

Bryce Alive Quick Guide to Monitor Calibration

The recommendations in this article are generic - the exact method depends on the software tools you use for calibration. And please, all settings are **system** settings, and **not** changes you make to you image files.

Monitor settings are not a matter of taste, as in "I like this, I leave it like that." Unless you never show your work to anybody else, and you never look at other people's work. Only a correctly balanced display will show you what the picture looks like. I find that at least 80% of all monitors are badly calibrated. Brycers are often surprised at how completely different their work looks on somebody else's monitor. Some say it's the difference between Windows and Mac, but that's not true. Correctly adjusted Monitors should more or less show the same tone, colours and contrast.

The difference between Mac and Windows is the default "Monitor Gamma". Gamma is a setting which determines how your Monitor interprets brightness and contrast information of your system's video output. It is a numerical value, with 1.8 as the recommended default setting for Mac and 2.2 for Windows. Many users set the Gamma and believe this is all they need to do. But it really is only the first step. Setting the correct Gamma for your system does not calibrate the Monitor. You must ensure that brightness, contrast and colour balance are right. Getting it right can take many hours, and you must be prepared to compromise. Perfection or near perfection is only possible on the best of monitors.

Have a look at this test image:



You must be able to see all this:

- 20 sections of equal width and different tone
- the darkest section must be pure black
- the lightest section must be pure white
- there must be no hint of colour anywhere along the grey spectrum

If you don't see 20 different tones, you may need to lower the contrast.

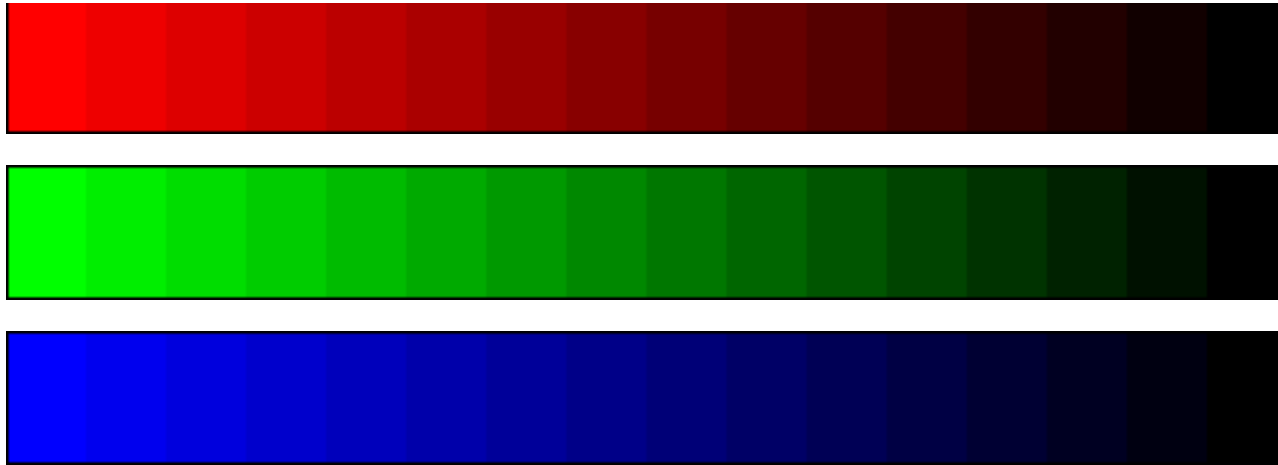
If black is not pure black, you need to either darken the monitor or adjust the black point.

If white is not pure white, you need to either lighten the monitor or adjust the white point.

If both black and white are not pure, try to boost the overall contrast or adjust both, the black and white points.

If there is a colour cast, try and adjust the colour balance. Some software allows you to do this separately for both ends of the grey spectrum

Once you have adjusted everything as precisely as you can, look at these test images (Red, Green, Blue):



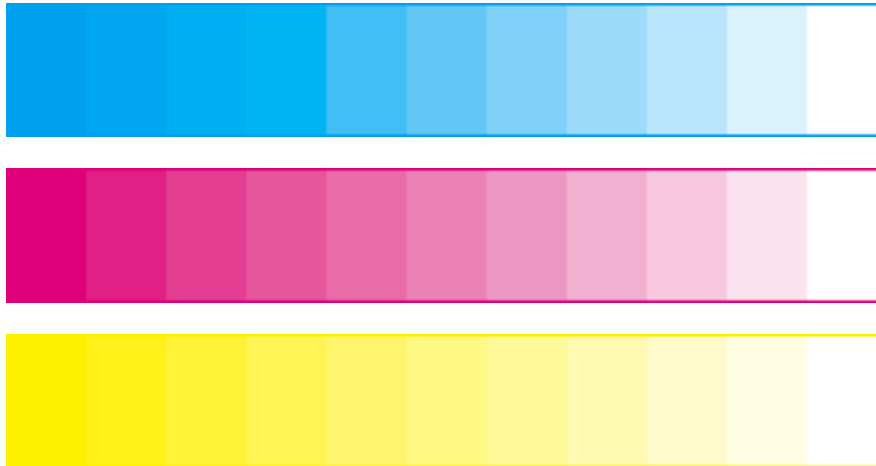
There are 16 clearly defined patches in each strip.

If you cannot distinguish between them towards the dark end in any of the strips, you may need to lighten the respective colour, or darken the other two colours.

If you cannot distinguish patches towards the light end in any of the strips, you may need to darken the respective colour, or lighten the other two colours.

You can also try to work with saturation controls for the individual colours, if they are available in your Software.

Also, have a look at the following test images (Cyan, Magenta, Yellow):



There are 11 clearly defined levels in each strip. You will find a relationship between how these are displayed and how Red, Green and Blue are displayed.

- If the deepest yellow patches are indistinct from each other, your darkest blue is probably too close to black..
- If the deepest magenta patches are indistinct from each other, your darkest green is probably too close to black..
- If the deepest cyan patches are indistinct from each other, your darkest red is probably too close to black.

Some men may have difficulties with the deepest colour patches. If in doubt, zoom in for a close look.... or ask a woman.

If you have a fairly precise inkjet printer, you can print out these last three strips and the greyscale. If your monitor settings are correct, the print should look close to the representation of those strips on your screen. Changing any of the monitor settings should have no effect on the print. So, if you can trust your printer, this is a very good indication of a correct monitor setup.

All this requires patience. Each setting has an effect on everything else. You may need to go back and forth between adjusting two or more parameters dozens of times.

by Gunther Berkus - back to [Bryce Alive Network...](#)
also: visit my [Gallery of Computer Graphics](#)
learn Bryce with [Brycetech](#)