Aperture Priority, Shutter Priority and Manual Modes

In this tutorial, we are going to look at how to use aperture priority, shutter priority and manual modes on your camera.

These are the three modes that will allow you to take control over the final look of your photograph.

This is the part when we move away from the theory and onto the more practical aspects of photography.

Before that however, we need to understand two important tools on your camera: the light meter and the exposure level scale.

Light Meter

The light meter in your camera **measures the light of a given scene** and lets you know if you

have set the right combination of aperture and shutter speed in order to ensure a correct exposure. Most cameras use a method called **through the lens (TTL) metering** to measure the light in a scene.

You can also buy a hand held light meter for more accurate light metering if you wish. These are often used by portrait and model photographers who take detailed readings from a model's skin to ensure to correct exposure.

Light Meter

We will take a look at the various metering modes on your camera in a later tutorial. For now, we will concentrate on how to set the correct exposure with each of the semi-manual and manual settings.

Exposure Level Scale

Your camera will display an **exposure level scale** like the one above. This can be on the back screen and on the small screen on top of the camera if there is one. It may also be visible when you look through the viewfinder.

Each whole number either side of the zero represents plus or minus a stop of exposure (brightness).

In theory, when the right combination of aperture and shutter speed has been chosen, the little arrow/indicator will sit on the zero in the centre

of the scale. This means that your photo should be neither underexposed nor overexposed. This is not always the case but the scale acts as a good guide and starting point.

Aperture Priority Mode

Aperture priority mode is one of the two semi-manual modes. Put simply, you **set the aperture manually** and your camera then sets what it calculates to be the right shutter speed to ensure the correct exposure.

The camera will set a shutter speed that makes the little arrow/indicator sit on the zero of the exposure level scale.

To switch on this mode, turn the dial on the top of your camera to "**A**" or "**Av**" on Canon cameras. You then turn the corresponding dial to set the

aperture. Different camera brands may use different dials so check your manual.

This is actually the shooting mode I tend to use 90% of the time. As I shoot a lot of urban landscapes, I usually set an aperture somewhere between f11 and f16 to ensure plenty of depth of field. The camera then selects the appropriate shutter speed.

Urban Landscape – Pont des Arts in Paris

I do however keep a close eye on the shutter speed set by the camera as I may want to avoid or create motion blur in my photo. As we learnt in a previous tutorial, setting a wider aperture will result in a faster shutter speed whereas setting narrow aperture will result in a much slower exposure time.

It's a balancing act. Sometimes it takes a few attempts to get the right combination for the look you are hoping to achieve. The good news is that this becomes more intuitive with time and experience.

Shutter Priority Mode

Shutter priority mode is the second semi-manual mode on your camera. When using this mode, **you set the shutter speed**

manually and the camera sets what it thinks is the right aperture to expose the scene correctly.

As with aperture priority, the camera selects an aperture that makes the arrow/indicator sit on the zero of the exposure level scale.

To turn on shutter priority mode, turn the dial to "**S**" or "**Tv**" on Canon cameras. This stands for "Time value". Then simply turn the corresponding dial to set your chosen shutter speed.

This is a useful mode when shutter speed is critical to your photograph. Perhaps you want to ensure a very fast shutter speed to freeze motion. Conversely you may want to ensure a longer shutter speed to capture motion blur.

Exposure Compensation Tool

Although your camera's light meter does a reasonably good job at helping you set the correct exposure, it does get it wrong from time to time.

This is often the case with very dark or very bright scenes. Your light **meter tries to measure every scene in terms of the mid-tones**. This is fine on an overcast day with even light.

St. Mary's Church in Clonsilla, Ireland

Photographing a very bright scene like a snow covered landscape however will often lead to underexposure and grey snow! This is because your camera wants to see most of the scene as a

mid-tone rather than the bright scene we can see with our eyes.

Dark Passageway in Tunisia

The same is true of very dark scenes that the camera will often overexpose as it tries to find that mid-tone.

Scenes with high contrast containing both very bright areas and very dark areas can also prove tricky for your camera's light meter.

This is where the **exposure compensation tool** comes in. Press the button with the plus and minus signs like the one in the picture to activate this tool.

Then, turn the dial to adjust the exposure. Check your manual to see which dial to turn.

When you turn the dial, you can set the arrow or indicator on the exposure meter scale to plus or minus half a stop or a stop or more depending on whether you want to brighten or darken the exposure. Most cameras work in 1/3 stops too. Again, there will be a dial designated for this on your camera.

Exposure meter scale set to -1 stop

What happens when you use the exposure compensation tool?

