Flash Photography

Ph12

Electronic Flash

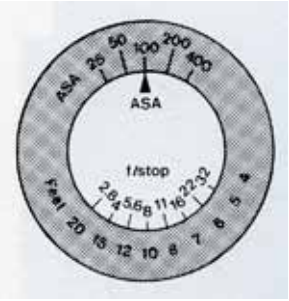
An electronic flash unit uses a battery, a capacitor, and a flash tube, to produce a bright split-second flash of light. The duration of the flash is about 1/1000 of a second.

Manual Electronic Flash

A manual flash gives a constant burst of light, that is the same with each shot. Because the flash is of very short duration, you must ensure that your camera is set correctly so that the flash fires when your shutter is completely open. If your camera has a M or X flash setting, be sure to use the X. The M is for use with older style flash bulbs. As well, you must choose the correct shutter speed. Most cameras will designate the correct shutter speed for flash with an "x" beside the speed, or by using a different colour for the shutter speed. The most common shutter speeds will be 1/60 for cameras in which the shutter moves from side to side (and are probably fabric), and 1/125 for cameras in which the shutter moves up and down (and are probably a metal leafl.

If you get flash pictures that have a portion of the picture that is black, or badly under exposed, you have probably used the wrong sync speed setting for your shutter.

Because a manual flash gives the same amount of light with each flash, you must use your aperture setting to control how much light reaches your film. The flash will have a flash calculator dial like the one on the right, that helps you determine which aperture to use. You first set the dial to the ISO of film you are using. You can then check which aperture to use for a specific distance.



In the example at right, the ISO is set at 100. For a distance of 4 feet, you would use an aperture of f:32. If you wanted to shoot from 10 feet, you would use f:8. At f:2.8 you could shoot at about 18 feet, which is the maximum distance this flash would be good for.

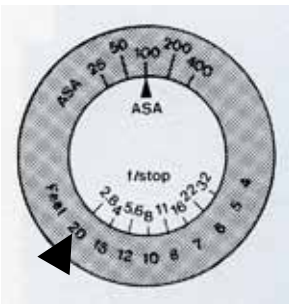
As the power of a flash increases, so will the price. A good quality flash may give you light up to 40 feet. Very few flashes will give you light beyond that distance.

The next time you see someone at a concert -way up in the standsshooting with a flash, you will know that they are wasting their film because the flash will not reach their subject.

Another "faux pas" - you can not use a flash to shoot fireworks. A flash must be able to reflect off a subject to light it for a photo. Because fireworks are in fact a light source, you would be using the flash to light a light.

Automatic Electronic Flash

In this type of flash unit, there is a light sensor built into the flash that responds to the light reflected back from the subject, and switches the light (flash) off at the correct exposure. The flash calculator will have a marking that tells you which aperture to use for a particular ISO, and the maximum distance the flash will be good up to. For all distances less than the maximum, the flash will automatically give the correct exposure.



In the example at left, the ISO is set at 100, and the auto indicator tells you that you can shoot any distance up to 20 feet, with your aperture set at f:2.8

Dedicated Automatic Flash

A dedicated auto flash is one that has been made for (dedicated to) a particular camera or series of cameras. The flash is usually attached to the camera by a slide shoe on the top of the camera. This type of flash will usually set the shutter "sync" speed for you, and may also set the correct aperture. As well, most dedicated flashes will show you in the camera viewfinder when the flash is charged and ready to shoot.

Dedicated TTL (Through the lens) Automatic Flash

This type of flash is similar to the dedicated automatic flash, but the difference is that the light sensing unit is located inside the camera, usually next to or close to the film. The advantage is that the amount of light reaching the film is being measured rather than the amount of light reaching the flash. This means you can use any aperture you wish, or can use other lenses or lenses with filters, and the flash will still give accurate light for correct exposure.

Another bonus for this type of flash is that you can use the flash off camera with an adaptor cord, have special angle or fill flash, and still get correct exposure.

Using Flash

A flash is designed to simulate natural light. Flash units are usually mounted on the camera for ease of use. Because the flash is similar to bright sunlight, it may create shadows that are cast behind objects. Another problem is that the strong light coming directly from the front will be very flat and faces may look washed out because they do not have the shadow detail (modelling) that comes with light cast at an angle and direction other than direct front lighting.

Bounce Flash

It is possible to bounce flash off of a ceiling and thus get a more diffused light that creates a more natural looking shadow. A problem may occur in that the distance the light travels (up to the ceiling and down to the subject) is increased, and therefore the flash may not be powerful enough.

Fill Flash

You may want to use a flash to fill in shadow detail when shooting outside. Just like using a flash indoors, your subject must be within the range of the flash. You will want to use the same aperture for the flash as the light meter reading of the camera. This may involve having to use a slow shutter speed so you can match apertures.

TTL flashes are the easiest to use for fill flash, because the exposure is controlled within the camera. This allows you to use the flash off camera, or to use any aperture you wish in conjunction with the allowable range of shutter sync speeds.