

# Vixen Polarie Star Tracker

review by Paul Russell

One of the many problems of being a budding travelling Astro-photographer is finding that ultimate portable mount. But no matter how you try to do it there is always too much equipment to carry to call it truly portable. Enter the Vixen Polarie, for wide-field imaging. This may just be the answer.

To be honest when I first saw the advertisements for it I thought it was a bit of a gimmick. Something to play around with, but not a serious astrophotography tool. But what you see here is all you need. I am amazed at the quality of tracking provided by this tiny unit. Hardly bigger than a Canasta pack it punches way above its weight. Easily handling a Canon 60D, a 135mm f/2 lens (no lightweight), a dew strap and cable weight, the Vixen Polarie performed way beyond my expectations.

Setting up was straight forward. I recommend getting the full kit including compass and polar scope. Using just these two, polar alignment was achieved in under 15 minutes and enabled consecutive 8 minute exposures with an 85mm lens for 4 hours. No Auto-guiding, just setup and go.



*Above: Vixen Polarie fitted with optional polar scope and polar meter which slips into the hot shoe adaptor at top of the star tracker. Tilt meter on the side indicates correct elevation corresponding to the users observing latitude.*



Due to the amount of weight that can be hanging off the front of the Polarie a solid mount is needed. The Polarie may handle it, but the mount and head may not. I used a Vanguard Tracker1 mount, a reasonably robust tripod and mount head rated to carry 5kg, and for the lighter lenses it performed well. However for heavier lenses particularly, when the camera is in the inverted position for imaging around the meridian of the south celestial pole (see image), flexure in the mount could be an issue to deal with.

The ball head used at the front of the Polarie is a Benro rated at 5kg and carried the camera and largest lens easily.

I found using a mount with a U saddle head on the mount easier to use than a ball head. To achieve the accuracy needed for polar alignment the ability to be able to make fine adjustments of the individual axis is important, and the U saddle is much easier than a ball head to achieve this. The U saddle also allows the screen on the back of the camera to be seen. If your camera does not have a flip out screen (or you forget to flip the screen out before aligning your shot) the U saddle head gives clear visibility to the screen and easier access to camera controls.



With the tilt/pan style U saddle I kept the adjustment handle to the front of the mount. It is too easy during the night when moving from one object to the next to forget to adjust the ball mount at the front of the Polarie and find out you have just tilted the whole lot and thrown your polar alignment out.

Luckily it only takes a few minutes to get back into polar alignment again with the quick release mounting system that holds the camera to the Polarie. Frustrating to have to do again, but simple enough. Keeping the handle at the front helps to prevent this from happening.

**Left:** Canon 60D, 85mm f/1.8 lens, tripod, Polarie, dew strap, controller cables and power supply. All that is needed for a successful nights imaging.



