

CHUDLEIGH CAMERA CLUB

Basic Skills 4 Focus Sheet.

Camera shake, what is it and how do we get rid of it?, and Using fill-in flash outside

Reducing Camera Shake

shutter speed

In photography, shutter speed is a common term used to discuss exposure time, the effective length of time a camera's shutter is open.[1] The total exposure is proportional to this exposure time, or duration of light reaching the film or image sensor.

In still cameras, the term shutter speed represents the time that the shutter remains open when taking a photograph. Along with the aperture of the lens (also called f-number), it determines the amount of light that reaches the film or sensor. Conventionally, the exposure is measured in units of exposure value (EV), sometimes called stops, representing a halving or doubling of the exposure. Multiple combinations of shutter speed and aperture can give the same exposure: halving the shutter speed doubles the exposure (1 EV more), while doubling the aperture (halving the number) increases the exposure by a factor of 4 (2 EV). For this reason, standard apertures differ by $\sqrt{2}$, or about 1.4. Thus an exposure with a shutter speed of 1/250 s and f/8 is the same as with 1/500 s and f/5.6, or 1/125 s and f/11.

In addition to its effect on exposure, the shutter speed changes the way movement appears in the picture. Very short shutter speeds can be used to freeze fast-moving subjects, for example at sporting events. Very long shutter speeds are used to intentionally blur a moving subject for artistic effect.[2] Short exposure times are sometimes called "fast", and long exposure times "slow".



Slow shutter speed 85mm lens 1/10 sec (shake)



Fast shutter speed 85mm lens 1/125 sec (sharp)

The ability of the photographer to take images without noticeable blurring by camera movement is an important parameter in the choice of slowest possible shutter speed for a handheld camera. The rough guide used by most 35 mm photographers is that the slowest shutter speed that can be used easily without much blur due to camera shake is the shutter speed numerically closest to the lens focal length. For example, for handheld use of a 35 mm camera with a 50 mm normal lens, the closest shutter speed is 1/60 s. This rule can be augmented with knowledge of the intended application for the photograph, an image intended for significant enlargement and closeup viewing would require faster shutter speeds to avoid obvious blur.

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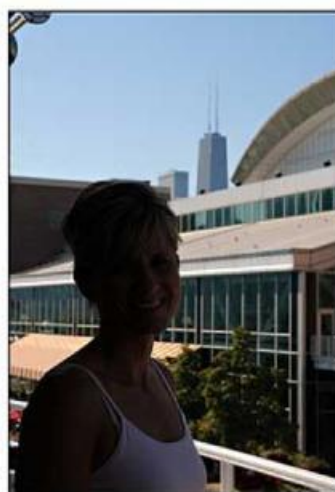
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Fill In Flash

The concept of fill in flash is simple.

The idea is to fill in or lighten shadows but not use the flash to generally illuminate your picture. Typical uses include a subject shot against a bright background when the subject otherwise be silhouetted or where your main subject is in shade but the background is brightly lit.

It is difficult to give a precise guide to how to do this as conditions and options on the camera and flash equipment used will vary. Many new cameras combined with TTL flash guns will have options on the flash settings for half, or quarter power. Some combinations will correctly do this for you in full automatic mode. Professional photographers will use this technique outdoor in daylight to balance the lighting on their subject with the available light.



In many ways, a good automatic flash unit is as effective as any TTL flash unit for fill flash. Automatic flash units are self contained in their operation; and do not need to communicate with the camera to set the correct exposure. To use an automatic flash unit for fill flash, you merely need to trick it into thinking your sensor is more sensitive than it really is. If you have your camera set on 100 ISO set your Flash to 200 or 400 ISO. The flash will then emit half or one quarter the amount of light to your subject filling in the shadows without overexposing the subject. Some experimenting with test shots will be required.



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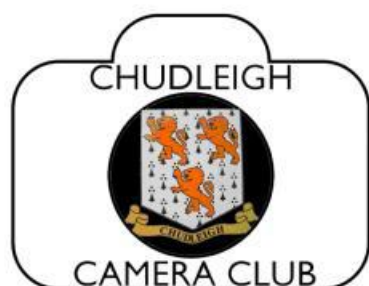
Camera shake, what is it and how do we get rid of it?, and Using fill-in flash outside After the event ' fill in flash

Although not fill in flash, images can often be 'relit' using computer image manipulation software, making separate adjustments to the subject and background in the image.

It is often surprising how much detail can be revealed using this method



This technique works especially well when images are shot as raw files and the original can be opened a number of times at different exposures.



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