Check the Preview box as shown below to view the image thru the printer profile. When viewing on a calibrated monitor, Proof Setup will give you a close preview of the image printed thru the profile. You may need to get used to Soft Proof in order to understand its value. Your display has a huge dynamic range of 3.0 or greater. Super bright and super dark! The Soft Proof is designed to reduce this to that of the Print which has a dynamic range considerably lower.

Customize Proof Condition		
Custom Proof Condition: Custom	ОК	
Proof Conditions	Cancel	
Device to Simulate: CCK3-9800-CansonRivesBFK		
Preserve RGB Numbers	Load	
Rendering Intent: Relative Colorimetric	Save	
Slack Point Compensation	Mereview	
Display Options (On-Screen)		
Simulate Paper Color		
✓ Simulate Black Ink		

- 2. Select File> Print
- 3. You can print with or without the Soft Proof, but you can only print one way using the Document source rather than the Proof source. With the pull down list on the upper right hand side of the window set to Color Management, check Document. Select Photoshop Manages Color in the Color Handling pull down list and select the correct printer ICC profile. Select Relative Colorimetric as the Rendering Intent with Black Point Compensation.



4. Select your printer model in the Printer pull down list. Push the Print Settings button to go to the Epson Print window. Select the Copies & Pages you desire, then select Basic Settings in the pull down list as shown below.

Print		
Printer: ③ EPSON Epson Stylus Photo R 🗘 🔺 Presets: Standard		
Paper Size: Other 2.00 by 2.00 inches Printer Settings		
Basic Advanced Color Settings		
Page Setup: Roll Paper		
Ink: Photo Black		
Print Mode: AccuPhoto HD2 + Color Mode: Off (No Color Management) +		
Output Resolution: SuperFine – 1440dpi		
<ul> <li>High Speed</li> <li>Mirror Image</li> </ul>		
?     PDF ▼     Preview     ▲ Low Ink     Cancel     Save		

- 5. Select Output resolution of at least 1440dpi setting for the best print quality. Depending on what printer model and paper you are using, select the appropriate Paper/Media Type setting as per the Printer Specific Media Type Settings page at the end of this document. The Media Setting is critical. You must use ours. Each Media Setting controls the output of ink densities. Our Porfiles were made with only one of two possible settings and they may not seem logical to you. If you choose a Media Setting that is not what we used to make the ICC profile, your color will be off! For the best quality, do NOT check the High Seed box.
- 6. The Color Mode should be "Off" because Photoshop is managing the color conversion.
- 7. Click Save and return to Photoshop's Print Window and print your image.

# Windows XP (With Photoshop CS3)

### **Opening an Image**

- 1. Open Adobe Photoshop CS3
- 2. Select Edit> Color Settings

Color Settings		×
For more informal color managemen Creative Suite app	tion on color settings, search for "setting up t" in Help. This term is searchable from any olication.	OK
Se <u>t</u> tings: Custom	n 💌 🚽	
- Working Spaces -		<u>L</u> oad
<u>R</u> GB: A	Adobe RGB (1998)	<u>S</u> ave
⊆мүк: ∪	J.S. Web Coated (SWOP) v2	Fewer Options
<u>G</u> ray: G	āray Gamma 2.2 🛛 👻	
Spot: D	oot Gain 20%	l Pre <u>v</u> iew
Color Management P	Policies	
RG <u>B</u> : C	Convert to Working RGB	
С <u>М</u> ҮК: Р	Preserve Embedded Profiles 🛛 💙	
Gra <u>v</u> : p	Preserve Embedded Profiles 🛛 👻	
Profile Mismatches:	Profile Mismatches: 🔽 Ask When Opening 🔽 Ask When Pasting	
Missing Profiles:	Ask When Opening	
Conversion Options		
Engine: A	Adobe (ACE)	
Intent: p	Perceptual 👻	
	Use Black Point Compensation	
	✓ Use Dither (8-bit/channel images)	
Advanced Controls          Desaturate Monitor Colors By:       20       %         Blend RGB Colors Using Gamma:       1.00         Description		

- 3. Select the settings as shown above
- 4. Click OK to close the Color Settings window
- 5. Open an image that you want to print
- 6. If the message "Embedded Profile Mismatch" shown below appears, select "Convert document's colors to the working space" and hit OK

