

# Color profiling your monitor

## Color Consistency

The ability to reproduce consistent, predictable and repeatable color across an entire range of devices; from camera to display to print.

## It's What's on Your Monitor That Counts!

Calibrating your monitor is the first step in achieving accurate color when processing your digital photos. Your monitor acts as a digital standard, so that you are seeing accurate colors on screen.

This equipment is easy to use, and offer a wide range of features.

Equipment: Data Color-Spyder; X-Rite-Color Munki. Price range \$120 to \$300. These are USB devices, and come with the necessary software.

Restrictions: Some monitors have a "built-in" calibration system that will have to be disabled. Check your manual for the procedure to do this. Some monitors such as NEC require the use of their software, not the software that come with the calibration device.

How often? Most software have the option that will notify you that it's time to reevaluate. This is set within the software. I recommend every 30 days. Most software will allow you to view the "before and after".

Settings: **Important:** Allow your monitor to warm-up for 30 minutes before continuing. Suggested software settings: Gamma 2.2; Brightness 120; White point 6500K.

Calibrate: Follow the "on screen" dialog. DO NOT allow your monitor to go to sleep and keep the cursor away from the sensor.

## Display Type

Identify the type of display you are calibrating, so that the correct process can be run.



### **LCD Display**

LCD Displays are lighter and not so deep, often with plastic screens. They resemble modern Flat Screen TVs.



### **CRT Display**

CRT Displays are heavy and deep. They generally resemble traditional television sets made with glass picture tubes.



### **Laptop**

Laptop or Notebook computers have built in processors and keyboards, as well as LCD screens. Choose the Laptop mode to calibrate this type of display.



## **Projector**

Front Projectors have a lens and display large images on a screen that is placed several feet away. Some use LCD technology while others use DLP. Both are calibrated using Projector mode.

## **Choose Display**

The menu allows you to select which display you wish to calibrate, if you have more than one display attached to your computer.

## **Identify Controls**

### **Usual Setting**

All LCD displays have a Brightness control, many have no other controls.

### **The Purpose of This Step**

Identifying what types of controls are available allows the software to make optimal adjustments to your display.

### **Brightness**

LCD displays will have a control named Brightness or with the Sun symbol, and possibly a different control called Backlight. If both are available, it is best to use the Backlight control to adjust your display's Brightness. If there is only one such control, then use this control, whichever name it may have, for your Brightness adjustment.

### **Color Controls**

For CRTs, adjusting any of the types of controls below is very effective. For LCD displays, it is recommended that you set these controls, if available, to factory defaults, and not attempt to use them to fine tune your display's White Point. Setting the Kelvin Preset to the value closest to your target White Point and not adjusting any available

slider controls is also a good strategy for White Point control on LCDs. Apple LCDs do not offer any type of white point controls, so these options are not offered when the software detects an Apple display.

### **Kelvin Presets**

If your monitor has a list of choices such as 5000K, 6500K and 9300K (and perhaps others) then your monitor has a Color Temperature Preset control.

### **RGB Sliders**

If your monitor has three sliders (variable controls) that allow setting individual values for the Red, Green and Blue channels (usually in a range of 0 to 100) then your monitor has RGB Gain controls. Some monitors have six controls, three for white and three for black:

Only adjust the controls for the white - usually labeled Gain or Contrast.

Do not adjust the controls for black - usually labeled Bias or Brightness; they are not intended for adjustment with this tool.

Some displays have only two sliders (typically Red and Blue) with the third channel fixed. You can still use the RGB slider adjustment screen to balance the white point of such displays by adjusting the variable channels.

LCD displays should not be adjusted with RGB control settings.