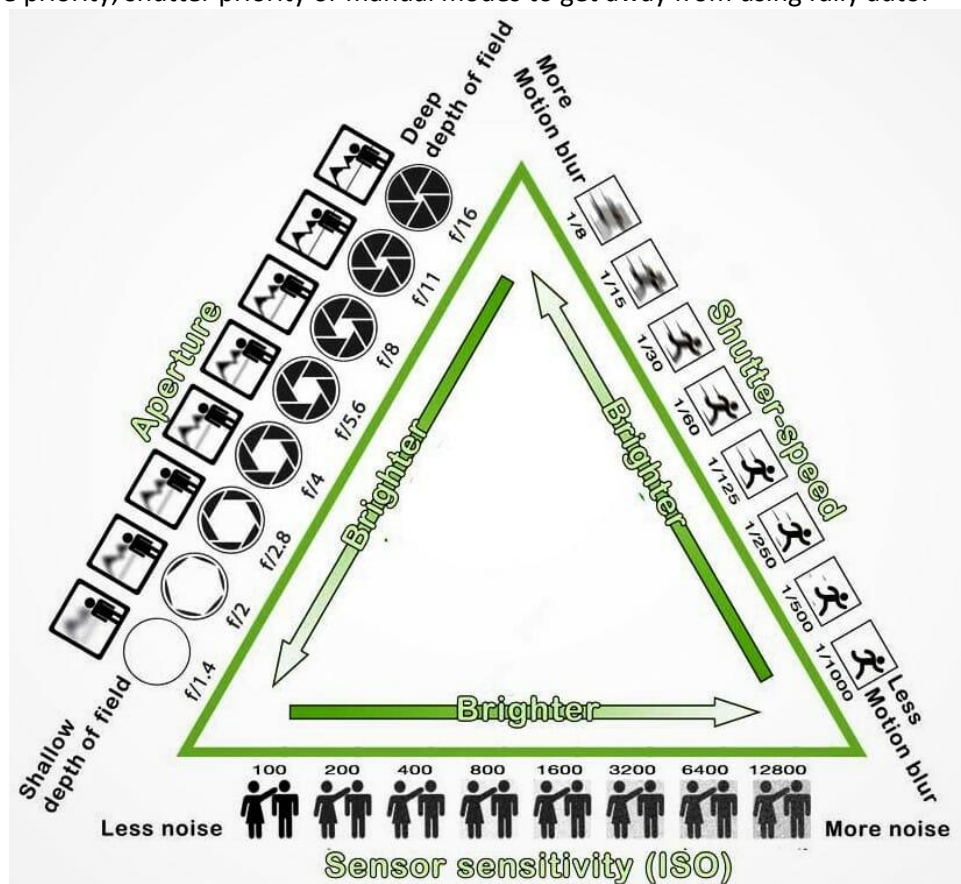


Enjoy & Improve your photography

Crewe Create and Crewe Cultural Forum

Modern cameras and phones can take great photos when set to auto. However, if you want to get the best out of your camera, especially in tricky lighting situations it pays to understand the fundamentals of photography. The auto setting can easily get confused with backlights, night photography, stage spot lights and fast action. Taking control of your camera can help you master these subjects and let you be a more creative photographer.

Many different camera settings can be chosen for a set amount of light and they can produce different results. These settings are the camera's shutter speed, aperture and ISO settings. This is commonly called the exposure triangle. Many cameras have a command dial where you can choose to use aperture priority, shutter priority or manual modes to get away from using fully auto.



The Exposure Triangle

The shutter controls how long the camera's sensor or film is exposed for. It is usually set to a fraction of a second, but can be a lot longer for night photography or a special blurry effect. Many modern cameras have an image stabiliser which can compensate for camera shake hence reducing the shutter speed required to keep the camera steady. A fast shutter speed like $1/1000$ second should freeze someone running while a slower one of about $1/125$ could be used if they were just standing.

The aperture is an adjustable diaphragm in the lens which controls the amount of light allowed through it. It is measured in f stops. The larger the f number the smaller the aperture so if a lens is a $f2.8/50\text{mm}$ for example it means its widest aperture is $f2.8$. At this setting the depth of focus would be quite shallow and would give you a blurred background. If you closed down the aperture to $f16$ the depth of focus would increase and there would be a lot more in focus. The depth of focus is also

controlled by the focal length of the lens. The longer the focal length the narrower the depth of focus.

The adjustable ISO setting controls the sensitivity of the camera's sensor. Most cameras have a base setting of 100 ISO which gives the finest grain or digital noise. As you increase the ISO more noise will become apparent. However, as the light decreases you may need to increase the ISO to maintain the other exposure triangle settings. That is the f-stop and shutter speed.

All three settings operate together to give a correctly exposed image. If any are changed, one or both of the others must be changed to maintain the correct exposure. Once you understand the concept of the exposure triangle you can release your creativity to select the settings to give you your desired results. For example if you wish to blur walkers in a scene you might choose to use 1/20sec shutter speed combined with a low ISO and small aperture. Alternatively, if you want to freeze a stunt bike you might use 1/1000sec with large aperture and a high ISO. If you wish to isolate your subject against a blurry background you'd choose a wide aperture and a fast shutter speed with a low ISO if possible. There are many permutations.

To take advantage of these controls you could switch your camera to be fully manual, but in most cases it's not necessary. Many cameras have 'semi auto' settings called aperture or shutter priority where you choose the aperture or shutter speed and the ISO, then the camera sets the other settings. If your camera has an auto ISO setting you should be able to use manual mode with auto ISO so you can choose your shutter speed and aperture and the camera will set the ISO.

After you've understood the basic technicalities you can develop your own style to stamp your personality on your photography. Every photographer wants to offer something a bit different from what others are doing. It's not easy as there are so many great photographers trying so many techniques.

Composition playing an important part in creative photography. Getting the balance right in the frame can make the subject dominate. This is a big subject but a good and easy starting point is to consider the rule of thirds. Imagine your viewfinder with lines drawn over it spaced a third apart horizontally and vertically. Where they intercept is a strong compositional point to place your subject. It can be balanced with a supporting object on the opposite side of the frame.

Photographs are two dimensional objects in a three dimensional world. We can give them depth by the use of shadows and perspective. Look out for some natural foreground interest and have your subject on a mid plane. Framing the subject also helps its importance especially if it has a contrasting tone. Use both physical and implied lines in your scene to lead to and support your subject. Diagonal lines are particularly strong compositional elements and can inject energy into a photograph. Triangular compositions are a popular way to build a picture. Look out for natural lines can form part of a triangle.

The choice of lens can dramatically change the characteristic of a photograph. A telephoto lens enables you to stand back so you are unobtrusive and will condense the objects in the frame while a wide angle lets you get in close and puts the viewer 'in the picture'. It will separate the objects more and create space in the picture. Another great tool that needs careful usage is tilting the camera to energise a photograph. This works well with subjects like a rock group on stage.

A popular technique for portrait photographers is to use a telephoto lens with a wide aperture which will give you a narrow depth of focus. This will isolate your subject from an out of focus background so that it stands out more. On the other hand a landscape photographer who wants to get as much as possible in focus would use a wide angle lens with a narrow aperture. While a sports photographer would use a fast shutter speed to freeze his subject's movement. Alternatively, he might want to blur the movement by using a slower shutter speed.

These notes just starting point in developing your own creative style and hopefully will encourage you to explore new techniques to improve your photography.

For some useful links of photographic resources have a look at Crewe Photographic Society's website - www.crewephotosoc.com

Good shooting, Peter Robinson. Email: webmaster@crewephotosoc.com