

CALIBRATING YOUR NTSC MONITORS

Before you start editing, it's important to adjust your NTSC monitor to ensure that it displays colors as accurately as possible. The easiest way to do this is with color bars, a regular pattern of colors and grey tones that can be used to adjust your monitor's brightness and contrast.

Many professional monitors and cameras can automatically generate color bars. Or, you can use editing packages like Final Cut Pro or Adobe Premiere to generate color bars. Though you can use these programs to record color bars to tape for playback on your NTSC monitor, it's better to feed the signal directly from your computer and into your monitor. Consult your editing package's documentation for details.

Tip: QuickTime Color Bars

You can find QuickTime movies of NTSC and PAL color bars on the Digital Filmmaking Handbook DVD in the Chapter 11 folder.

SETTING UP

Ideally, you'll want to calibrate your monitor in a dimly-lit room. Try to get rid of any bright reflections on the monitor's screen. Before you start calibrating, turn the monitor on and let it warm up for a few minutes. Then, activate your color bars. Now you are ready to start. (See color plate 5 in the *Digital Filmmaking Handbook* for an illustration of color bars.)

1. Your monitor should have a control labelled Color or Chroma. Turn this all the way down until the color bars are grey-scale.
2. In the lower-right corner of the screen is a rectangle that is solid black. (See figure 1 on the following page). To the immediate left of this are three thin strips of grey. On your screen, these strips may look like a solid block of black. These grey tones, called Pluge Bars—or Picture Lineup Generating Equipment—will be your first adjustment. Adjust the brightness control on your monitor until the right-most Pluge bar (see Figure 2) is barely visible. You should not see any difference between the left bar and the middle bar. You have just set the proper black level.



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Gray (80 units)	Yellow	Cyan	Green	Magenta	Red	Blue
Blue	Black	Magenta	Black	Cyan	Black	Grey
I	White (100 Units)	+0	Black	3.5	7.5	11.5
						Black

Figure 1. Colors in a standard color bar chart.

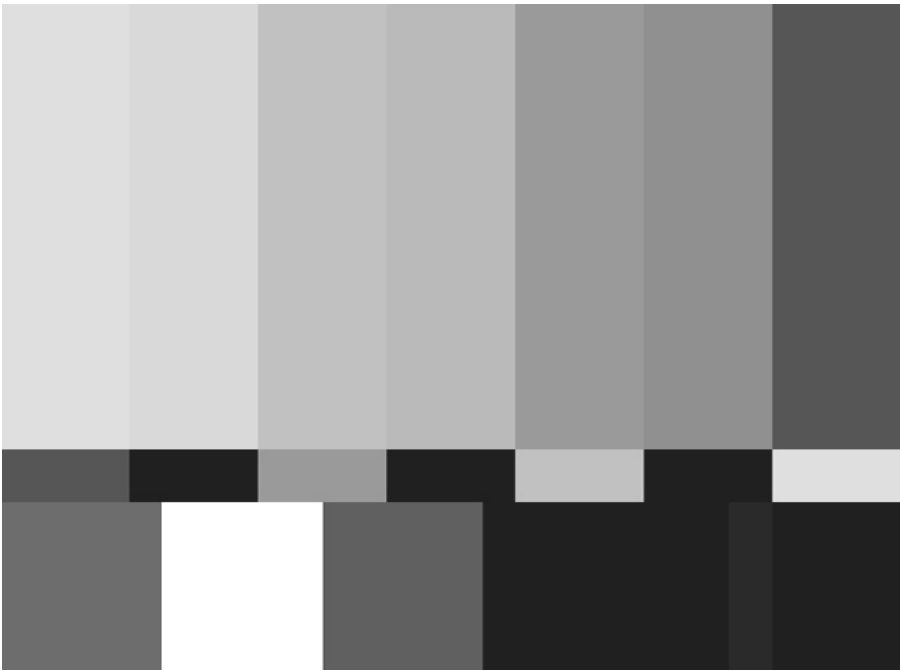


Figure A. Correct pluge bar

- Now turn the contrast on your monitor all the way up. The white bar (second from the left at the bottom of the screen) will flare. Reduce the

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contrast until you have eliminated the bloom and can see a sharp edge between the white bar and the grey bars on either side. You have now set the white point for your monitor.

4. Many professional monitors have a Blue Check button or an equivalent that will shut off the red and green guns in the monitor. If you're using a television or non-professional monitor, you'll have to eyeball your color adjustments. Adjust your monitor's color controls until the yellow is a lemony yellow with no orange or green. The magenta bar should be pure magenta with no shifts toward red or purple. Your monitor is now calibrated.
5. If your monitor has a Blue switch, turn it on. (If your monitor doesn't have a blue switch, you can get some blue lighting gels and simply hold them up to your eye.) On a properly adjusted monitor, you will see alternating bars of equal luminance (see figure A3 and Color Plate 18).



Figure 3. Blue color bars. Caption—On a properly calibrated monitor, blue-only color bars will appear as alternating shades of equal intensity.

6. If your blue bars don't look correct, adjust the color settings on your monitor until the grey bar at the far left, matches the sub bar that sits directly beneath it. Then do the same for the blue bar on the far right. If you have adjusted correctly, then the left-most grey bar and the far-right blue bar will be equally bright.



7. Next, adjust use the same process to adjust the cyan and magenta bars. When finished, the rellow, green and red bars should appear completely black.

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