

FIRST LIGHT

See an interactive 360° model of this mount at www.skyatnightmagazine.com/SWEQR6

Sky-Watcher EQ6-R Pro SynScan equatorial mount



A worthy addition to the EQ6 series with welcome upgrades

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VITAL STATS

- **Price** £1,379
- **Mount** Equatorial Go-To
- **Tripod** Stainless steel with adjustable legs
- **Fit** Dual Vixen/Losmandy-style dovetail saddle
- **Max payload capacity** 20kg (excludes counterweights)
- **Controller** SynScan V4 hand controller
- **Flash upgradable** Yes
- **Database** 42,000 objects
- **Tracking speeds** Sidereal, solar and lunar
- **Power** DC11~16V 4A
- **Weight** Mount 17.3kg; tripod 7.5kg
- **Extras** Two 5kg counterweights, counterweight shaft, power cable, camera snap port cable (specify camera type when ordering)
- **Supplier** Optical Vision
- **www**.opticalvision.co.uk
- **Tel** 01359 244200

Sky-Watcher mounts have a good reputation for stability and reliability, and the long-established EQ6 series is no exception. This latest variant, the EQ6-R Pro, brings further refinements and a slightly greater carrying capacity than previous models, up from 18kg to 20kg.

The EQ6-R certainly looks the business. In addition to the main mount head, the package includes a stainless steel tripod, a pair of 5kg counterweights plus extension shaft, a SynScan V4 Go-To hand controller, a power connector and a camera snap port cable. Note that you need to specify your camera model when ordering so you get the right snap cable, and that the carrying capacity does not include the counterweights. For astrophotography, we'd always recommend working at half to two-thirds the official capacity to take into account the weight of your imaging accessories, such as the camera, a guidescope and a guide camera.

Several tweaks to the EQ6 design stood out as we set up for our first practical night sky test. First, Sky-Watcher has incorporated a very welcome carry handle on the main body of the mount, which really helps if you need to keep the EQ6-R in storage when not in use. Second, the latitude and azimuth adjustment bolts are nice and chunky, and easy to grab hold of even with gloved hands, and they made adjustments much easier. The old

SKY SAYS...

We can see the EQ6-R becoming the mount of choice for those wanting to upgrade from EQ3s and EQ5s

graduated scale for latitude on the mount side has now been replaced with a latitude dial scale which we found useful on initial setting up for our latitude.

Another nice new feature is the change to the polarscope end cover – it used to be a screw-in cap that could be easily cross threaded, rendering it hard to remove or screw

back on. Now the end cap slots over the polarscope and is held in place with a plastic screw, a simple but effective solution to this particular problem. The saddle for attaching a telescope has undergone a slight but welcome redesign that makes it feel much more solid in use compared with – say – the NEQ6, and it can take both Vixen- and Losmandy-style mounting bars. Assembly was straightforward, all things considered.

Taking a tour

After attaching a SkyMax 180 Pro Maksutov telescope to the mount, we polar aligned and performed a three-star Go-To alignment using the SynScan V4 handset, then completed a tour of some deep-sky objects in and near to Leo, Cancer, Hercules and Ursa Major – including M1, M42/43, the Leo Triplet, the Eskimo Nebula, NGC 2903, M13 and M92. The mount placed all of our targets inside the inner 50 per cent of the view with our 26mm eyepiece, which gave a magnification of 104x. ▶

TRIPOD

The sturdy tripod has 2-inch stainless steel legs with easy-to-lock bolts when making height adjustments. It is lightweight at just 7.5kg, yet provided good support for the mount even when fully loaded with equipment. It comes with a spreader tray with cut-outs for both 2-inch and 1.25-inch eyepieces.



CONNECTIONS

The connections are easily accessible on the side plate of the mount. They include the power connector, an ST-4 compatible guide port, hand controller socket, red indicator light to denote low battery status and a snap port that allows you to control a DSLR camera's shutter via the hand controller.

ADJUSTMENTS

The latitude and azimuth bolts have chunky knobs and a tensioned latitude lever on one side. A welcome improvement is the easy-to-view latitude dial, with its clear graduated scale. There's a bubble level on the mount base for easy levelling.

SMOOTH BELT-DRIVEN TRACKING

One of the key innovations of recent years is the introduction of belt drives, offering smoother operation and better results when guiding. In the past this was an option for astronomers willing to perform the upgrade themselves, but now mount manufacturers have taken this on board – and so you'll find one in the EQ6-R.

In our tests, the belt drive gave good tracking and Go-To accuracy, and we experienced very little backlash when moving from one target to

the next. It also made for a much quieter viewing experience; some mounts can be quite noisy when slewing from one target to another, but that's not the case here.

Add in the functions of the SynScan hand controller and you have a mount that can give satisfaction to both visual users and imagers alike, especially if you perform periodic error correction and add in additional alignment points for greater accuracy.



