

Quad Tone RIP



BASIC TUTORIAL

Quad Tone RIP

on

Mac OS X

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Special Installation Requirements

----- Important OS X 10.2 - Jaguar Users Only -----

See note below about Jaguar and custom paper sizes.

With **Jaguar** you must also have the Ghostscript package installed.

for ESP Ghostscript see:

<http://gimp-print.sourceforge.net/MacOSX.php3>

Scroll down the page and find the ghostscript disk image download.

Download and install ghostscript before proceeding.

----- OS X 10.3 Panther and 10.4 Tiger Users -----

With these OS versions do not load Ghostscript.

Installation of this new version will replace any old version. There is no need to install or uninstall any previous version.

Program and Profile Installation

Installing QuadToneRIP Software:

Simply double-click on the **Install-QTR-2.3** package -- it is an ordinary Mac OS X installation package. You will need the Admin password to install.

Install it on your main hard drive.

Removing QuadToneRIP Software and Profiles:

If for any reason you wish to remove the QuadToneRIP product simply double-click on the **Remove-QTR** package -- it is an ordinary Mac OS X installation package. You will need the Admin password.

Installing and Setting up a Printer with QTR Profiles:

The profile install scripts setup everything necessary for printing using the USB interface. For some printers there is also an IPP install script which is for a network printer connected via ethernet. Before running the USB scripts the printer should be attached and powered on. The firewire interface cannot be used.

After installation you should restart Photoshop or any programs that you want to print through QuadToneRIP.

Within the **Profiles** folder there are separate folders for each of the printers with a particular inkset. Within each there is an install script for each model of printer. All printers have a USB install script. Pro printers also have the IPP install script. Folder names consist of family name and inkset.

Name	Printers in Family
1160	860, 1160
1270	870, 1270
1280	890, 1280, 1290
2200	2100, 2200
4000	4000
4800	4800
7500	7000, 7500, 9000, 9500
7600	7600, 9600
7800	7800, 9800
R200	R200, R300, R320
R800	R800, R1800
R2400	R2400

Inkset	Supplier and Name
UC	Epson UltraChrome inks
VM	MIS VM and UT inks
VMS	MIS VM Sepia inks
UT2	MIS UT2 (Ultratone-2) inks
UT7	MIS UT7 (Ultratone-7) inks
NK7	Piezography Neutral-K7 inks
GQ	MediaStreet QuadBlack inks

Installing custom QTR Profiles for another source:

Profiles are often available from other sources: ink suppliers and other users. These profiles are also very easy to install and use. There are three possible kinds of files that you may receive as profiles. They are distinguished by a 3 or 4 letter extension: a .txt or .qidf extension is an ink descriptor the "*source*" code for creating a profile; a .quad file is the "*binary*" profile format. The installation scripts handle all of these formats. The procedure is to create a new folder on your disk, copy all the profiles into that folder. Then go to the download folder **Profiles/InstallScripts**, find the appropriate script for your printer and drag it into your folder with the profiles. Simply double-click on the script and it will setup the printer, create and install all the profiles. Remember to restart Photoshop.

Printing Workflow

QuadToneRIP is completely integrated with the standard Max OS X Printing. It is very similar to all the normal printing one does on OS X. There are separate printers with names such as Quad2200. One uses these printers as if they were Black & White i.e. grayscale printers. All the system features such as Presets, Remote and Shared Printers work with QuadToneRIP printers. You use all the standard Page Setup and Print commands from any OS X application. Typically one would be printing grayscale images but RGB files can be used. They will be automatically be converted to grayscale. The one major addition is a separate QuadToneRIP print dialog page.

On Mac OS X since QuadToneRIP runs as a standard print driver you can print from any Application that has a Print command. Most Applications will just print centered images but Photoshop and Photoshop Elements are recommended to layout an image on the paper exactly as desired.

