FIRST light

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

Sky-Watcher Star Adventurer DSLR mount

A portable tracking mount that offers flexibility as well as accuracy

WORDS: PAUL MONEY

VITAL STATS

- **Price** £299
- **Payload capacity** 5kg
- **Latitude adjustment** 0°-75°
- **Tracking rates** Sidereal, 0.5x sidereal, lunar, solar for northern and southern hemispheres
- **Timelapse settings** 12 hours, four hours and two hours per revolution
- **Polarscope** Illuminated with 7° field of view
- **Power requirements** 4x AA batteries (not supplied), external power via mini USB DC 5V
- **Extras** Fine-Tuning Mounting assembly, 3/8-inch ball head adaptor, equatorial head, counterweight, camera shutter cable
- **Weight** 1kg
- **Supplier** Optical Vision
- **www.**opticalvision.co.uk
- **Tel** 01359 244200

SKY SAYS...
We captured five-minute expoures of the Double Cluster with only the slightest hint of trailing

WWW.THESECRETSTUDIO.NET X 5, PAUL MONEY X 2

Capturing the majesty of the night sky in wide vistas using a DSLR camera is a rewarding experience, especially if you can take long enough exposures to bring out the subtler features present: the vast clots of dust and nebulae peppered with stars. Doing so used to entail piggybacking your camera on a telescope and using the scope's motor drive to compensate for the rotation of the heavens. Today, there are a plethora of small mounts designed for this purpose. Sky-Watcher has now entered the arena with its Star Adventurer DSLR mount, and a great looking thing it is too.

Our review covers the 'astrophotography bundle', which comprises the main unit, an equatorial wedge, counterweight bar including a 1kg weight, 3/8-inch ball head adaptor, Fine-Tuning Mounting (FTM) assembly and a polarscope illuminator. Also included is a DSLR shutter control cable, for which you specify your camera make and model before ordering to get the right cable. Unlike some similar mounts on the market, this one doesn't come with its own tripod.

Inherent potential

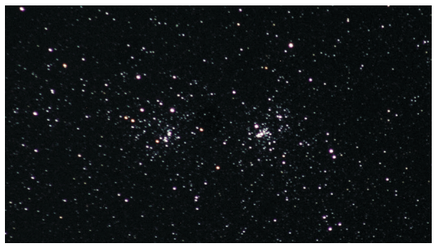
We found assembly and use was reasonably straightforward. For the most basic setup, all you need to add is your camera with a lightweight lens, on a ball head mount (not supplied). A spirit level on the equatorial wedge allows you to level the system before performing the polar alignment. Alignment was easy to achieve – we did so by using an app on our smartphone to show exactly where to place the pole star in the illuminated field of view of the polarscope. Alternatively, you can set the date and time dials on the polarscope to place the pole star in the correct position for alignment.

For wide-field astrophotography our Canon EOS 50D DSLR with an 18-55mm lens was fixed on a ball head, which was then attached to the supplied ball head adaptor with its Vixen-style bar. However, before attaching the camera to the main unit you need to perform the polar alignment using the built-in polarscope. We did note that you ►

