

# PLEASE KEEP THESE INSTRUCTIONS FOR LATER USE

## Monitor Profiling

One of the most common complaints in digital printing is that the print-out never seems to match the monitor. However it is often the monitor to blame for this, not the printer.

It should be pointed out that very high standard of monitor accuracy can be achieved, but only with an “instrumented” profile. This is a profile written with the use of a spectrophotometer (or a simpler device often referred to as a Spyder) which is physically attached to the monitor. This device analyses the colour of different coloured squares which are displayed sequentially using special profiling software. This software takes the values from the instrument and compares them to the values in its database and then constructs a monitor profile.

Monitor profiling packages including Spydres are becoming cheaper all the time but they remain out of reach of many users. Despite this it is possible to create useable profiles for monitors using software included with Photoshop as well as through Apple Mac’s Colorsync utilities.

### PCs and Adobe Gamma

Firstly open an image that contains neutral greys (Photoshop’s info palette will show equal amounts of red, green and blue). Alternatively, open a colour image and go to **IMAGE-MODE-GREYSCALE** and then back to **IMAGE-MODE-RGB**. This equalises the amount of red, green and blue in the file, creating a monochrome image in RGB mode.

With the image still on the screen, click on **START** and go to **Settings - Control Panel**. Open “**Adobe Gamma**”.

Next to “**Description:**” will be the name of the monitor profile currently in use. If no monitor profile has been created or installed yet then sRGB is often substituted.

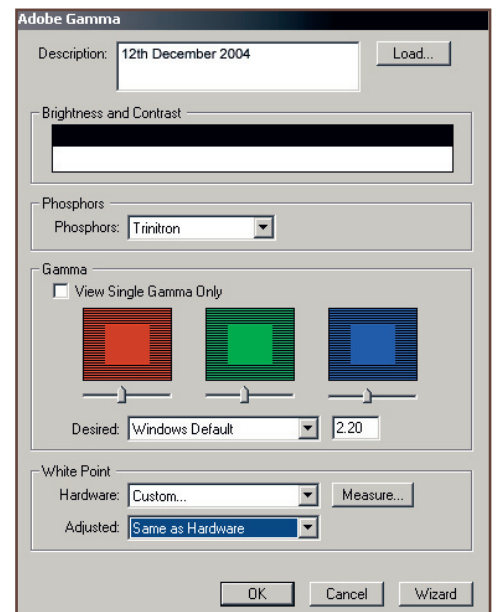
Firstly de-select the “**View Single Gamma only**” tick box so that separate controls for red, green and blue are displayed.

Next ensure that your monitor controls are set to maximum contrast levels. Then reduce your brightness setting until the black squares are just about visible from the grey squares in the “**Brightness and Contrast**” test pattern.

In the “**Phosphors**” drop down menu select the phosphors of your monitor (if known). “**Trinitron**” is a commonly used phosphor and will usually suffice.

Select “**Windows Default**” in the Desired Gamma drop down menu. Now adjust the red, green and blue sliders so that the grey tones in your image file appear perfectly neutral. This should also correspond to the red, green and blue squares in the Adobe Gamma control panel being virtually indistinguishable from the grid pattern behind them.

More recent Adobe Gamma installations include a White Point “**Measure**” option which helps to select the perfect white point for your monitor. Otherwise select **5500k** or **6500k** as the white point temperature depending on what looks most neutral to your own eyes.

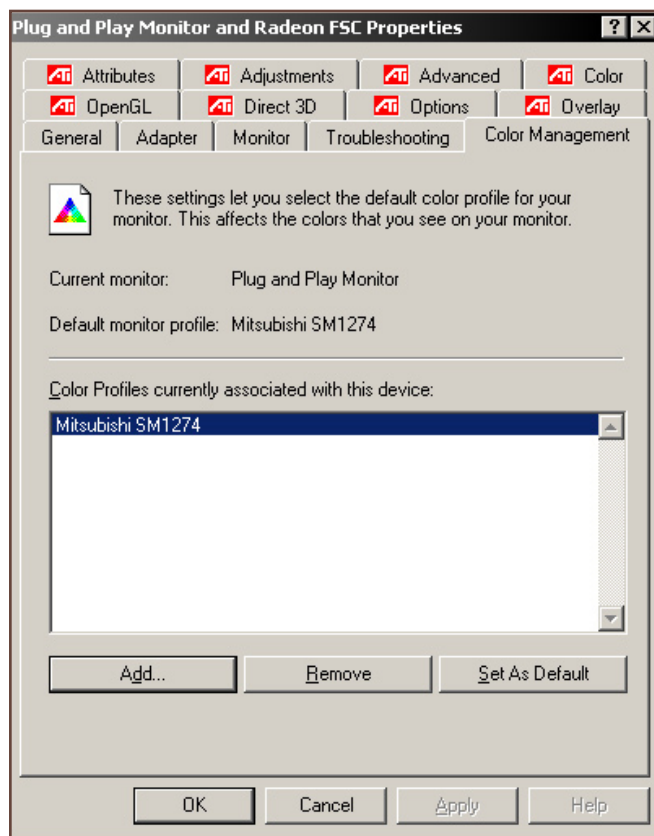


When you are happy with the monitor display type in a description of the profile in the window supplied. This can be a date so that you can easily check the last time the monitor was profiled. CRT monitors will “drift” over time, their colour reproduction becoming less accurate. This is especially a problem for older monitors. It is advisable to double-check the accuracy of a CRT monitor profile every 3 months. LCD monitors do not suffer from this drift in general. Once you have written an LCD monitor profile it should remain valid for the operating life of the monitor.

