



BAADER MAXBRIGHT[®] BINOCULAR VIEWER

245 6450



INSTRUCTION MANUAL

Thank you for your purchase of the Baader Maxbright Binocular Viewer! Properly used, this sophisticated optical accessory will provide a lifetime of amazing views. Unique features such as a precision die-cast body and prism mounts, collimation adjustments on the eyepiece holders, full multi-coatings on all air-to-glass surfaces, our special Glasspath Compensators (providing full color correction and allowing focus on almost any telescope) and T-2 modularity (for unparalleled versatility), set the Maxbright binoviewer above competing models. To insure optimal performance, please spend a bit of time reading this instruction manual before using your binoviewer.

	Baader Part No.	Description
1		Eyepiece Setscrews (3 for each eyepiece holder)
2		Eyepiece Holder, 1.25" (31.8mm)
3		Lateral Collimation Screws (for adjusting the eyepiece holder - 3 screws for each)
4		Rubber Grip Side Plates
5		Rotating Threaded T2 Ring and Front Optical Window (window is inside the ring and not visible)
6	245 6314 245 6316 245 6317 245 6301	1.25" Glasspath Compensators: #4A: 1.25x, focus gain: approx. 20 mm #4B: 1.7x, focus gain: approx. 35 mm #4C: 2.6x, focus gain: approx. 65 mm 2" Newtonian 1.7x, focus gain: approx. 80mm (not shown, see page 2)
7	245 8105 240 8150	T2 1.25" (31.8 mm) Nosepiece (#14) T2 2" (50.8mm) Nosepiece (see Figure 3)

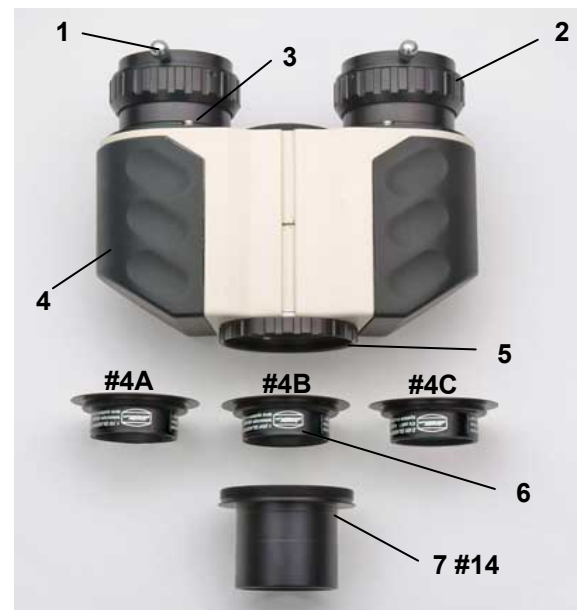


Figure 1 Maxbright Binocular Viewer, Glasspath Compensators and 1.25" Nosepiece

Basic Setup and Use

The Maxbright binoviewer is typically purchased with one of the Glasspath Compensators in Figure 1 and either a 1.25" or 2" nosepiece. Owners of Newtonian reflectors might instead purchase the 2" Newtonian 1.7x Glasspath Compensator which does not require a separate nosepiece.



Figure 2 Glasspath Compensator used with 1.25" nosepiece. Compensators may also be used with many other Baader T-2 accessories.

Using the 1.25" Nosepiece

- Remove the two plastic caps from inside the eyepiece holders and unscrew the black cap from the front optical window of the viewer.
- Screw the six (6) screws provided into the holes of the eyepiece holders.
- Screw the Glasspath Compensator inside the 1.25" (31.8 mm) nosepiece in the orientation shown in Figure 2.
- Screw the 1.25" nosepiece onto the threaded T2 ring on the front of the binoviewer, turning the ring until tight.
- Insert the Maxbright binoviewer in the telescope's eyepiece holder and tighten the set screw(s) to hold the binoviewer securely in place.

