

# Creating Your RGB Custom Printer Profile in Photoshop (Version CS4 & Earlier)

## 1) Prepare your Printer & Monitor:

**A)** Assure that your printer is loaded with the **proper paper & ink**. Remember that you need one profile for every combination of paper, ink, printer and resolution.

**B)** It is strongly suggested that you run a **Nozzle Check** to assure your printer is operating at 100%. Use a loupe or magnifying glass to check your results. Go to your Printer's Utility software to do this. Check your printer's documentation for more information.

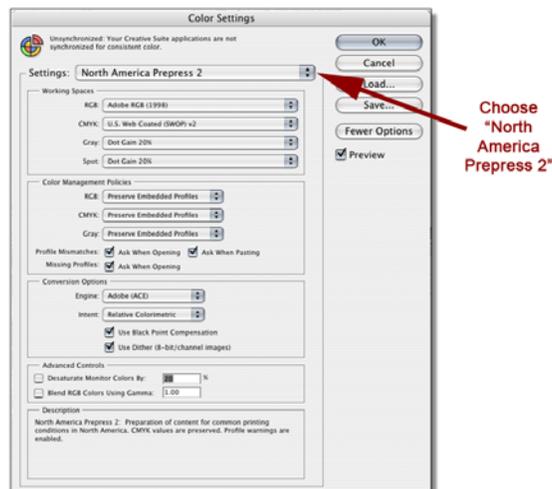
**C)** Your **monitor** must be properly **calibrated** and **profiled** to **use your printer profile**. If it is not, your printer profile will not be effective. (See our PDF download "*Prep-Your-Own Prints*" on our website for more information about this and other important color management information). **Please Note: It is NOT necessary to have your monitor calibrated and profiled to CREATE your Printer Profile, only to USE your Printer Profile effectively. Also, note that your printed targets will NOT necessarily match the targets displayed on your monitor.**

## 2) Download the Targets:

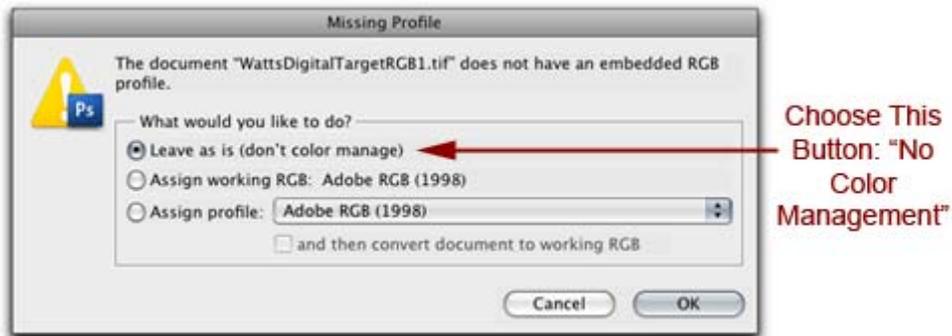
Go to our webpage and download the targets, available as a ZIP file. There are a total of 2 targets to print, called "*WattsDigitalTargetRGB1.tif*" and "*WattsDigitalTargetRGB2.tif*" (There is also a PDF file that contains an Order Form). **Important:** Both targets need to be printed on 8.5" x 11" paper or bigger and sent to complete the profiling process.

## 3) Print both Targets (In Photoshop):

**A) Set Up Your Color Preferences:** To access, Use the speed keys "*Shift + Command + K*" (for Mac) or "*Shift + Control + K*" (for Windows). Chose "**North American Prepress 2**" (or "**US Prepress Defaults**" in older versions of Photoshop) from the "*Settings*" drop down menu. Press the "**OK**" button.