Once you have entered a profile description then click **OK**. You will then be prompted to save your profile. Enter the make and model of your monitor and click **“Save”**. This profile will now be the default monitor profile.

You can double-check this by double-clicking on **“Display”** in Control Panels. Select the **“Settings”** tab and then **“Advanced”**. Under the **“Color Management”** tab you should see the name of your profile under **“Color Profiles currently associated with this device”**

To check the accuracy of your monitor after the 3 month period simply re-open the Adobe Gamma control panel. The last monitor profile created will automatically be called up and the date the profile was created will be in the **“Description”** window. Verify that the colour balance is still OK and make any changes as necessary. A new date can then be written in the **“Description”** window and the old profile over-written.



## Apple Macs and ColorSync

Apple have long had utilities designed for creating monitor profiles. The interface for these utilities has changed throughout the many operating system upgrades. Here we will look at the interface for OSX 10.3.

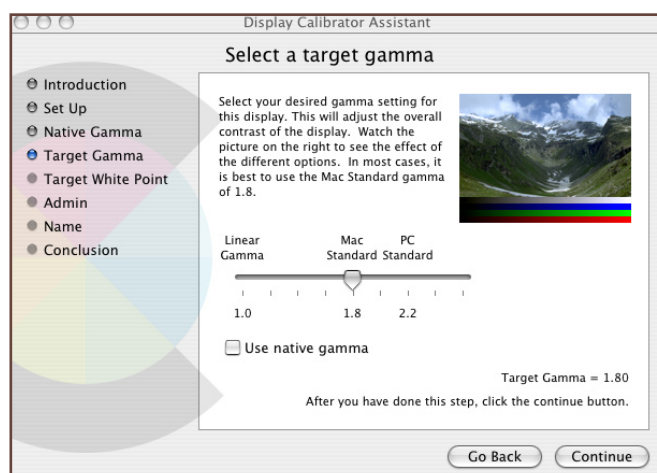
Go to System Preferences and click **“Displays”**.

Select the **“Color”** tab and then the **“Calibrate”** button.

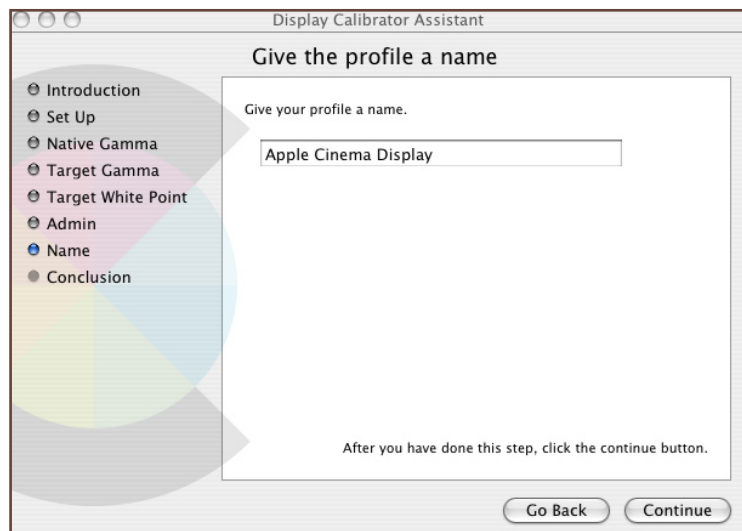
The window opposite should then appear.

Click on **“Continue”**.

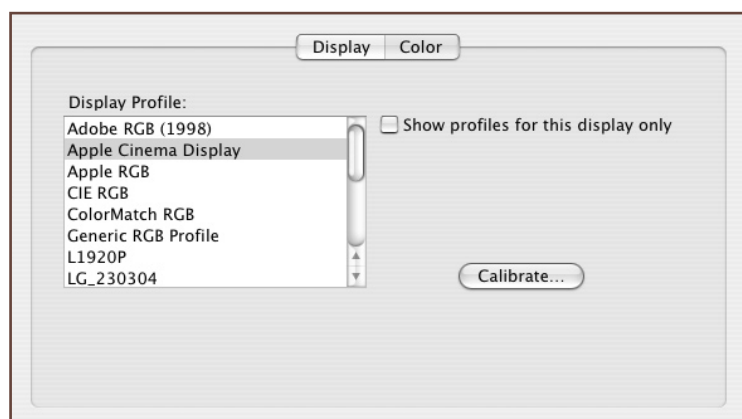
From this point on follow the prompts and adjusting the sliders. There is a succession of windows such as the one opposite for setting the Gamma at the Mac Standard of 1.8.



When all the necessary adjustments have been made you will be asked to name your profile. Do so in the window supplied. Pressing **continue** will then see the profile being generated and installed as the default monitor profile for your Mac.



This can be verified by going back to the "Displays" control panel and clicking on "Color". The monitor profile will be highlighted.



ColorSync interfaces for earlier OS versions all follow broadly the same sequence. If you are running OS8x with ColorSync version 3.0 then you should upgrade immediately as this version did not display white values accurately.

For further information about profiles see the pdf documents

**\*\*\* What are Profiles? and Using Profiles in Photoshop \*\*\***

available from the technical section of [www.lyson.com](http://www.lyson.com)