Using the 2" Nosepiece



Figure 3 This picture shows how to insert the Glasspath Compensator into the T2 2" nosepiece. The included white plastic ring must be pressed onto the compensator threads in order to center the compensator within the nosepiece adapter.



Figure 4 After placing the Glasspath Compensator into the 2" nosepiece, screw the nosepiece onto the threaded T2 ring on the front of the viewer, turning the ring until tight.

Basic setup of the binoviewer is performed as described in the previous section for the 1.25" nosepiece. However, installation of the Glasspath Compensator is a bit different. When attaching the 2" nosepiece to the binoviewer, the Glasspath Compensator does NOT thread into the 2" nosepiece, but as shown in the photos above is simply placed inside it, using the white plastic spacer (provided) to center the compensator body within the 2" nosepiece. Use care when installing or removing the 2" nosepiece; the compensator will fall out if the nosepiece is turned upside-down before attaching it to the front of the binoviewer.

Using the 2" Newtonian 1.7x Glasspath Compensator

- Referring to Figure 5, attach the T2-07 Change Ring to the top of the 2" Newtonian 1.7x Glasspath Compensator.
- Screw the T2-07 Change Ring onto the threaded T2 ring on the front of the binoviewer, turning the ring until tight.
- Referring to Figure 6, insert the entire 2" compensator into the telescope's eyepiece holder and tighten the set screw(s) to hold the binoviewer securely in place.

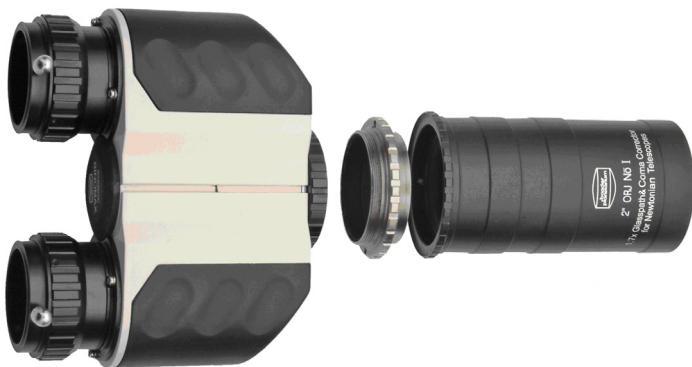


Figure 5 Maxbright Binoviewer, T2-07 Change Ring and 2" Newtonian 1.7x Glasspath Compensator



Figure 6 Maxbright Binoviewer and 2" Newtonian 1.7x Glasspath Compensator in 2" Focuser of a Newtonian Telescope

Adjusting Interpupillary Distance

Interpupillary distance (the separation between the centers of the eyes' pupils) varies from person to person. The binoviewer should be adjusted to match your interpupillary distance. Using both hands, hold the body of the binoviewer like a pair of binoculars. While viewing a distant object (daytime) or a bright star field, rotate the two halves of the binocular body about the central pivot until you see the field of view as a single sharp circle with both eyes.

Adjusting Left-Right Focus Difference

Many individuals require a different focus for their left and right eyes. Both eyepiece holders can be focused individually by simply rotating them. Adjust the focus of both eyepieces as follows:

- (1) With the telescope aimed at an object, close the right eye and look into the left eyepiece. Using the telescope's focus mechanism, adjust until the image is sharp.
- (2) Close the left eye and with the right eye look into the right eyepiece. Rotate the right eyepiece holder until you see a sharp image. If you reach the limit of the rotation, use the telescope's focus mechanism to adjust the image until sharp - then switch back to the left eye and rotate the left eyepiece holder for a sharp image.

You can now focus for different eyepieces or addition of other components to the optical path by using just the telescope's focus mechanism.

Note: If the dioptric difference between your eyes is very large (more than 5 – 6 diopters), you may find that even with one eyepiece holder adjusted fully in and the other fully out, you cannot bring both to a focus. If so, you may want to view while wearing your eyeglasses. Or, you may unlock the eyepiece in the fully extended holder and lift it out a few millimeters to compensate for the strong difference between your eyes.

