GUIDES TO ‘PROPER’ PHOTOGRPAHY

‘STOPS’ & the EXPOSURE TRIANGLE

https://www.youtube.com/watch?v=7HLP4PZtgto

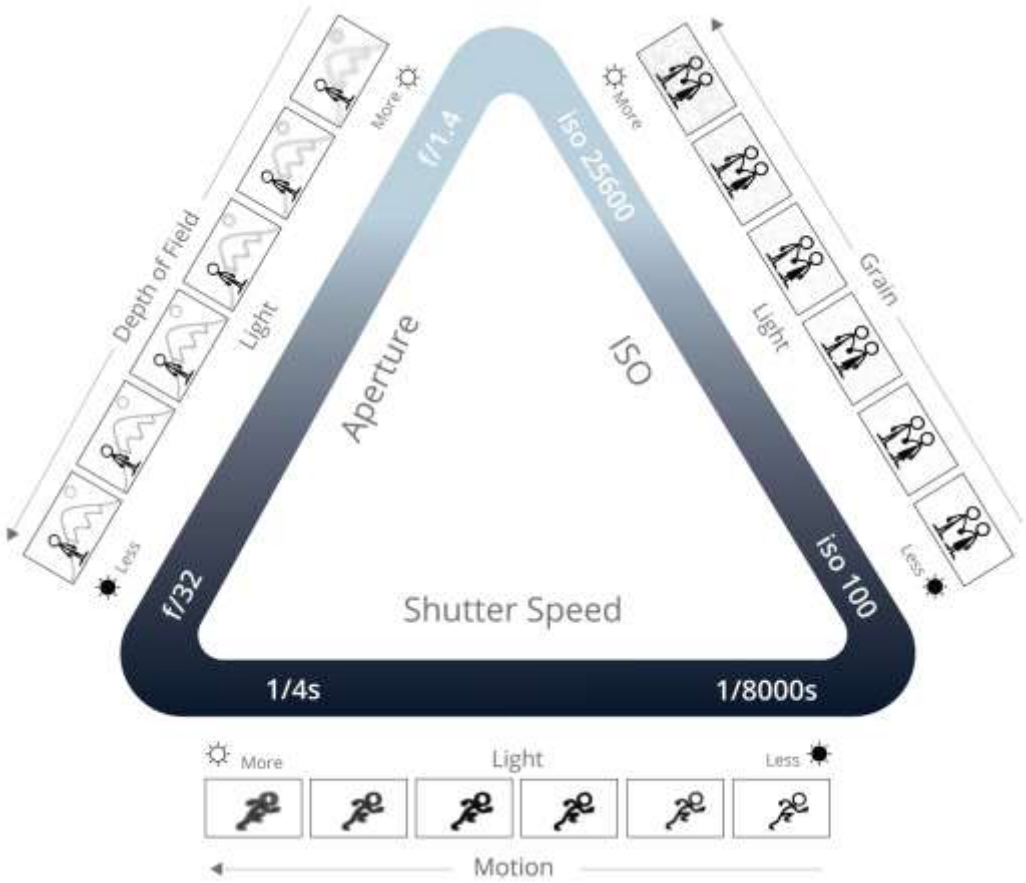
A primary reason for taking ‘proper’ images with a camera is to create effects:

- Having the subject sharply in focus back the background out of focus – simplifies the image and focuses the viewer on the PoF. This can be achieved by using a wide aperture (say F2.8)
- Having Blur to illustrate movement can reflect things that have speed and movement – athletes / birds in flight / horses racing etc – slowing the Exposure speed can achieve this.

However if you choose a wide open aperture (FStop) this lets lots of light in – so you need a faster exposure speed to ensure good light. Choosing a longer exposure speed again lets lots of light in – so you need to reduce the size of the aperture to reduce the light.

Achieving balance between shutter speed, aperture and ISO is a crucial ability to take good images and is called the ‘Exposure Triangle’

Put simply – if you increase one side of the triangle by one ‘stop’ you have to decrease another side of the triangle by one stop.



