

Color management- overview

Some colors on your monitor cannot be reproduced by your color printer. These colors are called "out of gamut" colors.

You want to insure the closest match between your screen and any prints, as well as ensure graphics look right between, say, your scanner and Adobe Photoshop.

CMS (Color Mapping System) Uses color management engine which reads **ICC profiles** [1] →

Translates colors from color space of one electronic device to device independent color space (**CIE LAB**)[2] →

Color mapping to other device

[1] **ICC (International Color Consortium) Profiles** embed color information in each file and insure the files appear correctly in any ICC compatible application. Monitors have ICC profiles. So do scanners.

[2] CMS's must use an objective color space to define color- Most use CIE LAB which can reproduce any color viewable to the human eye and is device independent.

Different methods of translation are used for graphics vs. photos to ensure trueness of color or brightness, etc.

Sources for more info:

www.adobe.com (search for color management)

www.apple.com (search for ColorSync)

www.linocolor.com (search for "Color Manager Manual")

www.agfa.com (search for "The Secrets of Color Management")

www.color.com (Color Resources)

Making your computer monitor display color well

Calibration = setting a device to a standard set of colors

Profiling = Creating an ICC (International Color Consortium) profile to describe your device.

(Monitor user guides often have tips).

1. Your monitor must have been on for 30 minutes, so it has a chance to warm up and display color properly.
2. Set your room lighting to how it most often looks when you are working on your computer.

3. Recommended (I never do this) – set your background wallpaper to a neutral grey. Busy backgrounds interfere with accurate color perception.

Windows

(You'll use the Adobe Gamma Utility, if you have it (it comes with most Adobe software) If you *don't* just follow the instruction manual that came with your monitor and skip the below).

4. Start menu > Settings > Control Panel
5. Double-click Adobe Gamma – if you don't see it, then you don't have it. You should see your monitor listed under "Description"
6. Click the Load button
7. Open the ICC profile that most closely matches your monitor
8. Click the Load button and open Adobe RGB (1998)

Mac (OSX)

You'll use the monitor calibration utility in the control panel.

4. Apple menu > System Preferences > Displays
5. Click on the Color tab
6. Hit "Calibrate"