Fine Adjustments for Superposing (Merging) the Image

After adjusting the interpupillary distance and focus, it should find it easy to attain perfect superposition of the left and right images. Said another way, you should only see one perfectly merged image. The brain can compensate for small differences between the two images, but basically the images should be nearly identical for effortless superposition.

A number of factors can cause difficulties when the brain attempts to merge the two images:

- The interpupillary distance must be correct - rotate the binoviewer body around the central pivot to insure a single sharp field of view is visible.
- Both images must be individually in focus. Go back to the previous section to check for focus.
- Both eyepieces must be identical. It is almost impossible to merge the image with eyepieces from two different manufacturers or two different eyepiece series, even if they have the same focal length. You may even have difficulties if the eyepieces are the same model, but were made at different times. A manufacturer sometimes makes small changes in an eyepiece design which can result in a significantly different image. Whenever possible, purchase pairs of eyepieces at the same time.
- Mis-collimation (misalignment) of one or both of the eyepieces or the binoviewer itself. This can occur if the eyepiece or binoviewer was disassembled or dropped, or with poorly made eyepieces.

The Maxbright binoviewer is designed to compensate for some of these difficulties. First, loosen the eyepiece locking/collimation screws (item 1 in Figure 1) and rotate one of the eyepieces slowly in its holder to merge the images. Be careful not to change the focus. Some eyepieces vary in their optical centering and rotating one of the eyepieces may allow you to merge the images.

If eyepiece rotation does not correct the problem, adjust the lateral position of the eyepieces by alternately loosening/tightening the locking/collimation screws (item 1 in Figure 1) to adjust the relative position of the eyepieces. For example, loosen the one furthest from you and tighten the other two. Depending upon the tolerances of the eyepiece barrels, this may only provide a tiny amount of adjustment.

Lastly, the entire eyepiece holder can be adjusted by loosening the 3 lateral collimation screws (item 3 in Figure 1) and sliding the entire eyepiece holder laterally to merge the images. If possible, prior to making this adjustment try a different pair of eyepieces to rule out the possibility of mismatched eyepieces.

If none of these adjustments improves the situation, please contact Baader Planetarium or your local distributor to determine if maintenance is required.

Choosing a Glasspath Compensator™

The Baader Glasspath Compensator fulfills two critical roles. First, it corrects for chromatic aberration (color error) caused by the long light-path through the binoviewer glass prisms. Second, the compensator magnifies and extends the focal point of the main telescope. This focal extending aspect is vital to using a binocular viewer with most telescopes. Due to the basic design of all binocular viewers, light must travel an additional 110mm or more before reaching the focal plane of the eyepieces (the Maxbright is the shortest binoviewer we know of at 110 mm). Many telescopes, especially Newtonian reflectors, do not have sufficient back-focus (in other words, not enough focuser in-travel) to achieve focus with such an optically long accessory. By using a Glasspath Compensator, the focal point of the telescope can be extended sufficiently to accommodate the length of the binoviewer.

Another benefit of the compensator is to provide additional magnification ahead of the binoviewer. For high magnifications (for example, planetary observation), it is preferable to magnify the image before the binoviewer, rather than to use shorter focal length eyepieces. By magnifying prior to the binoviewer, the effects of any optical tolerances and misalignments in the centering of the eyepieces are reduced. Additionally, longer focal length eyepieces tend to have longer eye relief and are more comfortable to use. In general, for binoviewing use we recommend eyepieces with focal lengths of 5 mm or longer. It is also less expensive to purchase an additional compensator to provide additional magnifications rather than to purchase additional pairs of eyepieces.

Newtonians typically have the least amount of back-focus; in order to extend the focal point well past the focuser surface, a larger secondary mirror would be required. This increases the central obstruction resulting in a loss of contrast and increased cost. For this reason, we offer a large 2 inch 1.7x Glasspath Compensator that is designed specifically for Newtonians. This compensator also corrects the off-axis coma that affects fast Newtonians.