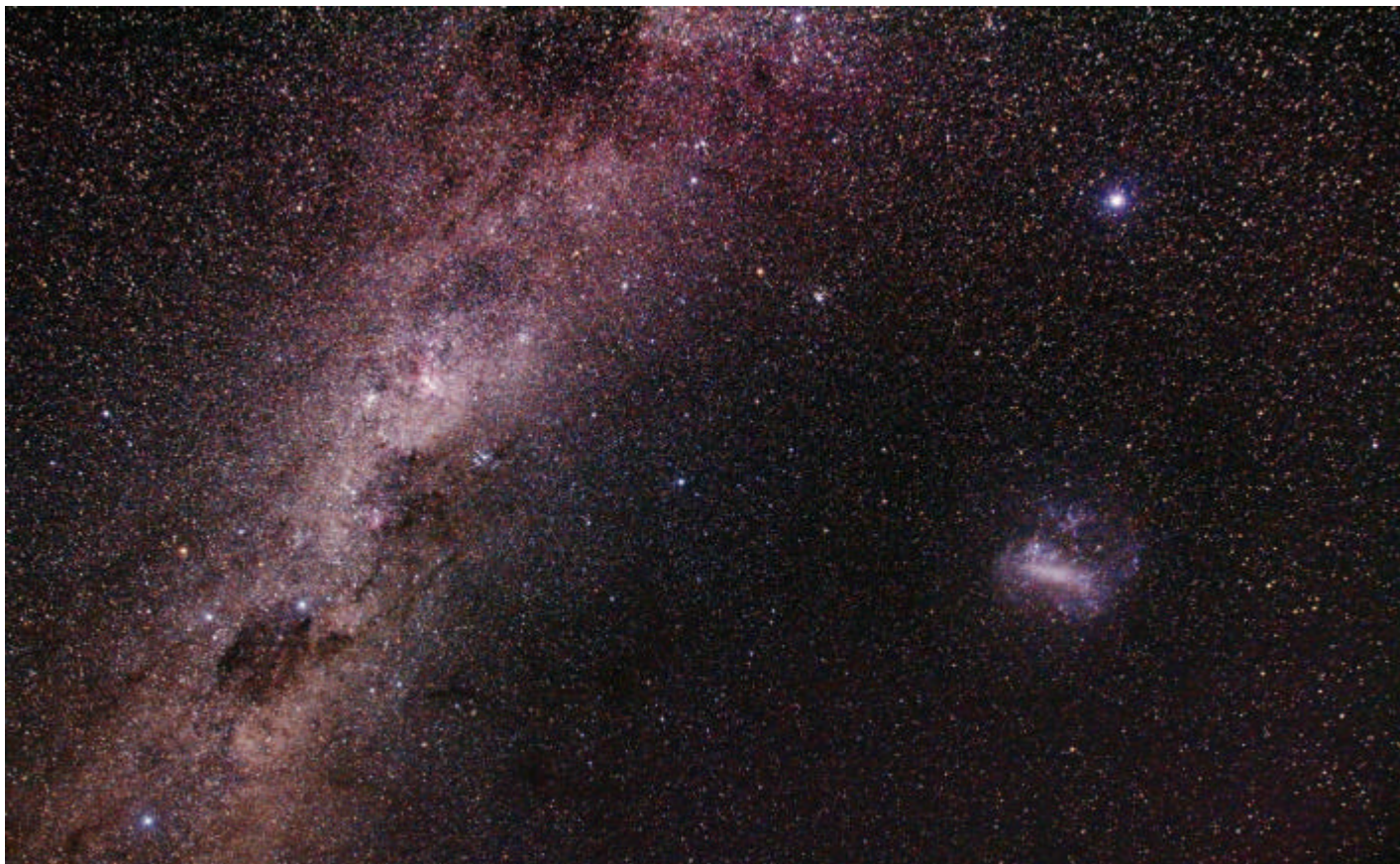
The Polarie performed without a hiccup, whether using the 2 AA batteries required or an external power source.

The 2 AA batteries drove the Polarie with camera and 85mm lens for nearly 6 hours which was impressive, though during winter I would not expect to go much longer than 1/3 that time.

