

## R1800 & R800 B&W Carbon Pigment Workflow

Although the Epson driver works fine for matte color photos, it will not work for carbon printing in the R800 and R1800. A printing procedure or “workflow” that uses a third party printer driver is used.

**QTR (QuadToneRip)** is the rip (“raster image processor,” non-OEM printer driver) that I recommend and for which I have made profiles. These profiles are now pre-installed in QTR (versions 2.5.2.0 and newer). QTR is shareware by Roy Harrington that is downloaded from and, if it works for you, paid for (\$50) at <http://www.quadtonerip.com/html/QTRdownload.html> .

Note that the interfaces and workflows within QTR differ between Windows and Mac. Here I discuss the **Windows QTR procedures** I’ve used.

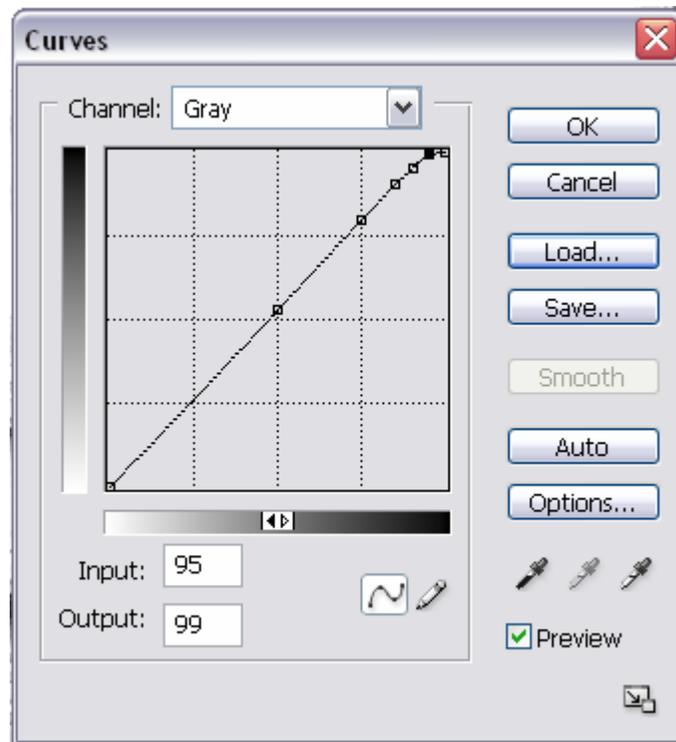
The basic Windows workflow is to edit the image file (preferably at 16 bit) in Photoshop or Elements, save the file, and then import the file into QTR for printing. QTR is used as a separate printing utility.

The **grayscale file** must be saved in **\*.tif format**. Jpeg and \*.psd (Photoshop) file types are not supported by QTR. (QTR uses a standard RGB to G/S conversion if the file is RGB.) Note that 16 bit \*.tif files with even a single adjustment layer become inefficiently large. If one uses layers, \*.psd 16 bit file types are much more efficient. For these files flatten, size appropriately, and save as \*.tif files for printing. I save such files with “print” or other designation as well as the print size in the file name for easy identification in QTR. One can also simply save the printing file to the desktop, and drag and drop it into the QTR shortcut for printing.

**Matching the printed image with that displayed on the monitor** can be refined in several ways. In general, QTR (like many rips and Epson’s “ABW” mode) uses a more linear print output than what most monitors are displaying. Many of our color-managed systems probably default to working space Gray Gamma 2.2 if no profile is specified. This space is consistent with how the internet displays images. If you use Photoshop or Elements, the print preview will show the document’s profile. The space is set in Photoshop under Edit>Color Settings. It is important to know what working space one is using. I recommend Gray Gamma 2.2 because it is a widely used space, and its characteristics give one a reserve of shadow information.

Gray Gamma 2.2 compresses the deep shadow tones. Below is a screen grab of a Photoshop image adjustment curve I use for printing images with QTR that have been edited in Gray Gamma 2.2 working space. Note the coordinates (95, 99), which are shown in the boxes for the indicated point. This curve, when used only for printing of images edited in Gray Gamma 2.2, causes QTR to print the images in a manner similar to how our computer color management system

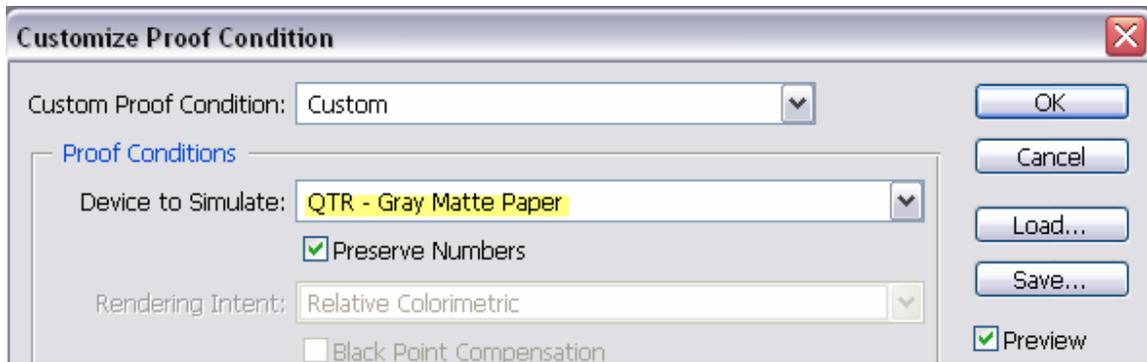
displays such images on our monitors (which are always “color managed”). That is, Gray Gamma 2.2 displays our file’s 95% as almost totally black – 99% black. So, this curve does the same thing for printing such a file through QTR.



