

Linux Installation of Roy Harrington's QTR2

The guide would not have been possible without the help that David Wroblewski, Roy Harrington and Daniel Staver gave during its development and writing.

The guide presupposes that you have a little familiarity with UNIX or Linux. That is, you can bring up a terminal, navigate from directory to directory and enter basic command line commands. You need to remember that Linux is case sensitive. It is easier to accomplish the installation working as root.

I would suggest that you use the RedHat 9.0 version of Linux for the basic installation. SuSE 8.2 is also workable. Mandrake 9.1 has some changes in file names that make it very difficult to install QTR2.

If you have a broadband connection and a cd burner it is practical to download the iso's of the 3 cd's you will need for installation. If you are not that familiar with Linux I suggest that you buy a copy so that you have the basic documentation and the registration for support from RedHat.

Although the Macintosh installation is a bit different, be sure to read through Roy's installation notes before starting your Linux installation. This is particularly critical in setting the necessary curves in order to print. The installation notes in the Linux distribution are the mac installation notes.

Since I am only familiar installing Linux on a freestanding computer the instructions will be geared towards that type of set up. That also means you will probably want to establish a local area network. This is not difficult using any of the small switches or routers that are available.

The instructions in this portion of the how to are concerned with establishing a stand alone functioning QTR2 printer within linux. It is entirely practical to stop at this point and do your printing from within linux. The images can either be brought to the linux box by sneaker net using a cd or zip disk or you can establish a network connection between the two systems and use a shared folder. Setting up printer sharing via samba is not covered in this document. Command line instructions or click box selections are printed in [blue](#).

Installation

Install the linux distribution and go through the steps to update the packages that require it. Make sure you install the cups printer system. In RedHat, rhn.redhat.com is the source for updates, in SuSE there are a large number of mirror sites that will allow you to download the updates.

Logon as **root**.

Install your printer. Now install a second copy of your printer naming it whatever you are going to use for quad printing. If you are going to use one of the canned profiles you need to be sure you name the printer the same as in the QTR2 distribution. For example, if you are using an Epson 2200, name the printer QUAD2200.

Now, you need to see if a couple of critical files have been loaded during your set up of linux.

As root, bring up a terminal and enter `updatedb` and press `enter`. This will take a bit of time to run. What it is doing is cataloging your system's software. On a fast machine with lots of ram it may take a couple of minutes; on an older machine with limited ram it may take some time. This command should be run once a day in order to keep the database up to date.

When the prompt returns enter `locate cups-conf` and press `enter`. A list should come up in the terminal. Check to see if `/usr/bin/cups-config` is in the list. If it is you are ready to start. If not you will have to install it before installing QTR2.

Enter `exit` then press `enter` in the terminal window and it will close.

Bring up whichever web browser you wish to work with. I like Galeon but any will do. Go to Roy Harrington's web site (www.harrington.com) and click on [QuadToneRip](#). Download the **the linux version**. It will be placed in root's home folder.

If **cups-config** was not present you will need to download the file containing it and install it. For Red Hat, open your web browser and go to <http://rhn.redhat.com> and sign in using your user name and password. Click on [software](#). Scroll down to RedHat 9.0 i386 and click on it. Click on [packages](#). In the search window enter `cups-devel`. When the search is complete select the `cups-devel` rpm and download it. [If you are using SuSE go to a mirror site and open the RPM folder. You need to find the `cup-devel` rpm for your distribution and you will also need to download the associated library file, `cups-lib` in order to satisfy the dependencies.] It (they) will be placed in root's home directory.

Next you need to download a utility program that will make life a lot easier in the installation and operation of QTR2 and Linux. Go to www.webmin.com and download webmin. It will be placed in root's home directory.

There is a bug in the way Linux handles printing from QTR2 and a small file to correct it is also necessary. Using your browser go to the Linux -

QTR2 folder in the files section of the B&W group on Yahoo and download quad.convs It will be placed in root's home folder.

Root's home directory should now have the following in it

```
QTR2-beta8.tar.gz
Cups-devel-1.1.xx (if you needed it) for SuSE, cups-lib-1.1.xx
Webmin-1.1
quad.convs
```

Close the root's home directory window and bring up the terminal. Enter `rpm -i webmin` press the `tab` key and the rest of the name should fill in. Press `enter` and webmin will install.

