STAR PHOTOGRAPHY

My attempt!

500 rule for sharp stars

Max time = 500

focal length x crop factor

= 500

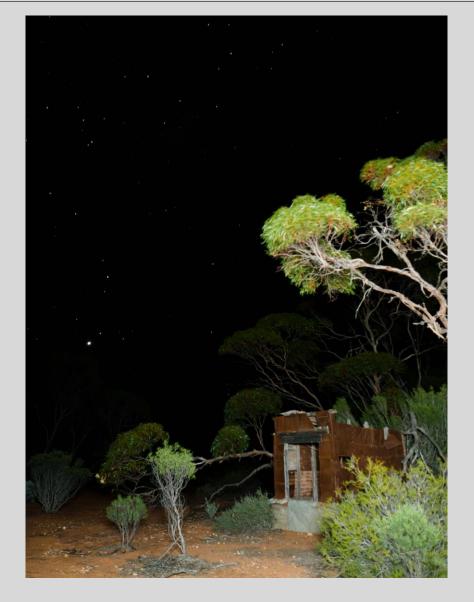
 12×2

= 21 seconds

So my 39 seconds was far too long. My stars are not sharp they formed a streak.

I was more concerned with light painting the buildings.

In fact I only really saw the stars when I processed the image.



ISO 200, 12mm, f/2.8, 39 seconds

Settings for Stars - Starlight

It's all about getting enough **starlight** onto the sensor

- Clear night!
- Find a dark sky area (minimal light pollution) e.g. <u>River Murray Dark Sky Reserve</u>.
- Avoid too much Moonlight
- Red light torch Or torch covered in red cellophane.
 - So you can see your camera without affecting the night adjustment of your eyes.

Settings for Stars - Camera Settings

- Tripod
- Wide, fast lens. A fast lens is one with a large aperture F2.8 (maybe F4) or lower.
 - Manual mode
 - Widest aperture
 - High ISO e.g. 1600 (preserves the colour of the stars)
 - Calculate speed
- Manual Focus
 - Move focus to infinity
 - Look at brightest star and fine tune till that star is a pin point.
 - Use focus magnification if you have it (x7 or x10)

Or

- Olympus Starry Sky AF
- Cable release, shutter delay etc. to trigger shutter.
- Trial Shots review and adjust

Settings for Star Trails - three methods

- 1. One very long exposure (at least 30 minutes)
- 2. Many shorter exposures that are then photo stacked.
- 3. Olympus Live Composite
 - The first photo is a base exposure
 - As other photos are taken, only new light is registered so the trail is made but any buildings etc. that are static are not blown out.
 - Live View enables you to see the image as it is being built up.
 - Computer in the camera stacks photos together into one image.

Star Trails - One shot

- Battery fully charged!
- \circ Lens that lets in as much light as possible e.g. f/2.8 or wider.
- F2.8, ISO 100 or ISO 200 or 320 if f4 or f5.6
- Test shot for 30 seconds to see if stars get recorded in the frame.
- More test shots until you have a good image.
- Increase shutter speed to around 10 to 15 minutes. Try more test shots by doubling the exposure time till you are satisfied.
- Need a minimum of 60 minutes exposure for good trails.

Information from https://www.lightstalking.com/how-to-photograph-star-trails/

Star Trails - Image stacked (shorter exposures)

- Wide aperture
- ISO 320-640 or higher -know what ISO you are willing to accept in your camera
- Noise reduction off
- Test shot adjust
- Set up intervalometer in your camera.
- Minimum of 50 exposures for short star trails, 200-300 for decent star trail.
- Stack images using Image Stacker or DeepSkyStacker.

Information from https://www.lightstalking.com/how-to-photograph-star-trails/

Stars Post Processing

- Brighten
- Adjust white balance
- Noise reduction
- Multi-shot panoramas then stich in Lightroom or Photoshop