



STARGAZER

Sky-Watcher Startravel-102 (AZ-GTe)

Designed to be controlled wirelessly with your smartphone, this highly portable refractor provides good Solar System views

Telescope advice

Cost: £379 / \$496

From: Optical Vision

Type: Refractor

Aperture: 4.02"

Focal length: 19.69"

Best for...



Beginners



Small budget



Planetary viewing



Lunar viewing



Bright deep-sky

There are all kinds of factors that mean we live rushed observing lives, from the constant threat of encroaching clouds to the demands on our time from general life and work. Often when we go out under the stars, we want a 'scope that's portable and quick to set up.

Sky-Watcher's Startravel-102, which comes on an AZ-GTe Go-To alt-az mount and an adjustable steel tripod, is the perfect 'grab-and-go' scope for beginners or casual observers. Weighing just 6.7 kilograms, it's easy to carry outside - though if possible, and not too rushed, allow half an hour for it to acclimatise to the ambient temperature outside to avoid heat currents from the telescope disturbing the view. Its most high-profile feature is its Wi-Fi capability, allowing you to control the telescope easily from your own smartphone, tablet or laptop. Once the mount is powered up using either eight AA batteries or a 14V external supply, it creates its own Wi-Fi network that you can connect to. However, you do need to first download Sky-Watcher's free SynScan app to control the telescope wirelessly. A little red LED light on the mount blinks on to let you know you're connected.

The next step is to align the telescope so that the Go-To system knows where it is pointing in the sky. The system automatically gets the date, time and location from your phone or tablet's GPS, meaning you don't need to input these manually. Next, select a region of the sky, at which time you'll be prompted to slew to a bright star in that region, using the finderscope to guide you. Once the telescope is aligned on that star, the Go-To will automatically slew to several other stars until it confirms a successful alignment. Now you're ready to start using it!

The Startravel-102, with an aperture of 102mm (four inches) and a focal length of 500mm, has a reputation for being a great wide-field telescope, and this was borne out in our tests. We began with the Beehive Cluster, also known as M44, which looked great; the pinpoint stars of this open cluster in Cancer, the Crab, seemed to sparkle as they filled the field of view through the 10mm 1.25" eyepiece that comes with the telescope. Both the 10mm and the 25mm that also comes with it are fairly standard - they are okay to begin with, but anyone intent on doing any serious observing will likely swap them out for their own better quality eyepieces.

Springtime is, of course, the best time of the year for viewing galaxies, particularly those that litter the constellations of Virgo, Leo and Coma Berenices. However, this is where the limitations of a rich-field telescope come into play. The brighter galaxies of the Virgo Cluster are mostly under ten arcseconds in angular diameter, and when viewed they appeared as diffuse blobs, lost in the wide field. The dramatic face-on spiral of the Whirlpool Galaxy fared a little better, but best was Messier 81, a spiral in Ursa

Right:

The Sky-Watcher Startravel-102 is suitable for a selection of deep-sky targets

Right (inset):

The refractor features a SynScan hand control port

Bottom left:

The telescope comes supplied with 10mm and 25mm eyepieces

Bottom right:

The Startravel is supplied with a red dot finder, making star-hopping an easy feat





“The Startravel-102 has a reputation for being a great wide-field telescope, borne out in our tests”

Major, its 27 arcminute diameter faring much better in the field of view, showing a fuzzy disc and a definite brighter concentration at its centre. In the same field of view, the nearby edge-on Cigar Galaxy, Messier 82, appeared small, but its higher surface brightness meant it held its own against M81.

Refracting telescopes inherently suffer from chromatic aberration – a colour fringing around bright objects caused by different wavelengths of light, or different colours – and focus slightly differently, resulting in colourful haloes around objects. Planets and the Moon in particular suffer from this when viewed through a refractor, and the Startravel-102 is no different. March’s supermoon came on a rare, relatively cloudless night. Full Moon isn’t always the best time for observing features on the Moon, but the distinctive fringe of purple resulting from chromatic aberration was noticeable on the lunar limb. For serious planetary observers and imagers it would be problematic, but we’ve seen worse chromatic aberration, and for casual observers the level of colour fringing is reasonable.

The SynScan database contains more than 10,000 objects: to be precise, 10,759 deep-sky objects like galaxies and nebulae, including all of the NGC, IC, Messier and Caldwell catalogues; 305 named stars; 55 double stars and all the planets of the Solar System, plus the Moon and the Sun – but do not look at the Sun without a suitable solar filter!

We found that the telescope’s Go-To was able to find every object that we targeted relatively easily. It has nine slewing speeds, and it’s not the quietest, but the telescope found every object we wanted, although most required a little bit of fine tuning to centre the object. The tripod is sturdy and can be extended to heights between 0.8 and 1.5 metres. On the telescope, the aforementioned eyepieces provide magnification of 20x and 50x, while the rack-and-pinion focuser is fairly decent, especially for the price.

The Startravel-102 is a great beginners telescope or a grab-and-go telescope for those wanting to observe in a hurry. While deep-sky enthusiasts may quickly outgrow it, for everyone else it is an excellent introduction to the world of refractors.