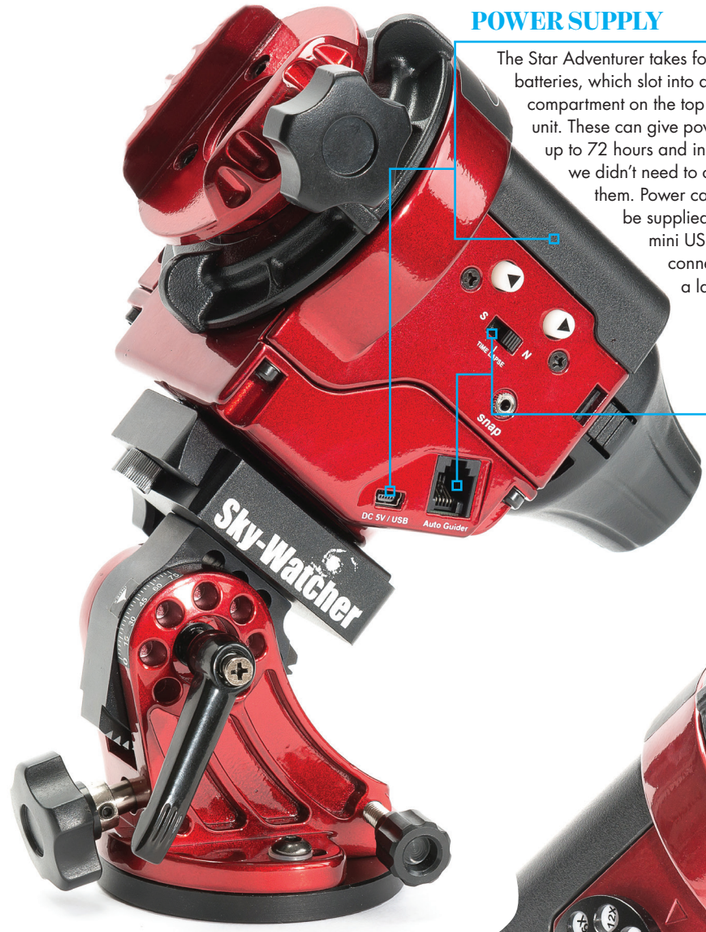
A REAL 'STAR' TRACKER

With our basic setup and camera lens set at 31mm, our 20-minute exposures of Cygnus showed nice sharp stars and no sign of trailing. We swapped to our 70-300 mm lens – as you increase the lens size, you also magnify the effects of star trailing. Setting the lens to 300mm and aiming at the Double Cluster in Perseus, we managed to capture five-minute exposures with only the slightest hint of trailing. Switching to our heavier Canon EF 100-400mm lens (and adding the Fine-Tuning Mounting assembly for greater stability), we set the lens to 100mm and captured good five-minute exposures of the Andromeda Galaxy region. Finally we pushed the lens to 400mm, aimed at the Double Cluster and got exposures of two minutes before significant trailing. Take a lot like that and you'll be a happy snapper. The weather beat us during our time using the Star Adventurer so we were unable to test out the guider port, but even so the Star Adventurer is really a 'star' tracker for wide-field imaging without it.

Our five-minute exposure of the Andromeda Galaxy, imaged using a 100-400mm lens at 100mm



Our five-minute exposure of the Double Cluster in Perseus, imaged using a 70-300mm lens at 300mm



POWER SUPPLY

The Star Adventurer takes four AA batteries, which slot into a compartment on the top of the unit. These can give power for up to 72 hours and in our tests we didn't need to change them. Power can also be supplied via a mini USB 5V lead connected to a laptop.

SWITCHES AND GUIDE PORT

On one side is the main selector knob, which allows you to choose sidereal, lunar and solar rates, an 'off' position, plus settings for timelapse photography. On the other side are left and right buttons, the northern/southern hemisphere selection switch, camera snap port, autoguider port and mini USB socket.

POLARSCOPE

The Star Adventurer has a built-in polarscope usable in both northern and southern hemispheres, which we found worked without any extra calibration. The polarscope illuminator is a little fiddly but does its job, however it does need to be removed before adding a camera.

EQUATORIAL WEDGE

The equatorial wedge can be set from 0° to 75° latitude for either hemisphere with an easy to use adjustment knob and locking handle. Longitude adjustment via two adjustable bolts helped in fine tuning the alignment. We found it very stable once attached to our tripod.

FIRST **light**

▸ cannot leave the polarscope illuminator in position after doing this – it must be removed before attaching the camera gear. Ensure you are happy with the polar alignment and lock the position securely before you do so.

Installing the Fine-Tuning Mounting assembly before the camera increases the mount's flexibility, as it allows you to attach a second ball head adaptor. This means you can attach another camera, creating a dual-imaging system – especially useful in meteor photography – or a lightweight scope, either to use for direct observation or as a guidescope. The mounting also allows you to attach the supplied counterweight shaft and counterweight, should you need them to balance the setup.

The mount offers several options, including northern or southern hemisphere tracking and timelapse. A rotating dial allows you to select from a normal sidereal (star tracking) rate, 0.5x sidereal, lunar and solar rates, the last two being useful for imaging eclipses. The 0.5x rate allows for wide-field exposures that have semi-sharp foreground objects (such as trees or distant mountains) while giving reasonably sharp stars as well. Three further options are for timelapse photography.

Using our Canon DSLR and a range of lenses we took a series of exposures of varying lengths to get an idea of how well the mount tracked (see our outstanding feature, page 94). Overall we were pleased with our results, considering the Star Adventurer is a fairly light 1kg without its extras. This means it is ideal for solar eclipse or astrophotography trips involving air travel, when weight can be an issue. Add to that its stylish design and it's a piece of kit you'll like to show off while on holiday as you capture the grandeur of the night skies.

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

SKY SAYS...
Now add these:
1. Sturdy tripod
2. Ball head adaptor
3. Skymax 90 telescope tube

FINE-TUNING MOUNTING ASSEMBLY

The Fine-Tuning Mounting assembly allows for a small telescope to be attached either for visual or guiding use, and has its own declination manual slow motion control. A second ball head adaptor can also be added, allowing you to create a dual-imaging setup.