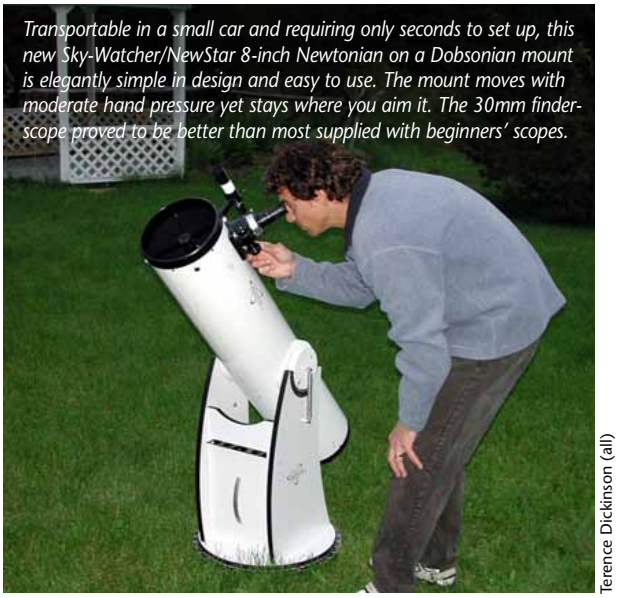

Transportable in a small car and requiring only seconds to set up, this new Sky-Watcher/NewStar 8-inch Newtonian on a Dobsonian mount is elegantly simple in design and easy to use. The mount moves with moderate hand pressure yet stays where you aim it. The 30mm finderscope proved to be better than most supplied with beginners' scopes.

Terence Dickinson (all)

Top left: The primary 8-inch mirror is supported at its edge, which leaves the back of the mirror itself exposed (that's its reflection at the rear of the tube). The numbered dials are mostly for show and have little practical application. Above left: When an eyepiece is inserted or extracted from the focuser, the springs on the mount provide enough tension to prevent the tube from tipping up or down as the balance point varies.

AN IMPRESSIVE NEW 8-INCH DOBSONIAN

BY TERENCE DICKINSON

ANYONE LOOKING FOR A FIRST telescope can go out and buy a 60mm or 70mm refractor or a 4-inch Newtonian at a big-box outlet for $299 or less. Some people are happy with these inexpensive scopes, but many others find the optics inadequate and the jiggly mounts toylike.

At the other end of the scale, a well-equipped computerized 8-inch Schmidt-Cassegrain telescope that is a joy to use can cost more than a top-of-the-line big-screen home-entertainment centre. Sensing a market for a telescope the size of the Schmidt-Cass but at a price closer to low-end big-box store scopes, Synta—a Chinese manufacturer—now offers an 8-inch f/6 Newtonian on a Dobsonian mount with two eyepieces at a remarkable $600. This is the same price that nearly identical 6-inch telescopes have been selling for over the past several years.

Our test unit was supplied from stock by EfstonScience of Toronto. Although manufactured by Synta, the Efston scopes have the NewStar house brand. Elsewhere in Canada, virtually identical Synta telescopes are available with the Sky-Watcher nameplate.

The telescope is shipped in two basic parts: the mount and the tube. The tube comes completely assembled and is tightly packed in foam for transport halfway around the globe. The Dobsonian mount, made of white melamine particleboard, requires some assembly, although the clear instructions (written by EfstonScience for its scopes) make this job an easy 20-minute task with the supplied screwdriver and wrench.

Each cradle on the mount is fitted with two Teflon pads on which the tube bearings ride. I had to use a hammer and a nail punch to recess the nails that secure the Teflon pads so that the surface of the plastic tube bearings would not be scratched. This isn't the first time I have had to do this on a Dobsonian mount. It should *not* be an owner fix.

Even with the larger 2-inch focuser—a nice feature at this price—I think the tube is the lightest 8-inch Newtonian tube I have ever encountered. The aluminum tubing and unique edge-mount mirror cell account for this pleasant surprise.

In theory, a mirror exposed to the air on both sides should cool down faster as it sheds its heat to the cooling night. On the other hand, when the tube has a closed bottom end, the main mirror's radiated heat is largely trapped. Both points proved true in practice. A half-hour after taking the scope outdoors (in May), the standard "boiling" images caused by cool-down seemed suppressed compared with other 8-inch Newtonians I have tested. But an hour later, small undulating tube currents, apparently caused by the closed tube, still lingered. Overall, though, the cooling effects were not as distracting as in many 8-inch Newtonians.

There is no way to avoid cool-down tube currents in Newtonian telescopes, at least not during the first two hours or so after sunset, when the air and the telescope are both cooling. This is a fact of life. Other types of telescopes suffer too, although refractors are far less afflicted by the phenomenon.

The telescope scored an A+ when I tested collimation (optical alignment). After travelling all the way from China, the mirrors were still perfectly collimated. Amazing! Collimating a Newtonian can be like voodoo for some beginners. Not having to face it with a new scope is a blessing.

The optics are good for an instrument at this price—equal to many 8-inch Schmidt-Cass scopes I have looked through. On a moonless May night, the Hercules Cluster (M13) was a beautiful mass of tiny stellar points at 122x. The two eyepieces—25mm and 10mm modified Kellner designs—yield 49x and 122x, respectively, and are perfectly adequate for your first few months of observing, until you are ready to add to your eyepiece collection. All in all, this is a terrific package for the price. I give it four out of five stars. ❍