## Exposure

### Camera Settings

Exposure is a term used to refer to the amount of light that is reaching the camera’s sensor .The amount of light reaching the sensor is a component of three variables

**ISO**: How sensitive the camera is too light

**Aperture**: How much light is allowed through the camera’s lens

**Shutter Speed**: How long the sensor is exposure to the light from the lens.

*Please refer to the camera’s manual for setting the exposure settings manually*

It is important to realise that all 3 variables (settings) work together to create the right exposure (differences in the exposure allow the photographer Artistic license). An [**Exposure Value (EV)**](https://en.wikipedia.org/wiki/Exposure_value)is a representational number based on the combination of all 3 camera settings. By varying any two or more variables for a given exposure, we can still achieve the same EV. Ie for a given scene, we can adjust the Aperture down one stop and the Shutter Speed up one stop and still obtain the same EV.

There is no hard and fast rule when it comes to the camera settings for any given exposure, ie and image may appear to be bright or dark but the exposure may still be considered correct. The use of the camera’s **histogram**, is a tool used to help determine if the exposure is good. Even when using the histogram there may be some flexibility in camera’s settings to achieve the right exposure.

When creating a Timelapse, the camera’s exposure settings ISO, Aperture and Shutter Speed should be manually set. For each image within a Timelapse it is important that each adjacent/successive image has the same exposure settings (in advanced techniques this can be changed, but in a controlled manner), this is to ensure the Timelapse lighting doesn’t jump or “Flicker”. If any of the three variables are in an automatic mode, it is possible the camera will constantly change any of the three setting in an attempt to get the correct exposure. This may cause some images to be brighter or darker within the Timelapse, hence the term “Flicker”. Having a gradual brightening or darkening of a Timelapse is quite acceptable; this is what we would expect to happen at sunrise / sunset or when clouds move through the sky.

When creating a Timelapse of either the Sunrise or Sunset there is a constant changing of the exposure values

One of the advantages of using the Timelapse + View device, is to allow for the controlled ramping (changing) of the exposure settings during the change in lighting luminance

### Motion Blur

Motion Blur is a term used to actively encourage the object within the Timelapse to blur and not be tack sharp. Motion Blur helps to smooth the motion of a moving object between the adjacent images within the scene. Control of Motion Blur is via the Shutter Speed, if the shutter speed is too fast, the Timelapse may in fact appear a little jerky when viewed. By introducing a little motion blur to the moving object, it appears to move more smoothly through the frame.

The amount of blur is not predetermined. Take a shot and look at the moving object within the frame, if it has a slight ‘blur’ (out of focus feel) and the rest of the image is tack-sharp; Motion Blur has been achieved, even a small amount is beneficial. However, too much blur can render the moving object indistinguishable. The amount of