If you need to install **cups-devel** then enter `rpm -i cups-devel` press the `tab` key to fill in the rest of the name and press `enter` to install.

From the root home directory type `cp quad.convs /etc/cups` and press `enter`. This places a copy of the file in the `/etc/cups` directory and corrects the problem with printing using the quad modified driver.

Type in `cp QTR2-beta8.tar.gz /usr/share` press `enter` This copies QTR2 into the `usr/share` directory.

Type `cd /usr/share` and press `enter`. Now you are in the `usr/share` directory.

Type `gunzip QTR2` press the `tab` key and press `enter`. This decompresses the file much as decompressing a zip file.

Type `tar -xvf QTR2` press the `tab` key and press `enter`. A list of files will appear on the screen. This puts the various elements of QTR2 where they need to go.

Type `cd Quad` press the `tab` key then press `enter`. Now you are in the QuadRIP2-beta directory.

Type `ls` and press `enter`. A list of files in the QuadRIP2-beta directory will appear.

Type `sh make-quadtonerip` press the `enter` key. A list of things this script file is doing will appear. There should be no error messages. If one does appear it is usually because **cups-config** is not present.

Type `install-quadtonerip` press the `enter` key.

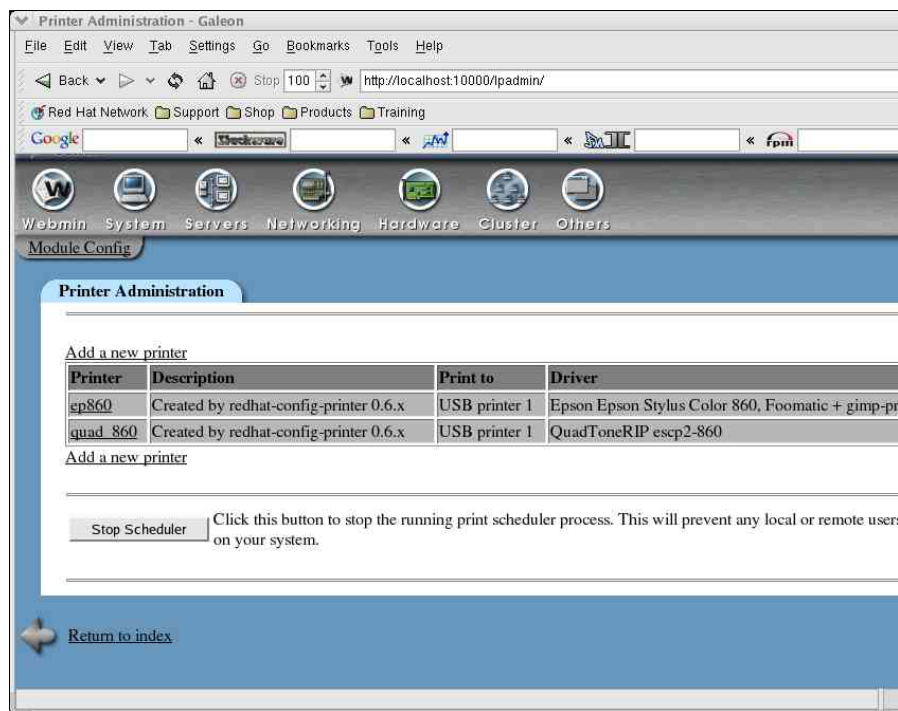
Now you have done the basic installation. All of the elements of the rip should be in their proper directories.

Go to your web browser and enter <http://localhost:10000>

The webmin should come up. Enter [root](#) for a user name and whatever you used for the root password as the password. Now you should be in WebMin.

