

Profile Mechanic Monitor (<http://www.dl-c.com>)

Your monitor probably has controls to correct the overall color temperature, brightness, and contrast. Tools like Adobe Gamma work with that and only ensure that on average your monitor is operating properly; there will still be errors in how colors and tones are displayed. A monitor profile corrects all of those individual color errors.

For example, your monitor may reproduce a middle gray just fine but portray fire-engine red as being a little too bright and a little too yellow. A custom profile won't alter the grays, but it will make the red a little darker and a little bluer to compensate, just enough to balance out the distortion of the monitor.

To profile your monitor, you need special hardware and software that measures and analyzes the colors being displayed. Profile Mechanic Monitor (\$180) from Digital Light & Color is inexpensive as monitor-profiling packages go (Figure 3-1). To use it, your video board



Fig. 3-1 Unlike your printer, it's not absolutely necessary that your monitor be calibrated to produce the best restorations. However, calibrating your monitor using a package like Profile Mechanic Monitor will make sure that what you see on the screen looks a lot more like what you'll get in the print. That lets you work faster and easier, with fewer wasted test prints.

must support hardware color look-up tables (CLUTs). Just about all modern video chip sets do.

Profile Mechanic Monitor includes a USB “hockey-puck” photosensor that directly measures the light and color produced by your screen. You position the sensor over a box displayed on the screen, and the software flashes a series of differently colored squares. In the initial trial-and-error manual stage, you must adjust the controls on your monitor to make the brightness and contrast match a displayed ideal brightness curve. After that, profile creation is an entirely automatic process.

A monitor can be set up in any of several different standard ways. You have a choice of color temperatures of 5000 kelvins (D50), 6500 kelvins (D65), or 7500 kelvins (D75) and of gammas of 1.8 or 2.2. (Gamma is a measure of how light the middle gray tones look.) There’s no one right configuration. Many standardize on D65 and gamma 2.2 as a good compromise between adequate monitor brightness and correct color rendition. D50 and gamma 1.8 is often recommended for work that is going to a press.

I like D50 and gamma 2.2. D50 is bright enough for me, and it’s a close match to standard daylight viewing conditions. It is also better than D65 for work that will be viewed under incandescent lights. My experience is that gamma 2.2 produces a closer brightness match to the prints that come off modern inkjet printers than gamma 1.8.

By the way, this is true whether you’re running a Mac or PC. The old rule that the Mac gamma should be set to 1.8 is based on ancient and obsolete technology. It’s got no more bearing on current equipment than 72 dpi does on actual monitor resolution.

You don’t have to agree with my preferences. Experiment! I made profiles for all six combinations of color temperature and gamma and looked at them to decide which ones worked best for me.

Monitors age and drift in brightness and color with time. It’s a good idea make a new profile every couple of months to ensure that your display is still producing the quality it ought to.