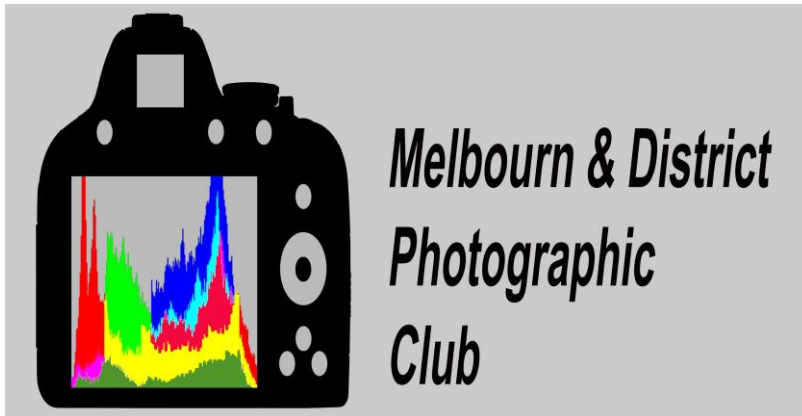


Getting off Auto

An Idiots Guide

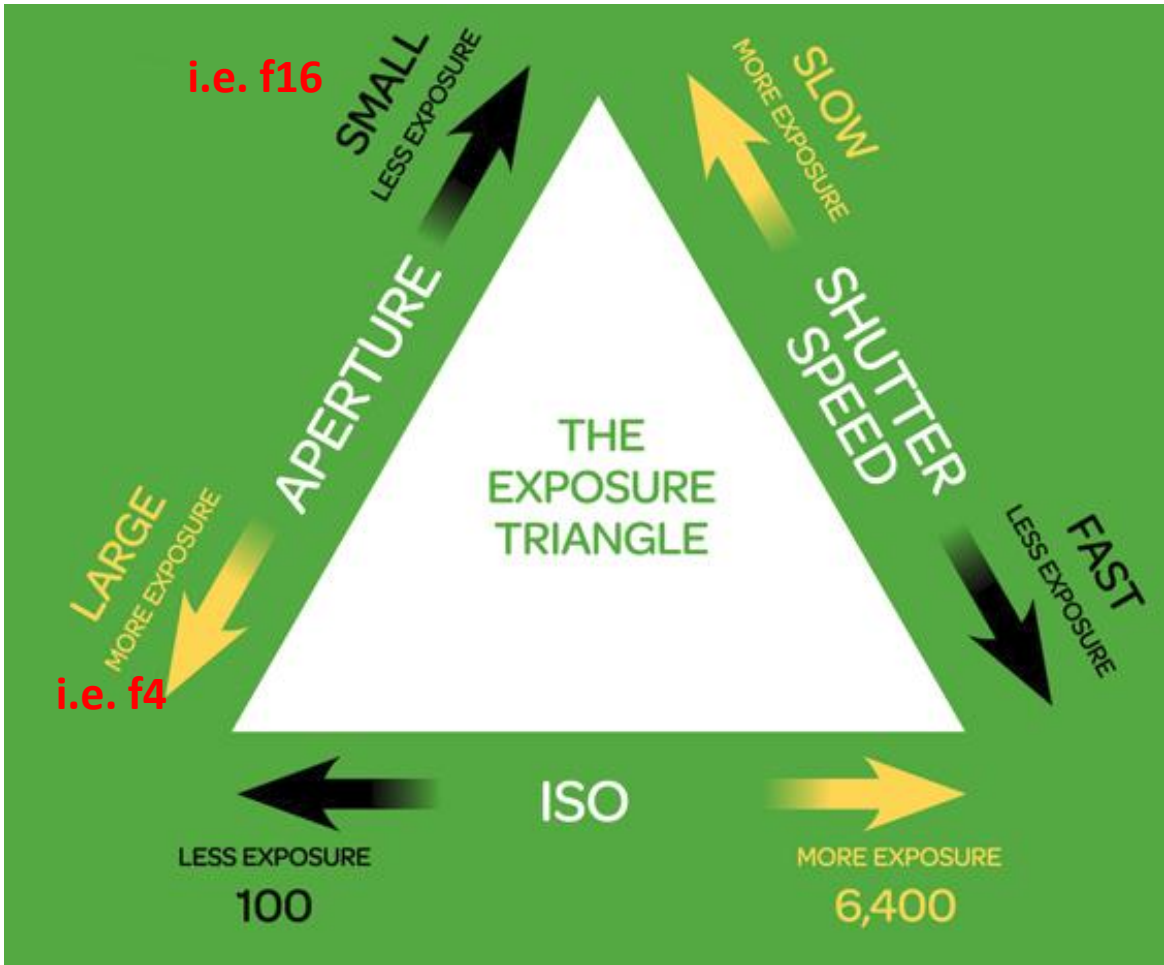




- Only by coming off Auto can **you** really take control of your images
- Staying on Auto means your **camera** decides settings (and the camera has no idea what you are shooting)

Good exposure.....

- Good exposure requires getting the right amount of light to fall on the Sensor
 - Not letting enough light fall onto the Sensor will result in **underexposure**
 - Allowing too much light to fall onto the sensor will result in **overexposure**.
- Exposure is controlled by only 3 variables
 - **Aperture**
 - How wide the lens opens
 - **Shutter Speed**
 - How long the shutter stays open
 - **ISO**
 - How sensitive you make the Sensor



APERTURE

f/32 f/22 f/16 f/11 f/8 f/5.6 f/4 f/2.8 f/1.4



Less exposure
Large DoF

More exposure
Shallow DoF

SHUTTER SPEED

1/2,000 1/1,000 1/500 1/250 1/125 1/60 1/30 1/15 1/8



Less exposure
Frozen motion

More exposure
Blurred motion

ISO

100 200 400 800 1,600 3,200 6,400 12,800 26,500



Less exposure
Clean image

More exposure
Noisy image

The three manual shooting modes what are they?

- **Aperture priority:** (A on Nikon, Av on Canon) this mode has you in control of two of the three exposure controls: ISO and aperture. The camera will select an appropriate shutter speed to give you a correct exposure. Landscape
