



Module 16: **Night**

Module overview

In this module you'll learn about the following:

- Introduction to Night Photography
- Using Slow Shutter Speeds
- Using Fast Shutter Speeds
- Fireworks
- Creative Night Photography
- Light Painting
- Night Photography Tips



“The pictures are there, and you just take them.”

Robert Capa
(1913 – 1954)

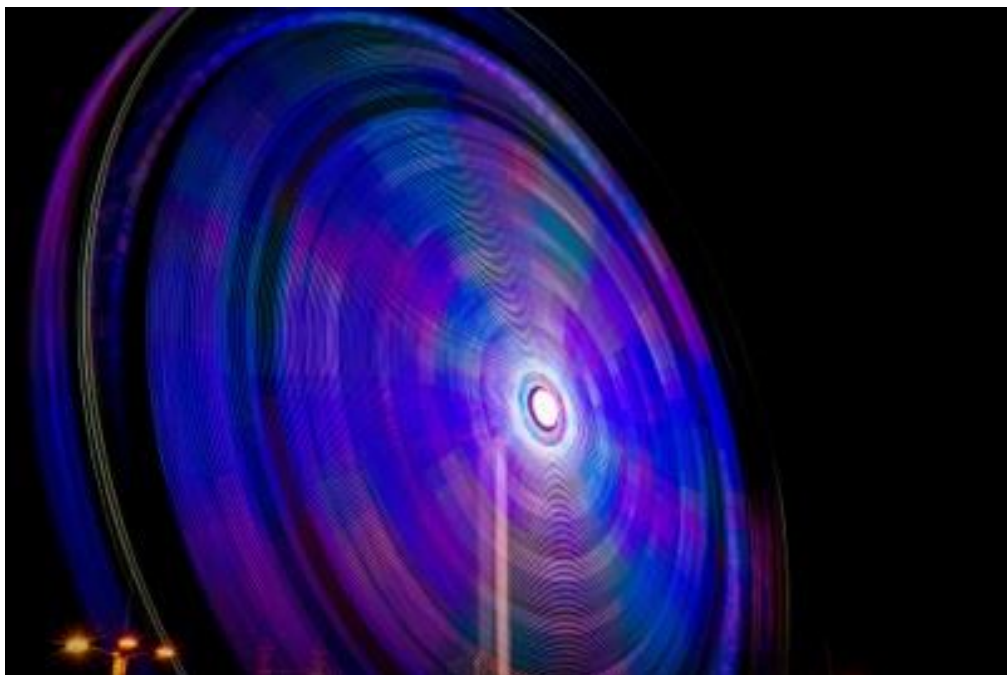
Tip: a UV filter is usually used to protect the lens.

When shooting at night, the UV will create reflections inside the lens caused by light sources in the frame.

Use a lens hood. This will protect the lens and will also prevent stray light from entering into it.

16.1 Introduction to Night Photography

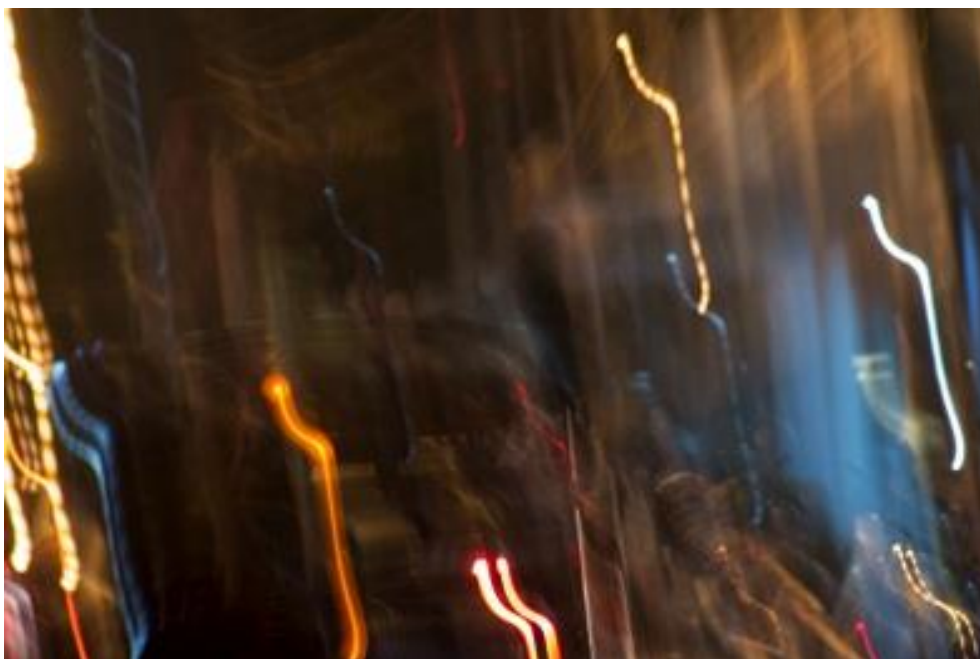
Night photography can be incredibly challenging but incredibly rewarding. The first and most obvious challenge is light (or the lack of light); but this restriction can be used as a positive and give you the opportunity to create some stunning images.



