

SHAW ACADEMY

Lesson 6 Course Notes

Diploma in Photography



SHAW ACADEMY

Manual Mode

Stops of light:

A stop in photography refers to a measure of light

A stop is a doubling or halving of the amount of light in your scene

Any time you Double the amount of light getting to the cameras sensor you are Increasing the light by 1 Stop.

Any time you Half the amount of light getting to the cameras sensor you are Decreasing the light by 1 Stop.

Relationships of shutter speeds:

The relationship between each of the common or standard shutter speeds on your camera is one stop. This means every time you change your shutter speed you are either allowing 1 stop lighter into your camera or cutting the light by one stop.

Each time you make your shutter speed slower you are allowing 1 stop lighter in. **Example:** Changing the shutter speed from 500/s to 250/s. The shutter is now open for twice the length of time, therefore double the light is getting into the camera, which is increasing the light by one stop.

Each time you make your shutter speed faster you are cutting the light by 1 stop. **Example:** Changing the shutter speed from 500/s to 1000/s. The shutter is now only open for half the length of time, therefore half the light is getting into the camera, which is decreasing the light by 1 stop.

Relationships of Apertures:

The relationship between each of the common or standard Apertures on your camera is one stop. This means every time you change your aperture you are either allowing 1 stop more light into your camera or cutting the light by one stop.

Each time change your aperture to a bigger one you are allowing 1 stop more light in. **Example:** Changing the aperture from f4. To f2.8. The aperture is twice as large, therefore double the light is getting into the camera, which is increasing the light by one stop.

Each time change your aperture to a smaller one you are cutting the light by 1 stop. **Example:** Changing the aperture from f4. To f5.6. The aperture is now half the size, therefore only half the light is getting into the camera, which is decreasing the light by one stop.



Process of Shooting in Manual Mode

Step 1 – Do a meter reading

Step 2 - Analyse your meter reading to determine how much more or less light you need to expose the scene correctly

Step 3 - Manually select a shutter and aperture combination to get the correct amount of light into camera

Step 4 – Capture that amazing shot!

Reading the Light meter:

When you point your camera at the scene the light meter will display information about how much light is currently coming into the camera based on the settings that are dialled in. It will indicate to you whether there is too little light, the correct amount or too much light coming into the camera. This will be indicated on the scale of -2,-1,0,+1,+2. From this information you make some decisions about what settings to adjust to either get more or less light in.

Shutter Speeds: If we need to get more light into the camera to get the meter to 0, we can make our shutter speed slower. If we need to reduce the light coming into the camera to get the meter to 0 we can make our shutter speed faster. Remember that shutter speeds affect how motion is captured in our images so consider this when altering shutter speeds to control the light.

Apertures: If we need to get more light into the camera to get the meter to 0, we can make our aperture bigger. If we need to reduce the light coming into the camera to get the meter to 0 we can make our aperture smaller. Remember that aperture affects the depth of field in our images so consider this when altering the aperture to control the light.

ISO:

The ISO setting is the third function of the camera we can use to control light. ISO refers to the sensitivity of the sensor. We have the ability to alter the sensitivity of the sensor. We can turn up the sensitivity of the sensor so that it requires less light to achieve a correct exposure.

The ISO setting on your camera can be adjusted in Stops just like shutter speeds and apertures. This means each time you increase the ISO setting you are doubling the sensitivity of the sensor therefore only needing half the light to make the an exposure than the ISO setting below it.

ISO is a great setting when you do not have enough light in your scene using the desired shutter speed and aperture, and you do not want to alter either of these functions. For example you want a faster shutter speed and small aperture but the cameras light meter is saying you do not have enough of light to get the meter to zero. You can increase the ISO setting until enough of light comes into the camera get the meter to 0.

ISO comes at a price. As we increase the ISO setting we increase the noise or grain in our images. Noise or grain appears as a sandpaper like texture over your entire image that effects the quality negatively. The higher the ISO gets the worse this will appear. This can have an extreme effect at the very high ISO's. Even though it impacts the quality of our images, ISO will allow us to achieve good exposures in situation we otherwise wouldn't be able to shoot in and maintain the shutter speed and aperture we need to capture motion and depth of field the way we want it.

The lowest ISO number on your camera is usually the default and your image at its highest quality.

We should always aim to achieve a good exposure using the apertures and shutter speeds to control the light while keeping the ISO as low as possible to preserve image quality. We adjust the ISO setting when we cannot achieve the exposure and get the aperture and shutter speed settings we need.

Thank You



SHAW ACADEMY