

How to photograph "star trails"

When photographing stars, you can either get pinpoints of light or streaky "trails" depending on what shutter speed you use.

This article deals with photographing star "trails". Keep in mind with the rotation of the earth, stars begin to "move" after about 15 seconds.

Firstly, you have to choose a cloud free night away from city lights. If you are close to a town or city, rather move a few kilometres away to a spot where the lights will not interfere with your shot. Rather also do not choose a time where the moon is full, it has to be as dark as possible.

Try for a clear smogfree night as the smog will reflect any ground light.

What you will need:

1. Warm clothing and warm drinks (if it is winter time)
2. Sturdy tripod
3. Cable release for your camera (that can lock)
4. Fully charged battery
5. A clean 2gig or bigger card for your camera
6. Wide angle lens
7. The option to "clean noise on long exposure" needs to be set to "off" on your camera
8. A chair
9. Flash light
10. A compass

The reason for the compass being that you face your camera towards the South so you can get the "circle" effect of the moving stars.

If you have a wide angle lens, that is preferable, but a standard lens will also do.

Set up your camera on a sturdy tripod facing South, to get the circle effect of the star trails

Attach the cable release, this is to ensure that you restrict movement when taking your photos.

Open your lens as wide as possible, if you have 2.8, that is your setting

Set the camera to manual mode

Set the autofocus switch on your lens to "off"

Set the focus to infinity

Set the exposure time to 30 seconds. Most DSLR cameras are able to do this, if not, use a cable release that you can lock.

Set the ISO to 200

Set the White balance to Auto

Set the drive mode to continuous shooting

Take a test photo to check your settings, make adjustments if the result is too light or dark. The above are suggested settings.

You now need to take photos of 30 second exposures for at least two hours. No one said this was going to be easy! Attach the cable release to your camera and press the shutter button, at the same time slide the button to the "lock" position. The camera will now automatically take a photo every 30 seconds. The example photo was exposed for two hours and resulted in just over 200 photos. While the camera is doing all the hard work for you, pour yourself a mug of hot coffee (or something stronger to ward off the cold)

OK, now you have a few hundred photos on your camera, now what do you do.

Go to the website www.startrails.de , click on Software and download the Startrails.zip software. The software is free.

You might need to download the Microsoft.NET framework as well. (also free)

Install the software on your computer, and now the fun starts.

Download the photos from your camera into a folder on your computer.

Click on File/Open images, select the images from a folder on your computer and click the Startrails button. The software will now create your startrails image. When it is finished, save the image as a .jpg, I used 1000 times compression. Now tweak the image further with your image software, I used Photoshop.

Tip: When setting up your camera to take your photos, make sure to have something in the foreground as well as the sky. This will give some scale to your photo and not just show some streaks in the sky. Look at the gallery on the Startrails website to see what I mean. The attached photo was my first try at taking Startrails.

The equipment I used:

Canon EOS 450D

Sigma 10-20mm wide angle lens, set at 10 mm

Cable shutter release that can lock

Sturdy tripod

Have fun!