



2 OFF-CAMERA FLASH

On-camera flash is convenient, but produces flat lighting that isn't very interesting. Moving the flash unit off-camera lets you create more exciting lighting. Flash brackets such as those from

Stroboframe will securely hold your flash unit in its off-camera position. To maintain TTL flash automation, you'll need a TTL extension cord—the major camera manufacturers offer these for their systems (except a couple whose current AF SLRs provide wireless TTL off-camera flash with appropriate dedicated flash units).

3 FILL-FLASH

There is a good use for on-camera flash: as a fill light, to supplement an off-camera main light source. In fact, probably the most common use of flash outdoors is to fill in the harsh, dark shadows created by direct sunlight. Most cameras with built-in flash units or hot-shoe mounts provide automatic exposure for flash, and some, such as Nikon's current AF SLRs, will even automatically balance the flash-lit subject and ambient-lit background exposures for you.

4 SLAVE FLASH

Some cameras provide off-camera flash capability via a PC cord or an extension cord that connects to the camera's hot-shoe, and a few even provide wireless off-camera flash. If yours doesn't—or if you want to sync several off-camera flash units—you need a slave. This is an "electronic eye" that fires the flash unit to which it is attached when it "sees" the flash from a camera-connected flash unit. Some portable and studio flash units have slaves built-in, and you can get slaves for most shoe-mount units. Slaves don't provide TTL automation—they can't control the flash duration—but they do allow you to fire any number of off-camera flash units (each with a slave attached) in sync with the camera shutter.

There are even slaves that don't require a triggering flash, using an infrared signal from a transmitter mounted in the camera's hot-shoe instead.

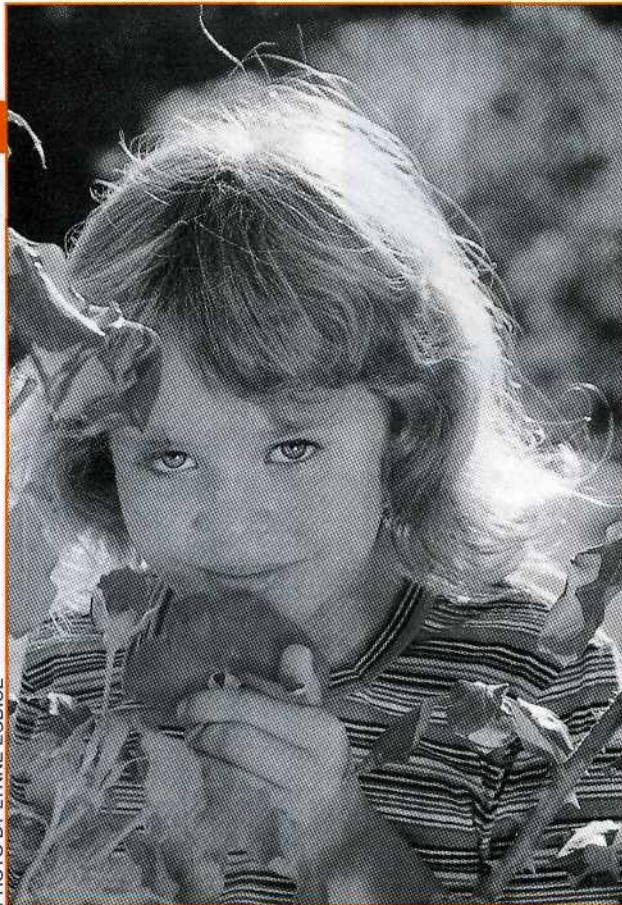
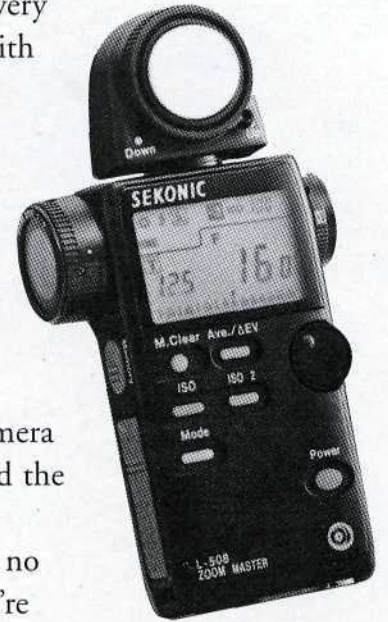


PHOTO BY LYNNE EODICE

5 FLASH METER

The TTL flash-exposure control found in today's AF 35mm SLR cameras is terrific. It makes flash photography—even tricky flash-fill situations—very easy to do. But it doesn't work with studio flash systems, and some cameras don't offer TTL flash, making bounce and multiple-light-source exposures difficult to calculate.

