Basic Guidelines for File Set-up to print to the Epson 9800

1. It is recommended that your files be embedded with the **U.S. Web Coated SWOP (v2) CMYK** profile. Make sure to set up an embedded profile in Photoshop, Illustrator, and InDesign or whatever program you work in.

2. Scanned images to be used for prints should be prepared for printing with a resolution of no less than 300 dpi. It may be necessary to scan your work in at a higher resolution, then re-size to 300 dpi.

3. If you are working on a laptop, hook your machine to an **external monitor**. The color accuracy of your print will look best on a color-calibrated monitor instead of your LCD laptop screen. As a general compensation for the screen, **imagine that the luminescence** of your color is at least *10 percent less* at all times when working. Let this de-saturation sink into your perception of the screen values.

4. To save your work for printing:
Photoshop:
- Flatten layers
- Save as **TIFF** with **Image Compression** set to **NONE**, **Pixel Order** set to **Interleaved (RGBRGB)** and **Byte Order** set to **Macintosh**.

Illustrator:
- Save as **Illustrator**, **EPS** or **PDF**. After selecting **Adobe PDF (pdf)** from the initial drop down and hitting **Save**, another **Save Adobe PDF** dialogue window will appear. On the left select **Compression**. Select **Do Not Downsample**, and set **Compression** to **None** on all available drop down menus. On the left select **Color**. Set **Color Conversion** drop down to **No Conversion**. Set **Profile Inclusion Policy** to **Include Tagged Source Profiles**.

InDesign:
- With a multipage document, you must **Package** it so that all Fonts and Images are included as supplemental and print crisply.
- Setting up and Exporting a **PDF** with above settings works swimmingly and is foolproof.

5. Create a Test strip. A Test Strip is just what it sounds like: it is a smaller piece of the larger print. With the test we can see any potential problems such as resolution, color or other image deficits, before we begin your job.

Select a portion of your image for print that is no larger than 42 in. wide x 10 in. high. Select a part of your image that has a black, a white, and good highlight and shadow detail. Also consider including any areas of your image that may be an issue. Including any area of your image that will give a good sample before creating your final print is ideal. Make sure the test strip is set up in the same color space as the original image or you will not be getting a good color reference. *(This setup applies to all programs with*

exception to InDesign. The Print Manager will setup the test for this file type that with you.)

Before your print appointment, make sure you are ready with the following:
- Epson 9800 PDF Request form filled out and printed, or emailed to the Print Manager.
- Final print file on a disc or drive.
- Test strip on a disc or drive.
- Check or Cash to pay for your print job.

Feel free to contact Mindy McDaniel with any questions:
mcdanm2@rpi.edu
WH 415
Tuesdays from 10 p.m.- 1 p.m.
Thursdays from 1 p.m.- 8 p.m.

Working Spaces color settings dialog box in Photoshop
You first need to tell Photoshop which range of colors (or Color Space) you would like to do your editing work in. Under Edit/ Color Settings…

RGB: Set to Adobe RGB (1998) – This color space has a wider gamut (more colors possible) than most other RGB color spaces, which makes it the best to carry out image adjustments in.
Note: If you output only to web applications, you could work in sRGB. This may be convenient, considering that before you optimize an image for the web, it is recommended to Convert your file to the sRGB color space. **sRGB** represents a color space which most average quality monitors are capable of showing. Yet, if you might repurpose the image for printing, it would still be better to use the larger working space of **Adobe RGB (1998)** for image editing.

CMYK: Leave set to the default **U.S. Web Coated (SWOP)**, unless other specifics are required by your service bureau for output to a commercial printing press. Never convert to CMYK unless you are going to press.

Gray: Set to **Gray Gamma 2.2** for printing black & white images to an inkjet printer, or 20 percent Dot Gain for black & white output to printing press.

Spot: Leave set to default of **Dot Gain 20%.** This setting does not apply to digital photographs.

An **ICC Profile** is an extra part of a file that describes what the colors should look like in an image, (e.g., Which shade of red). Digital devices that generate images are only able to capture color within a finite range. A camera or a scanner may tag a file with a Profile of the colors it captured. This Profile is a description of the original source colors, and how they relate to the range of colors, that the device is able to capture.
When you open an image with an Embedded profile that describes color within a

different range, than the range of your Working Space, Photoshop needs to know how to process and present the colors to you. The **Color Management Policies** allow you to set notifications so that when you open a file that has a different profile than your working space, you will be given the option to change that profile depending on what you select here.

When you open an image without a profile **(an untagged image)**, Photoshop will not add a profile to it unless you tell it to. By checking the **"Ask when Opening"** missing profiles box, you will have the opportunity to assign it a profile.

RGB:
Convert to Working RGB – This is your best choice for working with your own files (even if your camera tags your image files with **"sRGB"**), since the larger color space of **Adobe '98** is far better to edit an image in. If a file comes **"tagged"** with a profile that differs from your Working Space, Photoshop will Convert **(or remap)** the color numbers **(the Red, Blue, Green values)**, to numbers that correspond to the same colors in your Working Space. Thusly preserving the color integrity of the image file. It will look the same as if you had not converted it.

CMYK:
Preserve Embedded Profiles – If you receive a file tagged with a CMYK profile, you may assume the person who tagged it knew what they were doing. Since CMYK is output specific and is only used for files going to press, you will need to convert the file to the specific profile of the printing press before you send it off.

Gray:
Convert to working gray – If you are printing the B&W image on your inkjet. If the file is going to press, consult your printer. 20% dot gain for coated stock, and 30% dot gain for newsprint is typical.

Profile Mismatches (checkboxes):
Ask When Opening
Recommended so you are at least informed about what's happening concerning the color information in your file and how Photoshop is interpreting it. (not) When Pasting This allows Photoshop to convert the file or item to your working space without prompting you. If you feel you want the extra control, then check this also. Many feel it gets in the way of their workflow.

Missing Profiles (checkbox):
Ask When Opening
This will allow you to choose an option for assigning a color space profile and converting to your working space (see next section).
Conversion Options Photoshop Color Conversion Options
The last item in the **Color Settings** dialog box is accessed by clicking the **More Options** button on the right.
Engine : Adobe (ACE) leave set at this default

Intent : Perceptual
* Perceptual is the best setting for working with photographs. Perceptual
Intent preserves the look of colors in their relationship to each other. Perceptual
Intent will effectively reduce clipping colors when converting from a wider gamut color
space (Adobe RGB) to a more limited colorspace.
* The default of Relative Colorimetric is the best setting for working with documents
already in a more narrow gamut (as in CMYK color spaces), and when it is important to
map the color numbers more accurately from one color space to another.
It is highly recommended that you do not change any of the other settings in the lower
area of the color settings box unless you know what you are doing.

Lastly:
You should click on the **"Save"** button so you may name this set of preferences and call
them up in the future if need be.