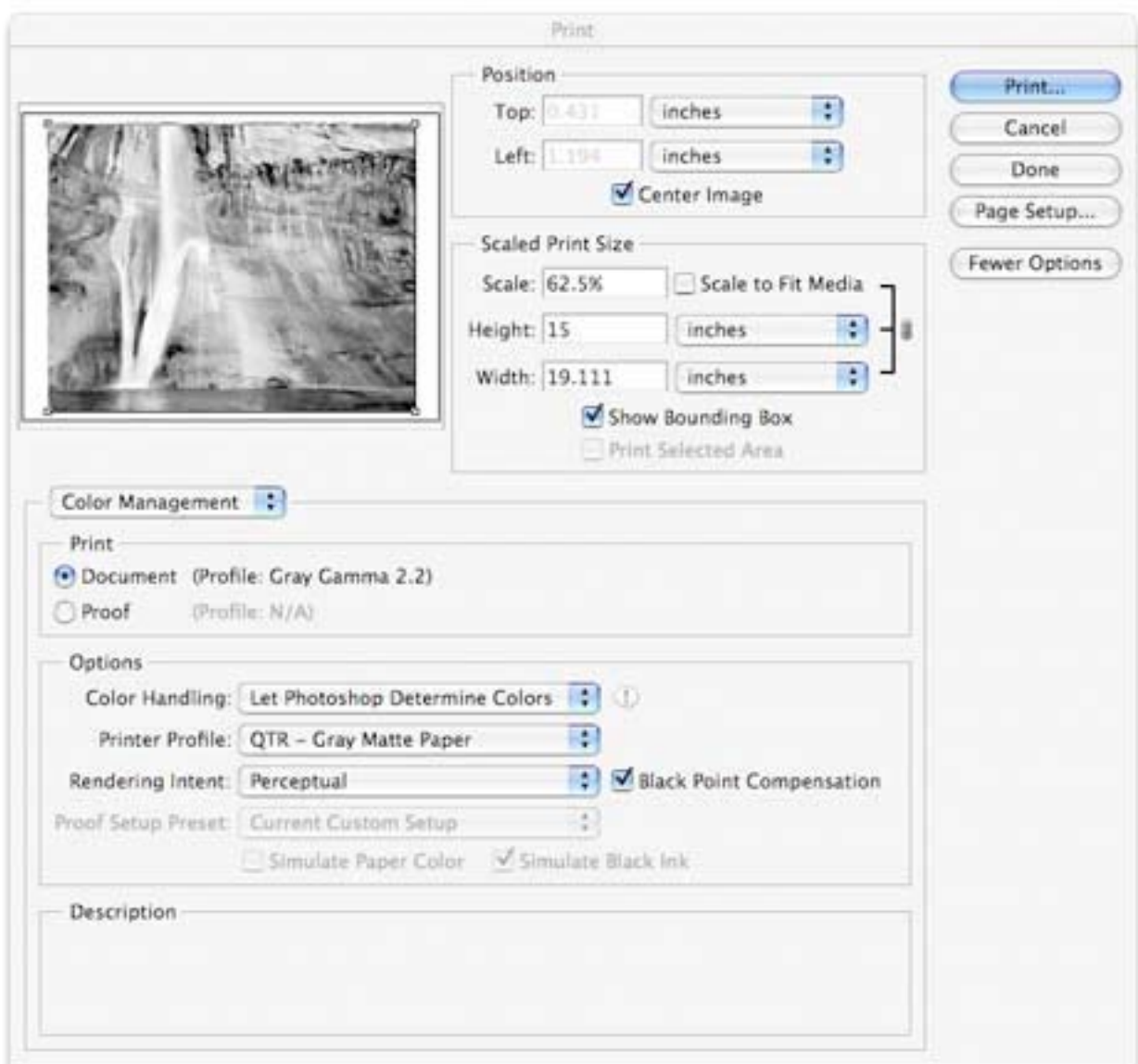
The Photoshop **Print with Preview** command allows this complete control. This page has many sections. If the lower section isn't visible click **More Options** and **Color Management**. The first thing to do is make sure the **Page Setup** is correct i.e. the correct size paper and correct orientation. See below for more info about Page Setup. If you want a centered image pay particular attention to the **Centered Paper Size** in Page Setup and the **Center Image** box below. Note also that **Position** is measured from the margins not from the edge of the paper. Typically the margin will be 1/8 inch or about 3mm.

The **Print Document** shows your embedded Profile Space.
The **Options** section shows how color management is being used.