Embe	dded Profile Mismatch	$\mathbf{X}$
♪	The document "Untitled-1.psd" has an embedded color profile that does not match the current RGB working space.	
	Embedded: sRGB IEC61966-2.1	
	Working: Adobe RGB (1998)	
	What would you like to do? Ouse the embedded profile (instead of the working space) Oconvert document's colors to the working space Obiscard the embedded profile (don't color manage)	
	OK Cancel	

7. If the message "Missing Profile" shown below appears, select "Assign working RGB: Adobe RGB (1998)" and hit OK

Missin	g Profile		X
The document "EP2400abpNeutral.jpg" does not have an embedded RGB profile.			
	- What would you	like to do?	_
	OLeave as is (dor	n't color manage)	
	Assign working	RGB: Adobe RGB (1998)	
	O Assign profile: Adobe RGB (1998)		
	and then convert document to working RGB		
			_
		OK Cancel	

### **Selecting Your Print Settings**

1. You can preview the image thru the profile by selecting View> Proof Setup> Custom. Select the printer profile in the Device to Simulate pull down list and Perceptual as the Rendering Intent. With Perceptual Intent, it makes no difference in the output if the Black Point Compensation box is checked or not. Check the Preview box as shown below to view the image thru the printer profile. When viewing on a calibrated monitor, Proof Setup will give you a close preview of the image printed thru the profile.

Customize Proof Con	dition	
Custom Proof Condition: Proof Conditions Device to Simulate:	Custom  CUSTON CCK3-2400-EPptoPaperG CCK3-2400-EPptoPaperG CCK3-2400-EPptoPaperG	OK Reset <-Default
<u>R</u> endering Intent:	Perceptual  Black Point Compensation	->Default ✓ Preview
🚽 👝 Display Options (On-	Screen)	
Simulate Paper Color		
Simulate Black Ink		
		]

2. Select File> Print

3. With the pull down list on the upper right hand side of the window set to Color Management, check Proof, which will list the profile name selected in the Proof Setup window in step 1 above. Select No Color Management in the Color Handling pull down list and Current Custom Setup in the Proof Setup pull down list as shown below. Do NOT check the Simulate Paper Color box.

Print		
	Printer: EPSON Stylus Photo Copies: 1 Page Setup Position V Genter Image Iop: 0.388 Left: 0.638 Unit: inches Scaled Drint Size Scaled Drint Size Scaled Drint Size Scaled Drint Size Scaled Drint Size Scaled Drint Size Unit: inches Width: 7 Unit: inches Print Resolution: 360 PPI	Color Management         Print
(b) et	Match Print Colors	
	Print Selected <u>A</u> rea	Reset Remember Print One

4. Select your printer model in the Printer pull down list. Now push the Page Setup button to go to the Epson print windows.

EPSON Stylus Photo R2400 Properties	? 🔀
🚱 Main 🥶 Page Layout 🚭 Maintenance	
Paper Options	
Source: Sheet  Borderless PhotoEnhance Revenue Order	
Type: Ultra Premium Photo Paper Luster V Print Preview	
Size: Letter (8 1/2 x 11 in)	
Ink Levels Orientation Orientation Orientation Orientation Orientation Orientation Orientation Orientation Orientation Orientation	
Show Settings           Beset Defaults         Online Support	]
OK Cancel Help	

EPSON Stylus Photo R2400 Properties		
🙀 Main 💮 Page Layout 🙀 Maintenance		
Paper & Quality Options Sheet  Borgerless Ultra Premium Photo Paper Luster Best Photo	Color Management Color Controls PhotoEnhange Advanged B&W Photo ICM	
Letter (8 1/2 x 11 in)	✓ Off (No Color Adjustment)	
Orientation Orientrait     O Landscage	ICM Mode	
Print Options	Intent	
High Speed	Printer Profile	
Print Pr <u>e</u> view	Printer Profile Description	
Custom Settings     Save Setting       Beset Defaults     Online Support	Show this screen first	
	OK Cancel Help	

- 6. In the Paper & Quality Options section, select either Sheet or Roll and the paper size you are using. Select Best Photo for the best print quality. Depending on what printer model and paper you are using, select the appropriate Paper Type setting. For the best quality, do NOT check the High Seed box. In the Color Management section, select ICM: Off (No Color Adjustment) as shown above.
- 7. Push OK, which will bring you to the print window shown below. Push Print to print.

