



A GUIDE TO BASIC
DIGITAL
SLR
(SINGLE-LENS-REFLEX)
CAMERA FUNCTIONS



This booklet is intended to accompany your camera's manual.

The following pages explain the basic functions of a digital SLR camera that you, as the photographer, can control.

Mastering these few settings will allow you to take creative control of your camera and craft unique images.

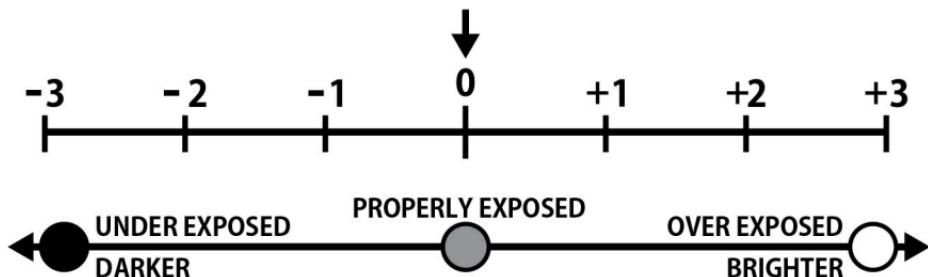
If you would like to further explore any of these settings or understand how to access them in your camera, remember to check your manual's index for the related topic.

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EXPOSURE

This is an example of a standard exposure meter. It can be found in your camera's view finder. The meter considers your camera's current settings and applies them to the image you are intending to photograph.



The three primary settings of a camera that determine how bright or dark an image will appear are the aperture, shutter speed, and ISO.

The pointer, located on the scale, indicates whether the image is too dark, too bright, or correct for the camera's settings. Adjust the camera settings accordingly.

Keep In Mind...

Once the exposure meter indicates that the exposure is correct, if one of the three primary settings is changed, one or more of the remaining two settings must be changed as well, in order to create a correct exposure.

Under Exposed



Properly Exposed



Over Exposed



APERTURE

The aperture is a series of curved blades, forming an opening, found in the lens. When the blades expand or contract, they form either a smaller or larger opening.

If the inner circle is wide, more light can pass through to the camera's sensor. If the inner circle is small, less light can pass through and either a slower shutter speed or a higher ISO is required, in order to counteract the limited light.



f2.8



f4



f5.6

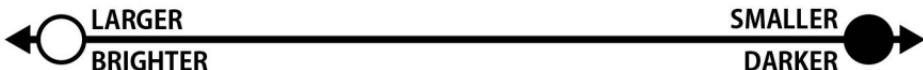


f8

f11

f16

f22



Keep In Mind...

When the aperture (also referred to as the "f-stop") is more open, the depth of focus, or depth of field, in your image will decrease. Also, note that the corresponding f-stop numbers increase as the size of the opening decreases.

As an example, if an aperture is set to f16 and everything in the image, 10 feet away from the camera to 500 feet away from the camera (490 feet deep) is in focus; opening the aperture to f4 will cause only everything 10 feet from the camera to 15 feet from the camera (5 feet deep) to be in focus. In order for a greater distance to be sharp, use a smaller aperture.

f 2.8



f 5.6



f 8



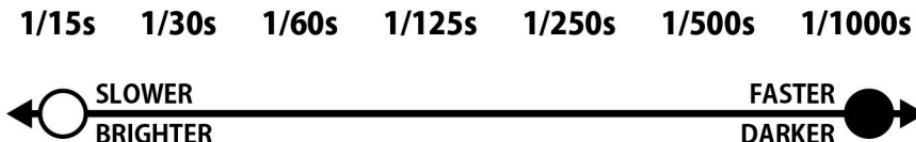
f 16



SHUTTER SPEED

In order to allow light to contact the camera's sensor, a shutter must open in the camera. When the shutter is open for a longer period of time, the sensor can absorb more light. When it is open for a shorter period of time, the sensor absorbs less light.

If you are using a fast shutter, either a wider aperture or a higher ISO are required to counteract the limited light.



Keep In Mind...

When the shutter remains open for longer periods of time, it allows objects in the intended image to move. This causes non-stationary subjects to appear blurry. If the shutter is open for a shorter period of time, moving objects in the image will appear sharper.

1/15th
SECOND



1/30th
SECOND



1/60th
SECOND

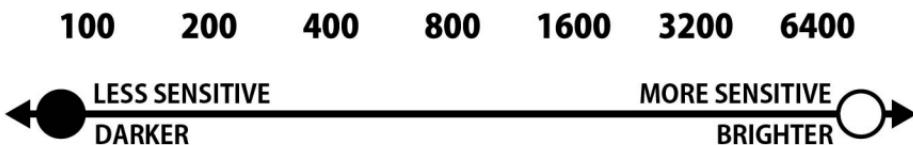


1/125th
SECOND



ISO

The sensor in your camera has various levels of sensitivity. These sensitivity levels are referred to as ISO settings. When the sensor is more sensitive, it can process incoming light faster. When the sensor is less sensitive it requires more light; this can be achieved with either a wider aperture or a slower shutter speed.