We recommend first choosing the lowest powered compensator that will allow your scope to reach focus. This will permit the widest possible field of view. In addition, one or more higher powered compensators can be added to give a greater range of magnifications.

The first step in choosing a compensator is to determine how much back-focus your telescope has available (please see the next section on back-focus). Once you have determined the back-focus of your telescope configuration (including any adapters, diagonals, etc.), use the following table to determine which compensator(s) provide a path-length that is less than your telescope's available back-focus.

Table 1: Path Lengths of Glasspath Compensator (GK) and Maxbright Binocular Viewer

Path Lengths Given in Millimeters

Alone or with various Baader Diagonals	No GK	1.25x GK	1.7x GK	2.6x GK	2" 1.7x Newtonian GK
Maxbright Binoviewer with nosepiece only - as might be used in existing diagonal or focuser tube	110mm	92	77	44	31
with T2-1C 32mm Prism Diagonal (Baader Part No. 245 6005 in Table 2)	148	131	116	83	Not Applicable
with T2-1B Deluxe Zeiss Prism Diagonal (Baader Part No. 245 6095 in Table 2)	151	134	119	86	Not Applicable
with T2-2 Deluxe Amici Diagonal 90° for correct image orientation (Baader Part No. 245 6130 in Table 2)	158	141	126	93	Not Applicable

Please Note: The distances in the table are approximate and are measured from the front mounting flange of the binocular viewer or nosepiece, to the top surface of the eyepiece holders. Many eyepieces have their focal points located ahead of, or behind, their shoulder. The effects of an eyepiece's focal point location are not taken into consideration here and thus the distance required to reach focus will usually vary from these values. Additionally, those who are near or far-sighted will also find that more or less back-focus is needed. For these reasons, we recommend at least 5 – 10 mm additional back-focus.

Let's look at an example. A short-tube refractor is found to have 160mm of back-focus as measured from the rear surface of its stock 2" eyepiece clamp to its focal point. Referring to Table 1, this scope can reach focus without a Glasspath Compensator, even when using the Baader Deluxe Amici correct-image star diagonal. In this case, we would choose either the 1.7x or 2.6x compensator. This would provide the ability to use the Maxbright binoviewer

with no compensator for low-power wide field viewing or with the higher powered compensator for optimum image quality at higher magnification for planetary observations.

Back-Focus

Sometimes referred to as “in-focus” or “in-travel”, back-focus is an important factor to consider when choosing a binocular viewer or any other long accessory (cameras, Herschel Wedge, etc). Back-focus is simply the distance from a telescope's focal point to the surface of its fully retracted focuser. Any accessory inserted into the focuser consumes some of this back-focus - star diagonals, eyepiece adapters or reducers, cameras, eyepieces, etc. In order to reach focus, the focal plane of an eyepiece or camera must be positioned at the telescope's focus.

To aid in determining the total path length when using various components, our listing of Baader Astro T-2 Accessories™ includes the optical path length for each product. If the stack-up of parts is longer than the telescope's back-focus, it will not be possible to reach focus.

Unfortunately, there is no consistency in the telescope industry for the amount of back-focus a telescope provides. As mentioned previously, Newtonians typically have the least amount of back-focus. Extending the focal point well past the focuser requires a larger secondary mirror, decreasing contrast and increasing cost. Thus the long optical path of a binoviewer requires a compensator to extend the focal point. Most Schmidt-Cassegrain and Maksutov telescopes provide large amounts of back-focus due to their movable primary mirror. It may be possible to use a binoviewer without a compensator, though our 1.25x Glasspath Compensator is recommended for its color correction and to keep the focal length of the telescope closer to its optimal design. Refractors vary considerably in the amount of back-focus they provide, sometimes within the same model line. Even if a refractor will come to focus without a compensator, it is again recommended that a Glasspath Compensator be used for color correction or to allow the use of longer focal length eyepieces while still providing higher magnifications.

