

color gamut

What is gamut?

Every color system (monitor, desktop printer, digital press, offset press, etc.) has its own unique color gamut. **Color gamut is the range of colors and tones achievable by an imaging system.**

The color gamut of a computer screen is determined by the purity and brightness of its red, green and blue pixels. The color gamut of a printing device is determined by the hue, saturation, and lightness of its cyan, magenta, yellow, and black inks and the brightness and other characteristics of the paper or substrate on which they are printed.

Successful designers work within the available color gamut – or accept some loss of color in the final output. For example, if you view your design in RGB without CMYK soft proofing, chances are you will be disappointed when it prints. Likewise, don't expect the same color gamut on newsprint as you can get on commercial offset paper.

Displaying RGB as CMYK: Your Monitor is a Variable

Computer monitors typically have larger color gamuts than printing devices, especially in deep blues and blacks. This means the printed result will often be less dramatic than the original RGB image viewed on screen. To see in advance how an RGB image will look when printed in CMYK, use the *Proof Colors* viewing option in Adobe Creative Suite applications. Colors outside the printable gamut will display with less saturation, similar to how they will print on press. Proof accuracy depends on the quality of your monitor profile as well as your default CMYK Working Space and default Rendering Intent.

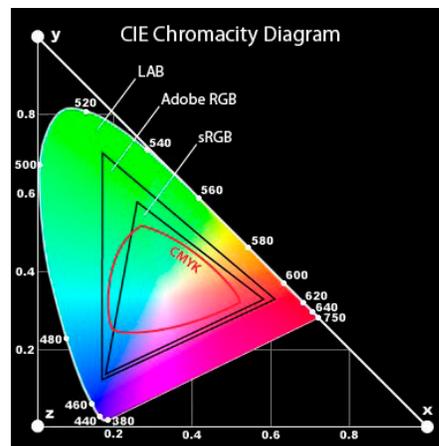
Controlling Color in Adobe Creative Suite

The main thing you need to know about Adobe Color Settings is to set your CMYK Working Space to your intended printing condition (GRACoL® or SWOP®). Recommended Adobe Color Setting files (.acs files) and full installation instructions can be downloaded free from idealliance.org. Search "G7 Color Settings" and follow instructions.

Utilizing Printing Standards

Creative users can take advantage of color management best practices and standardized printing specifications by:

- Setting the Adobe CMYK working space to GRACoL or SWOP
- Previewing RGB images as CMYK
- Proofing only on GRACoL or SWOP Certified Proofing Systems
- Asking for a Color Control Wedge on your contract proof
- Viewing proofs and press sheets under D50 lighting conditions
- Working with an IDEAlliance G7 Master qualified proof or print provider



There are a number of colors in the RGB gamut that are out of gamut for CMYK. They will be shifted to an in-gamut representation, thus not printing as your monitor led you to believe.