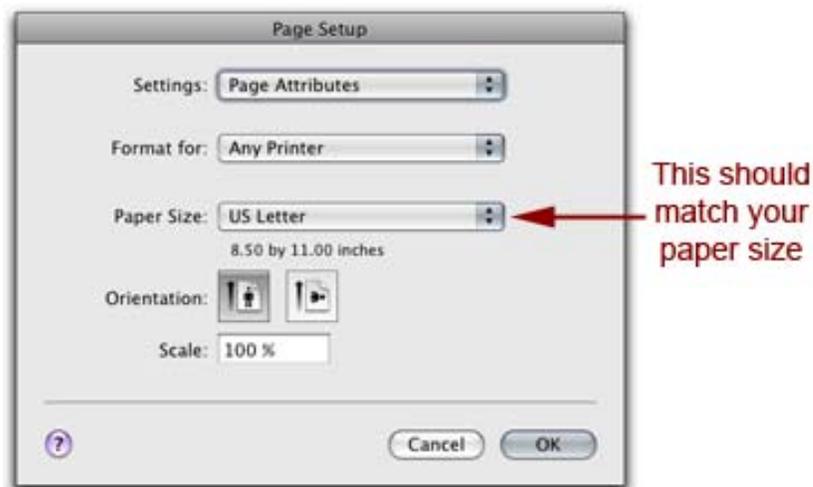
**B) Open the file(s) (with No Color Management):** If you set your Color Preferences up properly, the “*Missing Profile*” dialog box will appear. Choose as shown. Click “*OK*”, and your target will open.



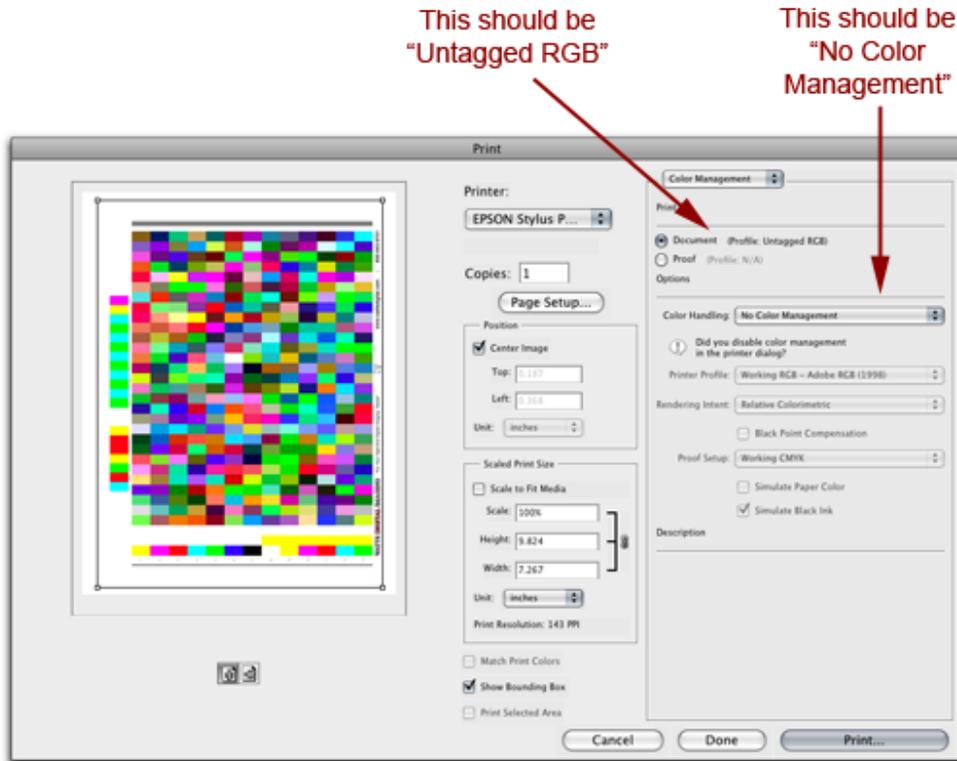
**Important:** If you're using Mac OS 10.6.x “*Snow Leopard*” with Photoshop CS4 and an Epson Printer – Follow the Special Instructions starting here – [Click Here if you need the Special instructions ...](#)

**C) Do not alter the Target(s) in any way!** Don't change the size, the resolution, the orientation, or anything else about the target(s). It is also important that you print each target on its own 8.5” x 11” or bigger sheet of paper on the surface to be profiled.

