

## Understanding Hand-held Flash

by Photographer Raymond Klass

All too often, photographers describe their hand-held flash as one of the most confusing and difficult pieces of equipment to fully understand. While your flash manual might describe the functionality of all the buttons, it rarely gives a good description for the best way to use your flash. This article will tackle the basics of flash use – giving a down-to-earth description of what really goes on behind the scenes in your flash and how you can use it to achieve dynamic results with your SLR.

Most modern cameras have a high level of integration between the camera's internal light meter, and the flash unit. This integration is often referred to as "TTL" or "Through The Lens" flash, and basically means that the camera is going to use its meter to help determine the proper amount of exposure to give via the flash.

When you focus on a scene with your flash attached in TTL mode, the camera automatically uses its light meter to determine how much flash power is required to expose the scene properly. When you press the



shutter button to take the image, the flash fires. In a matter of nanoseconds, the flash sensor measures the amount of light being emitted from the flash, and shuts off the bulb when the proper exposure is reached.

Without setting any type of compensation, the camera looks at your scene and determines the proper amount of flash to fully light the area. It then tells the flash how long to fire, based on feedback it receives from the flash as it is firing. This is often referred to as “full flash”, and means that all or almost all of the light that hits the sensor has been emitted by the flash unit. Most cameras default to a shutter setting of 1/60<sup>th</sup> of a second for this type of exposure. It is possible to change this, though some cameras require you change your flash mode to “slow sync” if you want a longer exposure time.

Though full flash has its place, fill flash is often of much greater interest to nature photographers. Fill flash is when you will be using a portion of the typical flash power, along with some natural ambient light to achieve the proper exposure. In this instance, you tell the camera what amount of natural light vs. flash exposure you will be using by either setting the flash compensation on your flash, or through your camera’s menu. By setting the flash compensation to “-1”, you will effectively be telling the camera to use the flash at a power 1 stop below full exposure. Your camera will make any necessary adjustments in your exposure speed and aperture to compensate.

The effect of using your flash below full power is that you end up with an image that looks natural, and doesn’t have sharp shadows that might occur with high contrast lighting. I typically use between -1.5 and -2 stops when using my flash as a fill light. The nice thing about a TTL flash is that once you set the flash to the proper compensation, there’s no need to fuss with it any more. You can adjust your in camera exposure as normal, and be confident that the camera will do the math to give you the correct amount of flash exposure.

There are some tricks you can do to enhance the light coming from your flash. I often use a diffuser to soften the light, especially when photographing macro subjects. Some flashes have built in diffusers, but if yours doesn’t, any semi-transparent covering for your flash can soften the light. In a pinch, a piece of wax paper works well, just remember not to cover the flash sensor. Rubber bands are great at holding a diffuser in place at the front of your flash.



Another trick for using your flash is make sure you've got the right color flash. This might sound funny at first, but remember that your flash is balanced for daylight, so if you intend to use it indoors in primarily tungsten or fluorescent lighting situation as fill light, you'll want to filter the flash so it matches the color temperature of the environment you're shooting in. Most camera stores sell gels specifically for this purpose. Get a Full CTO to turn your flash into a tungsten colored light, or a 30cc Green Filter to turn your flash light to match fluorescent lighting.



The method here is that in a mixed lighting situation, you first standardize the light sources – it's easier to put a small gel over your flash, than cover every light in your house with gel, so you put the appropriate gel on your flash. Then when you take the exposure, adjust your camera's white balance setting to tungsten or fluorescent, and your camera will give you the proper color.

Though sometimes intimidating, flash can be an incredibly powerful tool in the photographer's arsenal. It gives us the ability to create light, reveal shadow detail, and even stop motion. The most common use, fill light, is perhaps the most understated – if it is done well, fill flash is often undetectable. If you keep your flash turned down a stop or two, and remember to use a diffuser, you will always have a handy fill light by your side. While there are digital techniques that help adjust tone, none of them are the same quality or ease as using a flash when you take the image.