Very few manufacturers provide the back-focus specifications for their scopes. *Thus, the best way to determine your telescope's back-focus is to measure it yourself.* To reduce the possibility of errors, it is best to measure the back-focus using any adapters or star diagonals that will be present when using the binoviewer.

The easiest way to measure back focus is to point your scope at the Moon (with accessories, but **no eyepiece**) and project its image onto a white card. The focuser should be fully retracted. Hold the card behind the empty focuser or above the star diagonal and find the position where the image of the Moon comes to sharp focus. This position is your telescope's focal plane. Measure the distance from the card to the end of the focuser or the top of the star diagonal. This is the amount of available back-focus for additional accessories - for example, a binoviewer plus eyepieces. Armed with this information, revisit the last section and refer to the **first row** of Table 1. First, *subtract* the recommended 5-10mm to your back-focus value to allow for differences in eyepiece design and vision. Then, find the first column with a value **less** than your adjusted back-focus. The heading of this column indicates the appropriate Glasspath Compensator.

For example, let's say your telescope is measured to have 90mm of back-focus above the diagonal you intend to use with your binoviewer. After subtracting 10mm, your adjusted back-focus value is 80mm. The first column less than 80 is 77, the column for the 1.7x Glasspath Compensator. The 2.6x compensator would also work, as it requires just 44mm of back-focus. You would decide between the two by considering the eyepieces you are planning to use, the focal length of your telescope and the desired magnification for your observations. Or, you could purchase both compensators and have two magnifications available with a single pair of eyepieces.

In some rare cases, you may find that your scope does not have sufficient back-focus to work with any of the Glasspath Compensators we provide. If you are using a 2" star diagonal, you may want to consider using a shorter optical path 1.25" star diagonal. The Maxbright Binocular Viewer has been specially designed to directly mount to the body of our T2 diagonals in order to provide the minimum path length possible. Newtonian reflector owners may want to consider shifting their primary mirror forward (or shortening their truss tube poles) in order to increase the amount of back-focus.

Additional Mounting Options

One of the unique features of the Baader Maxbright Binocular Viewer is the versatility possible with our Astro T-2 System components. In order to keep the back-focus requirement as short as possible, the front mounting ring of the Maxbright has an internal T-thread (M42 x 0.75 mm) allowing it to be directly coupled to any externally T-threaded accessory. The rotating feature allows the binoviewer to be oriented as desired, and securely locked in place. The accessories shown below in Figure 7 are just some of the more popular combinations. Of course, you are free to invent your own, using any of our Astro T-2 System components. For example, a T2-06/T2-07 (Baader

Part No. 245 6321) Quick Changer may be added to enable quick attachment and removal of any T-threaded accessory such as the Maxbright binoviewer. Visit our web site for more information on all of our Astro T-2 System components.



Figure 7 Maxbright Binoviewer and a variety of optional mounting accessories.

Choosing the Most Suitable Diagonal

When the Maxbright Binocular Viewer is used with refractors and Cassegrain telescopes, it is much more comfortable to use a diagonal between the telescope and the binoviewer. However, care must be taken to insure the safety of the binoviewer and eyepieces. Many 1.25" (31.8 mm) diagonals are simply not up to the task of supporting a binoviewer setup, especially with two heavy wide-field eyepieces like the Baader Hyperions. Plastic or stamped metal bodies, small locking screws and generally lightweight construction are inadequate to safely hold heavy accessories like a binoviewer. Unfortunately it's quite common to hear about heavy and expensive eyepieces being dropped to the ground (and broken) because of the poor locking system of these budget diagonals. This is compounded by the extra height (and increased leverage) imparted by placing the binoviewer on top of the diagonal's existing eyepiece clamp (which also consumes a large amount of precious back-focus).

