PDT 041122

**Exposure.**

Exposure means the chosen amount of light which, when transmitted through the lens onto a camera sensor, causes an image to be recorded as dots of colour and tone.

Exposure is often shown as a 10 stop range from Black to White. Auto exposure will calculate an average between max and min known as V. This gives a “normal” full toned image. See chart.

The interval between each of the 10 stop range is one f stop and is double the last.

The interval between each ISO, shutter speed (SS) and aperture (AV) value is

one f STOP.

ISO 1600 800 400 200 100

SS 1/500 1/250 1/125 1/60 1/30

AV f2.8 f4 f5.6 f8 f22

Increasing exposure by one f stop doubles the exposure and vice versa.

**Exposure Example (**Camera gives setting at ISO 200 of 1.60 @ f8)

 V

ISO 200

Shutter 1/500 1/250 1/125 1/60 1/30 1/15

speed

Aperture 2.8 4 5.6 8 11 16

When you set ISO at 200 and the camera meter tells you that 1/60 @ f8 is the correct exposure, **all the other pairs will also give you the same exposure.**

So, 1/125 @f5.6 gives the same exposure as 1/60 @ f8 because 1/125 is half 1/60 and f5.6 is double f8 so they cancel each other out.

So what ???? you may ask.

Well, you might want to freeze motion and use 1/500; so the above example tells you that you need f2.8 aperture to give the same exposure as at 1.60 @f8.

You might want max D of F and use f16 so you know you need a shutter speed of 1/15th of a second.