

FIRST light

Sky-Watcher EQ8 PRO equatorial mount

Fills the gap between the NEQ6 and its more expensive brethren

WORDS: STEVE RICHARDS

VITAL STATS

- **Price** £3,395; optional polarscope £99.99
- **Load Capacity** 50kg
- **Hand controller** SynScan
- **Database** 42,000 objects
- **Flash Upgradeable** Yes
- **Autoguider port** ST4
- **Tripod** Heavy-duty with central pier
- **Extras** Flight case, assembly tools, 12V cigar lighter cable, ST4 cable, serial cable, shutter release cable, two 10kg counterweights
- **Weight** Mount 27.6kg without counterweights; tripod 29.4kg
- **Supplier** Optical Vision
- **www.opticalvision.co.uk**
- **Tel** 01359 244200

Taking delivery of the new Sky-Watcher EQ8 PRO is quite an event: you'll probably need to help the deliverer unload the three large boxes because they are pretty heavy. The mount head, hand controller, cables and counterweight shaft are supplied in a custom-built flight case that ensures their safety. The incredibly substantial tripod comes in the second box, while the final box contains the polarscope assembly and two sculptured 10kg counterweights. Assembling the mount is just about a one-person task, but care must be taken because of the weight of the individual components. You'll be thankful for the excellent grip handles attached to the mount head, as these make lifting and placing the mount on the tripod quite straightforward. A rather nice gear drive tightens the 12mm, spring-loaded central mounting bolt using a large silver knob on the side of the pier. Levelling the mount is made simple by the inclusion of three free-standing, height-adjustable feet.

First time assembly takes about half an hour using the excellent instructions in the two manuals supplied, but subsequent assembly is much quicker. Everything about this mount is heavy duty, underpinning its suitability for permanent installation in an observatory.

SKY SAYS...

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Azimuth adjustment is carried out using two opposing hand bolts against a central pillar, and thanks to the large nylon pads on the pier top the movement is very smooth and controllable. Altitude adjustment is achieved using a large single worm drive with a chrome T bar at one end to push or pull the base of the mount into the correct position, and this was very easy to operate. Once the correct

elevation has been set, the mount is locked by two substantial hand bolts; tightening a further two Allen bolts ensures that nothing can subsequently move.

Heavy duty, heavy hitting

The 32mm-diameter counterbalance bar screws securely into the base of the RA axis. Further emphasising the high payload capacity of 50kg, we had to ballast our refractor to achieve balance in right ascension even though we were using just a single 10kg counterweight installed at the very top of the 400mm-long stainless steel counterbalance bar.

There is an iterative polar alignment routine controlled by the SynScan hand controller that results in quite accurate polar alignment, but for all our visual tests, we used an external polarscope (an optional extra). The polarscope is attached via an

A GOOD SENSE OF DIRECTION

There are many occasions when it would be rather useful to be able to unlock your mount's clutches during an observing session to, for example, quickly point the telescope in a totally new direction without having to use the hand controller. Unfortunately, with a normal Go-To mount, it is imperative that the clutches are kept locked at all times after the initial star alignment has been carried out. Failure to do so will leave the mount's tracking system unable to determine where it is pointing.

The EQ8 has auxiliary encoders on both the RA and dec. axes that work in conjunction with a special function built into the hand controller called 'Freedom Find'. Provided the mount isn't turned off after alignment, you can unlock either or both clutches at the same time and manually move the telescope to point in a new direction, and the auxiliary encoders will keep track of the movement. When you then relock the clutches, the Go-To system will carry on tracking, knowing exactly where the telescope is now pointing.

See an interactive 360° model of this mount at www.skyatnightmagazine.com/sweq8



LOSMANDY-STYLE SADDLE

Recognising that the EQ8 is going to be used with larger telescopes, the installed saddle is a very heavy-duty Losmandy-style unit with three spring-loaded, 8mm hand bolts to clamp the jaws firmly closed. The ends of the side cuts are neatly chamfered to make installation of the telescope's dovetail bar easier.

HAND CONTROLLER

The SynScan hand controller is well established and will be well known to many astronomers. It gives access to a database of over 42,000 objects chosen from Solar System, NGC, IC, Messier, Caldwell, SAO, Named Star, Variable Star and Double Star categories, as well as being capable of generating a deep-sky tour.



CONNECTIONS

The connections are thoughtfully placed, making them easy to access. The switchable 12V power connector has a retaining collar to avoid accidental disconnection, while the standard ST4-compatible guide port and hand controller socket are complemented by a 'snap' socket – this allows you to control a DSLR shutter via the hand controller.

TRIPOD PIER

A very substantial braced tripod with an adjustable-height pier is included. The pier can be set at any height from 800mm to 1,100mm. The top platform has a geared drive to tighten the central mounting bolt to the mount, while large nylon pads make azimuth adjustment very smooth.



Dec. clutch

RA clutch

FIRST light

► impressively solid right-angled bracket. We found that it worked very well, but were disappointed that it was not illuminated.

The EQ8 has a very useful 'auto-home' feature that uses two home sensors to place the mount in a repeatable position at the start of each session, ideal for running the star alignment routines. For the most part, this worked very well, but on two occasions it resulted in a long search followed by the declination axis ending up 180° out of position.

Following a two-star alignment, the Go-To system placed each of our subsequent test objects, including those within the Solar System, very close to the centre of our 17mm eyepiece. Swapping to our 8mm eyepiece, our test star remained in the centre of the field of view for an hour and a half – at which point we ended the test.

We were pleased to note that computer control using the excellent EQMod software was fully implemented, as this is a very popular solution. Our imaging tests took place during some of the worst February weather conditions ever reported, but autoguiding using our own off-axis guider showed smooth corrections with no backlash issues.

Apart from the auto-home issue, the mount performed flawlessly throughout our tests and

we were impressed by its heavy-duty build quality and quiet operation. Recommended for intermediate astronomers, especially those with an observatory, the EQ8 has a class-leading carrying capacity and neatly fills the gap between the venerable NEQ6 and much more expensive high-end mounts. **S**

SKY SAYS...

Now add these:

1. 17Ah power tank
2. GPS mouse
3. Extra 10kg counterweight



POLARSCOPE

Rather than being installed in the RA axis, the EQ8's unusual polarscope is mounted externally on a very substantial right-angled bracket. Once we had aligned it correctly to the mount using the clear instructions provided it was very easy to use.

However, we were surprised that it did not have an illuminated reticule.

VERDICT

ASSEMBLY	★★★★★
BUILD AND DESIGN	★★★★★
EASE OF USE	★★★★★
GO-TO ACCURACY	★★★★★
STABILITY	★★★★★
OVERALL	★★★★★

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