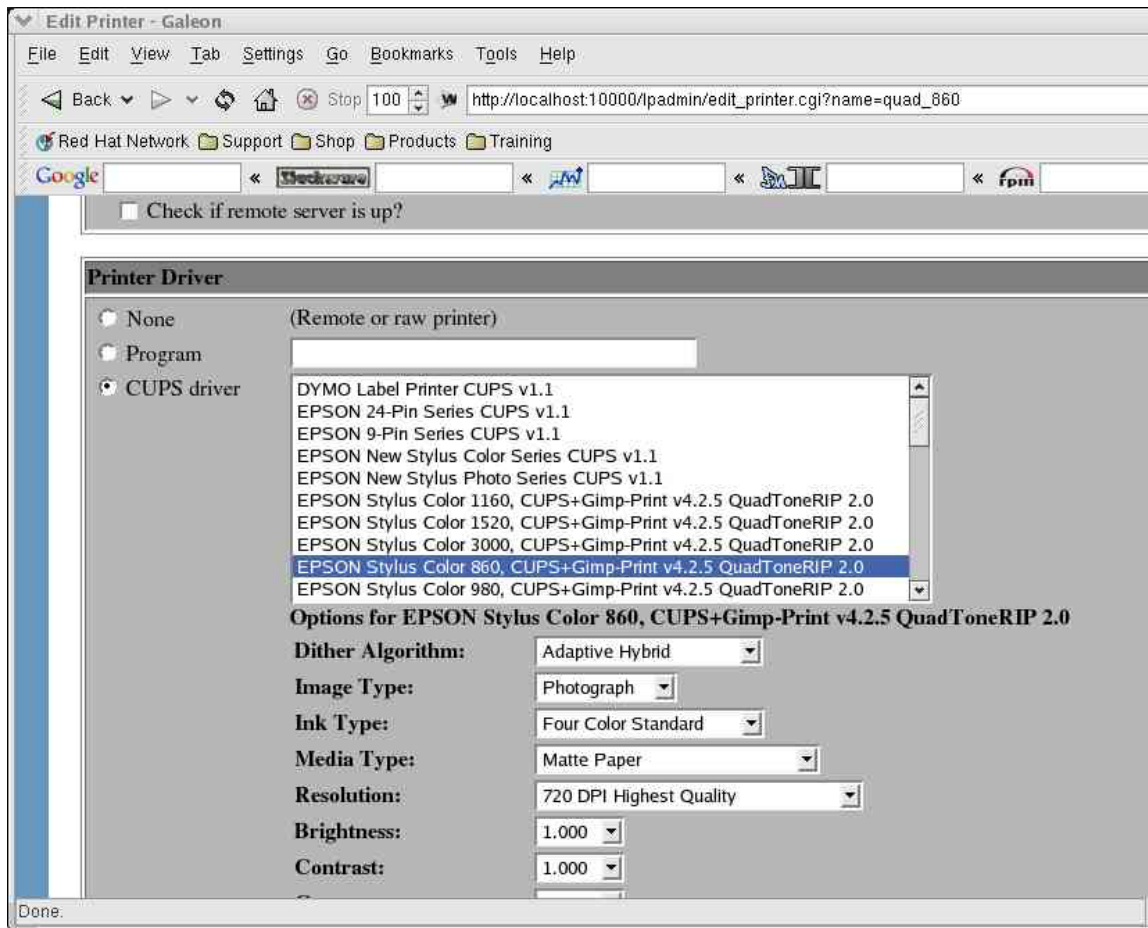
Click on [hardware](#).

Click on [printer administration](#)



Click on the name of your quad printer

Scroll down to the section printer driver



Select **CUPS** driver

Scroll down the list and click on your printer's quad definition.

Click on **save**.

Now you have the quad driver installed for your printer.

You can use webmin when you change parameters such as portrait vs landscape, curve selection and the like but it is easier to do it from the printing program, **qtcups**.

Close the browser and open a terminal.

Now you need to set up a set of curves for the QTR2 printer. The curves are printer, ink and paper dependent. Roy has included a number of curves for various printers and inks as well as instructions on how to modify the text files.

