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Love Your Camera



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1. If it has a lens and a shutter- you can take a photo!

These buttons will vary from camera to camera, Canon to Nikon to Panasonic but the symbols are almost universal and how they operate pretty much the same. Most Digital SLR 's have the same functions and most digital compact cameras that allow you to change some settings manually will allow you to also. These days, phones also have the same or similar capabilities.

2. Exposure and shooting modes on your camera

Where is your exposure control dial? If you don't have one, where do you find these settings in your menu?

We are only going to focus on P, AV, TV and M. Your camera MAY have some other presets – Landscape, Portrait, CloseUp, Sports, Night – presets are for HappySnappers and not Photographers so we're going to all make a promise to each other to stop using those today. Automatic is usually denoted by a Green Square – we're not going to use that any more either.

“P” or (program) mode. (used for People & Events where you don't have a lot of time to “plan” how to take your photograph.

This is semi automatic and will help you while you learn all about the camera and what it can do.

In P mode we can control the balance between shutter speed and aperture without risking an over or underexposed photograph.

Basically – our lighting is always correct!

You will notice differences between your photographs when you prioritise a faster shutter speed or deeper aperture. We'll talk about those and how to control them better very shortly.

Av/A - Aperture Priority – Which allows you to set the aperture of the lens (i.e. F2.8 or F8) and the camera will select the correct shutter speed.

This is good if you want more control over the depth of field (DOF) of your images. Remember F2.8 will have shallow depth of field and F16 will have a lot, or more elements in focus.

Tv/S - Shutter Priority - This is the opposite. You set the shutter speed, and the camera will select the correct aperture.

This can be great for sports or wildlife photography where you need control of the shutter speeds though Program mode will give you a little more control.

15th or 30th/sec is slow and 500th/sec is fast. Most digital SLR cameras have a range from 30 second exposure to about 8000th of a second.

Manual - You are in full control here. The cameras metering system will guide you but you need to set the shutter speed and aperture manually.

Good for more creative control and where 99% of your photography should be shot at.



The aperture is the opening and closing of your lens. The smaller your aperture number - or F-stop - the larger the opening of your lens. Conversely, the larger the number the smaller the opening.

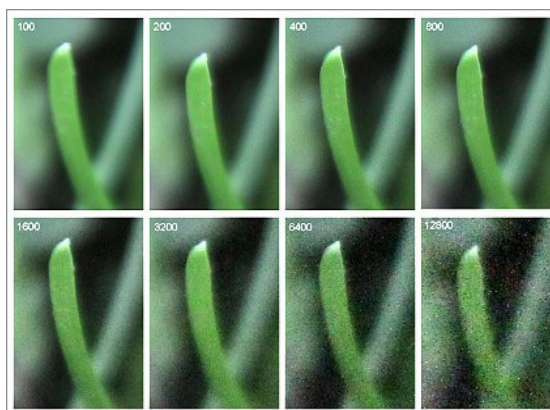


From left to right we have a large aperture (F1.2), a midrange aperture (F8) and a small aperture (F16). Different apertures will have different effects.

3. ISO

ISO measures the sensitivity of the image sensor. The lower the number the less sensitive your camera is to light and the finer the grain. Higher ISO settings are generally used in darker situations to get faster shutter speeds – however the cost is noisier shots.

As a rule we use an ISO of 100 as a standard and only go higher as we absolutely need to.

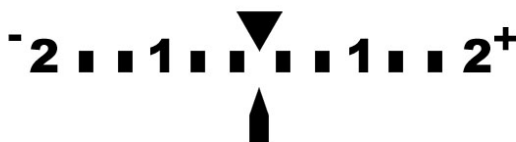


4. Using Your Light Meter

When you look through your viewfinder you will see a little grid down the bottom (or maybe to the side) of your view.

If your indicator is flashing on the centre – or 0 – this means that the image is correctly exposed based on your focal point, metering mode etc. (we'll talk about this shortly). You'll notice that every three markers there is a bigger or bolder mark on your meter. This is a STOP. Exposure is measured in STOPS or Thirds of Stops.