Color Handling: **Let Photoshop Determine Colors**
Printer Profile: **QTR - Gray Matte** or **Photo Paper**
Rendering Intent: **Perceptual** and **Black Point Compensation**

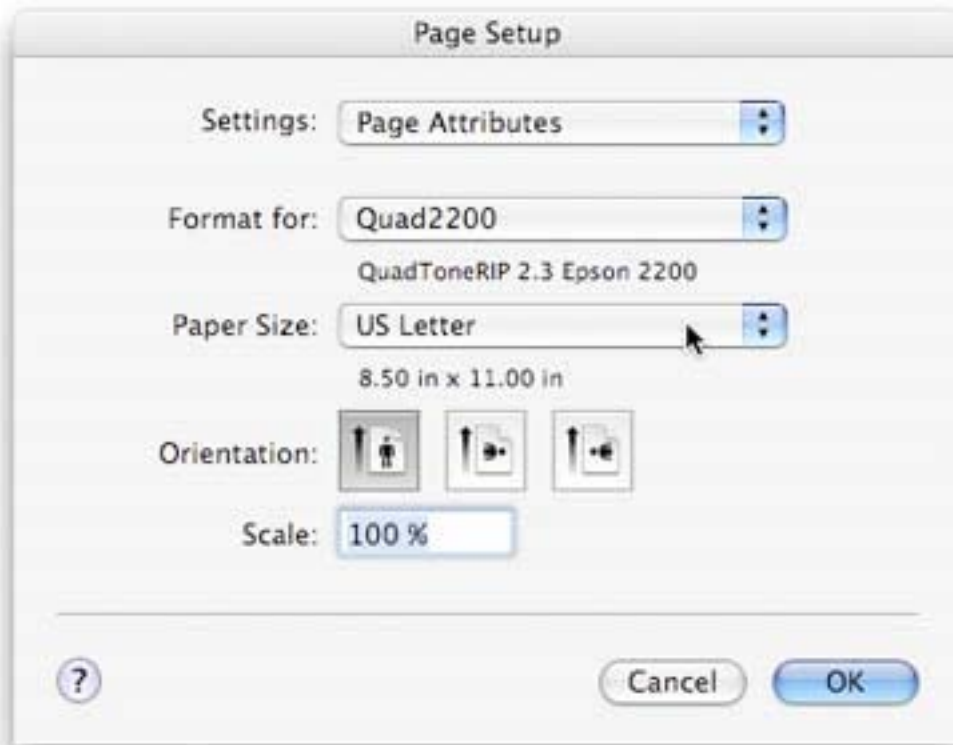
If you have a custom grayscale ICC profile from **QTR-Create-ICC** use that for the Printer Profile.

