Module Four Assignment: Shutter Speed

Learning Outcomes

There are two main technical factors that enable you to shoot in manual, one being the aperture and the other is shutter speed. By balancing these two elements together correctly you can create the effects you want whilst gaining the correct exposure for your images.

Shutter speed is used to control the amount of movement you see within an image and can be a little tricky to get your head around. Having learnt about it through the module, it is very helpful to get out with your camera and physically see how it works by experimenting with your shutter speed.

To fully appreciate the effects of the shutter speed, you want to venture out to a place with plenty of people or traffic. However, if you are a little uncomfortable doing this, then you will need to find a willing assistant to walk, run, or ride past you a few times - whilst you play around with your shutter speed.

Pre-Assignment Exercise

To really help you get to grips with shutter speed, we have put together a little exercise for you to do, so you can see how it works in its simplest form.

(Note: if you don’t have a digital SLR camera you may not have as many shutter speed settings available for you to use.)

Before you start, you want to ensure that the flash is off, and you have set your camera to shutter priority mode. This allows the camera to choose the aperture for you, so that you can focus (for the moment) on the shutter speed.

To best understand how shutter speed works, you want to choose a subject that is moving - and as mentioned earlier, this could be a busy street or road, but if you’re not happy with this right away, it could just be you and a friend or family member who can be your moving subject.

Once you have your subject chosen and your camera set to shutter priority, you will want to set your camera on a tripod or sturdy surface, to keep it nice and steady. The reason for this additional support for your camera is due to camera shake.
occurring with slower shutter speeds. However, if neither are available to you, you can hand hold the camera – but very slow shutter speeds will have additional blurring from camera shake.

Then you want to follow the steps below:

1. Position yourself so you have a clear view of your chosen moving object, and set the shutter speed to the fastest speed available to you.

2. Focus on the area your subject will be in and then take a picture as it passes through the frame.

3. Then, staying where you are and keeping the exact same framing, set the shutter speed to the slowest speed available.

4. Then using the same area of focus, focus the image and take another picture as the subject passes through the frame again.

When comparing the two shots on the camera you should be able to see a clear difference between the two images. To really show you how the shutter speed gradually affects an image, you can set the image up again - but this time take 5-10 photos, each time halving the shutter.

*For example, if the first photograph was taken as 1/4000s, take the second one at 1/2000s, then 1/1000s, 1/500s, 1/250s, 1/125s, 1/60s, 1/30s and so on. Repeat this until overexposure occurs.*

Here is an example of the image progression you should then see:

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<table>
<thead>
<tr>
<th>Shutter Speed</th>
<th>Image Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/320</td>
<td></td>
</tr>
<tr>
<td>1/160</td>
<td></td>
</tr>
<tr>
<td>1/80</td>
<td></td>
</tr>
<tr>
<td>1/30</td>
<td></td>
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<tr>
<td>1/15</td>
<td></td>
</tr>
<tr>
<td>1/5</td>
<td></td>
</tr>
</tbody>
</table>
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All cameras are different, and a lot of compact and bridge cameras are limited to the number of shutter speeds that are available.

Hopefully you will have noticed, whilst using your camera in shutter priority mode, that the camera selects different apertures as you change the shutter speed. As you vary the amount of light entering your camera, different apertures are needed to create the correct exposure. The less light you let in (using a fast shutter speed) the wider the aperture needs to be and vice-versa.

Carrying out this exercise will show you how you can capture motion blur whilst having a fixed point of focus, the background. This is just one of the techniques you can use shutter speed for.
Assignment Details

For this assignment please choose either a Panning or Ghosting technique to incorporate into your photograph.

So now you can take what you have learnt from the exercise above and within the module, and apply it to your photos. Using your shutter speed, try to create various images experimenting with the two techniques of panning and ghosting.

Panning

Panning is the technique of following a subject as it moves, and is a technique that a lot of people struggle with. You might like to know that even experts in photography still struggle with this technique, it takes a great deal of practice to get right. It really comes down to knowing how fast you need to move the camera to keep the subject in focus. In order to pan with a camera you simply select a slightly slower shutter speed and follow the subject as it moves by swiveling the camera - keeping the subject in focus at all times and pressing the shutter button as you pan.

Below is a diagram that shows how the panning technique works.

To get the right results, you really want your camera on a tripod to start with, this will help to keep it level. Then as your subject moves through the frame, you turn your camera and follow it whilst the shutter is open. Now where panning gets a little tricky is that there are no perfect settings that will guarantee the technique will work. Here are 3 images all taken with the same shutter speed but all offer different results:

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A lot of the time it is down to the speed at which you move the camera that can make or break the shot. Too fast and it will all be blurred, too slow and it will also be blurred. It takes practice and patient but can produce some brilliant images.

You don’t have to use a toy car or a real one, you could have someone riding a bike or even walking through the frame, just give it a go and be a little creative.

**Ghosting**

Ghosting is a slightly more advanced technique, which can be used to remove people from an image entirely. Photographers of architecture who want to eliminate the people from the building they are photographing often use this technique.

But you can do more than simply remove people from an image, you can use this technique to cause the people to appear like ghosts, leaving a mere imprint of themselves within the frame. You can also use this technique to create a sense of hustle and bustle somewhere busy; you can have a few people standing still, who are sharp, with blurred people moving all around.

To use this technique successfully you will need to use a long shutter speed, but you need to bear in mind that with shutter speeds slower than 1/30 camera shake is highly likely. This could then produce blurring throughout the whole image causing the image to look messy instead of professional and impressive.
To remove the risk of camera shake, you simply need to use a tripod or sturdy surface to support your camera. You could also consider combining the use of a slow shutter speed and your built-in flash. If you do this with a 3 second exposure you will find that the flash goes off just once and the shutter then remains open, this helps to capture the person in their entirety, whilst not capturing a full solid version of them.

For this technique however, you will need it to be quite dark otherwise there is too much light and the image will be over exposed.

Although it takes most photographers some time to understand shutter speed, it is one of the factors that will improve your photography skills dramatically, once mastered. For this reason, practice, persevere, read and re-read, until you feel confident and comfortable.

Submission Details

For this optional assignment please choose and submit **ONE** of the following demonstrations of shutter speed:

- Panning

  Or,

- Ghosting

Please submit your image through the Assignment Submission area, which is accessible through the dashboard.

**If more than ONE image is submitted, only the first image will receive tutor feedback.**