The best solution is a flash meter. Hold the meter right in front of your subject, point the translucent hemisphere at the camera lens, press the meter's button, and the resulting reading will tell you the proper f-stop to use for the shot, no matter how many flash units you're using, no matter whether they're used



direct or bounced, no matter whether they're small shoe-mount units or big studio systems. Many flash meters also read ambient light.

6 RED-EYE

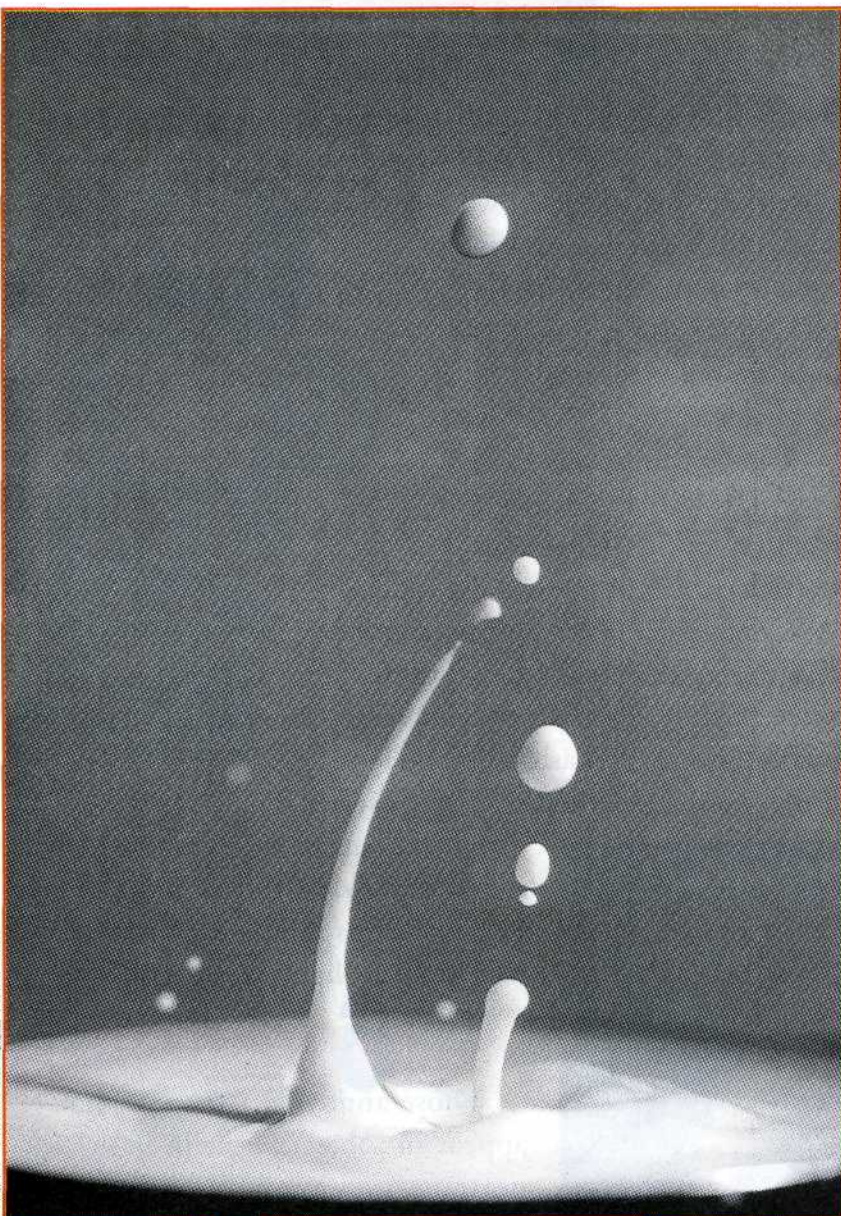
Those annoying red spots that appear in subjects' eyes in flash portraits are known as red-eye, and they're caused by light from the flash being reflected off the subject's



PHOTO BY MIKE STENSVOID

retinas right back into the lens. The only way to eliminate red-eye is to move the flash unit away from the lens axis (i.e., off-camera). Of course, you can't do that with built-in flash units, so most of today's cameras that have built-in flash provide a red-eye reduction feature. This generally takes the form of a series of weak pre-exposure flash bursts that cause the subjects' eyes to "stop down," thus minimizing the red-eye effect.