Photoshop — Print with Preview



Page Setup and Centering

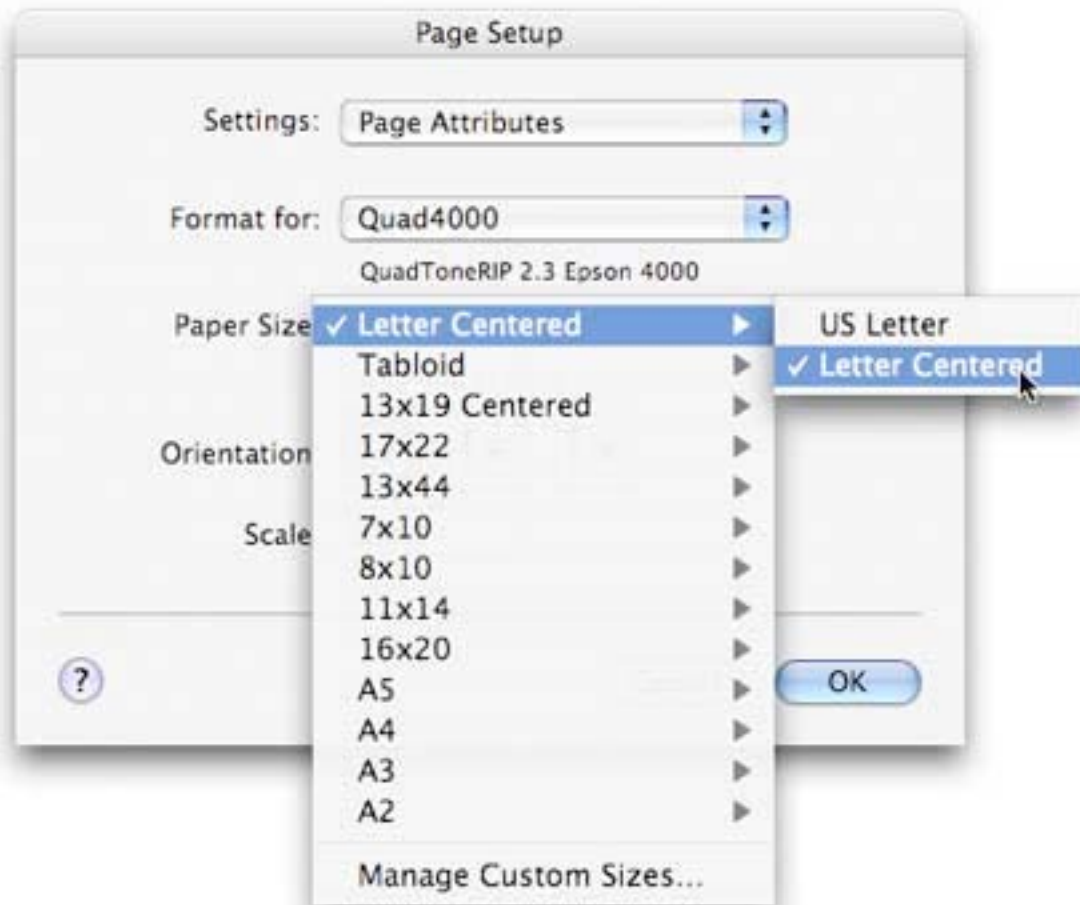
Standard Paper Selection



Page Setup is as usual. By selecting **Format for** a Quad printer you can see all the built-in page sizes for the printer. Select the desired **Paper Size** and the **Orientation** - see feed icon for Portrait or Landscape.

Page sizes and image centering have very often been a source of frustration. One of the main sources of the problem is the difference between the physical page dimensions and the printable page dimensions. Some Epson printers typically have a mechanically imposed page margin restriction and it is usually larger at the bottom than on the other three sides. This results in the printable area not being centered on the physical page. However, it is the printable area that is used for all the high-level positioning algorithms. So the default, centered image very often isn't centered on the physical page.

