

## Orion® Binocular Viewer for Telescopes

#52071

Congratulations on your purchase of the Orion Binocular Viewer. The “BinoViewer” provides superior contrast and detail for planetary, lunar, and even solar vistas. If you are trying to tease out extra features on Saturn or the craters on the Moon, the BinoViewer will deliver the view in 3D-like perspective unlike with monocular vision. Planets will appear less like flat discs, and more like floating spheres. The lunar landscape will look like it is flying underneath the window of your spacecraft. All this in greater viewing comfort, since you won't have to strain to close one eye.

The BinoViewer will work on any telescope with approximately 4" of inward focus travel. If your telescope has less focus travel, you can use the included 2x barlow lens with the BinoViewer; this combination only requires approximately 1.5" inward focus travel.

### How to Use the BinoViewer

First, take the BinoViewer out of its case and remove the cover caps. The eyepiece holder uses a single thumbscrew and a compression ring to ensure the eyepieces are centered in the eyepiece holder. This is important to achieve a sharper, merged image, especially at high magnifications. The eyepieces must be identical to get a clear image. After inserting the eyepieces, secure the thumbscrew and bring the BinoViewer to the focuser of your telescope.

### Connection to the Telescope

Before inserting the BinoViewer into the focuser, make sure any adapters or diagonals in the drawtube are secure. The BinoViewer weighs much more than an average eyepiece, therefore all connections must be extra secure to support it. Place the BinoViewer's chrome barrel into your star diagonal (if using a refractor or Cassegrain) or focuser (if using a Newtonian) and secure it with the thumbscrew. Now, adjust the interpupillary distance of the two eyepieces. Adjust the BinoViewer so the center of each eyepiece glass is directly in front of each of your pupils. This is done by grasping both sides of the BinoViewer and bending them together or apart. When the image from each eyepiece becomes a single merged image, the interpupillary distance is set for your eyes. You may also rotate the entire unit in the focuser so your neck is at a comfortable angle.



### Focusing

Now you are ready to focus. First focus with your telescope focuser. If the image looks a little soft, you can adjust the focus of each eye individually with the helical focusers at the base of each eyepiece holder. Cover your right eye and focus the left eyepiece holder by rotating it until the image appears clearest. Then cover your left eye and do the same for the right eyepiece holder. The BinoViewer is now focused.

If you rack the focuser all the way inward, and still can't achieve focus, the included 2x barlow lens threaded onto the front of the BinoViewer's barrel will usually solve this problem. This will likely occur in Newtonian reflectors and some refractors, but rarely in Cassegrain telescope designs.

### Image Orientation

As the light travels through the BinoViewer, the image will be rotated 180°. If you observe a mountain scene through the BinoViewer, the sky will be on the bottom of the image and the mountains on top. However, this image rotation is hardly noticeable when viewing the night sky.

### Use of the 2x Barlow Lens

As an extra bonus, the Orion BinoViewer comes standard with a high-quality 2x barlow lens. This lens threads onto the front of the BinoViewer's chrome barrel, and doubles the magnification of any eyepieces used in the BinoViewer. As noted previously, it also reduces the amount of inward focus travel required for the BinoViewer to reach focus in a telescope.

Keep in mind, however, that when the barlow lens is employed, the field of view and image brightness will be reduced. This is fine for viewing objects such as planets, as they are small yet quite bright. On the other hand, some deep sky objects, such as nebulae, can be dim and wide, so using the barlow lens might not yield the best view.

### Using Filters

Your BinoViewer's chrome barrel is threaded for Orion 1.25" filters. Simply thread the filter onto the barrel and re-focus. The



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BinoViewer's excellent lunar and planetary views can be further enhanced by color filters such as light blue, yellow, or red, and the classic Moon filter to block excessive glare. Since the BinoViewer works best for brighter objects, a light pollution filter may only work on the brightest deep space objects. A broadband filter, such as the Orion SkyGlow, may improve the contrast and eliminate distracting haze from city lights.

The barlow lens also accepts filters. Simply thread them onto the front of the barlow lens when it is installed on the BinoViewer.

### Solar Observing

Your BinoViewer reveals copious detail on our nearest star, the Sun. A white light solar filter placed on the front aperture of your telescope will provide a safe view of the Sun accentuated by the BinoViewer. These views are best enjoyed at medium power, from 50 to 100x.

### Storage

Although your BinoViewer is durable, it should avoid prolonged, unnecessary exposure to the elements. Keep the BinoViewer in its case, with caps on when not in use. It is also recommended to leave the BinoViewer in a dry place with caps off and case open overnight to let it completely dry out.

Store the instrument in a cool, dry place; storage in a humid environment will result in mold growth on the exterior of the prisms that can destroy optical coatings. This is not covered by the warranty.

**WARNING: Never look directly at the Sun with the naked eye or with a telescope – unless you have a proper solar filter installed over the front of the telescope! Otherwise, permanent, irreversible eye damage may result.**

### Cleaning

The prisms of the BinoViewer and lenses of the 2x barlow lens are coated with anti-reflection coatings, which can be damaged with careless handling. Avoid touching prism or lens surfaces with your fingers or any coarse material. Clean the prisms and lens surfaces if they get noticeably dirty. Always use lens cleaning tissue and fluid specifically designed for telescope optical coatings. Do not use regular tissue or fluids made for eyeglasses or household use. Do not disassemble the BinoViewer to clean it, with the exception of the chrome barrel, which may be unscrewed to better access the forward prism surface.

To clean the prism and lens surfaces, first blow air on the surface with a blower bulb or compressed air to remove any large particles. Then brush the surface with a soft lens brush and blow air on it again to remove any dislodged particles. Put two drops of lens cleaning fluid on a sheet of lens tissue; never put lens cleaning fluid directly onto the prism or lens. Wipe the surface gently with a circular motion, taking care to avoid undue pressure or rubbing, which can scratch the coatings. Quickly remove the excess fluid by wiping with a clean, dry lens tissue.

## Specifications

Nosepiece barrel:	1.25"
Eyepiece holders:	1.25"
Prism coatings:	Fully multi-coated
Prism type:	BAK-4
Eyepiece holders:	1.25"
Interpupillary distance:	53mm to 74mm
Barlow lens:	2x, fully multi-coated
Weight:	1 lb. 2 oz.

## One-Year Limited Warranty

This Orion product is warranted against defects in materials or workmanship for a period of one year from the date of purchase. This warranty is for the benefit of the original retail purchaser only. During this warranty period Orion Telescopes & Binoculars will repair or replace, at Orion's option, any warranted instrument that proves to be defective, provided it is returned postage paid. Proof of purchase (such as a copy of the original receipt) is required. This warranty is only valid in the country of purchase.

This warranty does not apply if, in Orion's judgment, the instrument has been abused, mishandled, or modified, nor does it apply to normal wear and tear. This warranty gives you specific legal rights. It is not intended to remove or restrict your other legal rights under applicable local consumer law; your state or national statutory consumer rights governing the sale of consumer goods remain fully applicable.

For further warranty information, please visit [www.OrionTelescopes.com/warranty](http://www.OrionTelescopes.com/warranty).



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