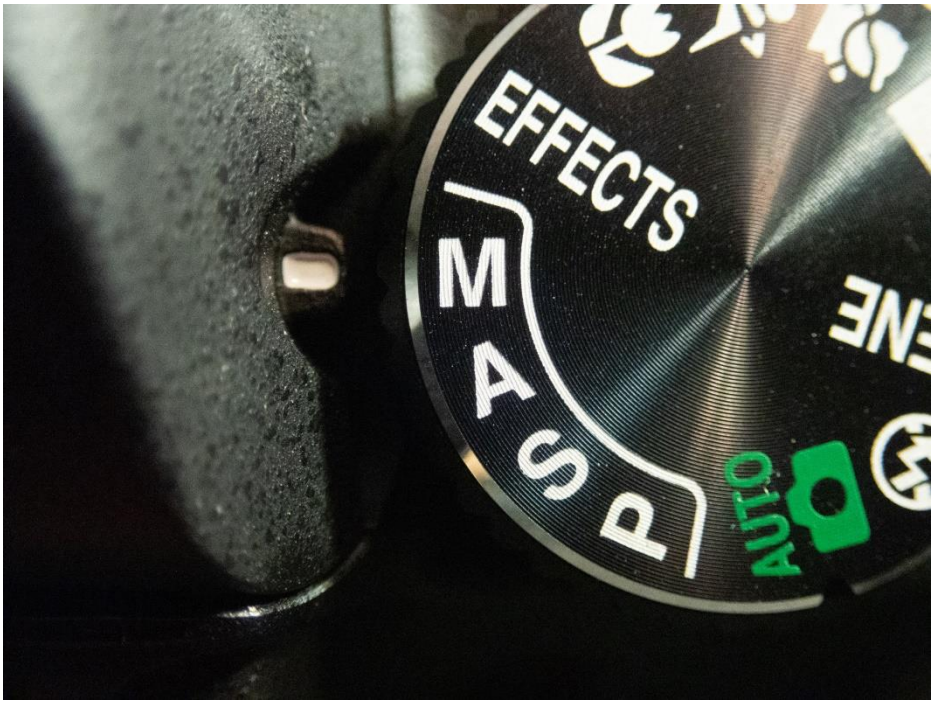
If you are using **aperture priority mode**, the camera will **keep the aperture you set** and **adjust the shutter speed** to allow more or less light in to brighten or darken the exposure.

If you are using **shutter priority mode**, the camera will **keep the shutter speed you set** and **adjust the aperture** to allow more or less light in to brighten or darken the exposure.

Manual Mode

Here's the scary one! Manual mode.... Dun Dun Dun! It's actually not scary at all now that you know how to use the exposure level scale.

To activate manual mode, turn the mode dial to "**M**". On most cameras you then turn one dial to set the aperture and another to set the shutter speed. This time, you set both manually.



The best way to do this is to start with one or the other depending on the photo you wish to create. Often I will set my aperture first. Then I turn the shutter speed dial until the little arrow/indicator is sitting on the zero of the exposure level scale.

Sometimes I will make adjustments to both settings if I find for example that the aperture I set makes my shutter speed too slow or too fast for the effect I want to create.

If after taking the photograph I find that it is underexposed or overexposed, I reset my aperture and shutter speed so that the arrow is sitting on plus or minus 1 for example to brighten or darken the exposure.

It's the same idea as the exposure compensation tool except you can adjust both aperture and shutter speed to your liking.

What is dynamic range?

Dynamic range refers to the range of tones from very dark to very bright that your camera can capture accurately in a single photograph.

Modern cameras tend to have very wide dynamic ranges which mean you can capture high contrast

scenes without clipped shadows or blown highlights.

Exposure Bracketing

There are times however when the range of tones is simply too great for your camera to handle. This is where **exposure bracketing** comes into play.

If I am photographing a high contrast scene such as a cathedral with its dark alcoves and bright windows I will often take a series of photos ranging from -3 stops up to +3 stops. Individually, most of these photos look completely underexposed or overexposed.

When I blend them together in post-processing however, I can create the perfect exposure that avoids clipped shadows or blown highlights.

Take a look at this example where I blended six differently exposed photos of the interior of a cathedral to create one photo containing lots of detail throughout.

-3

-2

-1

0

+1

+2

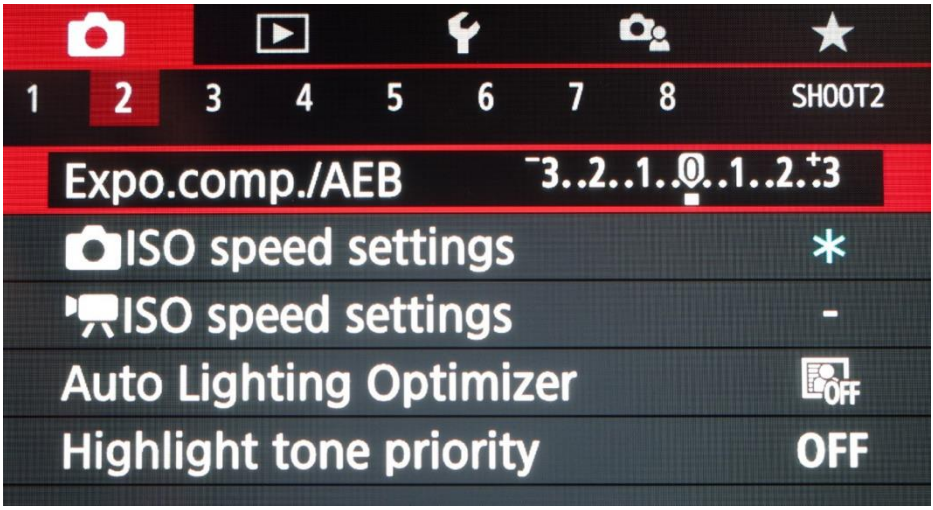
Six bracketed photos ranging from -3 exposure stops to +2 exposure stops

The final photograph consisting of the six blended photographs

There are many excellent tutorials online that can show you how to blend bracketed exposures using Photoshop and other post-processing software.

I often bracket my photos, taking three shots each time: one at -2 stops, one at zero and one +2 stops on the exposure level scale. Most cameras

even have a mode that will do this automatically (**Auto Exposure Bracketing/AEB**).



This acts as an insurance policy if my middle exposure (zero) has clipped shadows or blown highlights.

In our next chapter, we will look at the various metering modes on your camera.