- **Shutter priority:** (S on Nikon, Tv on Canon) this mode once again puts you in control of two of the three exposure settings, this time it is ISO and shutter speed. The camera will select the aperture for a correct exposure. Action
- **Manual mode:** this mode puts you in full control of the three settings on your camera that control the exposure (commonly known as the exposure triangle). ISO, aperture and shutter speed. In manual you will be making all of those choices. Don't worry

Forgetting ISO for a moment.....For a correct exposure.....

- 1) The wider the lens is open, the faster the shutter speed needs to be
- 2) The narrower the lens is open, the slower the shutter speed needs to be

1/250th sec at f2.8



1/20th sec at f11

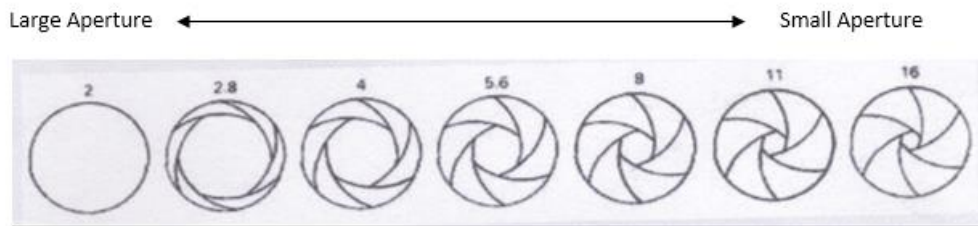


What do you notice about these 2 photos?

- Narrow depth of field when f number is small (i.e. f2.8)
- When f number is large (f11) , depth of field is very wide
- Water is frozen at fast shutter speeds (1/250th)
- Water is blurred with slow shutter speeds (1/20th)

Unless you get off Auto, your camera will decide which type of photo you want to take

- Choose **Aperture Priority** (A or Av) if Depth of Field more important than controlling Shutter Speed
 - For landscapes, you generally want an infinite depth of field so a large f number (small aperture) will be chosen. This would also apply to group portraits for instance.

