

In color film three emulsion layers separately record the individual blue, green and red components of the visible spectrum. CalColor calibrated filters are unique in that they are specifically designed to the spectral sensitivity of these emulsion layers and allow for the adjustment of these color components at the light source. As a result, the cameraman or technician can exercise complete control over the coloration of selective elements within the scene *with totally predictable results*. This development represented such a significant innovation that it was granted a U.S. patent.

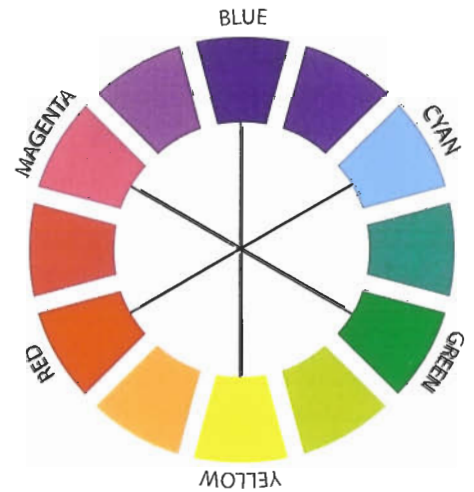
The CalColor system includes the primary colors Blue, Green and Red, the secondary colors Yellow, Magenta and Cyan, and two intermediary colors Pink and Lavender. Each color is produced in four densities: 15cc, 30cc, 60cc and 90cc, corresponding to the familiar 1/2, 1, 2, and 3 stop calibrations.

For example, a CalColor 90 Green filter selectively enhances green transmission by effectively reducing the blue and red transmission by a density of .90 or three stops. Similarly, a CalColor 90 Magenta filter selectively enhances blue and red transmission (creating magenta) by effectively reducing green transmission by a density of .90 or 3 stops.

CalColor and The Color Wheel

In addition to enhancing colors, Calcolors can be used for neutralizing, subduing or darkening the *opposing* colors in a scene.

- Blue Filter** Brightens blue. Strengthens cyan and magenta.
Darkens yellow. Subdues red and green.
- Green Filter** Brightens green. Strengthens cyan and yellow.
Darkens magenta. Subdues red and blue.
- Red Filter** Brightens red. Strengthens yellow and magenta.
Darkens cyan. Subdues blue and green.
- Yellow Filter** Brightens Yellow. Strengthens red and green.
Darkens blue. Subdues cyan and magenta.
- Magenta Filter** Brightens magenta. Strengthens red and blue.
Darkens green. Subdues cyan and yellow.
- Cyan Filter** Brightens cyan. Strengthens blue and green.
Darkens red. Subdues yellow and magenta.



Note: These principles also prove useful in black and white photography, since brighter tones are rendered as lighter grey and darker tones are rendered as darker grey.

Combining Calcolors

With their high degree of purity, Calcolors can be combined with each other to produce a vast working palette of clean colors. The resulting combinations are also predictable for their photographic results - simply add together the component density values of the two filters. For example:

30 Cyan (30C) + 15 Blue (15C, 15M) = 45 Cyan with 15 Magenta (45C + 15M) = a Light Steel Blue Filter.

Other Uses

In addition to their use as color effects lighting filters, CalColor can serve a number of technical uses.

For bluescreen, greenscreen or redscreen digital compositing, the Blue, Green and Red primaries in the 60 or 90 density offer color enhancement for lighting the colored background. The complimentary Yellow, Magenta and Cyan tints in the 15 density then become useful for backlighting the subject. This backlighting will neutralize any spill from the background that would otherwise cause contamination or fringing in the matte.