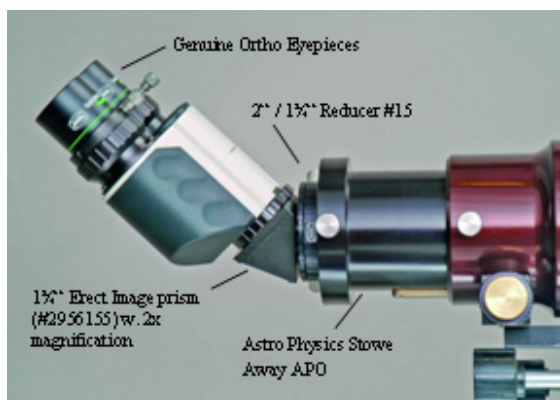


Figure 8 Maxbright Binocular Viewer mounted directly onto a Baader 45 degree correct image prism diagonal.

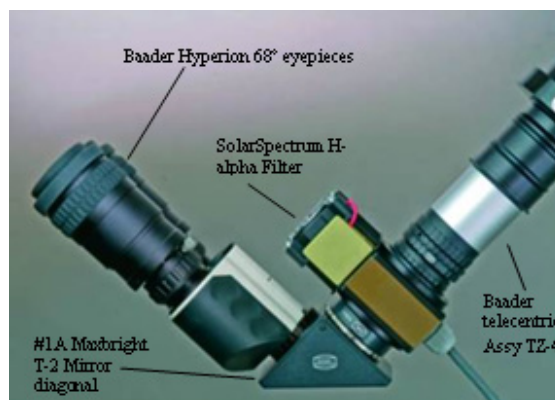


Figure 9 Maxbright Binocular Viewer mounted directly onto a Baader T2 Maxbright mirror diagonal.

The perfect solution for this problem consists of using a Baader T2 diagonal - see Table 2. Our T2 diagonals are equipped with T2 threads allowing the Maxbright binoviewer to be mounted directly on the diagonal body as shown in Figures 8 and 9. The result is a very secure mounting solution utilizing the minimum amount of back-focus

possible. These diagonals feature prisms or mirrors of the absolute best optical quality, incorporated into a solid one-piece precision machined metal body perfectly suited to hold the heaviest accessories. In addition to these traditional 90 degree diagonals, a 45 degree diagonal with an Amici prism for correctly oriented images is available as the ideal choice for terrestrial and nature viewing.

Table 2: Baader Diagonals

Astro T-2 System No. Baader Part No.	Description	Optical Path Length (added back-focus)	
T2-1C 245 6005	T2 90° Prism Diagonal (32mm Baader prism)	37mm	
T2-1B 245 6095	T2 90° Prism Diagonal (Zeiss prism)	41mm	
T2-02 245 6130	T2 90° Correct Image Prism Diagonal (Baader astro-quality Amici prism)	48mm	
T2-1A 245 6100	T2 Maxbright Dielectric Mirror Diagonal (Sital glass ceramic mirror)	53mm	
295 6155	T2/1¼" 45° Terrestrial Correct Image Prism Diagonal (Amici prism)	0mm (2x built-in "Barlow"- compensator)	
240 6210	2" Maxbright Dielectric Mirror Diagonal (Sital glass ceramic mirror with 153 coating layers)	68mm Remove 2" eyepiece holder (T2-17) and directly mount the Maxbright Bino onto the 2" housing by using T2-27 Adapter 2"/T2 (Part No. 150 8035)	
Available in two versions: Mod.P* 245 6200 Mod.V* 245 6210	2" Baader Herschel Solar Prism	77mm Remove 2" eyepiece holder (T2-17) and directly mount the Maxbright Bino onto the 2" housing by using T2-27 Adapter 2"/T2 (Part No. 150 8035)	

* Mod.P: for photographic use / Mod.V: for visual use

Using the Binoviewer Directly Mounted to a T2 Diagonal

When used with a Baader T2 diagonal, the Glasspath Compensator must be installed into the diagonal body.