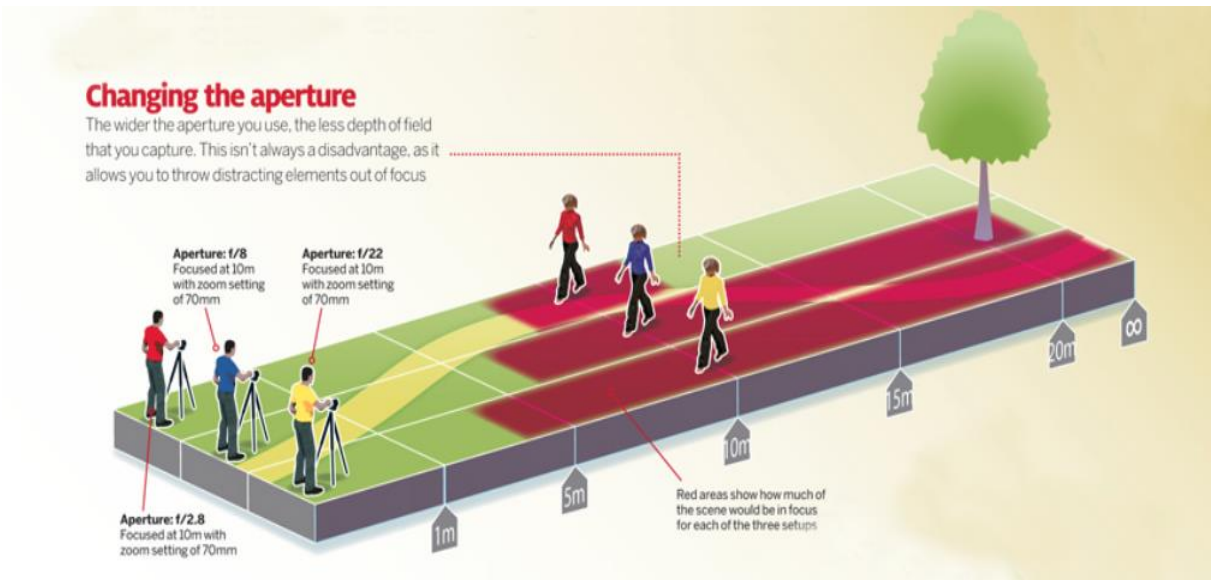


F 4.5 at 1/400 sec



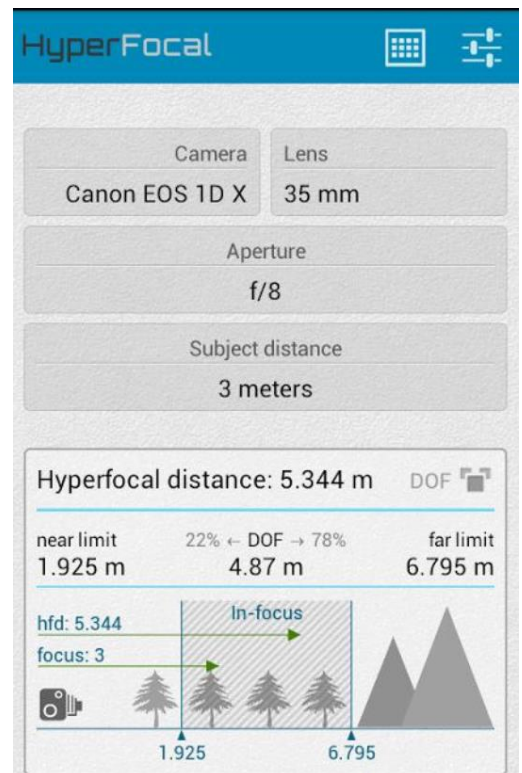
F 11 at 1/40 sec

- So, which aperture should I choose...



- Simple Rule of Thumb 1
 - Landscape say f11 or f13
 - Detail say f4
- There are Phone Aps which will help:
 - Hyper Focal Pro

Rule of Thumb 2: Focus 1/3rd of the way into the scene to maximise what's in focus



- Chose **Shutter Priority** (Tv or S) if Shutter Speed is more important than Depth of Field
 - subjects like sports or action
 - wildlife/moving people
 - flowing water, waterfalls, or panning a moving subject will require a slower shutter speed like 1/15th for panning and 1-5 seconds for flowing water.

Choosing Shutter priority means you choose the shutter speed and the camera automatically sets the aperture to give a correct exposure.