SYNSCAN V4 HAND CONTROLLER

The SynScan hand controller is easy to use, with good-sized buttons with a gentle red illumination. It has a database of 42,900 objects including the Messier, NGC and Caldwell catalogues, the brightest stars, double stars and Solar System bodies. You can also use the handset to adjust mount functions and its firmware is upgradable.

FIRST LIGHT



▲ A cropped stack of 23 one-minute exposures of comet 41P/Tuttle-Giacobini-Kresak, imaged with a DSLR and Equinox 80ED refractor



▲ The M81/M82 galaxy field, captured in 54 one-minute exposures using the same camera and telescope combination

► Pointing accuracy can be refined using the hand controller's sub-menu, although for visual observing this was not really necessary.

For long-exposure astrophotography you can use the handset to perform periodic error correction (which can be retained for future use) along with additional alignments to improve both pointing accuracy and tracking. Our own astrophotography setup doesn't require the snap port, but the option of having it is useful – now incorporated onto Sky-Watcher mounts as standard, it offers a way of controlling the camera via the SynScan hand controller if you don't have a remote control.

After mounting a Canon EOS 50D DSLR and an Equinox 80ED refractor, we took a series of one-minute exposures of comet 41P/ Tuttle-Giacobini-Kresak and of galaxy pair M81/M82 in Ursa Major on separate nights, and obtained good results on both image runs. We also hooked up our Wi-Fi controller to the handset and used SkySafari Pro 5 to control the mount wirelessly, undertaking another tour of the sky with good results.

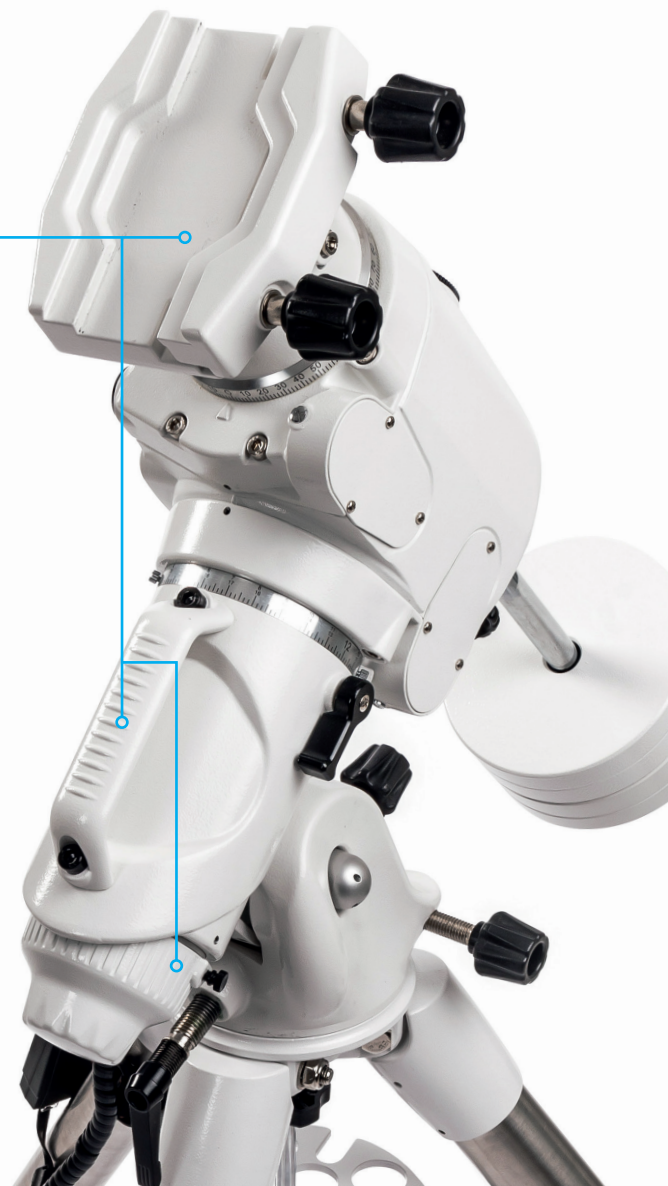
We can see the EQ6-R becoming the staple mount of choice for those wanting to upgrade from EQ3 and EQ5 mounts if they wish to stick with a familiar setup and delve into the realm of astrophotography. **S**

SADDLE AND HANDLE

The EQ6-R has a solidly designed dual-fit saddle that can take either Vixen- or Losmandy-style mounting bars, and the locking bolts are nice and chunky with good grip. It also possesses a useful carry handle and an improved protective cover for the polarscope.

SKY SAYS...
Now add these:

1. GPS mouse
2. Sky-Watcher Synguider autoguider
3. Sky-Watcher 17Ah rechargeable power tank



VERDICT

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