

FIRST LIGHT

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



Sky-Watcher Star Adventurer Mini

A little, lightweight tracking mount packs a big punch

WORDS: PAUL MONEY

VITAL STATS

- **Price** £279
- **Payload capacity** 3kg
- **Latitude adjustment** 0-90°
- **Tracking rates** Sidereal, 0.5x sidereal, 2x sidereal, lunar, solar, no tracking (all via Wi-Fi)
- **Power requirements** 2x AA batteries
- **Polarscope** Polarscope with separate red-light illuminator
- **Extras** L mounting bracket, built-in Wi-Fi, snap camera control port, 1/4-3/8-inch thread converter
- **Weight** Mount 650g, wedge 518g
- **Supplier** Optical Vision
- **www** opticalvision.co.uk
- **Tel** 01359 244200

Imaging the night sky was once the domain of the specialist astro imager with a telescope. They'd either image directly through the scope or piggyback their camera on it for wide field constellation photography. But in recent years a number of small, lightweight tracking mounts have appeared, bringing astrophotography to a greater number of astronomy enthusiasts and the latest entry into this field is Sky-Watcher's Star Adventurer Mini.

Sky-Watcher has taken its original Star Adventurer tracking mount and shrunk it to make it an ideal travelling companion. The Star Adventurer Mini Wi-Fi bundle consists of the tracking mount, an equatorial wedge, a dovetail L-bracket, a ball-head adaptor, a polarscope and a polarscope illuminator along with built-in Wi-Fi. Power is provided by two AA batteries or connection to a laptop via the mini-USB port. We were also loaned the optional 1kg counterweight and shaft to allow the use of larger lenses. Sky-Watcher recommends a maximum load weight of up to 3kg; we found a Canon EOS 50 DSLR and Canon 100-400mm lens comes in at 2.5kg combined. For

SKY SAYS...
Sky-Watcher has taken its original Star Adventurer and shrunk it down to make a mount that's ideal for travelling

most astrophotography Sky-Watcher also suggests using lenses of up to 100mm, but we tried a range that included wide-field 18mm and 200mm lenses (the latter produced slight tracking issues noticeable only when really zoomed into the images).

Able to cope with more

The Star Adventurer Mini tracking mount can be attached directly to a tripod, using the latter's tilt head to provide the adjustment for your latitude when polar aligning. It weighs just 650g so if weight is critical, such as when you're travelling abroad, it gives you the option of leaving behind the equatorial wedge. However, the latter provides sturdy support for the tracking mount and excellent adjustment for polar alignment. It only weighs 518g and has a bubble level so we'd always use it as part of the kit for astrophotography.

We used a Canon EOS 50 DSLR and 18-55mm lens for wide-field astrophotography. The ball-head adaptor has a short Vixen-style bar that slots into the Vixen-style dovetail on the mount head. Using a ball head to attach a camera provides greater flexibility for framing your targets. For larger lenses, up to the suggested weight and lens size, ▶

TRACKING MOUNT BODY

The main Star Adventurer Mini body is small enough to fit in your palm and weighs just 650g. It can be used either attached to a tripod, with latitude adjustment done via the tripod's tilt head, or with the supplied equatorial wedge.

WI-FI & APP

The tracking mount has a built-in Wi-Fi network that allows you to connect your smartphone or tablet to it and control the tracking and other aspects of the mount via the free Star Adventurer Mini app. It also allows you to control your camera via the snap port, however the correct camera remote cable is an optional extra.



EQUATORIAL WEDGE

The equatorial wedge provides greater flexibility for levelling the mount on a tripod, with the included bubble level, as well as a wide range of latitude adjustment from 0-90°. Two adjustment bolts for azimuth make it easy to line up with the azimuth direction of the polar axis.



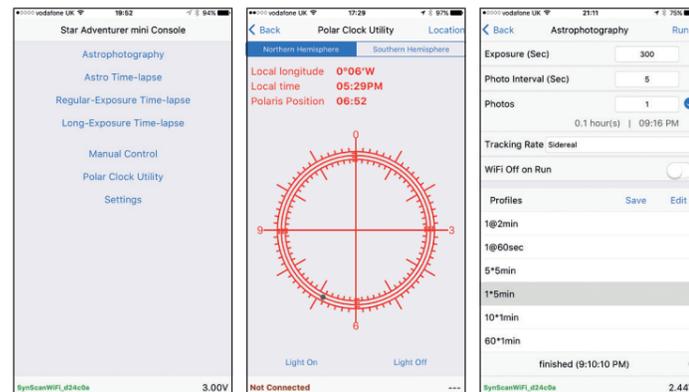
POLARSCOPE/SIGHT

Polar alignment is achieved with a pair of line-of-sight holes for rough alignment, then with an integrated polarscope for accurate fine-tuning. The polarscope can be lit with a small illuminator that fits over the front of the unit or with the supplied adapter for when the L bracket is installed.