**D) Check the “Page Setup” dialog box:** To access, Use the speed keys “*Shift + Command + P*” (for Mac) or “*Shift + Control + P*” (for Windows). The “*Paper Size*” drop down menu should match the paper size that you are printing on. Also, leave the “*Orientation*” at “*Portrait*” (as shown).



**E) Open the “Print” dialog box (or “Print with Preview” in older versions of Photoshop):** To access, go to *File* → *Print* (or *Print with Preview*). Make sure that you are printing with no color management by choosing *No Color Management* under the *Color Handling* drop down menu. (Under Photoshop CS, choose *Same as Source* under *Profile*). If you set up steps A and B above properly, *Untagged RGB* should appear next to *Document*. Once done, press the *Print* button.



**F) Printer Driver Settings** – After pressing the *Print* button above, the *Print* (or *Print with Preview*) dialog box closes, and your Printer Driver dialog box will open.

***Important:*** In the next menus, which will concern your specific printer driver, you must do these 3 things:

- 1) Turn off any color management in the printer driver
- 2) Choose the proper print media
- 3) Choose the highest print quality

*The following examples are generic setups for an Epson Printer. These settings will vary by Printer Brand and Model – There is no consistency, even among printers by the same manufacturers, and can get confusing. When in doubt, refer to your printer documentation, or contact us.*

***Please Note:*** For Canon Printers, please refer to the examples shown in the addendum on page 11, *Printer Driver Settings for Canon Printers*, then return to page 6 to finish creating your targets.

## F) Printer Driver Settings (Cont'd)

**Please note (Mac or PC):** Choose the options below for quality prints without wasting ink and time.

- A) If you have a choice between *“Best Photo”* and *“Photo RPM”*, choose **‘Best Photo’**.
- B) If you have a choice between *“1400 dpi”* and *“2800 dpi”*, choose **“1400 dpi”**.
- C) Choose *“Gloss Optimizer On”* only if you are using Gloss Paper.
- D) For time savings without loss of quality, I recommend printing with *“High-Speed Printing”* On.

### For Mac (two examples):

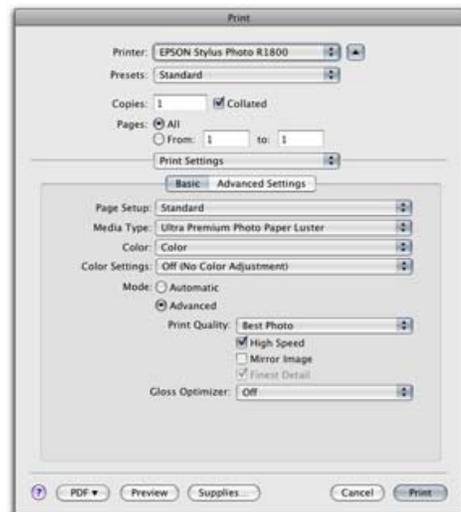
#### Example A:

- 1) Choose your Photo Printer from the Printer Menu.
- 2) Select *“Print Settings”* from the Drop Down Menu.
- 3) Select the proper *“Media Type”*
- 3) Select the *“Advanced”* option.
- 4) Select *‘Highest Print Quality’*, turn on *“High Speed Printing”*, turn *“Gloss Optimizer”* on or off, and turn off *“Edge Smoothing”*.
- 5) Select *“Color Management”* from the Drop Down Menu.
- 6) Turn *“Color Management”* Off (No Color Management).



