

Our experts review the latest kit

FIRST LIGHT

RVO Horizon 8-inch f/6 Dobsonian telescope

An excellent all-rounder with enticing views and lots of nice-to-have features

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VITAL STATS

- Price £449
- Optics 8-inch (200mm) Bak7 primary mirror, Newtonian reflector
- Focal length 1,200mm, f/6
- Mount Dobsonian rocker base with azimuth adjustment
- Extras 9mm and 20mm 1.25-inch Plössl eyepieces, 30mm 2-inch SuperView eyepiece, 35mm extension tube, cooling fan, battery holder
- Weight 24kg
- Supplier Rother Valley Optics
- Email: sales@rothervalleyoptics.co.uk
- www.rothervalleyoptics.co.uk

Rother Valley Optics has expanded its Horizon range and now offers a selection of Dobsonian telescopes from 6- to 16-inch diameters. Here, we review their 8-inch model, which provides a generous focal length of 1,200mm and a fast focal ratio of f/6 in a relatively portable setup.

It arrived in two boxes, with the tube and the accessories in one and the rocker base flat-packed in the other. Three eyepieces are included: two 1.25-inch eyepieces with 9mm and 20mm focal lengths, and a 2-inch 30mm eyepiece. We noted the Dobsonian mount includes a tension knob to adjust the ease of rotation, a handy carry handle and an eyepiece holder to take the provided accessories.

The tube itself is lightweight and, much like the base, has a carry handle for convenient repositioning. We found this made lifting the tube on and off the mount for transport and setting up particularly easy. Its side bearings also cleverly allow adjustment to achieve good balance and tensioning for minor

altitude changes. This, in addition to the tension knob on the mount, helps you make smooth adjustments while viewing your target, which is especially useful at higher magnifications.

The focuser is a dual-speed 2-inch CNC Crayford focuser with a 1.25-inch adaptor, while RVO has provided a 35mm extension tube to ensure the 30mm 2-inch eyepiece can come to focus. We found the action smooth when racking in and out of focus, with very little backlash. Another standard accessory is the 8x50 right-angled correct-image finderscope, which granted excellent clear views for easy location of many of the brighter deep-sky targets.

Taking it for a starry spin

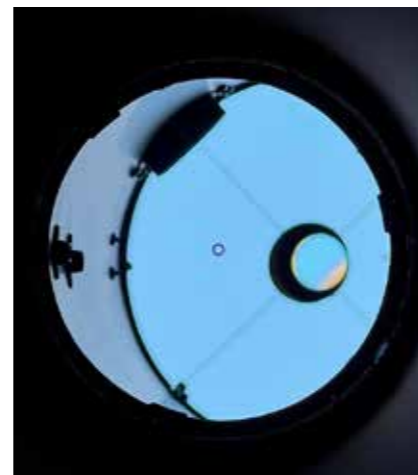
At the rear of the telescope lies the primary mirror cell. Once again, we noted RVO has added large knobs to enable easier collimation, although we were pleased to discover the optics arrived well collimated. The base also has a cooling fan to allow the primary mirror to cool down, which greatly speeds up the ▶

Colourful, super-clear views

The 8-inch (200mm) mirror is made from Bak7 glass, with both primary and secondary mirrors silicon-dioxide-coated for protection from the elements. The focal length of 1,200mm enables a focal ratio of f/6 and helps to bring out many of the brighter deep-sky targets. Such 'fast' optics can introduce coma, where stars look like comets towards the edges of the view, but we were pleased to see this well controlled. The quality of the optics and coatings gave excellent colour contrast for colourful double stars,

including Almach which was particularly vivid. The colours of the many orange-red stars in the Double Cluster were stunning against the dark background sky.

The optics also worked very well with galaxies such as M81, which showed a lovely disc, while nearby M82 had a mottled appearance. The supernova remnant M1 in Taurus can be quite diffuse, yet we enjoyed good views thanks to the dark skies, witnessing little in the way of light scatter even through the higher-powered 9mm eyepiece.



Eyepieces

RVO has generously provided three eyepieces with a good range of magnification options. A 2-inch 30mm wide view gives 40x magnification, but requires the supplied 35mm extension tube in order to reach focus. The other two eyepieces are 1.25-inch Plössls: a 20mm giving 60x and a 9mm giving 133x magnification.



Finderscope and focuser

The 8x50 right-angled correct-image finderscope was easy to use, providing a clear view and a crosshair to help centre targets. The dual-speed, 2-inch CNC Crayford focuser comes with a 1.25-inch adaptor and handy graduated scale that allows you to take note of the focus position for your eyepieces.

Mount

The Dobsonian base was easy to assemble and using the tensioning knob allows for fine rotation in the azimuth direction. It comes with a carry handle and an eyepiece holder on one side for the supplied eyepieces. The side bearings on the tube slot firmly into place with no play.



Altitude bearings

The tube has adjustable side bearings to achieve fine balance and they slot into the mount for a firm and secure fit. The large, knurled knobs either side allow the altitude rotation of the tube to be finely adjusted, giving enough friction to keep the tube from drooping mid-observation.



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KIT TO ADD

1. Rother Valley Optics ND96 Moon 1.25-inch filter
2. Cheshire collimating eyepiece
3. Celestron DX smartphone adaptor kit

► time from first setting up to viewing. Power is provided by a small battery pack that plugs into the base and takes eight AA batteries (not supplied).

Turning to the skies, our star test showed a little coma towards the edges of the 20mm eyepiece view, but nothing serious.

Thanks to the clear views

of the finderscope, we easily located the Dumbbell Nebula, M27, with the 20mm Plössl providing views of the 'apple core', as it's sometimes nicknamed. It bore magnification well when we swapped to the 9mm eyepiece, so we then swung up to the Ring Nebula, M57, and enjoyed views of this small planetary nebula appearing as a ghostly smoke ring.

Next, we headed to the Coathanger Cluster, discovering it more than filled the view of the 20mm eyepiece. Swapping to the 30mm eyepiece granted a lovely sight, with the stars crisp and sharp. Staying with the 30mm, we moved across the sky and located the Andromeda Galaxy, M31. As the skies were exceptionally clear, we were rewarded with a faint view of the disc and a bright bulge, with both companion galaxies making an appearance. There were even hints of the dust lanes cutting across the bulge of the galaxy.

The 30mm is ideal for such large targets and although it was quite low down, we popped over to the Pleiades, M45, which fitted the view nicely; we even glimpsed a hint of the Merope Nebula. Swapping back to the 20mm eyepiece, we took in a view of M81 and M82 next to each other, before seeking out Albireo. Both the 20mm and 9mm eyepieces successfully split the Double Double star in Lyra.

Our favourite view was a memorable one of the Double Cluster in Perseus, where the colours of the orange-red stars scattered amongst the two clusters presented beautifully in the 30mm and 20mm eyepieces. As our test ended, we were sorry to pack the RVO Horizon 8-inch Dobsonian away. 🚀

Collimation/cooling fan

Newtonian reflectors can easily slip out of collimation, so RVO has ensured the collimation knobs are big enough to easily grip without being too large and cumbersome. Mirrors often need time to cool down, so the inclusion of a large cooling fan powered by a small battery pack is welcome.



Close-up using the included 20mm eyepiece and the zoom of an iPhone 13 Pro Max, 1/174" at ISO 40

VERDICT

Assembly	★★★★★
Build & design	★★★★★
Ease of use	★★★★★
Features	★★★★★
Optics	★★★★★
OVERALL	★★★★★