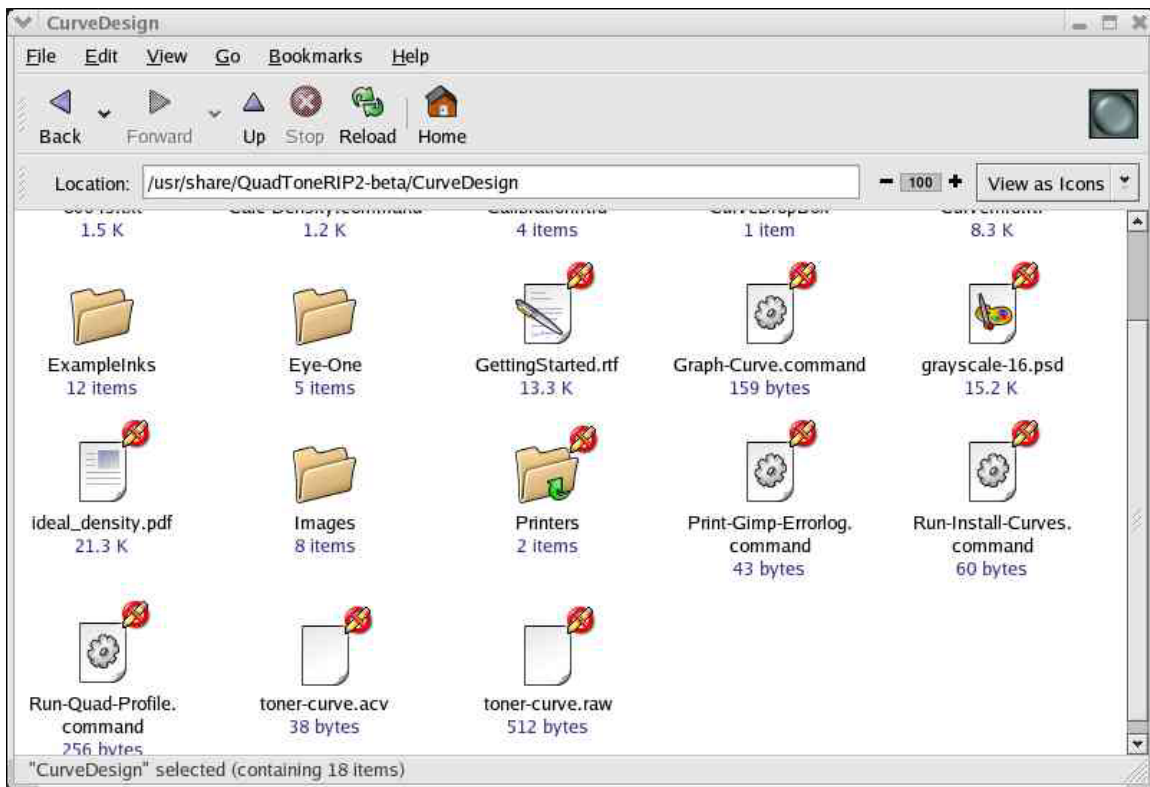
Type `cd /usr/share/Quad` and press **tab** to complete the line then press **enter**. At this point you should be in the **QuadtoneRIP2-beta** directory.

Type `cd CurveDesign` and press `enter`. Now you should be in the **CurveDesign** directory. Type `cd ExampleInks` and press `enter`. Type `ls` and press `enter`. A list of the curves Roy has included will appear. If your printer and ink are in the list you are fine, if not then you will need to define a new printer-ink-paper combination. If your printer uses the same printhead as one of those listed (for example the 860 and 1160 use the same printhead) you can edit the text of the curve file and save it under a different name. Please see Roy Harrington's instructions on how to do curve edits etc.

Exit from the terminal.

On the desktop, open the root home directory.

In **Location**, change directories to `/usr/share/QuadToneRIP2-beta/CurveDesign`



Double click on **Run-Quad-Profile**

Select run in terminal



Drag your curve definition (for example 860-fs.txt) from the **ExampleInks** directory to the terminal that just opened.

Press **enter** and your curve should be generated from the text file.

In the CurveDesign folder double click on **Run-Install-Curves**

Select **run in terminal**

In the terminal press **enter** and your curve should be installed into the proper printer folder.

Exit from the terminal

Close the root home directory.