TRACKING THE APP

A tracking mount with built-in Wi-Fi might seem to be overkill for such a simple piece of equipment. Why go to the trouble of making it controllable via a smartphone app when all that's needed is to turn on the power and perform a rough polar alignment via the sighting tubes? However, it only took moments for us to become completely hooked on using a smartphone to set up and control both the Star Adventurer Mini and our camera. This facility will have huge appeal to tech-savvy internet-loving astro-imagers. With the power on and Wi-Fi connected, the app gives you total control and includes a polar-alignment chart showing you exactly where to place Polaris in the polarscope. The green LED on the mount informs you of the Wi-Fi connection and the mount is almost silent in operation while the app has a multitude of functions that includes controlling the duration of the exposure. This adds a fun element to imaging the night sky and one that we found enjoyable to use.



▲ Simple menus and control options make the free app user-friendly

FIRST LIGHT

SKY SAYS...

Now add these:

1. Fotomate H-26qr tripod ball head
2. Sky-Watcher shutter release cable
3. 1kg counterweight and shaft

► the dovetail L bracket is replaced with the ball-head adaptor.

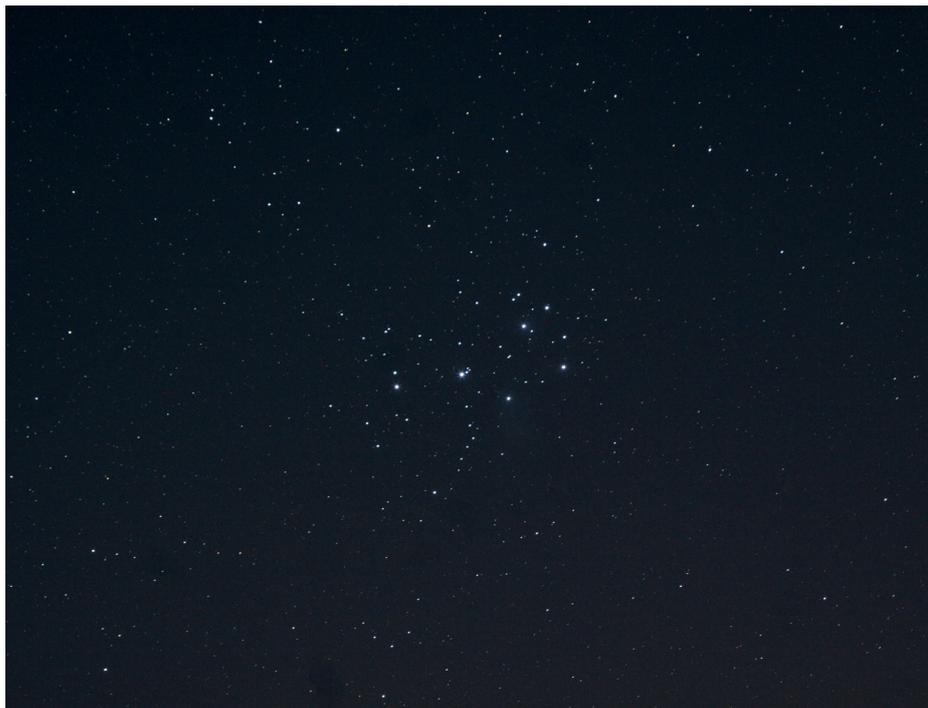
The built-in Wi-Fi network allows you to sync your smartphone or tablet to the tracking mount and control its various functions. The Star Adventurer Mini app – downloadable for free for both iOS and Android – is extremely easy to use and has a multitude of functions that are too numerous to

cover in detail. Its primary function, however, is to set the tracking rate, length and number of exposures, all of which can be stored for future use. Various tracking rates can be chosen and there are also functions that make time-lapse photography possible. Sky-Watcher has given the app a great deal of thought but one slight niggle is that the night light option is not particularly effective.

The faintest of trails

After making sure the setup was polar aligned, we used the app to program a range of timings. With the DSLR and its 18-55mm lens set at 18mm we were able to take a 10-minute exposure of Taurus and Auriga with barely any trailing evident until we zoomed right into the image. We then set the camera lens to 55mm and framed the Pleiades and Hyades and were able to take a five-minute exposure that again showed barely any trailing.

Swapping to a 100-400mm lens required us to use the L bracket along with the optional counterweight and shaft. We set the lens to 200mm, framed the Pleiades and achieved a two-minute exposure. Sky-Watcher suggests a maximum lens of 100mm, but we found it could cope with bigger lenses, which makes this an ideal basic solar setup for eclipse chasers. Overall, the ease of use, highly practical app and Wi-Fi connection make the Star Adventurer Mini a winning combination and a highly recommended piece of kit for budding astrophotographers who like to travel. **S**



▲ The Pleiades (M45) taken with 100-400mm lens set at 200mm, f6.3, with a two-minute exposure, ISO 400. Light pollution has been removed and the levels adjusted

L BRACKET AND BALL-HEAD ADAPTOR

The supplied ball-head adaptor allows you to attach a camera directly or fit an optional ball head if you're using a DSLR and wide-angle lens. For larger lenses the dovetail L bracket provides better support and balance while an optional counterweight and shaft is useful for the heaviest lenses.



VERDICT

ASSEMBLY	★★★★★
BUILD & DESIGN	★★★★★
EASE OF USE	★★★★★
FEATURES	★★★★★
TRACKING ACCURACY	★★★★★
OVERALL	★★★★★