

FIFTH EDITION

Exploring Color Photography

FROM FILM TO PIXELS

Robert Hirsch
with contributing writer Greg Erf





© Brian Ulrich, Six Flags Mall, from the series Dark Stores, 2009. Variable dimension. Chromogenic color print.

within the scene, contrast can be pushed to the other extreme. Either way, post-exposure corrections are often necessary. Low levels of light translate into long exposures; a tripod, a higher ISO setting that increases digital noise or film graininess (see section on Long Exposures and Digital Aberrations on page 49), or additional lighting may be needed to make the desired picture. Despite these issues, dim lighting conditions can be visually compelling due to the atmosphere of mystery generated by unusual colors and lack of detail that spark the imagination.

Contrast Control/Tone Compensation

DSLRs have an image adjustment control for altering the image-contrast and brightness at the time of exposure. Altering the tone curve can control image-contrast, the relationship between the distribution of light and dark tones. This is sometimes referred to as tone compensation. DSLRs offer a host of contrast management options. The Automatic or default option optimizes the contrast of each exposure by selecting a tone curve to match the situation. Normal uses the same curve setting for all images. Low contrast prevents highlights from being washed out in direct sunlight. Medium-Low contrast produces slightly less contrast than Normal. Medium-High produces slightly more contrast than Normal. High contrast can preserve detail in low-contrast situations such as in a foggy landscape. Some cameras allow the creation of a custom tone curve to deliver a unique look. RAW



Figure 3.12 Composing this image in extremely dim light and dealing with the high-contrast between shadows and highlights presented a challenge for Brian Ulrich. He was able to capture the image by using a handheld flashlight for the shadows and photographing with an 8 × 10 large format camera, which allowed for an extremely high fidelity image. Ulrich's *Copia* project, which examines American consumer culture, was influenced by the terrorism and collective grief of 2001 and the almost immediate governmental urge for citizens to bolster the failing economy. He states that this project "explores not only the everyday activities of shopping, but also the economic, cultural, social, and political implications of commercialism and the roles we play in self-destruction, over-consumption, and as targets of marketing and advertising."

© Brian Ulrich. *Pep Boys 3*, from the series *Copia*, 2009. Variable dimensions. Chromogenic color print.

users will adjust their contrast later, using post-processing software, rather than in the camera. The contrast of film can be managed slightly by altering the choice of film stock and the time of the first developer. Finer control is possible by scanning the film and then using image software to make adjustments.

Light Metering Techniques

Metering the Subject

Metering the subject is another way to determine proper exposure. When in doubt about where to take an exposure reading, decide what the principal subject is in the picture and take a reflected reading from it. For instance, when making a portrait, go up to the person or zoom in and take the meter reading directly from the face. When photographing a landscape in diffused, even light, an overall meter reading can be made from the camera position. If the light is hard (not diffused) or directional, the camera meter can be pointed up, down, or sideways to emphasize the sky, the ground, the highlights, or the shadows. In this situation bracketing is recommended.

Exposing for Tonal Variations

Exposing for tonal variations is another method that can be used in calculating the exposure. A scene having large areas of either dark or light tones can give incorrect information if the exposure is based on a single reading. When photographing a general outdoor scene, taking two manual light meter readings—one each from key highlight and shadow areas—and then averaging them together can deliver a correct exposure. For example, suppose you are photographing a landscape late in the day, when the sky is brighter than the ground, and detail needs to be retained in both areas. First, meter a critical highlight area, in this case the sky, in which detail is required. Let's say the reading is $f/16$ at $1/250$ of a second. If the exposure was made at this setting, the sky would be rich and deep, but detail in the ground would be lost and might appear as a vast black area. Second, take another meter reading from a key shadow area of the ground. Say it is $f/5.6$ at $1/250$ of a second. This would provide an excellent rendition of the ground, but the sky would be overexposed, completely desaturated of color and with no discernible detail. To obtain an average reading, meter the highlight (sky) and the shadow (ground) and halve the f -stop difference between the two readings. In this case, an average reading would be about $f/8-1/2$ at $1/250$ of a second. It is permissible to set the aperture in between the f -stops, though DSLRs display the actual f -stop number, such as $f/8$, $f/9$, $f/10$, and so on. The final result is a compromise of the two situations, with acceptable detail and color saturation in each area. Bracket your exposures to ensure the result you desire. Often one will favor capturing highlight detail instead of shadow detail, as overexposed "blown out" highlights are gone forever.

