

Flash-Fill & Speedlights/Speedlite

Small Flash Units	Daylight balanced light source. Offers more: power, lighting options and control than a camera's onboard flash.
Guide Number (GN)	Indicates the power of the flash. The higher the guide number the more powerful the flash & the smaller the f stop that can be used.
Recycle time	the amount of time it takes for a flash to reach full power after being fired.
Dedicated Flash	Flash units that are brand-specific, i.e. dedicated to Nikon, Canon, etc. The flash fires and the camera measures illumination at the film, or digital capture, plane. When the interior sensor has received sufficient light for proper exposure, the camera cuts the flash power. Settings TTL -- through the lens, I-TTL (Nikon) or E-TTL (Canon) Some flash units utilize lens focus when calculating flash output, i.e. If a lens is focused on the subject, the flash will allow for proper exposure on the subject, rather than the background. Zoom flash heads optimize the angle of the light emitted by the flash to match the focal length of the lens. With a wide-angle lens, the light spreads across a wider field. With a longer lens, the head concentrates the light. As the flash head zooms in tighter, it requires less output which speeds recycling times and extends battery life.
Sync Speed	When camera shutter and flash are synchronized, i.e. the fastest shutter speed for which the shutter is completely open at the time of exposure.
Flash Placement	Camera "hot shoe" Placing the flash on the hot shoe can cause undesirable shadows and red eye. Bounce light if possible -- the larger the effective light source, the softer the shadows. Use a reflector, ceiling or wall. L bracket-- raises and offsets flash.
Triggering Devices	Move flash off camera and use, in order of cost and convenience: <ol style="list-style-type: none">1. Sync or PC cord (\$) allows the camera to electronically trigger the flash2. Optical slave (\$) (These can be external devices or built into some flash units.) flash signalled by another flash sometimes "fooled" by camera's pre-flash can be inadvertently triggered by other photographers' flashes.3. Infrared signal (\$-\$\$) flash triggered by infrared signal requires line-of-sight for both trigger and flash head works best indoors, sometimes "fooled" by sunlight4. Radio signal (\$-\$-\$-\$) flash triggered by radio signal does not require line-of-sight between trigger and flash works at significant distances (depending on device) signals through walls
Daylight Flash Fill	a. Be sure sun is coming from behind subject. b. With bright background, set camera shutter speed to highest possible sync speed. (In this situation cameras with fast sync speeds are helpful.) c. Determine f/stop based on subject/flash distance
Night Flash w/ Background Detail	a. First determine F/stop based on subject/flash distance b. Meter background for shutter speed based on f/stop selected.
Additional Settings	Rear-Curtain Flash Sync With normal flash synchronization, the flash fires when the shutter is tripped. With the rear-curtain setting, the flash fires at the end of the exposure, rather than the beginning. Slow Sync: shutter automatically slows to compensate for low-light level backgrounds. High-Speed Sync (Canon) or FP Sync (Nikon) Flash will synchronize at all shutter speeds. Flash pulses thousands of times per second to produce a continuous beam of light. Only some flashes and cameras have this capability.