



*In this unit we investigate artificial lighting, such as electronic flash and studio lighting.*

*We also will look at Tripods and remote controls.*

## Artificial Lighting & Tripods

Don't feel that it is always necessary to use a flash if the ambient light is a bit on the dark side. Digital cameras are very good at taking acceptable photographs in poor lighting conditions, thanks to the faster sensors that are used. A flash should really only be used as a last resort if you are concerned that the ambient light might not be adequate. There are a few exceptions to this, such as situations where supplementary, fill-in light as described below is desirable.

I think most cameras these days have an automatic flash built into the camera body (if not they will be equipped with a shoe into which an external flash gun can be fitted). This also applies to the smart phones we have today. And for a lot of shots they work OK, however, they all suffer from the same problems.

- they create harsh shadows they
- do not cover long distances
- being small they do not produce a nice soft even coverage of light prone
- to creating 'red eye' in people or animals

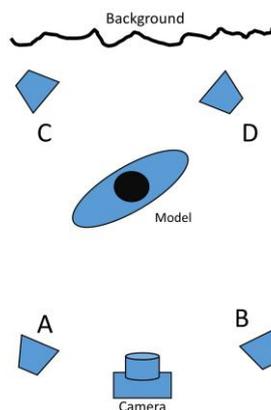
We will now look at 'red eye', first because that is built-in flashguns biggest sin. So, how is it produced? These flash units are normally situated very close to the lens of the camera, and they are looking along the same line as the camera lens, as they are normally used at night and a persons' pupils are dilated, the flash penetrates the eye and lights up the blood vessels in the eye's retina. Most cameras these days have now a built-in red eye reduction system that can be turned on or off. When turned on, the camera flash sets of a number of smaller flashes before the main flash goes off, what happens is that the pre flashes cause the iris of the eye to close down and reduces or eliminates the red eye. One problem with this is that the delay between you pressing the shutter release button and the camera actually taking the shot could be up to 15 seconds, and some people will blink or shut their eyes when the pre-flashes goes off. The better option, if your camera can use one is a flashgun that mounts onto the top of the camera similar to the one shown here, these move the point of light further away from the lens which eliminates red eye.



They also are much more powerful giving greater light coverage, they also have swivel and tilt heads which allows the photographer to bounce the flash off ceilings or walls to produce more natural soft light. Direct flash on camera tends to give the 'police mug' shot image with no modelling at all. Their output is also very adjustable and are quite often used in daylight as a fill-in light to soften shadows under peoples' eyes, chin and brim of a hat. They can produce great portraits of a person standing with a beautiful sunset behind them and using the flash to lighten up the model.

I would suggest obtaining a flashgun from the same manufacturer as the camera, this will ensure that they are compatible, I have seen other people try to save money by getting a generic brand of flash only to find that it did not work correctly with their camera. The manufacturers flashguns may be more expensive, but it will be worth it. The camera and flash communicate with one another to create the correct amount of light thus avoiding over or under exposure.

There is another type of flashgun on the market that does need mentioning, and that is the 'ring' flash. These guns have the electronic flash tube in a circular shape that when fitted to the camera circles the lens. These units produce shadowless images, they are often used by photographers in the advertising field, you can tell them in some advertisements where the model has small round rings as catch lights in the eyes rather than a single spot. Studio lighting has become more affordable and a typical set-up can be seen above. The model is placed no closer than one metre from the background sheets. These background sheets can consist of plain white or coloured papers, mottled or patterned sheets, or even a large scenic mural. The light sources can either be electronic flash units inside large hoods or reflectors, or steady flood lights. My preference is the latter as I feel I can see and control the shadows better.



Light source A is the main light and usually set high, full power and looking down (emulating sunlight).

Light Source B is set lower and possibly about 25% power just to soften shadows under eyes, chin etc.

Light Source C is used to create highlights on the hair of the model and also powered down to about 25%, coloured gelatine filters can be used in front of this light for effect.

Finally Light Source D can be used to light or create effects on the background if necessary.

Do not forget to experiment by shifting or changing this light set-up and find a set-up that suits you. You can also use cut out frames like a window in front of the main light to give the appearance of sunlight shining through a window etc.

## **Tripods**

Now let us look at tripods, mono-pods and other ways of ensuring that the camera remains rock solid while taking the shot. All these items range in price from nothing to many hundreds of dollars.

Starting at the free end, we have a bean bag style that you can make yourself, like mine, sew up a bag about 20cm by 30cm, fill about 75% of it with uncooked rice (which is what is in mine), or wheat or sand. This can be used to sit on any uneven surface and have the camera nestle into it, I have used this to take 30 second exposures with great success. It has a permanent home in my gadget bag.

We then will step through the small tripods and Gorilla pods which all would work well, provided the camera is not too heavy making them unstable. These would be quite suitable for the smaller and lighter point & shoot cameras. For people who are using digital single lens reflex (DSLR) cameras, you will probably find these would not be suitable, being too light for the heavier cameras.

Then we have the mono-pod range, these also screw onto the bottom of camera but only have one extendible leg which is good for sport photography. It gives the camera a firm base but allows the photographer to quickly pan the camera, it will not stop the chance of horizontal camera movement blur. A normal tripod can be used in the same manner by extending only one leg.

For the more serious photographer using a DSLR, he usually requires a firmer tripod, and probably the best known brand is the Manfrotto range, these can range up to thousands of dollars. However there are many on the market that can be suitable. Firstly, there are two main types of heads on tripods. The ball and socket head, or the pan and tilt head.



The pan & tilt head shown on the right above, is very good for video filming as once set up level it allows the photographer to pan the camera with the action. For the still photographer, the ball and socket head on the left is a much better option as it is much quicker to set the camera level. When purchasing a tripod make sure it is sturdy and firm with the weight of the camera on it. Remember that it is essential to maintain a still camera all the time, so you should make use of a tripod as often as possible. I would also make sure the tripod will allow a low camera angle as there are times you will need to get the camera lower to the ground.

## Remote controls

An almost essential accessory for the tripod is a remote shutter release. Avoid using your hand to trigger the shutter release as vibration can still be transmitted to the camera, even on the most sturdy tripod. Depending on your camera make and model there are two types of remotes available, an infrared release or a wired release.



I prefer the wired release because you are always near the camera to make adjustments etc. and therefore within the range of the connecting cable. It also has a big advantage of having a built-in timer that allows for interval shots and also timed release. A tip for the remote is to fix some Velcro on the back of it and have the other portion on the tripod and easily holds the timer handy. The Infra Red remote is good to set up the camera and take selfies etc.

An simpler and cheaper alternative to a remote release is to use the camera's self-timer. There is one drawback to this method - once activated you have no control over when the shutter will open.

### Activity 5.1

*This week's exercise is to use your flash and learn its capabilities and downfalls. Look and see what happens with shadows and try different effects with the flash. Try taking some shots of the same subject both with and without the flash and compare the results. If you consider that a photo taken without the flash is almost good enough then it may be possible to do a simple enhancement using an editor as described in the next unit.*

*Next lesson we will look at organising your files, how to store and name them.*