Processing a Digital Image – Revision **11.10   Best Practices**

1. Transfer original JPEG (.jpg) or RAW camera file to hard drive of your choice via USB or Firewire – directly from the camera or with a card reader.

2. Sort, Select and Process (if shooting RAW) within **Adobe Bridge**

3. Open JPEGs requiring adjustment in **Adobe Photoshop**.

   3a. Duplicate background layer

   3b. Apply all corrections/modifications as "adjustment layers"

         Luminance – Levels

         Color – Curves

   Grayscale – Channel Mixer

         Sharpening – Unsharp Mask applied to Duplicate Background Layer

4. Saving Working copy of file as Photoshop File Format (.PSD) or .TIFF (without compression, or maintaining layers)

Preparing the working copy for Print

Color working space should be configured to **Adobe RGB 1998 / Pro Photo RGB (?)** prior to opening files for print.

1. Open working copy of the file and apply any adjustments required prior to scaling resolution to appropriate dimension for the final print (as described above).

2. Convert Resolution to appropriate print dimensions with **Resample OFF Photoshop Menu -> Image -> Image Size**

 *
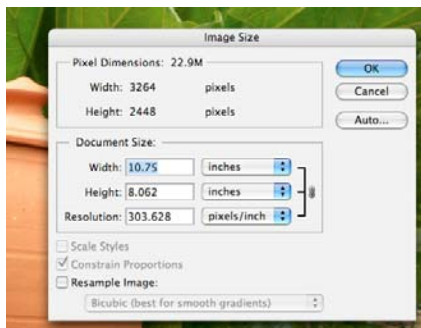
Print Dimension Recommendations:

8.5X11 Sheet with Narrow Margin – 10.75 on the largest dimension/height or width

8.5X11 Sheet with No Margin – Borderless – 11 (requires borderless sheet feeder selection in Page Setup)

8.5X11 Sheet with Larger Margin for Mount/Matting – 9.5 on the largest dimension

Sharpening *– Unsharp mask applied as final step prior to printing (*Unsharp Mask applied to Duplicate Background Layer)*

Depending on the size and complexity of the file an optional final step prior to sending to printer is to flatten all layers.   **(*Do not overwrite your working file in the flattened state!)**

3. Adobe Photoshop File Menu - Select **Print**

4. Click on **Print Settings** – Select **Printer, Presets** are **Standard,** and **Paper Size**.
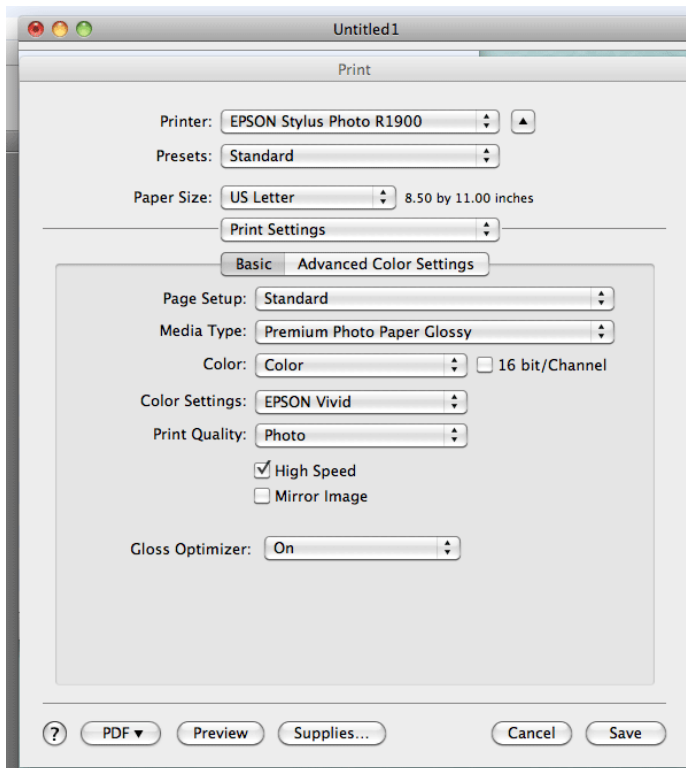
Print Settings

- **Media Type -** set the appropriate paper surface or media type.