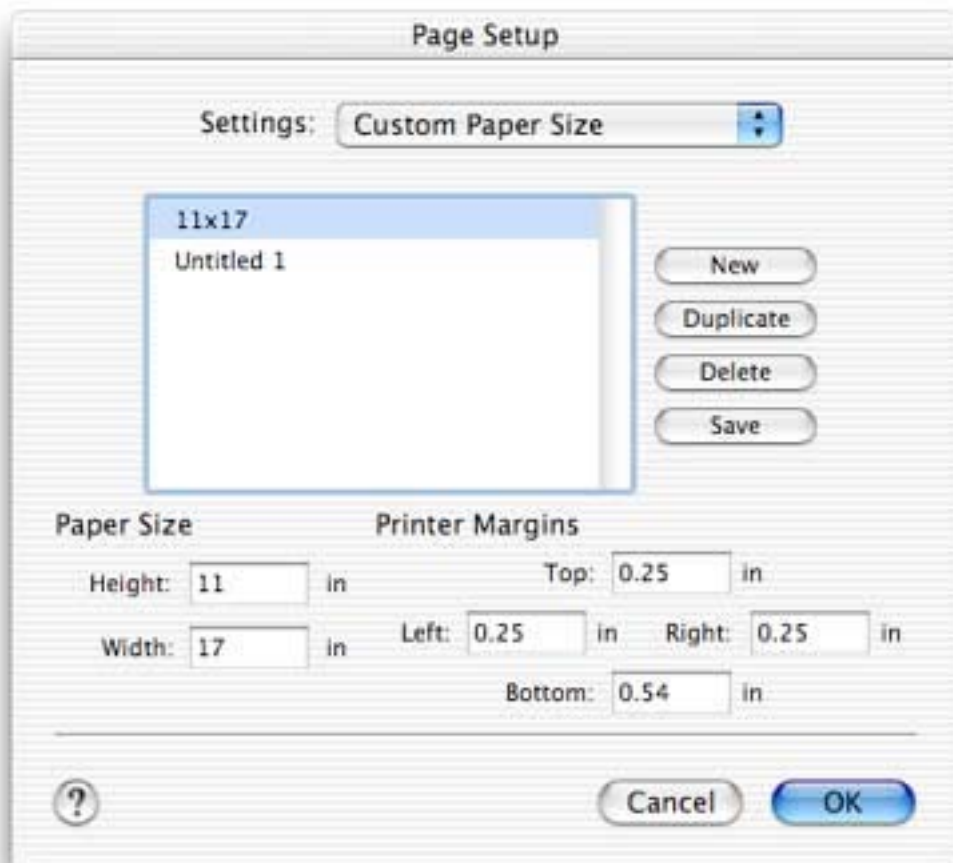
Centered Paper Selection



To alleviate this problem for printers with uneven margins, QuadToneRIP has expanded the Page Setup dialog. The Paper Size pull down selection is now a two level selection. Each page size has two versions: first, the hardware restricted printable area which allows the maximum size image and second, a version with a centered printable area. The centered version has a slightly smaller printable area since the top margin must be increased to match the bottom margin. When selecting a page size be sure to drag down to the desired size and also to drag right to select which version of printable area you want.

10.2 Jaguar & 10.3 Panther — Custom Paper Sizes

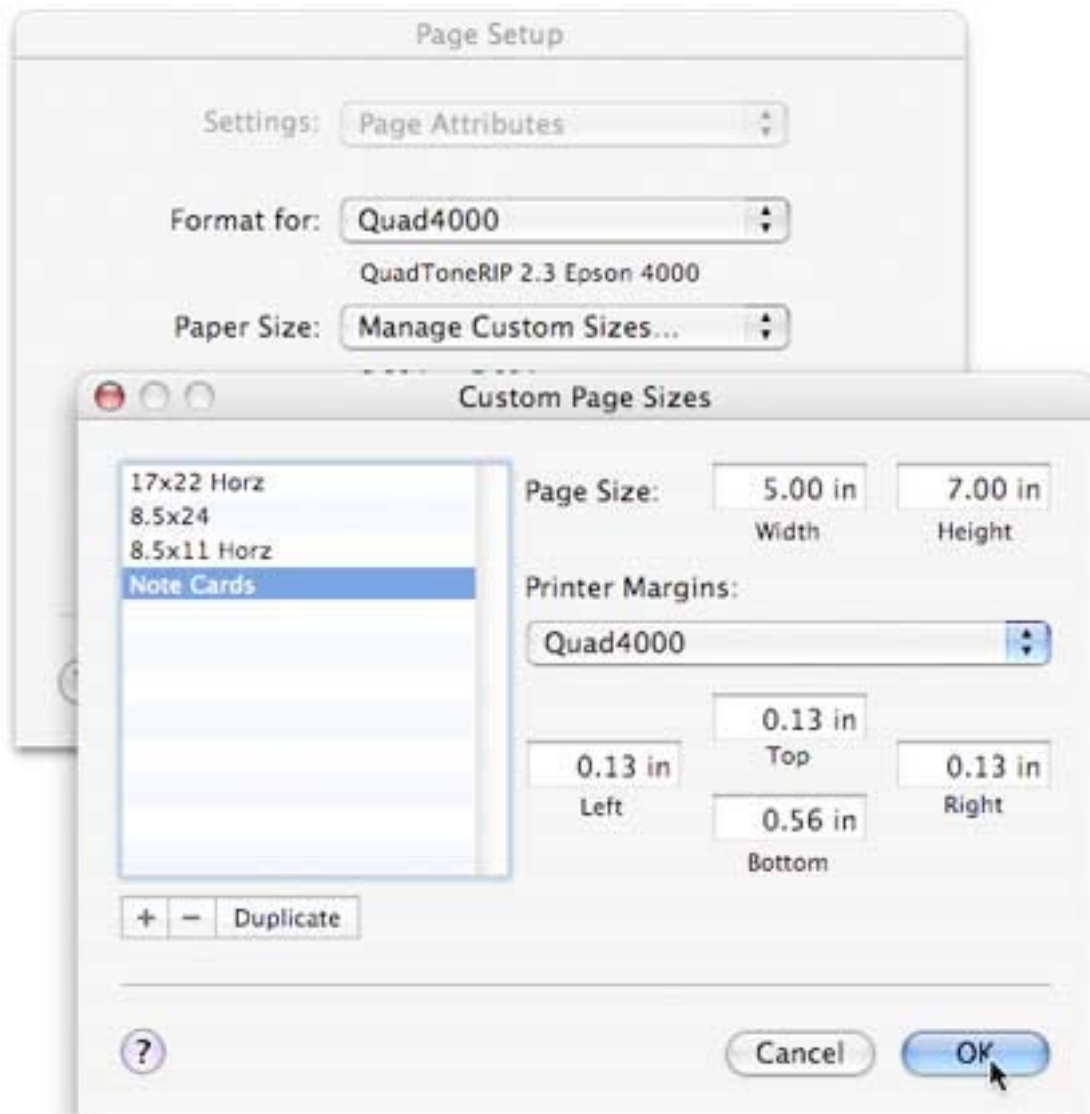
These system feature allows the user to define paper sizes and the margins that will be used. Printers have minimum and maximum sizes as well as minimum margins. can also achieve the different printable areas but you will have to set the margins to get the printable area you want -- make sure the top and bottom are the same to get centered prints.