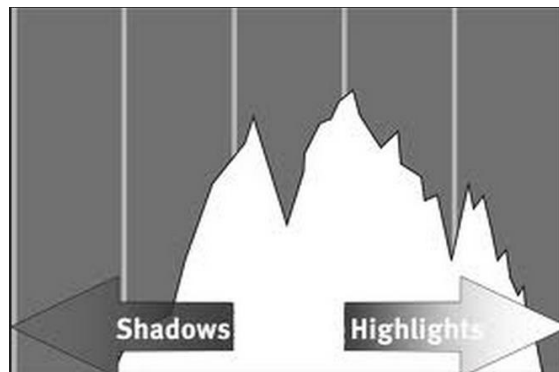
1/4000th at f7.1



0.8 sec at f16

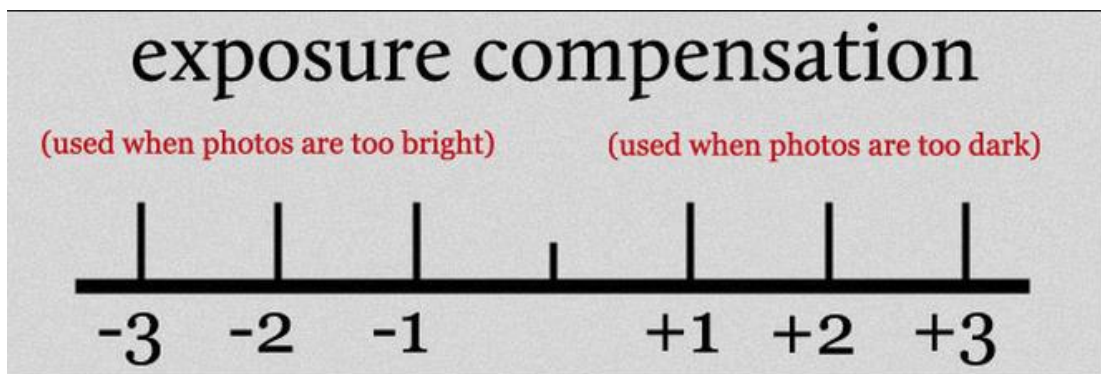
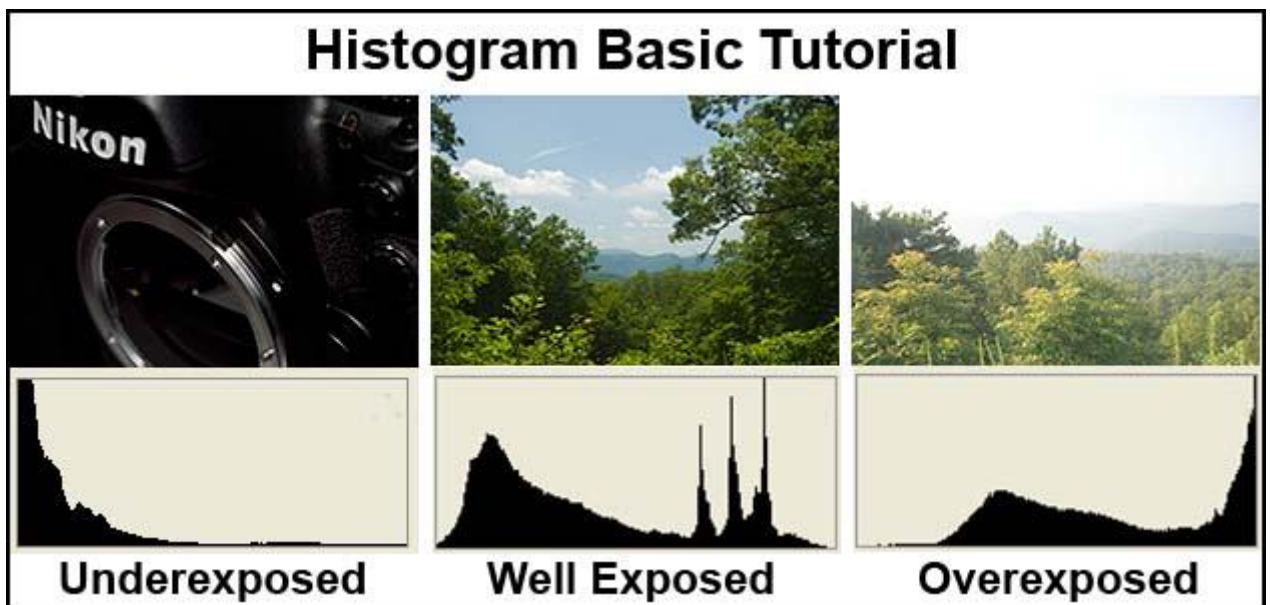
What do you do when your camera gets it wrong?

