

# Monitor Luminance Calibration

## Fact:

Because most monitors are used for viewing text, manufactures preset the brightness low and the contrast high at the factory to render high contrast for text. In order to see maximum shadow and highlight detail, the monitor's luminance must be adjusted for imagery.

## Objective:

Adjust the monitor's brightness and contrast controls to render as much detail as possible while still maintaining 256 levels of gray.

## Procedure:

1. Set room lighting to conditions as used when viewing imagery.
2. Adjust the monitor's color temperature to 6500K
3. Open the Photoshop file using Photoshop or Windows 2000 image viewer. **Note:** Windows 98 image viewer and earlier is not acceptable for this calibration because it's a high contrast viewer and all pixel values from 0 to 40 are displayed as 0.
4. Adjust the monitor's brightness control until you can **JUST** see a difference between pixel value step 0 and 7.
5. Adjust the monitor's contrast control until you can **JUST** see a difference between pixel value step 248 and 255.
6. Re-check pixel value steps 0 and 7, if its still OK after adjusting the contrast, luminance calibration is complete.

**Note:** Some monitors (especially older ones) do not have enough luminance output to see a difference between 0 and 7. If your brightness is set to 100% and you still cannot see separation between 0 and 7, you should consider upgrading your monitor for maximum shadow detail.

**The step tablet below was created in Photoshop. The numbers indicated in each step represent it's pixel values. For the calibration process, only steps 0 and 7 are needed adjusting the monitors brightness and steps 248 and 255 for contrast.**

Look for density difference between steps 248 and 255 / and step 0 and 7  
See arrows indicated steps