If you change your Shutter Speed you will effectively be altering your exposure by one third of a stop each time you move the dial. If you change your ISO and Aperture you are theoretically moving one whole stop – though in practice it can be between a third and a full stop depending on your camera.

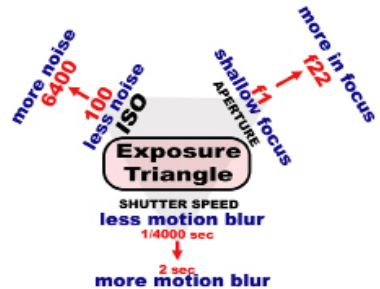


5. Combining your exposure ingredients

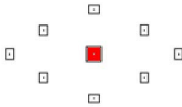
A correct exposure is a combination of ISO, Aperture and Shutter Speed depending on what you want to shoot.

If you change one of those settings then you will need to alter another setting to compensate.

So, if you are correctly exposed (like in the previous exercise) and you move your shutter speed faster by one stop this means you will have to compensate by altering either your ISO or Aperture by one stop also.



6. A single focal point - YOU decide!



Your light meter reading comes (depending on your metering mode) from the focal point – or flashing red dot, green square, black square, black dot or whatever in your viewfinder or on screen.

This focal point is your telling the camera what the most important thing in the photograph is. What is the subject? What is the central element to the story that ties your photograph together?

Most cameras will default to an automatic focal point selection. That is, the camera is deciding what is important. You might see a whole bunch of dots or squares appear on your viewfinder – or you might see one but every time you half press your shutter it is in a different place each time.

Although we have the ability to move our focal point wherever we want, photography is largely about good habits and if we always know the focal point is in the center then it is always easy for us to frame our photo and expose our image quicker with that in mind.

7. Metering Modes

On today's digital cameras, users have the ability to choose and adjust the metering mode, or how the camera measures the brightness of the subject. Metering settings work by assessing the amount of light available for a photograph, and then adjusting the exposure accordingly. Sometimes, however, the camera isn't intuitive enough to get the exposure right when using Program, Shutter Priority, or Aperture Priority modes. Fortunately, the photographer has the ability to make manual adjustments to the metering mode used by the camera. (Refer to your individual owner's manual to learn how to change the settings on your camera.)

Evaluative Metering (on Canon cameras), or Evaluative/Matrix Metering (on Nikon cameras) – This is the "default" setting on most cameras. The camera sets the metering automatically to suit the scene and subject of the photograph. The entire scene within the camera's viewfinder is utilized to assess the appropriate metering. This is the mode to use when you're not sure which mode the scene will require.

Partial Metering (on Canon cameras), or Spot Metering (on Nikon cameras) – This type of metering is helpful for photographing back-lit subjects. The metering is weighted according to the very center of the shot – a very small area of the frame. Use this mode when you have a very specific area of the photograph that you wish the exposure to be based upon.

Center-Weighted Average Metering (on Canon cameras), or Center-Weighted Metering (on Nikon cameras) – This metering setting gives priority to the center portion of the photograph, but also

takes the surrounding portions of the shot into consideration. Basically, this is somewhere in between Evaluative and Partial Metering. Use this setting when the subject is in the center of the photograph and exposed correctly, so that the subject is not affected by the exposure of the background.

The differences can vary from slight to extreme and if you prefer to not think too much about the different aspects of your photograph then you can generally leave your camera set to evaluative metering and not think too much about it.

8. White Balance

You can see a lot of options when you look at your white balance settings: Sunny, Cloudy, Shady, Light-bulb (Tungsten) or Incandescent depending on your camera model), Fluorescent, Flash or Custom.

Let's simplify matters a little bit. We now have three White Balance settings. The first is OUTSIDE. Use an outside white balance if your light source is natural light – the sun for example. For everything else i.e. our light source is ARTIFICIAL – whether it is indoors OR outside at night and street lamps are giving us the light, choose the light bulb or fluorescent setting.

