

SKY-WATCHER

Skyliner-300P FlexTube Auto

Sky-Watcher's latest Dobsonian telescope can track the stars so that the views through its huge aperture stay in the eyepiece. **Paul Money** takes a look

VITAL STATS

- ▶ **PRICE** £1,099
- ▶ **APERTURE** 305mm (12 inches)
- ▶ **FOCAL LENGTH** 1,500mm; f/5
- ▶ **OPTICAL DESIGN** Newtonian reflector
- ▶ **FINDER** 9x50 straight-through
- ▶ **EYEPIECES** 25mm, 10mm; 1.25-inch fit
- ▶ **FOCUSER** Crayford; 1.25- & 2-inch fit
- ▶ **MOUNT** Motorised Dobsonian
- ▶ **WEIGHT** 40kg
- ▶ **SUPPLIER** Optical Vision
- ▶ **WWW** opticalvision.co.uk
- ▶ **TEL** 01359 244200

When John Dobson created the telescope design that bears his name, he would scarcely have imagined how it would evolve thanks to Sky-Watcher. First, the company came up with the FlexTube collapsible truss tube, which greatly improved portability. Now it has added auto-tracking motors to the FlexTube design, taking the Dobsonian on its next great leap forward.

The Skyliner-300P FlexTube Auto is a delight to use, especially as it comes almost fully assembled; there's no hassle of having to assemble a flat-packed

MDF rocker base here, like the setup of some other Dobsonians. This is no doubt to ensure that the 300P's axis motors stay accurately installed. Instead, you just lift the tube assembly onto the rocker base and the main job's done. All that's left is the 9x50 straight-through finderscope to assemble and the hand controller to install.

The 300P comes with two eyepieces, a 25mm and 10mm 1.25-inch fit that give 60x and 150x magnification respectively. Its Crayford focuser can also take 2-inch eyepieces with the supplied adaptor. To power the system there's a battery holder that takes eight size D batteries, or you can

plug it into a power pack, neither of which are supplied.

The Skyliner's 1,500mm of focal length collapses down to just under a metre thanks to its telescopically extending trusses, making it extremely portable for such a large instrument. We were impressed to find no collimation issues, even after repeated setups. And with its tracking motors, we could take decent images of the Moon and planets, despite the fact that long-exposure imaging has never been the domain of the Dobsonian in the past.

Time to cool off

Like all large telescopes, we found that it was best to set up the 300P at least half an hour before use. This was so that the tube could cool down to the ambient temperature and stop the eddying air currents in the tube disturbing the view and affecting performance. The open truss design at the front of the tube assembly helped speed up the cooling process. In use, the Skyliner turned out to be quite smooth to move around manually, considering that it has motors on both axes. There was a bit of play, but it wasn't a major problem.

Checking the optics with the supplied 25mm eyepiece, we ▶



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AUTO TRACKING TO THE RESCUE

Dobsonian telescopes are great light-gathering instruments, but their drawback has always been the need to move the mount manually to keep objects in view. Not any more. The FlexTube Auto's tracking motors are a fantastic addition. The days of pushing a Dobsonian around the sky are numbered.

The auto tracking was easy to set up: you only have to put in your latitude. Then, you can manually move the scope to your target, or slew to it with the motors. And by pressing two buttons on the hand controller, you select tracking mode.

With the 25mm eyepiece, our targets stayed in the central 50 per cent of the view for more than 30 minutes, with only a small amount of drift – plenty of time to enjoy even the most engrossing views. Power comes from eight D-type batteries or by plugging in a power supply. We had no problems using batteries, which lasted for several nights.

The Skyliner 300P's auto tracking feature is an accomplished addition to John Dobson's great design. How long will it be before we see the next step in the Dobsonian's evolution, with the addition of Go-To?



Focuser

Getting a perfect focus is essential for visual and imaging use. We were able to catch subtle details in deep-sky objects with fine adjustments made to the Crayford-style focuser. It wasn't too stiff and it didn't have too much slack.

Optics

A 12-inch mirror collects 44 per cent more light than a 10-inch, but if the optical surfaces are poorly figured or out of alignment then that extra light could be wasted. Fortunately, there were no apparent defects in any of the mirrors.

Motor drives and controller

The motor drives were smooth to operate and kept celestial objects in view for at least 30 minutes, with a little drift over longer periods. At high powers we noticed a slight jerkiness to the views as the motors adjusted the position in both axes. The hand controller is simple to use.

► got a crisp view of the star Vega across 65 per cent of the field of view before it trailed off towards the edge. When we swapped in our own 25mm Plössl eyepiece of known quality, we got a better result: sharp views across 75 per cent of the field. The Moon fitted in the 25mm eyepiece's view with room to spare and revealed impressive detail and sharp relief in the craters of the lunar southern hemisphere. Saturn was also a beguiling sight, revealing two belts, a very thin ring system and, on one night, seven of its moons.

Deep-sky greats

When we turned to the Double Double, the star Epsilon Lyrae, the 10mm eyepiece revealed a very refined view indeed, clearly splitting the famed star into its four components. With the resolution test criteria truly met, and with sky conditions on the night seemingly exceptional, we pushed the envelope by dropping our own 5x Powermate Barlow into the optical train with the 10mm eyepiece. Loaded with magnification equivalent to a 2mm eyepiece, we sought out Zeta Boötes – a double star with just 0.7 arcseconds of separation. We could make out the two stars with their Airy discs (ring patterns surrounding them) overlapping during moments of steady seeing – astounding!

The deep sky was equally striking. The whirl of spiral arms around M51 and the dust patches along the disc of galaxy M82 were two particularly memorable sights. Messier 13, the Great Globular Cluster in Hercules, was stunning with the 10mm eyepiece, with innumerable stars surrounding its densely packed core. Nebulae really benefitted from the Skyliner's light grasp: M17, the Omega Nebula in Sagittarius, and M27, the Dumbbell Nebula in Vulpecula showed some lovely detail.

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Finderscope

The finderscope gives a bright, wide field of view for initially locating objects. It is positioned close to the focuser but doesn't impede it, and it's easy to look through without having to crane your neck.

Mount

The mount was able to handle the 300P tube assembly with ease and was very easy to set up despite its bulk. Motion in both axes was smooth and the height of the rocker box put the eyepiece-end of the tube at a reasonable height for viewing.



Overall, the Skyliner put in a premier performance, but the real delight is its tracking, which keeps objects in view for pretty long periods of time (see 'Auto tracking to the rescue' on page 90). This gives you all the pleasures of viewing the night sky with a large telescope without the drawbacks of setting up a large and heavy equatorial mount. Thoroughly recommended. ✪

VERDICT

BUILD QUALITY	94%
EASE OF USE	92%
FEATURES	95%
OPTICS	92%
TRACKING ACCURACY	90%
OVERALL	93%