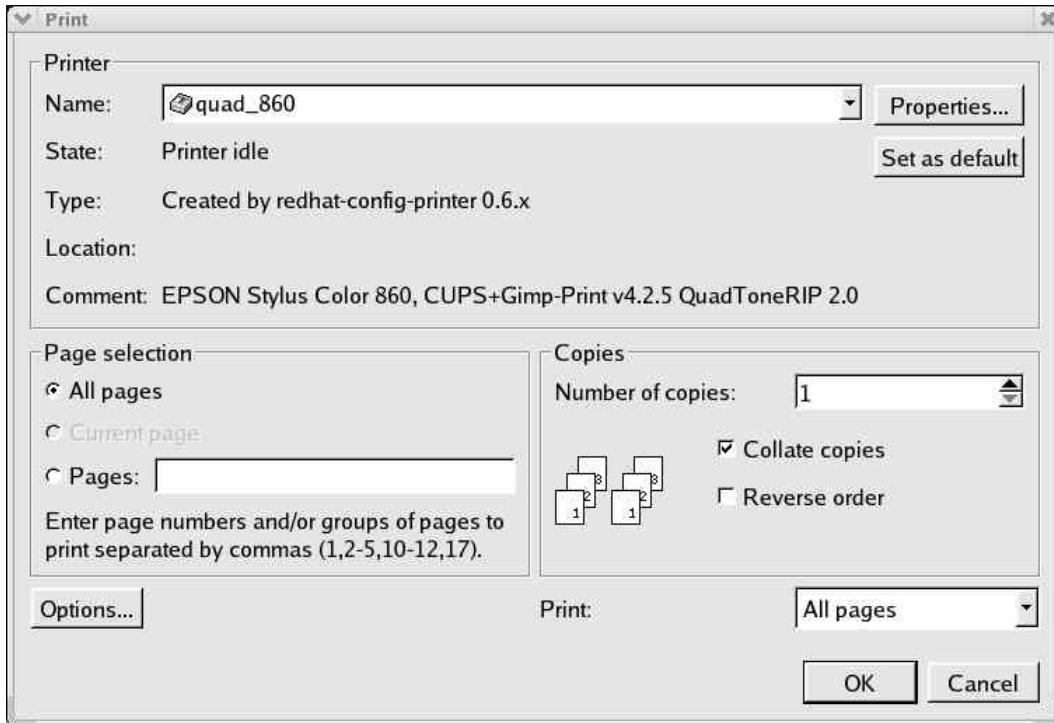
At this point you should have a functional installation and should be able to print using the command line program, qtcups.

Printing using qtcups

Change directories to a directory in which you have an image you wish to print.

Enter `qtcups "name of your image"` (for example, `qtcups foo.tif`)

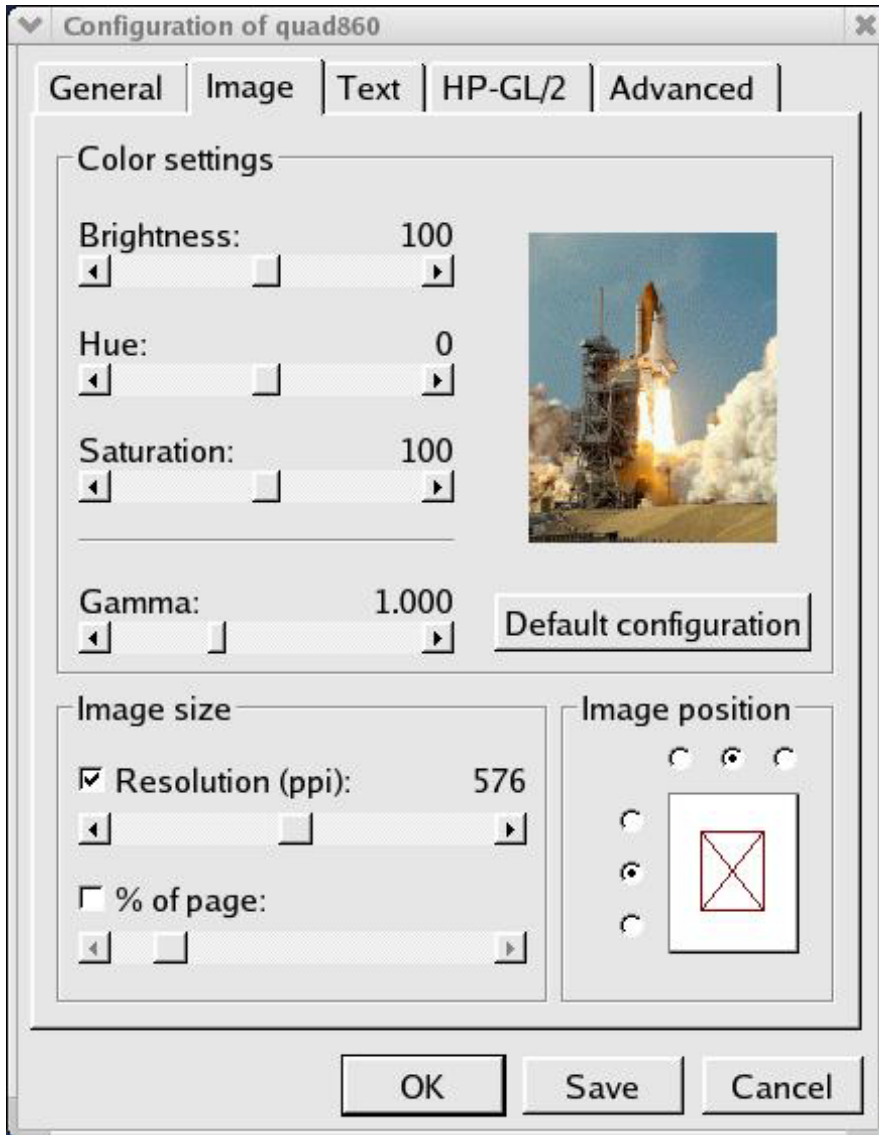
The qtcups dialog should come up.