- Thread the compensators into the top of the T2 diagonal as shown in Figure 10. It is not necessary to thread the compensator too tightly, tighten only by hand. If you need to remove it later and you cannot loosen it by hand, use a toothpick or other safe object in the small holes near the edge of the compensator.
- After threading the Glasspath Compensator into the T2 diagonal, screw the threaded T2 ring on the front of the binoviewer onto the top of the diagonal, turning the ring until tight.



Figure 10 Threading the Glasspath Compensator into the top of the various Baader T2 diagonals.



Figure 11 Maxbright Binoviewer with Zeiss prism diagonal (T2-1B) and 2" nosepiece (T2-16).

Using the Binoviewer with the Baader Herschel Solar Prism (Solar Observation)

The Maxbright binoviewer is uniquely suited to provide outstanding views with the 2" Baader Herschel Solar Prism, an optical accessory designed for refractor telescopes to permit safe, high-resolution observation and imaging of the solar photosphere. As the Herschel Solar Prism does not have T2 threads on the top, a T2-27 adapter ring (Baader part no. 150 8035) is required. Inserting the binoviewer into the 2" eyepiece holder is not recommended as it may not be possible to reach focus on many refractors due to the long optical path length of the various components.

CAUTION: To safely observe the sun with the binoviewer coupled to the Herschel Solar Prism you **MUST ALWAYS USE** the ND = 3.0 Filter (Baader part no. 245 8332) securely attached to the T2-27 adapter. The ND = 3.0 Filter must be transferred from the Herschel's stock 2" threaded coupler that attaches the 2" eyepiece holder to the T2-27 adapter.

A Glasspath Compensator is generally required to reach focus with most refractors telescopes. To use a compensator with the Herschel Solar Prism, a T2-25C 7.5mm Extension Tube (Baader part no. 150 8155) is required. Thread the T2-25C extension tube onto the T2-27 adapter (which is itself threaded onto the top of the Herschel). Insert the Glasspath Compensator with plastic spacer ring into the top of the extension tube - refer to Figure 3 earlier in this manual. Finally, screw the threaded T2 ring on the front of the binoviewer onto the top of the T2-25C extension tube, turning the ring until tight.



Figure 11 Maxbright binoviewer, attached directly onto the Herschel Solar Prism with T2-27 Adapter 2"/T2.

The Baader Solar Continuum Filter provided with the Herschel prism is also suggested in combination with the **required** ND = 3.0 filter to enhance the contrast of faculae and granulation. Simply screw the Continuum filter to the front of the ND = 3.0 filter.

Choosing the Most Suitable Eyepieces for Binoviewing

The Maxbright Binoviewer features an optical window with a clear aperture of 23mm insuring little or no vignetting with most eyepieces, even eyepieces up to 30mm in focal length. (Vignetting is light drop-off at the edge of the field of view.) Longer focal length eyepieces or eyepieces with a wider apparent field of view may exhibit a drop in light at the very edge of the field. By using special extension tubes (Baader part no. 2456325 which actually consists of Baader part numbers 245 8105 and 245 8120) it is possible to use eyepieces of longer focal lengths with Cassegrain telescopes without vignetting. Two of these extension tubes are inserted into the eyepiece holders of the binoviewer and the eyepieces are then inserted into the extension tubes.

The maximum outside body diameter of eyepieces that can be used with the Maxbright binocular viewer is about 58mm. If the binoviewer is used with eyepiece having a larger diameter, for example the Pentax XW, you may have problems reaching the correct separation between the two eyepieces if the interpupillary distance between your eyes is less than 60 mm.

It is extremely important to choose pairs of identical eyepieces made by the same manufacturer in the same period of time. It is quite common to find significant differences (optically and mechanically) in eyepieces of the same brand and type built at different periods of time. If you do not use identical eyepieces, you may experience problems merging the two images.

We suggest Baader Genuine Ortho eyepieces for high resolution observations. For general observing, we suggest Baader Hyperion wide-field eyepieces. Both have been optimized for use with the Maxbright binoviewer.

