

Getting astro-imaging on track

■ The Canon 20Da mounted on Vixen's Polarie tracking mount. Image left: Ninian Boyle; right: Pete Gamby/Vixen.



Can Vixen's new Polarie camera tracking mount make following the stars to obtain that perfect scene of a starry sky that bit easier? **Ninian Boyle** finds out.

Astro-imaging in all its forms is becoming increasingly popular. It's then good to see that manufacturers are rising to the challenge of making this particular field of amateur astronomy more accessible. If you have ever attempted to take images of the night sky with just a DSLR camera and tripod you will already be aware of the issue of star trailing in your shots. The new Vixen Polarie camera tracking mount virtually eliminates this, or so the advertising suggests.

Vixen have never been slow in coming up with new, innovative products and their latest offering is in the form of a device to aid the astro-imager to take wide-field vistas of the starry night sky in a simple and effective manner. The box arrived well packaged and inside was a Velbon photographic tripod, the Polarie tracker itself and a couple of accessory boxes. On opening the Polarie I was intrigued to find that it looked a little like a digital camera and was pleasingly robust. I read the instructions and it seemed quite simple to set up and use and so it was – I had the whole thing assembled and ready for action in just a few minutes. I already began to imagine the type of photographs I might be able to take with this kit and drew up a mental list of shots I would attempt while I had use of the equipment. I quickly realised that my old Nikon DSLR would not show off what the Polarie could do particularly well, so I called a friend and asked to borrow his Canon 20Da camera, a device coveted by many astro-imagers, including me!

Apart from the Velbon tripod – which was pleasingly light in weight and yet stable – and the Polarie itself, the package included a polar alignment-scope designed specifically for use with the Polarie and an additional box that contained a camera ball and socket pan head made by Opticon. The supplier kindly included two AA batteries required to make the Polarie work, so it was just a matter of

following the instructions regarding polar aligning the tracker so that I could then start taking pictures. There are two ways to polar align the system, the simple method using a small 'window' in one corner of the Polarie through which you 'sight' the Pole Star, or the more accurate method using the supplied polar alignment-scope. Initially I chose the quick method as I was keen to get taking pictures. Bubble levels in the tripod helped considerably with levelling and aligning the whole thing. To get the Polarie pointing in the general direction of the celestial pole, you can turn the tracking rate knob to its 'set up' position which will illuminate a small dial on the side of the unit showing you the angle in degrees to which the Polarie is tilted. In my case, the required angle was just over 50 degrees as this was the latitude where I carried out the tests. Once the unit was roughly polar-aligned I set up the camera with an 18–55mm wide-angle zoom lens with the lens at its widest setting in order to give a good panoramic view of the night sky.

Four speed

The Polarie has four tracking rates; the first of these is half sidereal rate. This is a clever compromise for

wide-angle scenic shots as it allows the user to take moderately long exposures with minimal blurring of the foreground and also minimising unwanted star trails. If little or no star trailing is more important to the shot however, you can switch the Polarie tracking to full sidereal rate, ideal for taking images of constellations or regions of the sky where there are no foreground objects or where blurring of these is less important to the quality and number of stars that you have in your pictures. The unit also has a lunar and solar tracking rate option, so you could for example get some pleasing shots of the Moon using a telephoto lens or likewise the Sun, providing you use appropriate filters.

The instructions thoughtfully provide a table to indicate the lengths of exposure you should be able to obtain once the Polarie is reasonably well polar aligned, without getting any star trailing on your images. The biggest problem I had was with local light pollution and a bright first quarter Moon! I opted for exposures of around one minute that would normally show significant star trails with just a static tripod. I also attempted a couple of two minute exposures, but the Moon washed out the sky background to the extent that

Back with Vixen's Polarie



▲ The Polarie can also come in snazzy red! Image: Pete Gamby/Vixen.



▲ A look at the controls on top of the Polarie, including the knob for altering the tracking rate – half and full sidereal rate, as well as lunar and solar. Image: Pete Gamby/Vixen.

there was little to be gained from the extra time. I'm sure that a clear Moonless night and little or no light pollution would easily bring out the full potential of the tracker. The universal pan and tilt head made setting up and framing shots relatively easy, although I found that care had to be taken not to knock the tripod. A remote shutter release also made the whole operation go more smoothly.

I decided then to set up the Polarie using the supplied polar alignment-scope. This was also easy to install and set up using the instructions, although I felt they could be a little clearer in explaining how the dials were to be used in different longitudes if, in other words, you were travelling with the tracker. Also, as you are relying on nothing more accurate than slipping clutches and levers on the tripod to set up, precise polar alignment was quite tricky to obtain. Perhaps some kind of fine adjusters could be utilised for this purpose in future models?

My overall impression of the Vixen Polarie was that it was well thought out, easy to use and answers a real need for those of us who like to take dramatic pictures of the night sky. Its price tag would perhaps make one consider other similar types of photographic tracking mounts, but the portability and ease of use make this a winning product in my estimation.

Visit Ninian Boyle's website *Astronomy Know How* at www.astronomyknowhow.com. He would like to thank Nick Yellop of sunworshippers.org for the loan of his Canon 20Da camera for the purposes of this test.

▼ The region of night sky around Cassiopeia, photographed with a Canon 20Da mounted on a Vixen Polarie tracking mount. Image: Ninian Boyle.



At a glance

Vixen Polarie camera tracking mount

Dimensions:	13.7cm x 9.4cm x 5.8cm
Weight:	800g (with batteries)
Power:	2 x AA batteries (last two hours)
Maximum payload capacity:	2kg (4.4lb)
Tracking:	half and full sidereal, solar and lunar, usable in both hemispheres
Optional accessories:	Polarie polar axis-scope, ball and socket panhead, Velbon VS-443D tripod
Details:	Available exclusively to Astronomia (01306 640714, www.astronomia.co.uk) and The Widescreen Centre (020 7935 2580, www.widescreen-centre.co.uk). Also see www.vixenoptics.co.uk .
Price:	£399

▼ Orion and surrounding stars, imaged with a Canon 20Da on top of a Vixen Polarie mount. Image: Ninian Boyle.