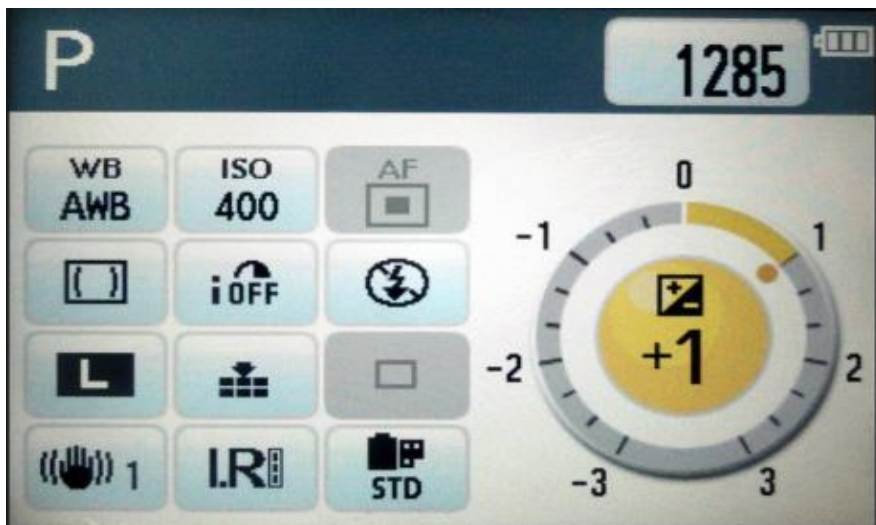
- **Always** review your image when you have taken it
- **Always** check your histogram to ensure the image isn't over or under-exposed and highlights and shadows are not clipped



Know how to use Exposure Compensation

- When you look at your Histogram and Histogram shows exposure is incorrect.....





But what do you do if there's just not enough light to take the pic you want.....ISO

- Generally always use the lowest possible ISO you can get away with (less noise)