The simple guide is that once you have the right exposure overall in any combination (use an auto setting in your camera to get this), the image can be altered by increasing the light by a number of STOPS through one setting (eg a longer shutter speed) and decreasing the light by the same number of STOPS in another setting (eg Aperture)

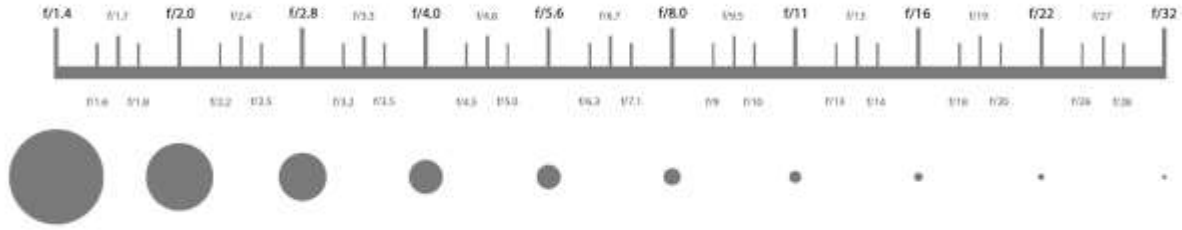
Example: If your Auto settings on a shot show a good setting is:

- F8
- 1/250th Sec
- ISO 100

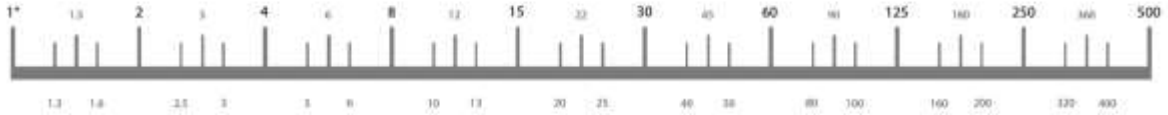
And for a long exposure you add a 10 STOP filter (ND1000)

Then to retain the same depth of field (not change the fStop), you would need to lengthen the shutter speed by 10 STOPs to 4 seconds. See (2) below and extrapolate.

1) **Aperture STOPS: (F1.4 to F32)** Most lenses don't have such a wide range.

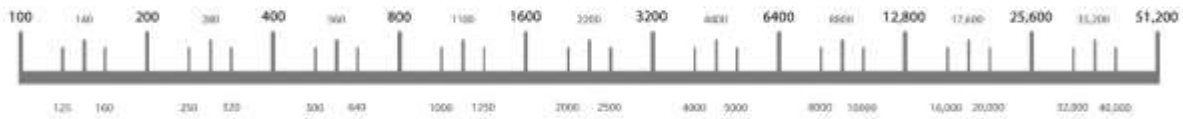


2) **Shutter Speed STOPS: (1 second to 1/500th sec)**



Alternatively you might adjust the 'ISO'. This is a term to define the light sensitivity of your camera sensor. A low ISO (100) is less sensitive – and sensitivity increases as you increase ISO. BUT this creates noise because it makes the pixels more active – so as it goes higher (typically 5000) it will introduce noise to your image.

3) **ISO STOPS: (100 to 51,200)** Most Cameras don't have such a wide range.



The example here is a technical calculation and may not give the artistic result you seek. You can decide slight variations to this in the field and don't worry if it isn't correct – the main thing is to take a few images of the same subject on different (but similar) settings.

The best way to decide for long exposures is to check the effect achieved in the viewfinder (or rear LCD) after each shot.

The shutter speed that works for a long exposure is partly an artistic choice (how flat do you want to make the water that is moving?) and partly a defined choice (how much light do you have to play with and how do you avoid overblown highlights?)

Examples:
The ideal shutter speed for a rolling wave is 1/3 sec. But this changes depending on the force of tide and wind.
The ideal shutter speed for a waterfall is 1/20th Second – but this varies depending on the speed of the water which is governed by height of water, amount of rain, sunshine etc!

ISO – at ALL times keep control of ISO – **Be aware that if set to Auto** it will automatically change and affect your artistic result without you realising it. Most times it is kept on the lower number (100 – 200)