Notes on using custom pages:

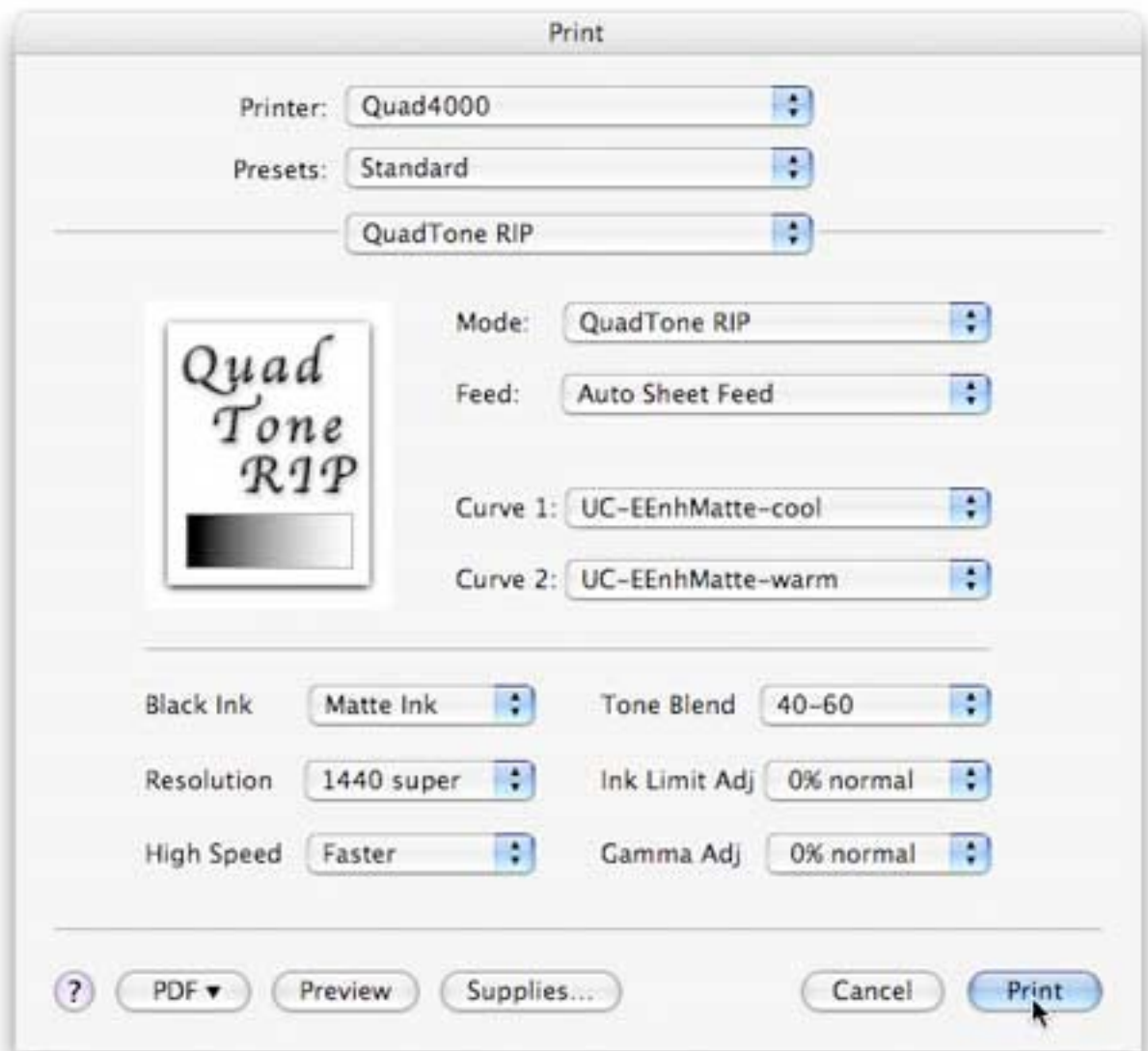
- go to **Page Setup** > Settings: **Custom Paper Size**
- hit **New** and enter a name
- fill in height, width and margins
- **important:** hit **Save**, but do not hit OK
- back at the top again, select **Page Attributes**
- select your custom size in the **Paper Size** pull down.