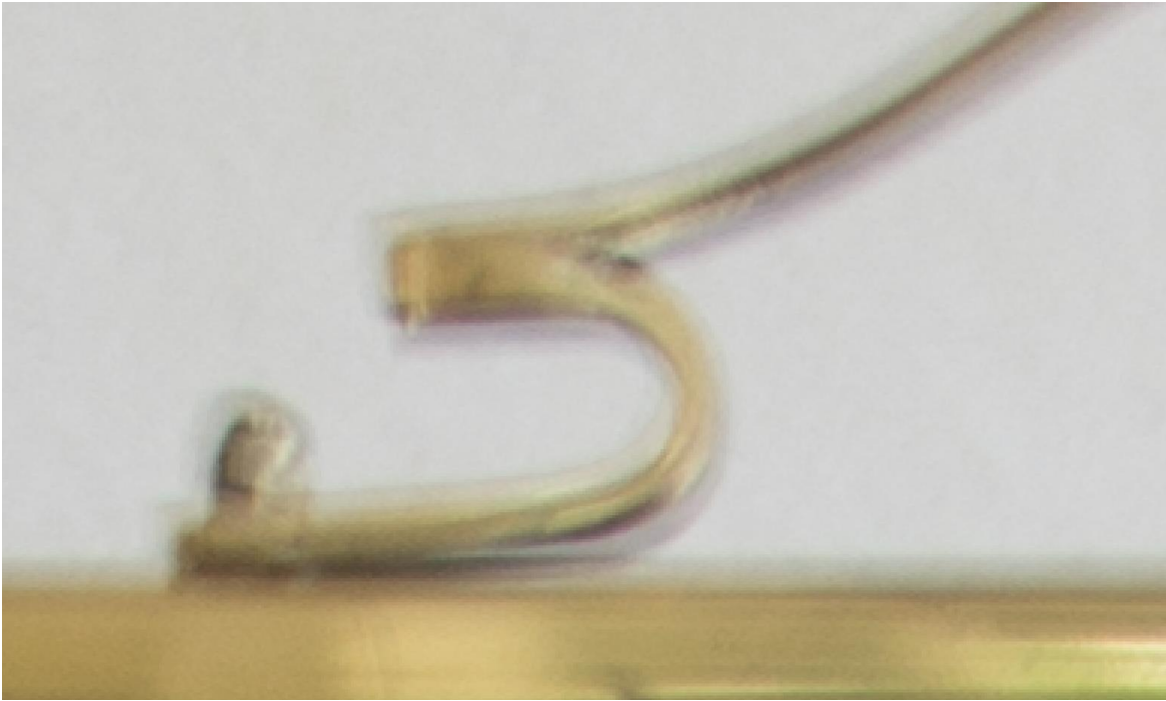
f4 1sec
ISO 100



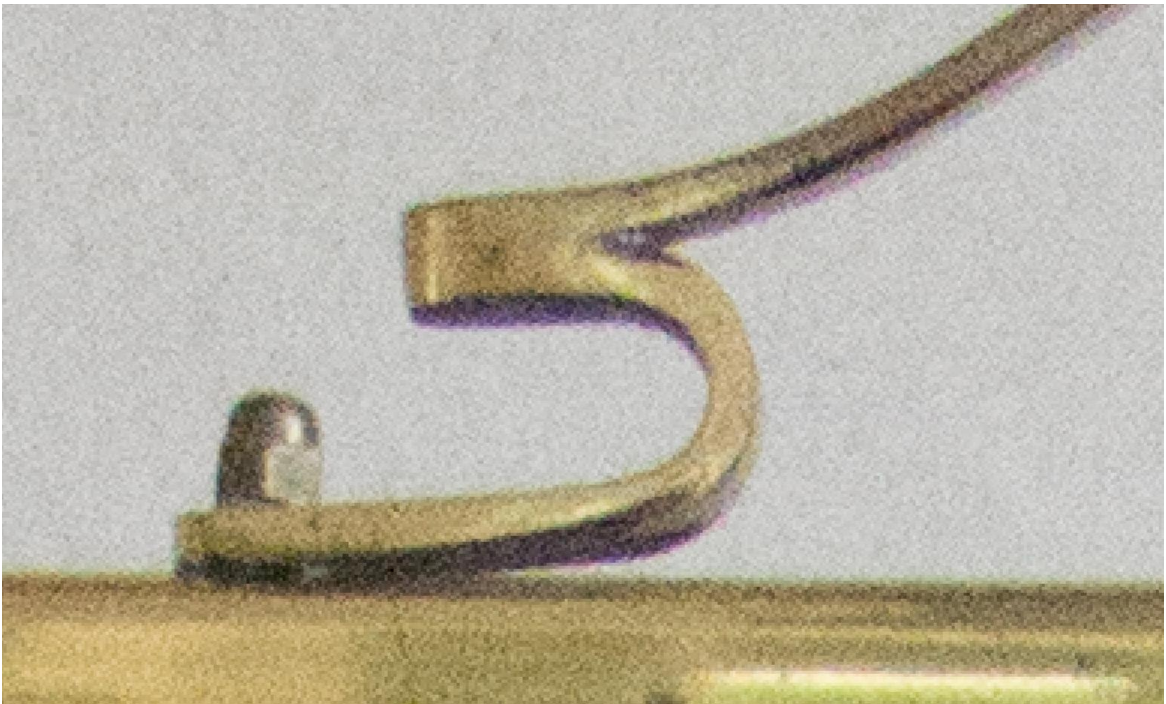
f4 1/60th sec
ISO 6400

Or use a **Tripod** or use **Flash**

Low ISO; 100



High ISO; 6400



Never have your camera set to Auto ISO

Do not hand-hold a shot if the speed is slower than the reciprocal of the focal length of the lens

- **10**mm lens

- Do not hand hold at slower speeds than **1/10**th sec

- **50**mm lens

- Do not hand hold at slower speeds than **1/50**th sec

- **200**mm lens

- Do not hand hold at slower speeds than **1/200**th sec

Adjusting ISO to be capable of hand-holding

- If exposure is 0.4 Sec at ISO 100.....
- 0.2 (or 1/5th) Sec at ISO 200
- 1/10th Sec at ISO 400
- 1/20th Sec at ISO 800
- 1/40th Sec at ISO 1600
- 1/80th Sec at ISO 3200

Increasing Noise