#### Example B:

- 1) Choose your Photo Printer from the Printer Menu.
- 2) Select *“Print Settings”* from the Drop Down Menu.
- 3) Select the proper *“Media Type”*
- 3) In the *“Color Settings”* Drop-Down menu, choose *“Off (No Color Management)”*.
- 3) Select the *“Advanced”* option
- 4) Select *‘Highest Print Quality’*, turn on *“High Speed Printing”*, turn *“Gloss Optimizer”* on or off, and turn off *“Edge Smoothing”*.

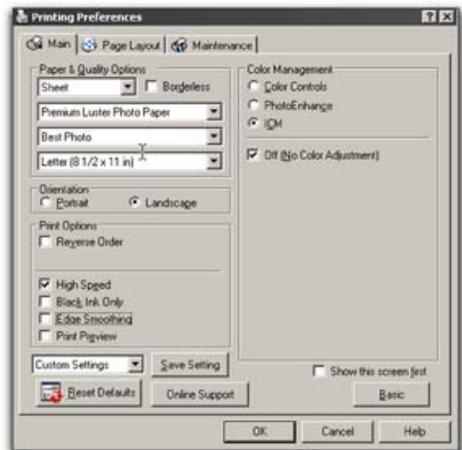


## F) Printer Driver Settings (Cont'd)

### For Windows (two examples):

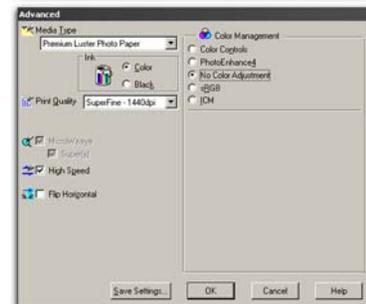
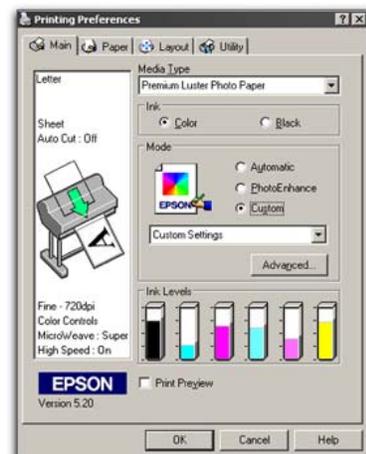
#### Example A:

- 1) In the **"General"** Tab, choose your Photo Printer from the Printer Menu.
- 2) Click on **"Preferences"**, then the **"Main"** tab.
- 3) Choose the **"Highest Print Quality"** option, the proper **"Media Type"**, the proper **"Paper Size"**, then click on the **"Advanced"** button.
- 4) Turn on **"High Speed Printing"**, turn **"Gloss Optimizer"** on or off, and turn off **"Edge Smoothing"**.
- 4) Choose the **"ICM"** radio button.
- 5) Click **"Off (No Color Adjustment)"**.



#### Example B:

- 1) In the **"General"** Tab, choose your Photo Printer from the Printer Menu.
- 2) Click on **"Preferences"**, then the **"Main"** tab.
- 3) Choose , the proper **"Media Type"**, then choose **"Custom"**, then click on the **"Advanced"** button.
- 4) Choose the **"Highest Print Quality"** option, turn on **"High Speed Printing"**, turn **"Gloss Optimizer"** on or off, and turn off **"Edge Smoothing"**.
- 4) Choose the **"No Color Adjustment"** radio button.
- 5) Click on the **"Paper"** Tab.
- 6) Choose the proper **"Paper Size"**.



## F) Printer Driver Settings (Cont'd)

**Important Step for Both Mac and PC:** It is imperative that you save these settings in your printer driver menu, as you will need to use the same settings later when you use your custom profile (See page 10, "Using your Custom Printer Profile in Photoshop", later in this PDF).

*In Epson's Printer Driver Dialog Box:* For Mac, go to the "**Presets**" Drop Down Menu, choose "**Save As ...**"; For Windows. Go to "**Save Settings**" in the Advanced Dialog box. Save your settings with an appropriate name, such as "Premium Glossy Best".