10.4 Tiger — Manage Paper Sizes



The new Mac OS X 10.4 Tiger has changed and improved the method of handling custom paper sizes. Now in Page Setup > Paper Size you will find **Manage Paper Sizes...** at the bottom of the list. On this dialog page you can create and modify paper sizes. Most is self explanatory but note the Printer Margins. If you are making a paper for a specific printer it's best to set the margins according to the printer -- select a printer and it will show the margins allowed. You should not use a margin less than specified or you may find images cropped at the edge. After creating a custom size be sure to select it after leaving the Custom Page Size dialog.

QuadToneRIP Print Dialog Pane:



QuadToneRIP now has its own print dialog page. All of the commonly used options are readily visible on one page. Some printers may not have all options.

Mode:

select QuadToneRIP for normal printing

Feed:

select the type of Paper Feed desired

Curve1 and Curve2, Tone Blend:

These three options are the critical part of QuadToneRIP. You must select at least one curve here -- None will produce unpredictable results.

Unlike the standard color profiling systems, QTR allows two curves (or profiles) with different color tones to be selected. Typically one would pick a warm and a cool tone. The **Tone Blend** then allows you to blend the two color tones for your own personal taste -- you can pick any tone between the two extreme colors. The following example shows several color tones plus a 50/50 blend.



Print from a cool/neutral tone curve.



Print from a warm tone curve.



Print from a sepia tone curve.



Print from 50/50 warm/sepia tone.

Resolution:

The resolutions supported are 720, 1440, and 2880. 1440 also has a "super" version on some printers that does a more elaborate weaving if the printer is capable of that. Most of the supplied profiles so far are created for 1440 dpi resolution and can be used with any 1440 mode. Profiles meant for 2880 have this in the profile name.

High Speed:

selects either unidirectional(**Better**) or bidirectional(**Faster**) printing. The Pro printers usually do well with Faster/bidirectional but the desktop printers often improve with Better/unidirectional.

Black Ink:

this option is only for the Epson 4000. it allows you to select which black ink -- matte or photo -- will be used.

Ink Limit Adj:

this option allows you to increase or decrease the overall ink limits all the ink limits in the profile are multiplied by this factor. the mostly case you might use this is to use a paper that can handle more or less ink than the profile allows. also you might increase the ink limits for a print that you want to really push the blacks dark -- there may be some loss of shadow detail however.