Using the Maxbright Binoviewer with Zoom Eyepieces

Owners of pairs of identical zoom eyepieces may wish to use them with the Maxbright binoviewer. To adjust left/right focus you should zoom the two eyepieces to their highest available power. As you change the power of the two zoom eyepieces, objects should stay focused or only require a minor adjustment of the focus of the main telescope.

Two special considerations should be kept in mind when using zoom eyepieces with a binoviewer. First, when you twist the eyepiece to change the focal length (magnification), the individual eyepiece focusing mechanism of the binoviewer is likely to change. Thus, you should hold the eyepiece holder of the binoviewer when adjusting the zoom to prevent the focus from changing. Second, both eyepieces must be set to the same focal length or it will be difficult or impossible to merge the left and right images. This can be difficult with many zoom eyepieces as the focal length scale on the eyepiece is often not precise.

We recommend the Baader 8-24mm Hyperion Clickstop Zoom eyepiece for binoviewing. This eyepiece is optimized for use with the Maxbright binoviewer providing a generous field of view across the entire range of focal lengths, bright, high contrasts views and precise click stops at 8/12/16/20/24mm.

Care and Cleaning of the Maxbright Binoviewer

IMPORTANT WARNING! Do NOT try to disassemble the Maxbright binocular viewer and do NOT try to clean it inside!

When not in use, cover the eyepiece holder and optical window apertures with the provided caps and store the binoviewer in its padded case.

Generally the glass surfaces of your binoviewer will not require anything more than a burst of clean air from a blower bulb in order to remove dust. Avoid touching the optical window lens or the prisms inside the eyepiece holders with your fingers. Should you touch them, it is advisable to clean promptly, since the natural grease of fingerprints contain weak acids which can corrode the optical coatings of the lens/prisms. Before cleaning fingerprints or other dirt spots, first remove dust with a soft brush and a burst of clean air. To achieve the best results, we suggest you use a few drops of Baader Optical Wonder Fluid on a Baader Optical Wonder Cloth. This combination does not scratch or damage optics and won't leave a halo, film, chemical residue or tissue fibers. Additionally, unlike many cheaper microfiber cloths, Optical Wonder Cloth is antistatic, inhibiting the attraction of dust onto freshly cleaned optical surfaces.



Baader Optical Wonder Cloth is ideal for cleaning optical surfaces. It does not scratch and cleans very well without leaving a residue.

Baader Order No. 290 5000



Baader Optical Wonder Fluid is the ideal cleaning solution for today's high performance multi-coated optical surfaces. It cleans and removes dirt, grease and fingerprints from lenses without leaving a residue.

Baader Order No. 290 5007

On an extremely damp night, moisture may collect inside the binocular viewer, fogging the internal surfaces of the prisms. Do not try to remove the dew, but rather, bring the binoviewer into a warm and dry environment leaving it without caps until it dries naturally in the air. When the binoviewer is completely dry it may be used again or capped and returned to its case for storage.

Servicing and Maintenance

Your Baader Maxbright binoviewer does NOT require any special or periodic maintenance. If the binoviewer should need servicing please return it to the shop where you purchased it, directly to Baader Planetarium or to a facility recommended by the authorized distributor of Baader products in your country.

Please do not attempt to open the binoviewer. The optical collimation (alignment) of the internal prisms is the most important technical aspect of a binocular viewer. Baader Planetarium has gone to great lengths to produce the most accurately collimated binoviewer possible. If your binoviewer has been accidentally dropped or otherwise physically damaged, it is possible for it to lose its optical alignment and require servicing to restore the collimation of its prisms.

If you should happen to notice problems or defects inside your Maxbright binoviewer, NEVER try to open it yourself and do not request service from personnel not authorized by Baader Planetarium. Doing so will void the warranty. If you have any problems or questions about the use of the binoviewer or its optional accessories, please contact Baader Planetarium or your local distributor.

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