In the shops

Opting for the iOptron

Olly Penrice took time to test iOptron’s new GOTO mount under the dark skies of his Les Granges Astronomy Holidays farmhouse.

It is easy to see the design objectives behind the iOptron IEQ45 German equatorial mount; portability, speed and ease of setup, imaging-friendly accuracy in pointing and tracking, plus a 20 kilogram payload.

Lifting it from its box I realised that it certainly is a very light mount for its claimed payload and much less of a lump to move about than our EQ6 and Takahashi EM200. The whole thing fitted together effortlessly, the main bolts combining Allen key heads with nylon finger knobs. There are synthetic washers, in many places, which are likely to get lost or crushed by over tightening, but they are not really necessary. The declination cable is external, probably because the svelte design has little internal room.

With the mechanical side of the setting up done very sweetly I turned to polar alignment, something mobile imagers want to be quick and accurate. The alignment routine on the iOptron is both. First, switch on the mount and handset as soon as you can because the GPS can take minutes to orientate itself. While it is doing so, set the mount level with the built-in spirit level and use a compass to set it roughly north. A clear latitude scale allows you to have prepared a rough latitude setting at home.

Once locked on, the GPS gives the mount everything it needs to know (though if it fails you can type in your co-ordinates) and you ask it to show you the ‘Polaris Position’ which it does by presenting what looks like the hour hand of a clock in a circle. This shows you where to put the North Star on a clock-like reticle seen in the polarscope, though screwing in the separate polar illuminator is a niggle when an integrated one would have been more in keeping with the very slick alignment routine on offer.

Moving the mount to bring Polaris into position was easy with the altitude adjuster being far better than some. It’s a splendid system, but with one small caveat.

Yes, a guest who also had his own IEQ45 operating during the test, initially found that his polarscope was imperfectly aligned, with nothing in the manual to advise on adjustment. The iOptron helpline provided instructions and he sorted it out easily. I did not check ‘my’ mount but the standard routine allowed me to take ten-minute sub exposures and several hours of data free of serious field rotation so I was very happy with it.

When putting on the telescope for balancing I encountered some iOptron idiosyncrasies. Although the manual runs through the balancing procedure as if the mount had conventional clutches, it doesn’t. It has four clamp bolts per axis and never becomes free enough to let the payload and counterweights pivot easily for balancing. The manual’s stony silence on the matter was patently disingenuous. For declination you could always balance your telescope/camera/guider across a pencil on the kitchen table and mark the mid point but for right ascension you will just have to guess.
At a glance:

**iOptron IEQ45**

**German equatorial GOTO mount**

- **Mount weight:** 11.4 kilograms
- **Payload:** 20 kilograms
- **OTA attachment:**
  - fits 89mm (3.5-inch) Vixen dovetail and 203mm (eight-inch) Losmandy mounting plates
- **Power:** 12V DC (car plug adaptor included)
- **GOTO:** 130,000 object database
- **Accessories:**
  - Heavy duty stainless steel tripod, polarscope, two 5 kilogram counterweights
- **Price:** £1,599

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