Night photography is great opportunity to experiment with slow shutter speeds. This also has the advantage of allowing you to keep the ISO lower and reducing digital noise. If you want to remove motion blur, a wide aperture and high ISO are required.

16.2 Using Slow Shutter Speeds

The first thing you will need is a tripod. It might be possible to find something to balance and steady your hand with, but it will limit your ability to compose your shots.



This is what happens when you use a long shutter speed without a tripod.

Tip: shoot RAW. Night shooting creates so many variables that by shooting RAW, can help you can correct any flaws – for example, reducing colour noise and fixing any white balance issues.

One factor for determining the best shutter speed will be how fast the objects in the frame are moving; for very fast movement, a half or even a third of second will be enough.



For much longer shutter speeds, try photographing stars.



Even though it's the Earth that's actually moving, if you photograph stars using a long shutter speed the rotation of the Earth will cause the starlight to create circular trails in your image. So how long do you need the shutter open for?

The answer is: several hours. So you will need a camera that has a bulb setting and you will also need a cable release so that you can keep the shutter locked open.

Tip: you should always use a tripod for long exposure and use exposure delay or mirror lock, as well a remote or cable shutter release.

The camera should be perfectly still, so if your tripod is on the flimsy side, you can tie something heavy to the centre column of your tripod to help stabilise it. Make sure the weight is low to ground, as a strong wind may make the weight swing.

If you're looking for more instant gratification, try photographing the light trails from cars.



Using a 30 second shutter speed and an aperture setting on f/2.8 means that the ISO setting can go as low as 100.



Even though light trails look amazing, you still have to think about your composition. When you're setting up your shot, think about where the light trails will enter the frame and where they will exit it. If you're not sure, then take a test shot, look at the composition and then make adjustments to the framing if you think they are necessary.

Tip: try using your flash with a long exposure; it can freeze a subject as well as give you motion blur.

Some common sense is required though; if you're shooting on a busy road, make sure you shoot motorists and/or cyclists from the back. You wouldn't want to blind someone temporarily while they're driving.

16.3 Using Fast Shutter Speeds

If you're shooting hand-held at night, you will need to use a very high ISO setting and the widest possible aperture. This will allow you to use faster shutter speeds, which will eliminate camera shake and motion blur.



By using an aperture of f/5.6 and an ISO setting of 3200, it was possible to capture this image without the need for flash. Using flash can add more light, but when you're outdoors at night you might not have anything to bounce the light off and using a direct flash burst can create harsh lighting. Also, by shooting in RAW it's easier to reduce the digital noise created by the high ISO setting.



At 100% magnification, we can see the amount of noise produced at 3200 ISO; but by using RAW software, this can be minimised to the point where it's not noticeable.

Tip: if you're shooting candid "documentary style" images at night, using the night mode can be useful.

Purists may hate this idea, but sometimes it helps to let the camera do some work and it gives you time to concentrate on getting interesting shots.

If you're worrying about your settings, the chance to capture something might have passed by the time you've sorted them out.

Look for artificial light to help keep your ISO down.



By using the artificial light in this scene, it was possible to use an ISO setting of 400.

16.4 Fireworks



The beauty of shooting fireworks is the fact that they literally explode, so you don't need to use really long shutter speeds to capture them. Although using longer exposures can help when you want wide shots of multiple fireworks, because they will probably go off a different times using a longer shutter speed will allow to capture more. Try to keep your aperture at a medium setting; this will help you to retain the sharpness of the light trails.

Tip: if you're shooting in RAW, try playing around with the white balance when you process your images.

Try all of the presets to see how much difference it makes.

If they look "too warm", then drop the colour temperature using the manual slider.

Ever seen fireworks set off at ground level?