- **Color** - Ink Use **Color** or **Black** only *grayscale

- **Color Settings -**   **OFF (No Color Adjustment)**

- **Print Quality** *should be resolution:

    Photo (1440x720)
    Best Photo (1440x1440)
    Photo RPM (5769x1440)

- **High Speed** - **ON**

- **Gloss Optimizer** – **ON/OFF** (*optional)

Select **Save.**   Return to Printing with Preview menu
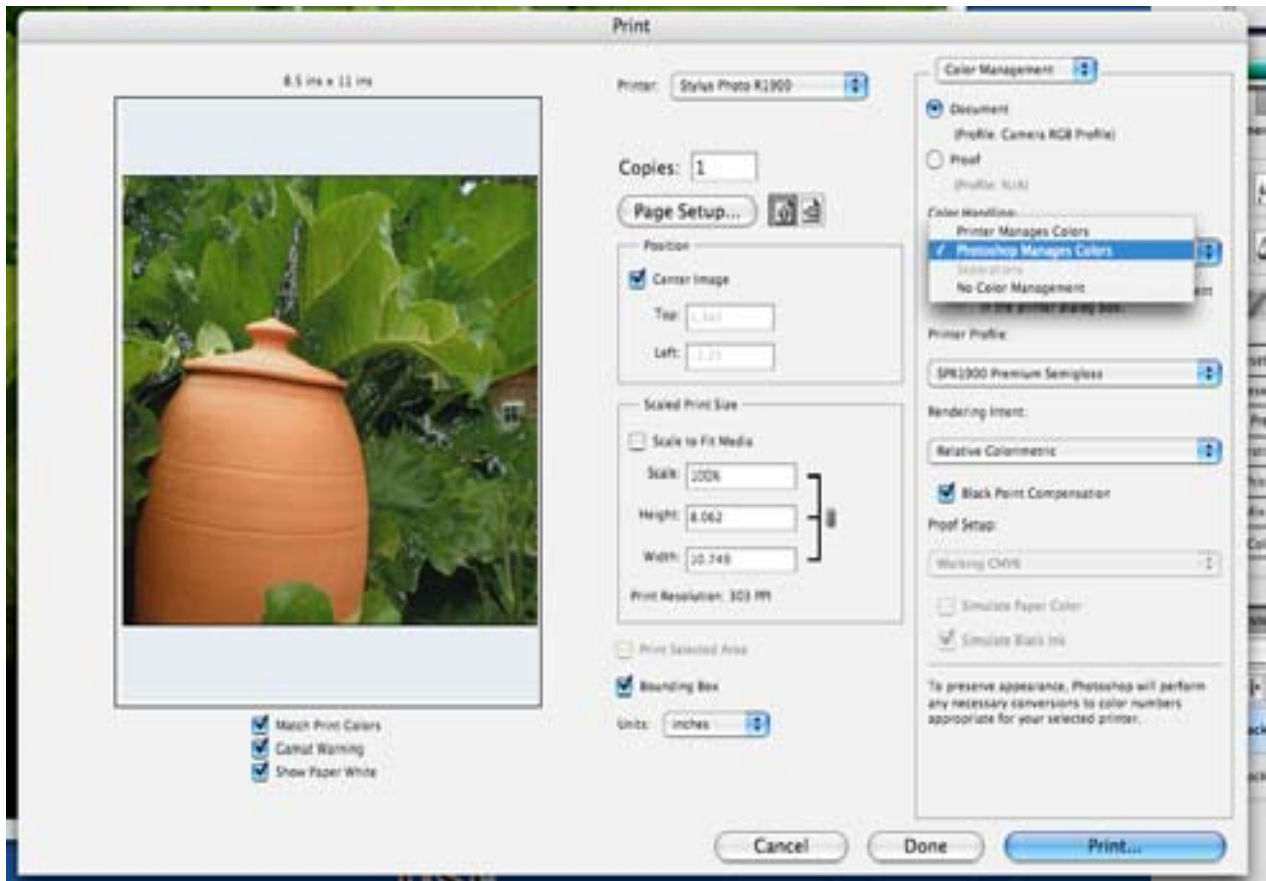
7. **Color Management** menu   (*right hand column)

Let Photoshop Determine Colors

8. **Printer Profile Selection**– choose Profile for specific printer and paper.

The primary difference with regard to an Epson print using a printer profile is the selection, installation and application of a paper profile specific to the paper and printer combination.   In the initial color management menu under Print select the Printer Profile provided by the manufacturer of the paper you have chosen for this specific printer. All other color management systems and options will be turned off in a later menu.

