CAMPBELL
PHOTOGRAPHIC ARTS

USING POLARIZING FILTERS

What filter is the most commonly used filter in photography? The polarizing filter of course. This is the one filter that can dramatically deepen a blue sky, eliminate reflections and glare, and increase color contrast to the nth degree.

Skipping the physics discussion of light theory, polarization occurs in open blue sky and wherever there are reflections off shiny surfaces (not mirrors, that's something entirely different). By rotating a polarizing filter you can progressively prevent the polarized components of light passing through, while allowing normal light to pass through unaffected. The filter acts as a 1.5 X neutral density filter at its minimum polarization and 2X at its maximum. For darkening a blue sky, the maximum effect occurs in a clear sky at right angles (90 degrees) to the light emanating from the sun.

To use a polarizer for maximum effect, a simple rule of thumb (literally) is to point your thumb at the sun, then extend your forefinger (like your making a handgun). Maximum polarization occurs at the direction your forefinger is pointing. When it comes to reflections, the polarizing filter works best on light that passes through the filter at an optimal angle (say 30 or 40 degrees) from the reflecting surface. If you want to achieve maximum polarization, you would do best to choose your subject, then determine the viewpoint needed to achieve 90° (30°/40° for reflections).

All materials, even opaque matte surfaces, reflect some degree of polarized light. Using a polarizing filter will greatly increase the amount of color saturation that occurs on any given film.

There are two types of polarizing filters, circular and linear. For optical reasons too complex to discuss here, circular polarizers are necessary for most autofocus lenses. Linear polarizers are made for manual focus cameras. If you're unsure of what your lens may need, get a circular polarizer just to be safe. They are more costly than linear, but putting a linear polarizer on an autofocus lens will get you nothing but trouble.

It’s a common misconception that linear polarizers will adversely affect metering; only autofocus.