

ISO

The ISO is a measure of the sensitivity of the sensor in your camera. Different cameras, containing different sensors, will have different ranges of ISO values available to you but the way that they work is similar in all cases.

100	200	400	800	1600	3200	6400
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These are some of the ISO values for my camera (as with shutter speeds, it has two other values between each of the ones shown here). You can probably see that each value is double that of the one to its left. This means that ISO 200 is twice as sensitive to light as ISO 100. And ISO 800 is four times as sensitive as ISO 200.

The difference between these values is **one stop**.

If you think back to the table of shutter speeds, they also differed by one stop. There is a relation between these two values:

if you decrease the ISO by one stop then you should decrease the shutter speed by one stop as well

But why would you want to do that?

Let's say that you want to take a photograph that shows motion blur. You are in Shutter Priority mode and the camera has selected a speed of 1/125 and an ISO of 400. The shutter speed is too fast to show the blur ... so you reduce it by one stop to 1/60.

If you take the photo now it will be overexposed: you will be letting too much light in. So you reduce the sensitivity by one stop as well, from ISO 400 to ISO 200.

Noise

High ISO values enable you to take photographs in low light conditions without having to use flash or a tripod. If you set the ISO high enough then you can use a fast enough shutter speed to avoid camera shake and still get a useful image.

The problem with higher ISO values is that, as the sensitivity increases, so does the production of sensor artefacts in the image. This is called noise (or sometimes 'grain'). In certain circumstances the noisy, grainy effects created in an image can add atmosphere to a picture. But in most cases it can be a distraction.

Some image processing software is able to deal with noise but it is best to try to avoid it in the first place and is something that you should be aware of when taking photographs at high ISO.