

# Go light with the Star Adventurer mount

Sky-Watcher USA's mount is small, light, and accurate — plus, it won't break the bank. **by Mike Reynolds**

There have been many times when I wanted a lightweight, portable equatorial mount to use with a small telescope, Hydrogen-alpha (H $\alpha$ ) instrument, or camera when I was traveling. Those occasions when I braved taking a larger equatorial mount, especially when flying, were challenging to say the least. My wife would look at me like I was crazy: one suitcase for our clothes and three for the mount, tripod, accessories, and tools. When the airlines' luggage scale readout maxed out, I knew I was in more trouble.

A small, reliable mount for observing is always a nice piece of hardware to have if you're like me and enjoy escaping for an evening or weekend. Or perhaps you have a telescope and want to

**Sky-Watcher USA's Star Adventurer mount provides a highly portable option when you want to do some grab-and-go observing while still tracking what you see.**

SKY-WATCHER USA

upgrade to a mount with the ability to track as you observe.

## First impressions

Sky-Watcher USA has designed and manufactured a portable German equatorial mount (GEM) called the Star Adventurer. What I saw right out of the box pleased me. The unit is lightweight, tipping the scales at a little over 2 pounds (1 kilogram) not including the optional counterweight (\$30), which is a shaft with a 2.2-pound weight on it. All construction also was of high quality.

The Star Adventurer package normally includes a polar scope and illuminator. The one I tested also had some accessories: an adjustable wedge, the counterweight set, and a fine-tuning assembly for mounting a telescope. The Star Adventurer does not come with a tripod; I used medium- and heavy-duty photographic tripods for the review.

Note that Sky-Watcher USA makes two versions of this mount. The \$339 Astro Package (the one I tested) has a declination bracket. The Photo Package, which retails for \$20 less, comes with a ball-head adapter. That accessory allows you to easily attach a DSLR camera.

Setting up the mount is easy. I used the included equatorial wedge with the Star



The author attached his Canon DSLR and zoom telephoto lens to the mount, which carried the combo with little effort. MIKE REYNOLDS

Adventurer GEM and the 3/8-inch threaded setup. The wedge lets you adjust the mount to your latitude for polar alignment, a must for when you want to track. Just make certain your tripod is sturdy enough that you don't pick up any unwanted vibrations.

I preferred to attach the wedge directly onto the tripod. Yet you could use a pan- or ball-head tripod setup if you want. Some of you might even use a pan- or ball-head as your wedge to adjust to the North or South Celestial Pole.

The mount has an excellent built-in polar alignment telescope. You calibrate it with a well-designed reticle with markings for both poles, making alignment easy. I recommend using the adjustable illuminator to light up the reticle. The mount also features a date dial to compensate for star drift over time.

The mount derives its power from either four AA batteries or a 5-volt USB port. The specifications noted up to 72 hours of continuous use with one set of AA batteries.

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The motor is a DC servo type, the aluminum alloy wheel gear measures 3.4 inches (86 millimeters) in diameter with 144 teeth, and the brass worm gear is 0.5 inch (13mm) in diameter. I note these specs to support my conclusions about the quality; no plastic parts here.

## Beyond the basics

As for mounting options, several are possible. You can use a 3/8-inch ball-head adapter for a camera-lens combination, allowing you to do tracked imaging with your camera. Sky-Watcher USA has additional ball-head adapters available so you can image with two cameras if you wish. I am thinking ahead to the 2017 total solar eclipse, and this might just be one of my imaging setups: two cameras with lenses of different focal lengths on a reliable GEM like the Star Adventurer.

Other optional setups include using a telescope with the Fine-Tuning Mounting Accessory or a telescope side by side with a camera on a ball-head. The manufacturer built a nice slow-motion adjustment into the Fine-Tuning Mounting Accessory. A counterweight and shaft can be used to balance a heavy telescope.

Low-battery and motor-error indicators are also a part of the system. Mount tracking rates include sidereal; 0.5x, 2x, 6x, and 12x sidereal; solar; and lunar. You also can do time-lapse photography at various speeds. You can select these with an easy-to-see and easy-to-use control called the Mode Dial. This dial also turns the mount off, and with a built-in LED, the selected mode was visible in the dark.

You can use the mount either north or south of the equator with a flip of a switch. The various options also will let you perform horizontal and vertical rotation time-lapse photography.

One other nice-sounding feature is the DSLR Shutter Control Cable, which connects to a 2.5mm three-segment stereo jack built into the mount. When you use it, the

## PRODUCT INFORMATION

### Sky-Watcher USA Star Adventurer

**Type:** Equatorial mount

**Tracking rates:** Sidereal; 0.5x, 2x, 6x, and 12x sidereal; solar; and lunar

**Power:** USB or four AA batteries

**Payload:** 11 pounds (5 kilograms)

**Included:** Polar scope with illuminator; DSLR interface for automatic shutter control; Astro Package comes with declination bracket; Photo Package comes with ball-head adapter

**Price:** \$339 for Astro Package; \$319 for Photo Package

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Explore Scientific's ED80 refractor weighs 7.5 pounds (3.2 kilograms), well within the payload limit of the Star Adventurer mount. MIKE REYNOLDS

cable provides a preprogrammed camera shutter control interface for time-lapse photography. You will require the cable specific to your DSLR camera; ones for Canon, Nikon, Olympus, and Sony cameras are available. I was not able to try this particular component.

You can download firmware upgrades to your computer at no cost. You'll find the latest version at www.skywatcherusa.com. Once you are on the Sky-Watcher USA site, click the "Support Center" link. The mount connects directly to your computer with a mini USB cable.

## Testing

I tested several instruments on the Star Adventurer mount, including a 3.2-inch Explore Scientific refractor, a 3.2-inch Daystar SolaREDi H $\alpha$  telescope, and a Canon 5D Mark II DSLR with different lenses. The specs provided by Sky-Watcher USA note that the Star Adventurer can carry a maximum payload of 11 pounds (5kg). All

three of the instruments I mounted on the Star Adventurer were under that maximum. The SolaREDi was the heaviest at a bit over 8 pounds (3.6kg). And for each instrument, the mount performed admirably.

In the field, alignment was quick, made so with the integrated polar scope and its illuminated reticle. The rest of the setup was also fast. I tested the drive under different uses, from simple imaging through my DSLR to high-magnification observing. For such a light "grab-and-go" mount, I found the tracking to be quite good with few periodic errors.

## The bottom line

Sky-Watcher USA's Star Adventurer is a solid, compact, and lightweight tracking mount with a wide array of excellent features and options. For an observer or imager like myself, ease of setup and simple operation really prove helpful. I know the airlines will appreciate the small features — as will my wife. ☺



Star Adventurer accessories include (left to right) the ball-head adapter, counterweight set, and declination bracket. SKY-WATCHER USA