

The Image – Monthly NEWSLETTER

The Abertawe Photographic Society –

Based near the heart of Swansea, Abertawe Photographic Society is an established, friendly and welcoming club, who's members both amateur and professional all share a common interest, in all aspects of photography.

Whether you are a complete beginner or a seasoned snapper, interested in digital techniques or 35mm film, there is a warm welcome by a likeminded group of people sharing in the search for the perfect image.

By sharing, not only our enthusiasm but also our skills, techniques and knowledge, we all grow as a club and by trying new things we all get the opportunity to stretch our boundaries. All members are encouraged to take part in club events.

The Society meets every Tuesday at:
Greenhill Community Centre
Chapel Street, Dyfatty,
Swansea.SA1 1NB.

This Month's Events: July

TBD

High-Speed Sync Flash

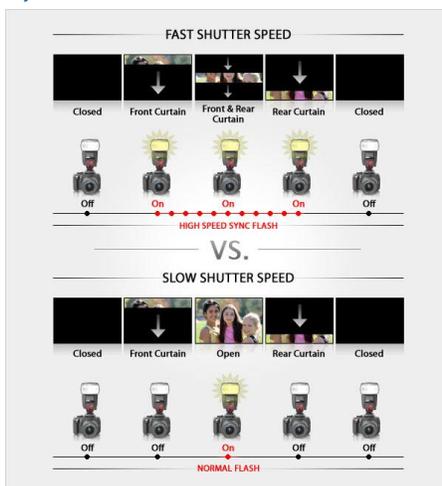
Understanding High-Speed Sync Flash and Shutter Curtains: Before I write about high-speed synchronization (sync), maybe I need to explain for some of you what is flash sync. Flash sync is the computer-controlled feature in which the flash and the shutter release are synchronized such that the flash light output illuminates the subject for the specific moments that the shutter exposes the image sensor. The flash instantaneously lights up the subject (it does travel at the speed of light), so the flash doesn't last nearly as long as the shutter remains open even though this is very fast (1/60s, 1/125s, 1/250s, etc.). There is a limit to the shutter speed, and this is the camera's native sync.

High-speed sync flash is your DSLR's ability to use a flash at shutter speeds faster than the camera's native sync. Most cameras have a native sync of 1/250th of a second, and anything faster than that is beyond the camera's ability to sync the shutter with the flash. But if you happen to be in a situation that requires faster shutter speeds to effectively capture the action, or for other aesthetic reasons (like a wide aperture), then you'll overexpose your image. However, high-speed sync flash/camera combinations allow you to use the flash at higher shutter speeds.

High-speed sync flash is used when you want to use a shutter speed that is faster than your camera's native flash sync speed, or when you want to use a wider aperture setting that requires a

higher shutter speed as is often the case with outdoor daylight shooting. For example, you may want to take an outdoor portrait and your TTL meter tells you that the f-stop should be set at f/16 with a 1/125s shutter. Those settings will give you too much depth of field, way too much actually. Nearly everything in sight will be in focus. Instead, what you want is a sharp subject, but a soft, blurred background, which would be achieved with an aperture of about f/2. That's six stops of light difference, which means that shutter speed needs to go up to 1/5000s. This is easily achievable by setting the flash to High Sync Speed. When you take your photo, you'll have that beautiful, soft background that the good photographers get when shooting outside. You'll want to use High Shutter Sync when you're shooting with a telephoto lens, trying to capture fast action, using a high shutter speed as well as a high f-stop. So in sports photography High Shutter Sync is ideal, and in some wildlife situations as well.

How High-Speed Sync Works: With a high-speed sync flash-capable camera and dedicated flash unit, all you have to do is set the camera to that setting. You may find this in the menu settings of your camera, which most cameras have. Let me try and explain how this really works; basically, at high-shutter speeds the rear curtain starts to close before the front curtain fully opens. This way only a sliver of exposure moves across the image sensor. It is within this moving sliver of exposure that the flash fires. A high-speed shutter speed is synchronized to the flash. The flash does fire longer than in a standard flash mode. In standard flash mode, the flash duration is much shorter than the time it takes for the shutter to move across the image sensor, and the partially opened shutter will cover part of the frame. This would leave large sections of black in your image. The underexposed black in the image is not good, to say the least.



