

Vixen's GP Mount

Introduction

The Vixen Great Polaris (GP) is a German equatorial mount costing around 700 US Dollars, it is rated to carry telescopes to 4 inch refractor, 8 inch SCT or 6 inch Newtonian size. The GP succeeds the earlier Super Polaris mount. There are various accessories such as the dual axis stepper motor drives shown here. In addition there is a computer drive system to slew the telescope under computer control. The cost of extras can be very high, the motors and hand controller cost over 300 US Dollars.

A closer look

The standard mount includes slow motion controls, fine adjustment for azimuth and elevation to aid polar alignment, latitude scale, built in polar alignment scope, quick release dovetail mounting for the scope, mechanical setting circles and slip clutches on both axis. The claimed accuracy of the polar alignment scope is 3 minutes of arc, this wasn't tested as accuracy of that order doesn't really matter for most purposes and if it does matter you can always set the mount using the drift alignment method over a couple of hours. The mount seems very sturdy and has easy clutch adjustment. It is important to avoid the telescope or counter weight shaft jamming against the tripod legs as serious damage to the gears can result, this is rather surprising for such a costly mount. The drive wheels have 144 teeth and are totally enclosed, this makes for a very neat installation with none of the exposed oily drive wheels of some earlier telescopes, this reduces fouling of the drive wheels by clothing or blown dirt.



The drive, while not including periodic error correction with the standard hand controller, is incredibly accurate. The overall sidereal drive rate is virtually fault free when using a 135 mm telephoto lens over at least a 15 minute period. The lower picture shows the central portion of a photograph of M31 taken entirely 'hands in pockets' for 15 minutes and doesn't show any star trailing whatsoever. The mount shown here belongs to [COAA](#). Bev Ewan-Smith has produced his own computer driven stepper motor interface that we used to located planets and some brighter stars during daylight using this mount. The unit slews fairly rapidly between objects and is certainly capable of giving a 'Messier tour' or similar feat. Bev manufactures this unit and sells it for around 199 UK Pounds, a good deal cheaper than the Vixen version. There are details available at the COAA web site.

Conclusions

The choice of telescope mounts is usually between virtually home made 'garden shed' mounts with open gears, questionable accuracy, no polar alignment aids and all the usual lack of facilities that can become irritating, or you spend a small fortune on a semi professional mount. This Vixen mount falls between the two extremes and provides a good sturdy mount with the opportunity to upgrade to a dual axis drive or computer driven mount. The tracking accuracy is superb. On a later visit to COAA I used this mount with my Starlight Xpress 'SX' colour head camera. I took dozens of individual one minute shots. None of these images showed any trailing at all (900mm focal length Newtonian telescope). While it would be naive to assume that other GP mounts would track without apparent periodic error, this one certainly performed beyond expectations.



Central portion of photograph of M31 taken with 135mm lens, 15 minutes unguided.

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