💩 Print	? 🛛	
General		
Select Printer		
EPSON Stylus Photo 2200 (Copy	1) DEPSON Styl	
EPSON Stylus Photo R2400		
Status: Ready	Print to file Preferences	
Location: Comment:	Find Printer	
Page Range		
O Ali	Number of <u>c</u> opies: 1	
◯ Selection ◯ Current Page		
O Pages:		
Enter either a single page number or a single page range. For example, 5-12		
Print Cancel Apply		

# Windows XP (With Photoshop CS2)

Photoshop CS2 is the same as CS3 described above, except for the first print window.

- 1. Select File> Print With Preview. With the pull down list under the image preview set to Color Management, check Proof, which will list the name of the profile selected in Proof Setup Window, Color Handling: No Color Management and Proof Setup Preset: Current Custom Setup. Do NOT check the Simulate Paper Color box.
- 2. Push the Print button then follow steps 4-7 in the Windows XP/Photoshop CS3 instructions above to select Print Settings and Color Management, now push Print to print the image.

#### **Printer Specific Media Type Settings**

- R2400~ Glossy papers: Ultra Premium Photo Paper Luster Non-glossy papers: Ultra Premium Presentation Matte
- 2200~ Glossy papers: Ultra Premium Photo Paper Luster Non-glossy papers: Enhanced Matte
- 1400~ Glossy papers: Ultra Premium Photo Paper Luster Non-glossy papers: Ultra Premium Presentation Matte
- **3800**~ Glossy papers: Ultra Premium Photo Paper Luster Non-glossy papers: Enhanced Matte

# Macintosh OSX (With Photoshop CS3)

### **Opening an Image**

- 8. Open Adobe Photoshop CS3
- 9. Select Edit> Color Settings as shown below

Color Settings	
Unsynchronized: Your Creative Suite applications are not synchronized for consistent color.	ОК
Settings: Custom	Cancel
Working Spaces	Load
CMYK: U.S. Web Coated (SWOP) v2	Eewer Option
Gray: Gray Gamma 2.2	Preview
Color Management Policies	
CMYK: Preserve Embedded Profiles	
Gray: Preserve Embedded Profiles	
Conversion Options Engine: Adobe (ACE)	
Intent: Perceptual	
Use Black Point Compensation Use Dither (8-bit/channel images)	
Advanced Controls Desaturate Monitor Colors By: 20 % Blend RGB Colors Using Gamma: 1.00	
Description	

- **10.** Select the settings as shown above.
- 11. Click OK to close the Color Settings window
- 12. Open a photo to print
- 13. If the message "Embedded Profile Mismatch" shown below appears, select "Convert document's colors to the working space and hit OK

	Embedded Profile Mismatch
	The document "Untitled-1.tif" has an embedded color profile that does not match the current RGB working space.
Ps	Embedded: sRGB IEC61966-2.1
	Working: Adobe RGB (1998)
	What would you like to do?
	Use the embedded profile (instead of the working space)
	<ul> <li>Convert document's colors to the working space</li> </ul>
	O Discard the embedded profile (don't color manage)
	Cancel OK

14. If the message "Missing Profile" shown below appears, select "Assign working RGB: Adobe RGB (1998)" and hit OK

Missing Profile			
Ps	The document "RGBtestImage1.tif" does not have an embedded RGB profile. What would you like to do? O Leave as is (don't color manage) Assign working RGB: Adobe RGB (1998)		
	Assign profile:	Adobe RGB (1998)	
		and then convert document to working RGB	
		Cancel OK	

#### **Selecting Your Print Settings**

8. You can preview the image thru the profile by selecting View> Proof Setup> Custom. Select the printer profile in the Device to Simulate pull down list and Perceptual as the Rendering Intent. With Perceptual Intent, it makes no difference in the output if the Black Point Compensation box is checked or not. Check the Preview box as shown below to view the image thru the printer profile. When viewing on a calibrated monitor, Proof Setup will give you a close preview of the image printed thru the profile.