Select your [quad printer](#).

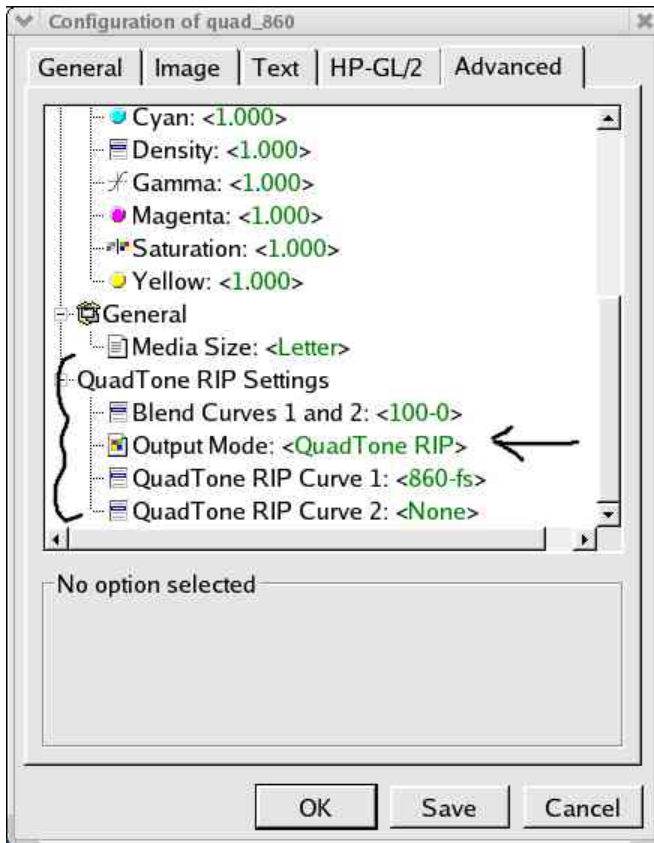
Select [Properties](#)

Select [Image](#)



Click on the [resolution box](#) and adjust the slider to whatever resolution you saved the image you wish to print. This is important because if the two do not match the size of the image will be unpredictable when you print. Make sure you have set the image position to center the image. Click on [OK](#)

Select [Advanced](#)



Set your parameters as suggested by Roy Harrington for your printer and make sure you enter the curve you stored in the previous step. This is also where you set the print resolution. I suggest that you use 1440 X 720 highest quality for any serious printing. Don't go to 1440 X 1440 or higher or you may have a problem with too much ink flow.

Click on [OK](#)

Now you should be back in the main qtcups menu. Click on [OK](#) to print. Depending on the size of the image, the speed of your processor and the amount of memory you have installed it will take a variable amount of time to begin printing. Eventually a notice will appear that the print job has been sent to the printer and it should start printing soon after.

Remember to get the most out of QTR2 you will need to go through the calibration routine as described in Roy Harrington's instructions.

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