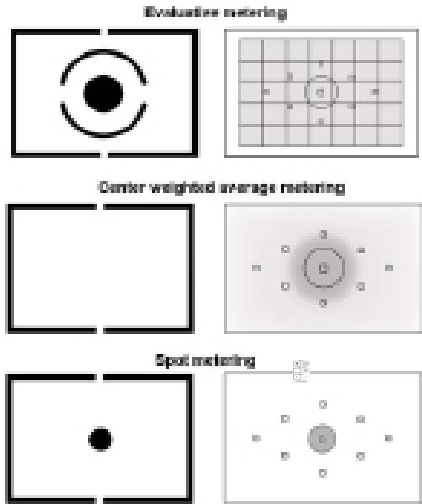
If you use an outside white balance setting when you should be using an indoor setting, your photos are going to have a very yellow tinge to them. Likewise, if you use an indoor setting when it should be outdoor – then your photos are going to look very blue.

The best way to ensure a correct white balance is to set it manually or CUSTOM.

Depending on your camera you are going to have different options. The first custom option would be to select Custom White Balance and your camera will ask you to select a photo on your memory card. You then select what white should look like and the camera stores that setting.

It is always handy to have a nicely exposed, correct white balance WHITE photograph always stored on your memory card if your camera customizes this way. Some cameras will have the second option which is a grid with four quadrants and you can move the white balance setting between them to identify what what looks like.

The third possible option is K where you select a number between 2500 and 10,000. The higher the number the stronger the outdoor lightsource and the lower the number the more artificial the light.



A camera sees the light information coming from only this group when the distance is a square. The darker is also means more weighting.



9. Focal Modes

You may have heard the terms 'SINGLE or ONE SHOT', 'AI FOCUS' and 'AI SERVO'.

Single/One Shot: This is based on our focal point. Wherever your red dot, green square, etc. is pointed at is in focus.

AI Focus: This mode is designed for still subjects that may begin to move. In this mode, the camera automatically switches to AI Servo AF if it detects subject movement. This mode is good for photographing wildlife, music concerts, events, and children at play.

So it is essentially the completely automatic version of focusing.

AI Servo: This mode tracks focus on moving subjects and locks focus and exposure at the moment you take the picture. In this mode, the shutter fires even if sharp focus hasn't had time to be finalized.

If the AF point is automatically selected by the camera, it uses the center AF point and tracks the subject as it moves across all nine AF points. If you manually select the AF point, then the camera uses the selected AF point to track the subject. This is also referred to as predictive focus because if a subject is moving toward or away from the camera at a constant rate, then the camera "predicts" the subject distance to calculate focus.

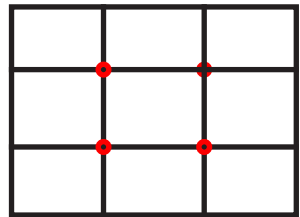
10. Composing Your Image

Remember when we changed to a single focal point? At the moment it is sitting in the middle of the viewfinder and whatever we press it on is in focus and is the subject of our story.

If we half-press our shutter that will lock in a focal point and give us a light meter reading. If we half-press and don't let go we can place the subject (what our focus point is locked on) anywhere in the frame – meaning that the subject can be where we want it to be.

As a rule our movements when taking a photo are:

- Half press on our subject
- Let go of shutter and modify our exposure settings
- Half press on our subject
- Reframe the image
- Finish the pressing of the shutter button



11. Rule of Thirds

I will say right up front however that rules are meant to be broken and ignoring this one doesn't mean your images are necessarily unbalanced or uninteresting. However a wise person once told me that if you intend to break a rule you should always learn it first to make sure your breaking of it is all the more effective!

The basic principle behind the rule of thirds is to imagine breaking an image down into thirds (both horizontally and vertically) so that you have 9 parts.

With this grid in mind the 'rule of thirds' now identifies four important parts of the image that you should consider placing points of interest in as you frame your image.

The theory is that if you place points of interest in the intersections or along the lines that your photo becomes more balanced and will enable a viewer of the image to interact with it more naturally. Studies have shown that when viewing images that people's eyes usually go to one of the intersection points most naturally rather than the center of the shot – using the rule of thirds works with this natural way of viewing an image rather than working against it.

In learning how to use the rule of thirds (and then to break it) the most important questions to be asking of yourself are What are the points of interest in this shot? Where am I intentionally placing them?

Once again – remember that breaking the rule can result in some striking shots – so once you've learnt it experiment with purposely breaking it to see what you discover.

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