1. The soft effect of umbrella lighting produces pleasant portraits. 2. Moving the flash off-camera produces a dramatic portrait. 3. On-camera flash filled in the unit face to produce this lovely backlit portrait. 4. This Wein Pro-Sync LX transmitter/receiver unit fires flash units up to 600 feet away. 5. The Sekonic L-508 Zoom Master meter provides flash and ambient readings of incident and reflected light. 6. Red-eye can ruin flash portraits. Moving the flash off-camera is the only way to eliminate red-eye, but most cameras with built-in flash have red-eye reduction modes that minimize the effect.

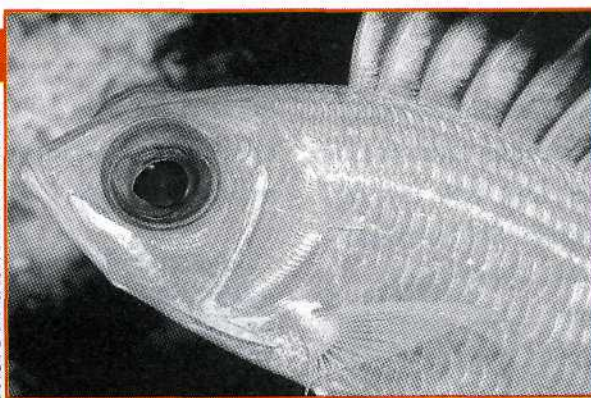


7 FREEZING ACTION

The burst from an electronic flash unit is very brief—used at close range in auto mode (or at the lowest power setting in manual), many flash units produce durations of $\frac{1}{20,000}$ or shorter. Since the flash duration serves as your “shutter speed” in flash photography, you can take advantage of this to freeze moving subjects at close range. Just set your flash unit to automatic, or to manual at partial power ($\frac{1}{16}$ or lower; $\frac{1}{64}$ will produce the shortest duration if that setting is available with your flash unit), and shoot at the desired point in the action. (Note: With really fast actions, such as bursting balloons, you’ll find a sound trigger such as the Woods Shutter-Beam to be a big help—timing the exposure with the actions is quite difficult manually.)

8 MACRO FLASH

In close-up work, depth of field is minimal, so you need to shoot at a small aperture; and the effects of camera and subject movement are magnified, so you have to shoot at a fast shutter speed. Electronic flash is an excellent light source for close-up photography, because it solves these two major problems: it’s bright enough at close range to let you shoot with the lens stopped down to maximize depth of field, and its brief duration minimizes the effects of camera and subject movement.



9 STROBE

Electronic flash units are often generically referred to as “strobes,” but true strobes are electronic flashes that fire repeatedly at a rapid rate. Many high-end shoe-mount flash units provide repeating strobe capability. You can use it to record a motion study on a single frame of film. You have to position the flash unit close to the subject, because the strobe function works only at low power settings, but you can achieve some unusual effects. Subjects moving across the frame work best with this technique; if the subject stays in one position, such as a baseball batter, the overlapped areas will be overexposed. Remember that the background isn’t moving, so it receives exposure each time the flash fires—to avoid overexposing the background, shoot in a large room with the subject well away from the background wall, or outdoors at night. Lighting the subject from the side rather than head-on will also keep light off the background.

10 FREEZE-BLUR

You can combine the motion-blurring effect of a long exposure time with the motion-freezing effect of electronic flash’s short duration to create unique action images on film.

Determine the exposure for the ambient light, and set the slowest exposure time the light level will permit (use a slow film and stop the lens down). If you are using a camera with TTL flash, it will automatically provide the proper flash exposure.

When you shoot, the flash’s brief duration will sharply freeze an image of your moving subject, while the long ambient-light exposure will record a blurred image. ■

7. Electronic flash can freeze motion in a way the eye can’t. 8. Electronic flash minimizes the effects of subject and camera movement, and allows you to stop the lens down for adequate depth of field. Underwater, it also provides enough light to shoot, and brings out the true colors of the subject. 9. Strobes fire many times a second, allowing you to make stop-action motion studies on a single frame of film. 10. You can combine the action-freezing ability of flash with a long ambient-light exposure to create a freeze-blur image.