## G) Click "Print" to print your Target.

**Important: Don't forget to do all of these steps twice and print both Targets!**

*Note: It is not necessary to save the target files after printing.*

## 4) Send both Targets to us:

Fill out the Order form enclosed in the ZIP or SITX file, and send the 2 targets and order form to us. Some things to remember about your targets:

**A)** Let your targets dry for at least 4 hours (preferably overnight) before handling or packing.

**B)** There should be no blotches, spots, scratches, nicks or dents – If there are, reprint them; if you don't, this will affect your profile negatively.

**C)** Pack your targets properly – We suggest that you put a few sheets of regular copy paper over your target (after they have dried completely) to protect them, then pack them between two stout sheets of corrugated cardboard. Also, you should write "Photos – Do Not Bend" prominently on the front and back of your package.

**D)** We are not responsible for poorly printed or damaged targets. If we receive the targets in an improper condition, they will need to be reprinted and resubmitted at the client's expense. Please also note that the targets you send us will not be returned.

## 5) We'll Email Your Custom Printer Profile to you:

In approximately 2 to 3 working days from the time we receive your targets, we'll email your profile back to you via email. It will be sent in the proper file format for effective color management. The file will be about 1 to 2 MB in size. Make sure that your email account can handle a file that big.

***Oh, and please save these instructions –  
You will need the following pages to  
properly install and use your profile –See Page 7!***

**Questions? Please call or email – I'd be happy to help!**

**[john@wattsdigital.com](mailto:john@wattsdigital.com) - - 1-800-443-9701**

## Using Your Custom Printer Profile in Photoshop (Version CS4 & Earlier)

### 1) Load the Profile on your Computer:

After receiving your profile by email, put the file in the following location depending on your computer's operating system: **Please Note:** If Photoshop is open, please close and restart Photoshop after this step so that it will recognize the profiles.

**For Mac OSX:** Primary Hard Drive -> Library -> ColorSync -> Profiles

**For Windows:** Download to your desktop, right-click on the profile icon, click ["Install Profile"](#), then delete from your desktop. (It will end up in the following folder:  
C:\WINDOWS\SYSTEM32\SPOOL\DRIVERS\COLOR)

### 2) Print using your Profile:

**Note:** Your monitor must be properly calibrated and profiled. If it is not, your printer profile will not be effective. (See our PDF download *"Prep-Your-Own Prints"* on our website for more information about this and other important color management information).

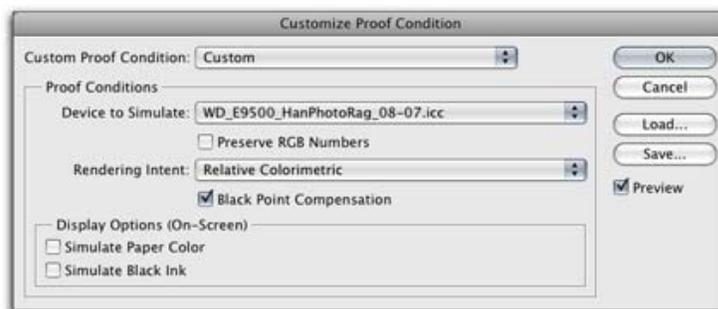
**A note of caution:** You will never get your monitor to be a 100% accurate representation of your print, due to the different physical light properties between your monitor (emitted light) and your print (reflective light), It will never be perfect, but it will be extremely close!