Gamma Adj:

this option allows an overall lightening or darkening of a print. the effect is identical to using the Levels command in Photoshop. the percent value is approximately how much the 50% midtone will be affected. if you've printed with another system and your files consistently print either lighter or darker with QuadToneRIP this option allows you to print the old files without re-editing them (especially useful if they are 8-bit data).

There is still a remnant of the old **Printer Features** dialog box. It has the dither algorithm selection. The default is Ordered which seems to me the best choice. Its a bit faster than Adaptive Hybrid and I haven't seen any difference in result. There is also the Paper selection. Since the profile curves really contain all the paper printing information this is not very important. It defaults to Matte paper.

Troubleshooting and Diagnostics

The most common problems:

- 1) not installing Ghostscript on a Jaguar 10.2 system
- 2) custom paper sizes on a Jaguar system

There is a Diagnostic Script that can aid in solving problems. If there are any difficulties running QuadToneRIP, please run this script by double-clicking on **DiagnosticScript**. The script will open a window and show lots of information about your print system. Cut and paste this info into an email when inquiring about a problem. There is a yahoo group that has many users of QuadToneRIP, see: <http://groups.yahoo.com/group/QuadtoneRIP>
Email questions to quadtone@harrington.com

Jaguar 10.2 and Custom Paper Sizes

While Jaguar is fully supported with this release, since Jaguar was the first Apple release of the new CUPS printing system some people have run into a few bugs in Jaguar CUPS. The most notable one is an error with Custom Paper sizes -- some sizes work, some don't. One easy workaround is to use the next bigger standard size and calculate your own margins. Another method is to use the Preview program to print rather than Photoshop -- this lacks the positioning of the Photoshop Print Preview but allows simple centered prints. The difference here is that Preview uses a PDF workflow whereas Photoshop uses a PS or PICT workflow.

I've recommended to several people to upgrade to **Panther** or **Tiger**. This fixes the custom paper problem, has more consistent behavior with printing Presets, and some with older computers have reported faster processing. Another nice addition is that with Panther you get easy access to the Epson Printer Utility from Print Setup.

Printer connected to USB port of Airport

This is just for printers connected to the special USB port on the back of the Airport Extreme Wireless/Router.

Using with Panther 10.3 - Rendezvous Printer

This requires some manual setup of printer.

You must have already downloaded and installed the Epson driver for this printer.

- 1) Connect printer to usb port of airport.
- 2) In Printer Setup:
Hit Add, Select Rendezvous
Printer should show after a few moments. Select it.
For Printer Model, select QuadToneRIP and the appropriate printer name.
Hit Add.
- 3) You now have the right printer but the name is Stylus Photo ... instead of Quad.... (Note: you can't just go to Show Info and edit it).
- 4) Run DiagnosticScript.
At the top you'll see an entry such as:

```
device for EPSON_Stylus_Photo_R200: mdns://EPSON%20Stylus%20Photo%20R200._pdl-datastream._tcp.local./?bidi
```

It's a big long name but the important thing to find is: mdns:// from here to the end of line is the unique name for the printer. Leave this on the screen.

- 5) Now go back to Printer Setup.
Hit <option> Add. Select Advanced.
Device: Rendezvous register printer ...
For Device URI, go to the Diag output and copy/paste the unique name for printer. Make sure you start exactly at the "m" for mdns and go to the last character.
Printer Model: QuadToneRIP and the appropriate printer.
Hit Add.

That's it. You can delete the printer with the Stylus name.
Run the Profile install script from the QTR download to get the profiles.

Using with **Tiger 10.4 - Bonjour Printer**

Tiger is much simpler to set up.

First, Rendezvous has been renamed Bonjour.

Run **Printer Setup Utility**

click **Add** printer, select the appropriate **bonjour** printer.

Change the **Name** to QuadXXXX where XXXX is the Epson model number such Quad2200, QuadR800, Quad7600, or QuadR2400. Note some printers have a letter "R" preceding the number. If the printer has a special inkset add dash '-' and the inkset name such as Quad2200-NK7.

select the **Print Using** to **QuadToneRIP** and select the printer model name.

Run the Profile install script from the QTR download to get the profiles.