Keep In Mind...

In order to process incoming light more quickly, the sensor processes images with less detail. This is recognizable in the amount of “noise” that appears in your image.

When the sensor is less sensitive, the image will appear sharper and with greater detail. When the sensitivity of the sensor increases, the noise will increase and the image will become less detailed.

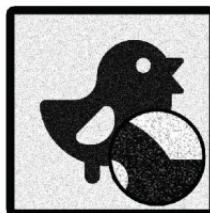
ISO 100



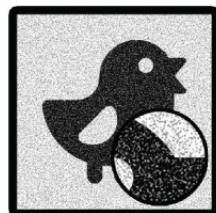
ISO 400



ISO 1600



ISO 6400



WHITE BALANCE

Each image you capture is lit by a light source. Whether it is the sun, a household lamp, or the flash on your camera, every light source has a unique color. Proper color in an image can improve it just as improper color can make it worse. In order for your image to have a natural tone, you will need to set the white balance. These are the common settings, found on most cameras.

AWB AUTO

The camera automatically chooses the best white balance for the image.

DAYLIGHT

Use this setting outside on a sunny day.
The camera sees this as "neutral colored light."

CLOUDY

This setting is for use outside when it is overcast.
The camera corrects for a slightly warm tone.

SHADE

Use this option when it is sunny out but you are photographing in the shade. This will fix the blue color of the image.

TUNGSTEN

This setting is for use inside or when the primary source is an incandescent bulb. This will correct for the yellow color.

FLUORESCENT

Use this in an office setting or when the light comes from a fluorescent bulb. This corrects for the green color.

FLASH

When your camera's flash is active, choose this option. It will correct the color, which is slightly cooler than "daylight."

CUSTOM

Select this option if you want to use information from an existing picture to set the white balance.

KELVIN

Choose a specific white balance from a chart of "Kelvin temperatures."

CAMERA SHAKE

If your subject is poorly lit and you do not wish to use a wide aperture or a high ISO, you will need to use a long shutter speed.

If your image appears blurry and you are having difficulty holding the camera still, try using a tripod. It will keep the camera from moving and allow for longer shutter speeds without motion blur.



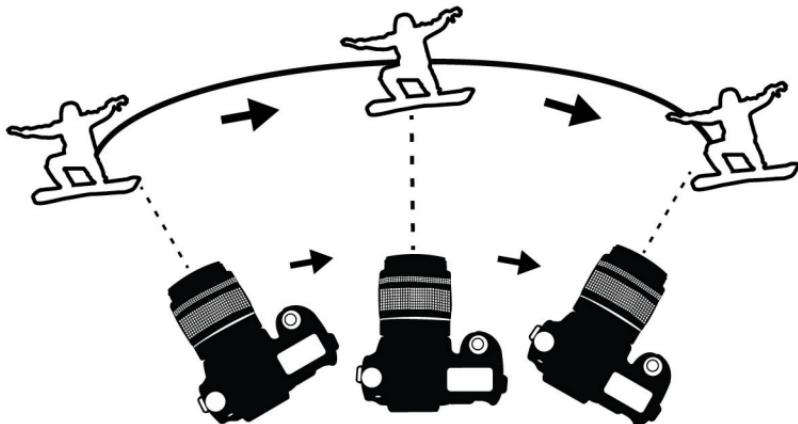
PANNING

If you are attempting to take a picture of a subject in action and would like to show movement while keeping your subject clear, try “panning” your camera.

Set your camera to a slow shutter speed (if you were using 1/500th of a second, try 1/60th of a second). Then, focus on your subject.

As they move across the setting, move the camera at the same speed, keeping the subject in the same location of the frame.

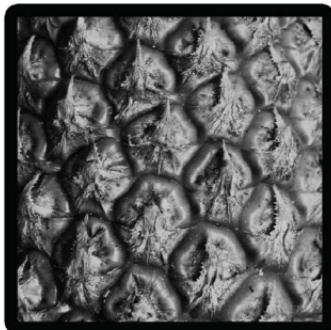
This will cause the background to move during the exposure, while keeping your subject stationary, relative to the camera.



DON'T FORGET THE DETAILS

Don't forget about the details. It is very rare to find an object that has absolutely no texture.

If you are photographing a subject that is visually interesting, try moving in close to take a picture of the texture on its surface. This is a great way to learn how different types of light affect different objects.



REMEMBER TO SEE CREATIVELY

Don't miss the forest for the trees, as well as the other way around. There is a good chance that your subject may be part of a larger picture.

Try photographing the same subject at various distances. This can produce unexpected results and help you view your surroundings in new and unique ways.



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