#### The steps to print are:

- A) Soft Proof and Gamut Warning
- B) Print Dialog Box
- C) Proper use of your Printer Driver
- D) Press the "Print" Button

#### A) Soft Proofing and Gamut Warning:

Soft Proofing is a previewing procedure that Photoshop uses to "see" the results of your printer profile. It is what your image will look like (on a calibrated and profiled monitor) when the printer profile is applied. **It does not affect the output of your printed image, is used for viewing purposes only, and can be considered optional.**



## Soft Proofing Procedure:

- 1) Go to "**View**" → "**Proof Setup**" → "**Custom**"
  - 2) Go to "**Device to Simulate**" and select your new paper profile from the drop-down list.
  - 3) Intent should be "**Relative Colorimetric**" and "**Black Point Compensation**" should be checked.
  - 4) Click "**OK**".
- You can toggle this soft proof on and off by going to "**View**" → "**Proof Colors**" or by using the speed key: Mac: "**Command**" + "**Y**" or Windows: "**Control**" + "**Y**".
  - Soft Proofing is active when the profile name shows up in the Document Window's title bar.
  - You can save this soft proof setup by clicking on the "**Save**" button. The saved name will now show up in the list, "**View**" → "**Proof Setup**".

## Gamut Warning:

A gamut is the range of colors that a color system can display or print. If your image has an "out-of-gamut" color, that color will not print as it is shown on your monitor.

**To set up the gamut warning:** You should first choose a bright fluorescent color to show your out-of-gamut colors when the warning is active. To do this, go to "**Preferences**" ("**Command**" + "**K**" on Mac, "**Control**" + "**K**" on Windows) → "**Transparency & Gamut**" (From the menu on the left) → "**Gamut Warning**" (double-click on the color box, and change to something like **RGB 255/0/255** in the **Color Picker**).

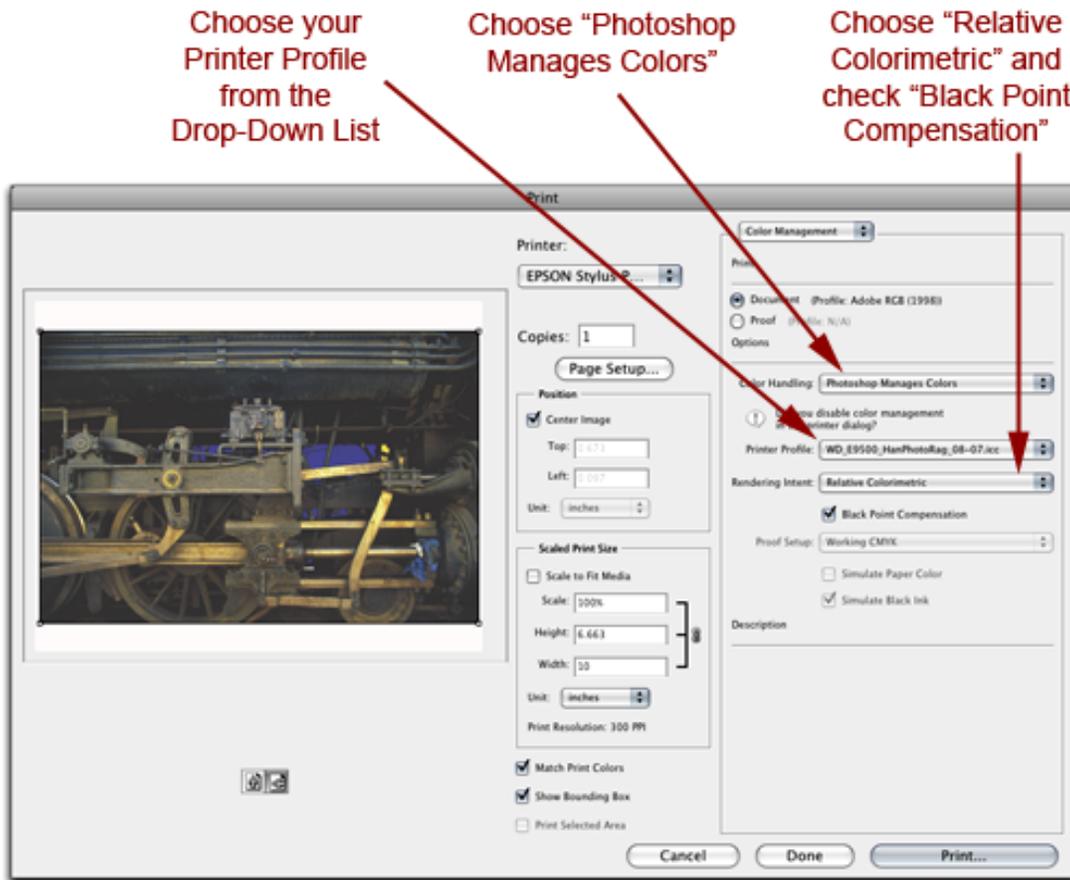
**To Check Gamut:** Make sure that you are Soft-Proofing (A printer profile must be loaded), then go to "**View**" -> "**Gamut Warning**". The areas that are out-of-gamut will show up as the fluorescent color you picked above.