The shutter on your DSLR consists of two curtains; the front and rear that open and then close in the time designated by the shutter speed (i.e. at 1/500s, the front shutter opens and then the rear moves to close all within 1/500th of a second). The default setting coupled with a flash is "front curtain sync", in that the flash fires as soon as the front curtain begins to move, thus illuminating the subject for the duration of the shutter speed. However, many 35mm and DSLRs give you the option to have the flash fire just before the rear curtain (or second-curtain) begins to move. You can achieve arresting, creative motion-blur and streaming light effects by deftly manipulating the front and rear curtain sync, especially with longer shutter speeds (1 second or more).

Checking your Camera Shutter Count

DSLR cameras have very few moving parts, but the two most important and largest moving parts are the reflex mirror (the mirror that allows you to look through the lens from the viewfinder and that swings up and out of the way when you take the photo) and the shutter. The mechanical shutter is largely more delicate and prone to failure over the life of the camera of these two. This information is important if you plan to buy a used camera.

Depending on your camera quality, the amount of shutter movements, or actuations, will vary. Camera manufacturers usually publicise the shutter rating of the camera, and most entry-level DSLR cameras are only rated at 100,000 shutter actuations. Mid and high-end cameras have more durable shutters that are rated up to between 150,000 and 300,000 actuations. To give you an idea as how much 100,000 shutter actuations is, here's a simple explanation: If you were to use the same camera body for full-time work and snapped one photo a minute throughout every working day, it would still take you two years to get to 100k. So don't worry too much if your camera is reaching somewhere near that.

Why use the term actuation rather than image? That's because a camera shutter may move more than once when photographing a subject. A shutter "actuation" is the opening and closing of the shutter when a picture is taken. It should be noted that you can actuate the shutter for other purposes, most notably to enable sensor cleaning in many modern DSLR cameras. The total actuation count of a camera may be more than the total number of pictures it has taken, so it is important to differentiate between the *number of photos* and the *number of actuations*.

There are several ways to check the shutter actuation count of a camera and all of them rely on either having access to the camera, access to an

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image created by the camera, or both. Fortunately many manufacturers embed the number of shutter cycles/actuations in the EXIF (**EX**changeable **I**mage **F**ile) data of the pictures produced with that camera so you can examine a recent photo taken with a given camera and see how many clicks are on the shutter.

Here are the web addresses of three such free sites where you can check your camera's shutter actuations:

<http://myshuttercount.com>

<http://shuttercounter.com>

<https://www.camerashuttercount.com>

For me, a much simpler way of doing this is by using Photoshop, here are the simple steps to follow:

1. Set up your camera if you've just taken it out of the box. Charge the battery, insert it and attach the lens. If you're evaluating a camera you've owned for a while, check your battery status.
2. Insert a memory card into your new camera and take one picture in the RAW, TIFF or JPEG format. Consult your owner's manual if you're not sure how to set the file format for your camera. Transfer the photo file to your computer. To check a camera that isn't new, locate the last image you shot and transfer it to your hard drive if you haven't already done so.
3. Launch Adobe Photoshop. Navigate to the folder in which you stored the photo and open the file.
4. Open the "File" menu and choose "File Info." Click on the "Advanced" tab at the top of the File Info dialog box.
5. Scroll through what looks like a folder listing that your operating system would display. Display the item called "Schema (<http://ns.adobe.com/exif/1.0/aux/>)" and look for a line that begins with "aux:ImageNumber:" followed by a number. That number is the shutter actuation count as of the time you shot the photo you're examining.

..... and finally

People say photographs don't lie, mine do.