Lab Color

✓ Adobe RGB (1998)
Apple RGB
ColorMatch RGB
ProPhoto RGB
sRGB IEC61966-2.1

Coated FOGRA27 (ISO 12647-2:2004)
Coated FOGRA39 (ISO 12647-2:2004)
Coated GRACoL 2006 (ISO 12647-2:2004)
Japan Color 2001 Coated
Japan Color 2001 Uncoated
Japan Color 2002 Newspaper
Japan Color 2003 Web Coated
Japan Web Coated (Ad)
U.S. Sheetfed Coated v2
U.S. Sheetfed Uncoated v2
U.S. Web Coated (SWOP) v2
U.S. Web Uncoated v2
Uncoated FOGRA29 (ISO 12647-2:2004)
US Newsprint (SNAP 2007)
Web Coated FOGRA28 (ISO 12647-2:2004)
Web Coated SWOP 2006 Grade 3 Paper
Web Coated SWOP 2006 Grade 5 Paper

Dot Gain 10%
Dot Gain 15%
Dot Gain 20%
Dot Gain 25%
Dot Gain 30%
Gray Gamma 1.8
Gray Gamma 2.2

CIE RGB
Display
e-sRGB
Generic RGB Profile
HDTV (Rec. 709)
HFA_Eps1900_PK_FABaryta
HFA_Eps1900_PK_PRBaryta
hp color LaserJet RGB v402
IGSGP11_EPR1900_PSPPn.ICC
IGSGP9_EPR1900_PSPPn.icc
IGSHMP_EPR1900_PQIPn.icc
IGSPP9_EPR1900_PSPPn.icc
INKP_MAT80_1900.icc
IP BARYTA-EPS 1900.icc
IP LUSTER-EPS 1900.icc
IP SATIN FIBER-EPS 1900.icc
IP WARMTONES-EPS 1900.icc
MOAB Colorado Fiber Gloss Epson R1900.icc
MOAB Colorado Satine R1900.icc
MOAB Entrada Bright R1900.icc
MOAB Entrada Natural R1900.icc
MOAB Lasal Matte R1900.icc
Museo Silver Rag_Epson R1900 (UltraPremiumPhotoPaperLuster_Gloss OFF_BestPhoto).icm
Museo Silver Rag_Epson R1900 (UltraPremiumPhotoPaperLuster_Gloss ON_BestPhoto).icm
NTSC (1953)
PAL/SECAM
ROMM-RGB
SDTV NTSC
SDTV PAL
SMPTE-C
SPR1900 Double-Sided Matte Paper
SPR1900 Matte Paper-HW
SPR1900 Photo Paper Glossy
SPR1900 Photo Qlty IJP
SPR1900 Premium Glossy
SPR1900 Premium Luster
SPR1900 Premium Semigloss
SPR1900 Standard
SPR1900 Ultra Premium Presentation Matte
SPR1900 Ultra Smooth Fine Art Paper
SPR1900 Velvet Fine Art Paper
SPR1900 Watercolor Paper - Radiant White
Wide Gamut RGB

Euroscale Coated v2
Euroscale Uncoated v2
Generic CMYK Profile
hp color LaserJet CMYK v402
Photoshop 4 Default CMYK
Photoshop 5 Default CMYK

Generic Gray Gamma 2.2 Profile
Generic Gray Profile
hp color LaserJet Gray v402
sGray

9. Rendering Intent – Relative Colormetric,

A **rendering intent** determines how a color management system handles color conversion from one color space to another. Different rendering intents use different rules to determine how the source colors are adjusted; for example, colors that fall inside the destination gamut may remain unchanged, or they may be adjusted to preserve the original range of visual relationships when translated to a smaller destination gamut. The result of choosing a rendering intent depends on the graphical content of documents and on the profiles used to specify color spaces. Some profiles produce identical results for different rendering intents.

Perceptual Aims to preserve the visual relationship between colors so it's perceived as natural to the human eye, even though the color values themselves may change. This intent is suitable for photographic images with lots of out-of-gamut colors. This is the standard rendering intent for the Japanese printing industry.

Saturation Tries to produce vivid colors in an image at the expense of color accuracy. This rendering intent is suitable for business graphics like graphs or charts, where bright saturated colors are more important than the exact relationship between colors.

Relative Colorimetric Compares the extreme highlight of the source color space to that of the destination color space and shifts all colors accordingly. Out-of-gamut colors are shifted to the closest reproducible color in the destination color space. Relative colorimetric preserves more of the original colors in an image than Perceptual. This is the standard rendering intent for printing in North America and Europe

Absolute Colorimetric Leaves colors that fall inside the destination gamut unchanged. Out of gamut colors are clipped. No scaling of colors to destination white point is performed. This intent aims to maintain color accuracy at the expense of preserving relationships between colors and is suitable for proofing to simulate the output of a particular device. This intent is particularly useful for previewing how paper color affects printed colors.

10. Black point compensation – checked

Black Point Compensation Ensures that the shadow detail in the image is preserved by simulating the full dynamic range of the output device. Select this option if you plan to use black point compensation when printing (which is recommended in most situations).

11. Select **Print – Load Paper / face up**