**To Correct:** Use a "**Hue/Saturation**" adjustment layer to correct the out-of-gamut color until the fluorescent color disappears. You can do this either globally or locally with selection tools.

**To Turn Off Gamut Warning:** Go to "**View**" -> "**Gamut Warning**" and click it again. If you prefer, you can use the available speed key shown by the menu item.

## B) Photoshop Print Dialog Box:

Open the *"Print"* (or *"Print with Preview"*) Dialog Box. To access it, go to *"File"* → *"Print"* (or *"Print with Preview"*).



- 1) Under the *"Print"* box, Choose *"Document"*.
- 2) Under Options:
  - *"Color Handling"* → *"Photoshop Handles Colors"*
  - *"Printer Profile"* → (Your Printer Profile)
  - *"Rendering Intent"* → *"Relative Colorimetric"*
  - Click *"Black Point Compensation"* On
- 3) Press *"Print"*. This menu will close, and your **Printer Print Dialogue Box** will open.

### **C) Printer Driver Settings:**

**Note:** You should have saved these settings in your printer driver menu when you created your profile (See page 6, "Creating Your RGB Custom Printer Profile in Photoshop", earlier in this PDF).

*In Epson's Printer Driver Dialog Box:* For Mac, go to the "*Presets*" Drop Down Menu; For Windows, Go to "*Custom Settings*" in the Advanced Dialog box. Choose the "saved-as" name of these settings, and your settings will load.

**Now, simply go to page 4 (Epson for Mac) or page 5 (Epson for Windows) or page 11 (for Canon) and follow the steps for your printer driver exactly as you did when you printed the Test Targets, or better yet, use the saved configuration.**

**D) Click "Print" to print your photo – *That's it! Enjoy your Print!***

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**Questions? Please call or email – I'd be happy to help!**

***john@wattsdigital.com***

***1-800-443-9701***

## Addendum: Printer Driver Settings for Canon Printers

*The following examples are a generic setup for a Canon Printer in Windows Vista. These settings will vary by Printer Brand and Model – There is no consistency, even among printers by the same manufacturers, and can get confusing. When in doubt, refer to your printer documentation, or contact us.*

### ■ In the “Main” Dialog Box:

- 1) Choose the proper “Media Type” for the paper that you’re profiling. If yours is not listed, choose the type closest to what you are using.
- 2) Set “Print Quality” to “High”.
- 3) Under “Color Adjustment”, choose “Manual”, and the “Set Dialog Box” opens.

### ■ In the “Set” Dialog Box:

- 1) All “Color” and “Intensity” sliders should be set to “0”.
- 2) The “Enable ICM” box should be unchecked - This turns off Color Management in the Canon Printer Driver.
- 3) “Print Type” should be “Photo”, and “Brightness” should be “Normal”.

### ■ In the “Effects” Dialog Box:

ALL check boxes should be unchecked.

### ■ In the “Profiles” Dialog Box:

Canon should rename this Dialog Box to “Configuration”, as it is confusing; This has nothing to do with Color Management or ICC Profiles. This is simply a place to save your configuration settings from above. Simply click the “Add to Profiles” button and give the configuration an appropriate name, such as “Glossy”

**Now return to Page 6 to continue...**