GG22-to-Rip.acv

In short, the curve above, applied to the file just before printing, can be used to more closely match the QTR print with the monitor view. While Elements does not support curves, it does accept curves layers, which can be dragged to the working file. “**Gray-Gamma-22-to-QTR.tif**” is a file that has a conversion layer on it for this purpose. For Picture Window, the Photoshop \*.acv curve can be used. For other programs that use curves, the above curve can be easily duplicated. The curve and an image with the curve on it as a layer can be downloaded from <http://www.paulroark.com/BW-Info/GG22-to-QTR-curve.zip>.

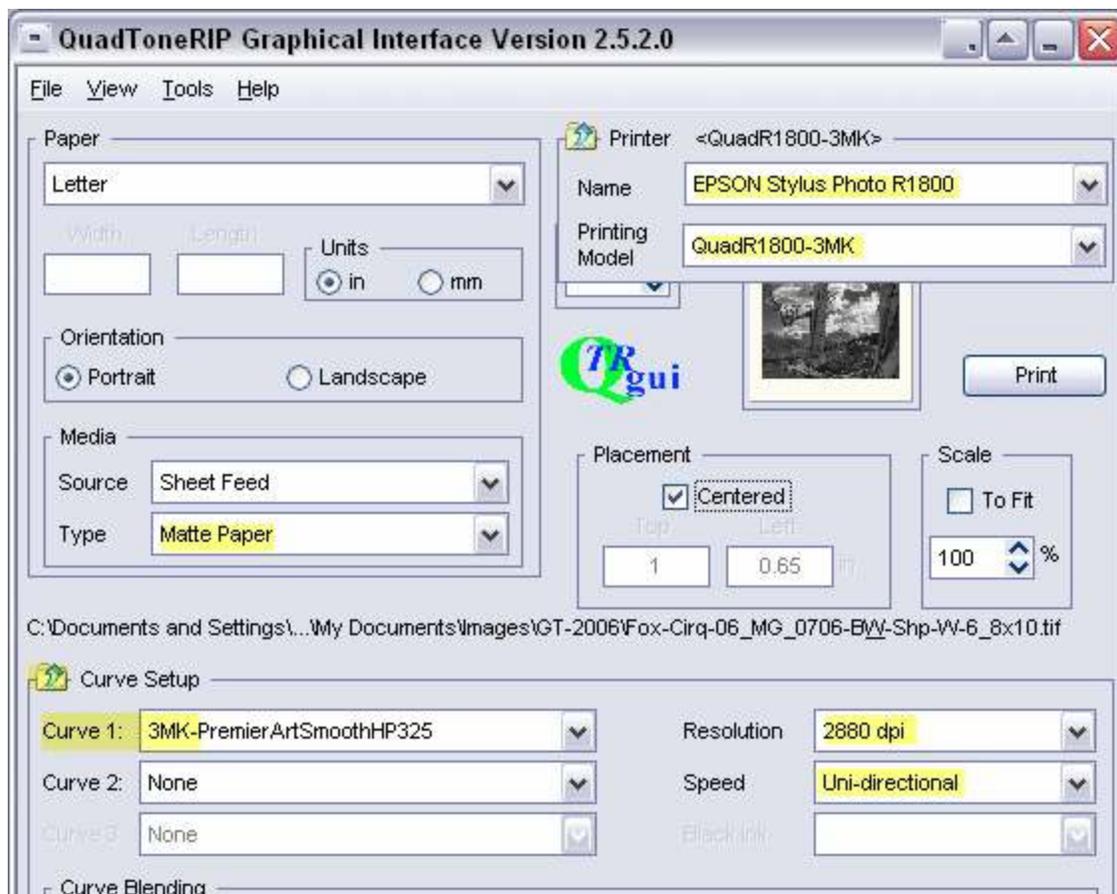
For those with **Photoshop** and familiar with the use of ICCs for **soft proofing** or converting the working space can use those methods to accomplish the same goals. QTR contains pre-made ICCs as well as a program that allows one to make custom ICCs. I have a function key set up as a Photoshop Action that goes through the soft proofing steps: View>Proof Setup>Custom



You can click on the “Preview” box to see the differences between how your monitor would display and image without this ICC and how QTR will print it.

**QTR settings (Windows interface)** are shown below:

The interface shown below contains the controls needed for printing. Prepare the image for printing in your image editor, save it as a Tiff file, and then print with QTR.



I use matte paper type, 2880, and uni-directional QTR settings for all profiles.

The profile for the particular paper is loaded from the “Curve 1” box, as highlighted.

## **Profiles**

The QTR profiles are pre-loaded in QTR versions 2.5.5.0 and newer. Those with older versions should update their QTR.

Profiles for more than a dozen matte papers are now included. More will be added with time and upon request.

Most matte papers appear to print reasonably well with the same basic profile. Families of papers from one manufacturer often use the same profile.

Minor linearization and dmax optimization can get a bit more out of the system. This can be done with a flatbed scanner. (See [http://www.paulroark.com/BW-Info/Making\\_B-W\\_ICCs.htm](http://www.paulroark.com/BW-Info/Making_B-W_ICCs.htm) for information on a similar use of a flatbed scanner.) I prefer the ColorVision PrintFixPro spectro, and I think it is a good investment for serious enthusiasts.

For more details about the profiles and profiling, and for instructions for downloading the profiles separately from QTR, see [www.PaulRoark.com/BW-Info/QTR-Profiling-Details.pdf](http://www.PaulRoark.com/BW-Info/QTR-Profiling-Details.pdf)