Customize Proof Condition	
Custom Proof Condition: Custom	OK Cancel Load Save
Rendering Intent: Perceptual	Preview
Display Options (On-Screen)     Simulate Paper Color     Simulate Black Ink	

- 9. Select File> Print
- **10.** With the pull down list on the upper right hand side of the window set to Color Management, check Proof, which will list the profile name selected in the Proof Setup window in step 1 above. Select No Color Management in the Color Handling pull down list and Current Custom Setup in the Proof Setup pull down list as shown above. Do NOT check the Simulate Paper Color box.

	Print	
	Printer: StylusPro4800  StylusPro4800 Copies: 1 Page Setup Position Conter image Top: 0.403 Left: 0.18 Unit: 0.18 Unit: 0.18 Unit: 0.767 Uni	Color Management <ul> <li>Print</li> <li>Document (Profile: Adobe RCB (1998))</li> <li>Proof (Profile: EP4800EP_EnhancedVelvet)</li> <li>Options</li> </ul> Color Handling:         No Color Management              Did you disable color management <ul> <li>Did you disable color management</li> <li>In the printer dialog?</li> </ul> Printer Profile:         Working RCB - Adobe RCB (1998)           Rendering Intent:         Perceptual           Black Point Compensation             Proof Setup:         Current Custom Setup             Simulate Back Ink           Description
<b>)</b> c	Match Print Colors	
	Print Selected Area Cancel	Done Print

11. Select your printer model in the Printer pull down list. Push the Print button to go to the Epson Print window. Select the Copies & Pages you desire, then select Print Settings in the pull down list as shown below.

Print		
Printer: StylusPro4800-B90AE0 (IP)		
Presets: 4800 ICC		
Print Settings		
Page Setup: Sheet		
Paper Tray		
Media Type: Archival Matte Paper		
Color: Color		
Mode: 🔘 Automatic		
Custom		
Advanced Settings		
Print Quality: SuperPhoto – 2880dpi		
Super MicroWeave		
High Speed		
Einest Detail		
PDF ▼         Preview         Supplies         Cancel         Print		

- 12. Select Best Photo or 2880dpi for the best print quality. Depending on what printer model and paper you are using, select the appropriate Paper/Media Type setting. For the best quality, do NOT check the High Seed box.
- 13. Select Printer Color Management now in the pull down list as shown below. Select Off (No Color Adjustment) then push the Print button to print the image.

	Print	
Printer:	StylusPro4800-B90AE0 (IP)	•
Presets:	4800 ICC	•
	Printer Color Management	•
Color Controls		
ColorSync		
💽 Off (No Color Adj	ustment)	
? PDF ▼ Prev	view Supplies	Cancel Print

# Macintosh OSX (With Photoshop CS2)

Photoshop CS2 is the same as CS3 described above, except for the first print window.

1. Select File> Print With Preview as shown below. With the pull down list under the image preview set to Color Management, check Proof, which will list the name of the profile selected in Proof Setup Window, Color Handling: No Color Management and Proof Setup Preset: Current Custom Setup as shown below. Do NOT check the Simulate Paper Color box.



3. Push the Print button then follow steps 4-6 in the Mac OSX/Photoshop CS3 instructions above to select Print Settings and Color Management, now push Print to print the image.

#### Solving Color Management Problems

If you select the wrong combination of source profile, printer profile and color management settings, you'll get unexpected results.

- If the printed image is darker than expected with a strong green cast, color management has probably been turned off in both Photoshop and Epson. Return to the instructions depending on your operating system. In the Print window, make sure the Document is *not* Untagged RGB. Make sure the correct profile is selected in the profile pull down list for the printer, ink and paper combination you are using.
- If the printed image is lighter than expected with a strong red cast, color management has probably been selected in both the Photoshop and Epson print windows. Return to the instructions depending on your operating system. In the Print window, make sure the correct profile is selected and in the Epson print window make sure No Color Adjustment is selected.
- If the printed image is lacking a color and/or the colors are not accurate (ex: if the green is printing cyan that means the yellow is not printing). Print a nozzle check to make sure all ink positions are printing fully and the correct color. If a position is not printing, first check the level of ink in that position cartridge then second make sure the vent hole is not blocked.

### Printer Specific Media Type Settings

Glossy papers: Ultra Premium Photo Paper Luster Non-glossy papers: Ultra Premium Presentation Matte aka/ Enhanced Matte