If the subject being photographed is either a great deal darker or lighter than the background, such as a dark-skinned person against a white background or a fair-skinned person against a black background, averaging will not provide good





Figure 5.25 When photographing under foggy conditions the diffused light can tend to have a cool (blue) cast. To bring out warmer tones, shoot in the late afternoon or in the early morning, as Steven P. Mosch did with this image shot at sunrise.

© Steven P. Mosch. *Trees and Fog*, Spring Island, SC, 2002. Variable dimensions. Inkjet print.

Fog and Mist

Fog and mist diffuse the light and tend to provide monochromatic compositions. The light can tend toward the cool (blue) side. If this is not acceptable, alter your white balance, use an 81A warming filter, or photograph in the early morning or late afternoon when there is the chance to catch some warm-colored light. If the sun is going in and out of the clouds, wait for a moment when a shaft of light breaks through the clouds. This can create drama and break up the two-dimensional flatness that these cloudy scenes often produce.

Because the light is scattered, both colors and contrasts are made softer and subtler. If you want a sense of depth in the mist, try not to fill your frame completely with it. Attempt to offset it with a dark area. To capture mist, expose for the highlights or use an incident light meter. Bracketing is crucial.

In fog, take a reading from your hand in light similar to that which is on your subject. Then overexpose by $\frac{1}{2}$ to one f-stop depending on how intense the fog happens to be. Bracket and review your exposures.

Rain

Commonly, rain tends to mute and soften color and contrast, while bringing glossy reflections into play. Include a warm accent if contrast or depth is desired. The shutter speed is important in the rain. The faster the speed, the more distinct the raindrops will appear. At speeds below $1/60$ of a second, the drops blur. Long exposures will seem to make them disappear. Experiment with different shutter speeds to see what you can achieve. Review and make adjustments as you go. The aftereffects of rain can make certain colors and surfaces more vibrant.

When working in wet conditions, keep your camera in a plastic bag with a hole for the lens. Use a UV filter to keep the front of the lens dry. Hold the camera inside your jacket when it is not being used. If it is going to be constantly wet, get a waterproof bag to hold your equipment. Camping stores sell inexpensive plastic-bag cases that will allow you to photograph in wet conditions without worrying about ruining the camera. Carry a bandanna to wipe off any excess moisture. Some manufacturers produce underwater camera housings and/or cases to protect the camera in difficult weather conditions while allowing free access to the controls.

Dust

Dust can be a bitingly painful experience to a photographer and equipment. Use a UV filter, plastic bag, and lens hood to protect



Figure 5.26 To shoot this scene, Brian Ulrich made a 30-second exposure around midnight in an empty parking lot. His biggest challenge was dealing with the elements. He was able to overcome the elements "by using the trunk of the car to block the snow and rain from hitting the lens and also shielding the camera from the wind." Ulrich began this series to analyze the intersection of consumerism and patriotism shortly after September 11, 2001, amidst threats of economic collapse. Ten years later, he tells us, "In the recent economic downturn some of the very stores I photographed at the beginning of the project are now emptied and laid barren in the hulking empty architecture of the big box mall or store."

© Brian Ulrich. *Linens 'N Things*, from the project *Copia*, 2009. Variable dimensions. Chromogenic color print.

the camera. Avoid changing lenses or opening the camera back in dusty situations. Dust is the bane of digital sensors, producing unwanted spots and specks, so avoid changing lenses or opening the camera back in dusty situations or you may need to have your camera professionally cleaned.

Use the same shutter speed guide for snow (see page 88) to help determine how the dust will appear. Dust in the sky can produce astonishing atmospheric effects. If turbulence is to be shown, expose for the highlights. This causes the shadows to go dark and the clouds will stand out from the sky. A polarizing filter may be used to darken the sky and increase color saturation. If detail is needed in the foreground, use the camera to meter for one-third sky and two-thirds ground, and bracket one f-stop in either direction.

