

# Night photography

## Tutorial for Carlow Photographic Society

### 2<sup>nd</sup> March 2016

#### Set up.

#### Set and Forget

If you have previously owned a digital camera, you should be familiar with the interface and menu systems used to control these marvels of modern technology.

If not, you should spend some time reading through your manual to familiarise yourself with some of the jargon, conventions and concepts used when navigating the camera's graphical user interface and hardware controls.

#### Keep it Simple

1 Format your card in the camera, not the computer. *(Make sure you have archived any images you want to keep before you format your card.)*

**2 Shooting Mode** Set your shooting mode to Manual (M)



You control exposure in one of three ways: by adjusting the aperture on your lens, changing the shutter speed, or setting an ISO value within the camera.

Manual exposure mode gives you complete control over all three exposure parameters.

#### 3 Shoot in RAW

Shooting raw gives you ultimate control over the look and feel of your images. When it comes time to post process your photographs, raw files allow for major changes to white balance and colour settings.

#### 4 Metering Mode

Your camera's built-in exposure meter will probably have a few different settings to cope with different types of lighting. Multi-zone, Centre weighted, and spot metering modes are the most common. I usually use evaluative (Matrix, multi-zone) metering, as it is more accurate for the majority of photographic situations you are likely to encounter on night photography.

#### 5 White Balance

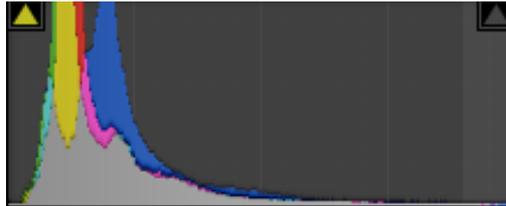
If you shoot raw, white balance setting isn't really an issue as the raw sensor data allows extensive manipulation of colour balance in software after the photo has been taken.

For streetscapes I usually shoot raw with a tungsten white balance setting. If you are unsure about how to shoot a scene, you can always use an auto white balance setting and tweak colour in post-processing to taste.

## 6 ISO Settings

Many photographers manually set ISO value to the lowest possible setting and avoid using auto ISO.

By selecting your camera's base ISO setting, which is generally around ISO100, (Some models allow you to extend the ISO having a minimum of 50.) you will keep noise in your images to a minimum. This isn't always possible, and in some situations you will need to increase the ISO value. There are different schools of thought on this issue. Possibly the most important issue regarding ISO and exposure is the control of noise in poor light conditions. One school of thought argues that if the exposure is correct at the time of taking the shot, the noise content will be low. Stop using Long Exposure noise reduction in the camera menu (This doubles the time taken to save the image to your card) and be prepared to set your ISO higher if necessary to achieve the correct exposure.



It's easy to fall into the underexposure trap when shooting at night. I only no about it because I've made the mistake dozens of times myself. Part of the problem in properly exposing a photo at night is understanding what a good exposure looks like on the histogram. Use your preview screen to check the histogram on each shot.

The histogram above is perfectly exposed, but it would be easy to think the photo is too dark. Night photos often have large areas of very dark tones. So it's normal to see data piled up toward the left side of the histogram. As long as the data does not touch the left side of the scale, it still has detail. Also, look at the tiny amount of data extending almost all the way to the right of the graph. This is a small amount of data because only a small part of the photo is bright, but if I were to increase the exposure at all, the whites would clip.

As proof, look at the image below, which is the photo that produced the histogram. You'll see that it's properly exposed.



The fact is that you'll always have a photo with less noise when you properly expose the photo, rather than underexposing the image in-camera and then trying to brighten it in Photoshop.

Increasing exposure in post-processing produces a large amount of noise. Expose properly in camera to avoid it, and that often means a higher ISO.

## 7 Tripod

It is generally accepted that the use of a tripod is essential for night photography. Other means of stabilising can be used such as using beanbags etc. but these can be cumbersome if you are moving about. The Internet has lots of information about tripods for various situations, but the best tripod is the one you have. Ideally a tripod should be strong enough to support the weight of your camera and lens. It should have the reach to allow you to interact with your camera in a comfortable posture, while allowing you to select various heights including low ground shots. Prices for tripods vary greatly depending on the material used to make them, the functionality etc.

When shooting at night exposure times can be a great s 2 – 3 seconds. In these situations it is essential that the camera is held still during the exposure interval. To ensure maximum stability a number of steps should be observed.

- 1 extend the legs only as far as is needed. Extend from the top of the leg, which is the largest diameter.
- 2 avoid extending the centre column if possible.
- 3 suspending a weighted object such as your camera bag from the centre of the tripod minimizes the tendency for the camera to move especially in windy conditions
- 4 avoid the temptation to hold onto the tripod during exposure as it may cause camera shake.
- 5 use of a remote shutter release will help avoid touching the camera body during exposure.
- 6 if you don't have a remote shutter release use the camera's delayed time function set to its minimum time of 2 seconds.

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March 2016.