Admittedly, this is a very stupid and dangerous thing to do – so don't try it. But if you're lucky (or unlucky) enough to see people do it, then it can make for some dramatic images. Just be sure to use a long lens and keep your distance: don't even think about getting closer. If you feel the shots are too far away, then you can always crop them later.

16.5 Creative Night Photography

There are many things that you can shoot at night that would not be possible in the daytime. Artificial light has the same intensity no matter what time of day it is, but when natural light is removed the artificial light appears to be much brighter.

As we've already seen, by utilising long shutter speeds those lights can create trails that can be captured by your camera. Remember that this is something that the human eye cannot see.

So if you use your imagination (and a few accessories), you create things no one could ever see in real life.

Tip: if you're taking very long exposures you'll need to keep your ISO as low as possible because long exposures can also create digital noise.

This shouldn't be a problem most of the time because using a low ISO will automatically mean you'll have to use a shutter speed slower.

So your aperture setting will be important and depend on the depth of field you require.

Remember the car light trails?



Try shooting them from inside a car; the best view will be from the back seat. A long exposure will be required in this case – 30 seconds.



Or you could shoot from outside the car.

Before you start sticking your head out of the window of a moving vehicle, you should be aware of clamp mounts. It's essentially the head of a tripod mounted on a clamp. In the example above, the DSLR was clamped to side of the car using a mount. Then the exposure (30 seconds at f/10 and 200ISO) was taken using a remote shutter release.

If you're shooting from the inside of the car, then a tripod should be sufficient; but you might have to tell the driver to keep their speed down and not make any sharp turn or sudden stops (unless it's necessary, of course).

Tip: if you have a smart phone or tablet, try playing a video on it and using that as your light source for light painting.

Choose something colourful and fast moving (probably a pop video). When you get it right, the results will be surprising.

16.6 Light Painting

Do you know what this is?



It's a light painting. They are surprisingly easy to create. All you need (apart from your camera) is a tripod and a portable light source.

Set your aperture to a medium setting (somewhere between f/8 and f/16), with a low ISO, and take a long exposure – anywhere between 5 to 20 seconds depending on the strength of your light source. You can use anything that generates light and is portable (an LED light, laser pointer, smart phone).

It helps to have another person to wave the light source; but if not, just use the shutter delay setting or a remote or cable shutter release. For an image like this, you will have to either shoot outside in an area with no other artificial light or in a completely dark room.



Tip: there are some apps available that will scroll words and phrases across the screen of your smart device.

Try taking a long exposure with one of these. The timing will be tricky, but when you've worked it out, the word or phrase should be light painted across your image.

You don't have to limit yourself to a dark room, though.



The exposure times will vary depending on your location, so some experimentation will be required. Keep your aperture in the mid-range and your ISO low. If the images are too light or too dark, then adjust your shutter speed or try a different light source.

Light painting can also be used to illuminate a subject during a long exposure. Shine your light source in the direction of your subject and move it around to ensure it covers the whole surface. This will require some trial and error.

16.7 Summary

- Exposure settings are crucial; you'll need to adjust your ISO and aperture to the shutter speed you want.
- Long exposures need a medium to small aperture and a low ISO.
- Fast exposures will need a large aperture and a high ISO.
- When shooting long exposures, do everything possible to keep the camera still.
- If you have to use high ISO, then shoot RAW.
- Be creative with long exposures.
- Light painting is fun.

Assessment 16

- 1) Should you use a UV filter at night?
- 2) Do long exposures produce digital noise?
- 3) If you were shooting hand-held at night, what would you do to your aperture and ISO settings?
- 4) True or False? If you want to shoot star trails, your camera must have a Bulb setting.
- 5) Name three things you can do to help stabilise your tripod during very long exposures.
- 6) Should you use a large aperture setting for light painting?
- 7) Can light painting only be done at night?
- 8) True or False? A small aperture setting is recommended for night photography.
- 9) What could you use clamp mount for?
- 10) Should you always have your camera in manual mode when shooting at night?

16.9 Assignment

Find a location suitable for night photography. Take a tripod and remote or cable shutter release (if you don't have one just use the auto timer to delay the shutter) and take long exposures. Experiment with the length of exposures: try shooting the same subject with and without using flash.

If you have any portable light sources, try some light painting as well. You can make abstract lines and shapes or write words (you will have to write them backwards, however). Also, try and use the portable light source to illuminate one object during a long exposure.