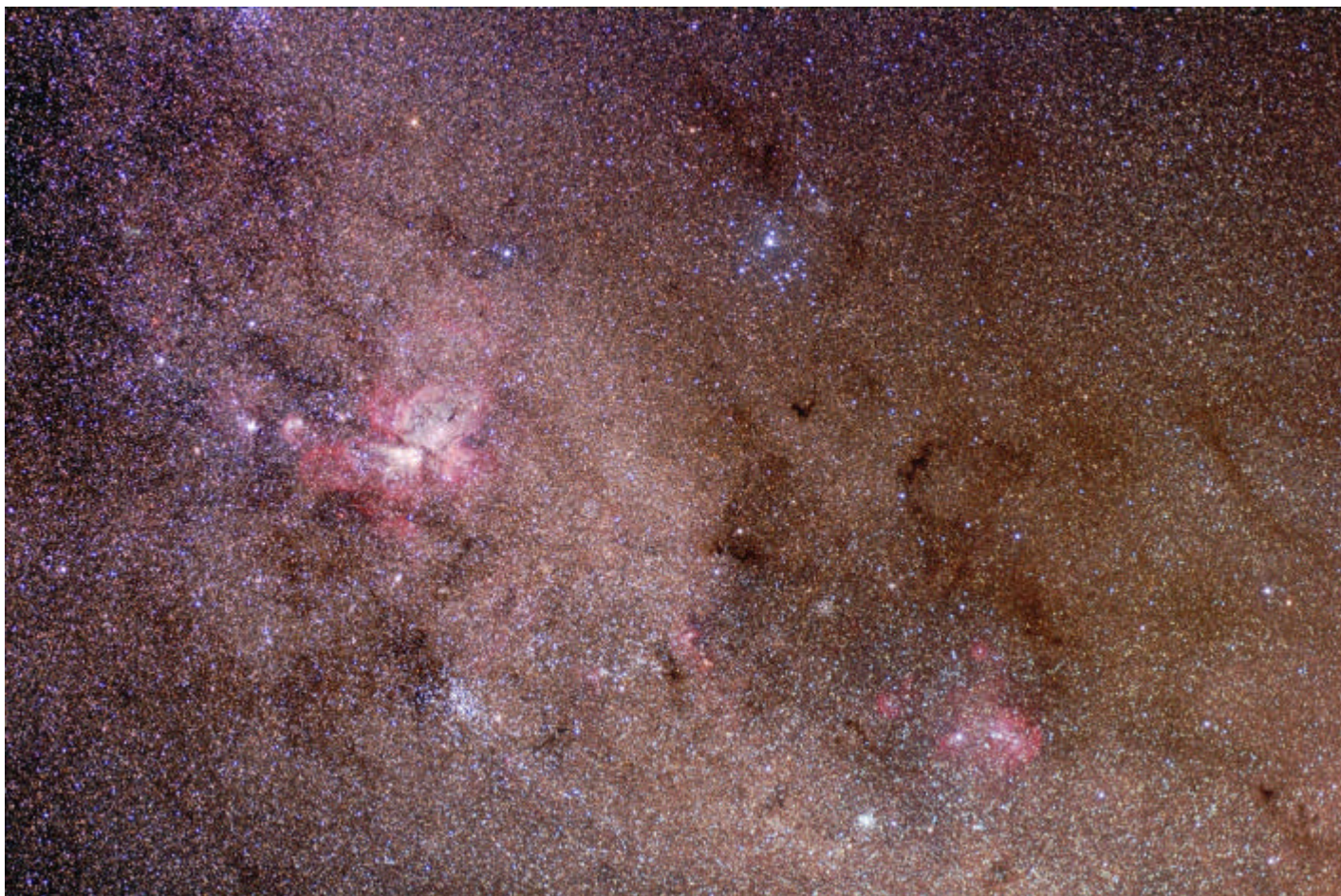
To power it externally the Polarie can be powered from your laptop via a micro USB cable or from AC or DC adapter with the micro usb cable.

I used the AC adapter for my Samsung mobile phone and the micro usb cable that came with my Canon camera. It also worked well using a USB/12V cigarette lighter adapter. The versatility of the powering arrangements means that power issues should never be a problem.

And the results? Well I think they speak for themselves. From 17mm up to 85mm there was no drift detected in 8 minute exposure. At 135 mm there was minimal drift on 4 minute images, and this may well have been flexure in the mount.



Canon 17-40mm f4 lens set at 17mm and f4.5. Total 14 exposures at 8 minutes each.



Canon 85mm f1.8 lens set at f2.5. 30 exposures at 8 minutes each.



Canon 135mm f2 lens set at f2. 50 exposures at 4 minutes each



Canon 135mm f2 lens set at f2. 50 exposures at 4 minutes each

*Paul Russell is long time accomplished astro-photographer & astro-photography educator based in south eastern Queensland where he runs regular telescope and Astro-phography workshops.*

*We thank him for taking the time to review the wonderful Vixen Polaris Star Tracker.*