Bahtinov Focusing Mask Instructions

The Bahtinov mask is a simple and easy to use device that allows the user to quickly and more accurately focus the telescope. It is ideal for use in astrophotography where achieving good focus is critical.

The Bahtinov mask is placed over the front of the telescope and a bright star is observed. The diffraction pattern created by the mask is seen as and X shape with a line going through the X. The telescope focus is carefully adjusted so the central line evenly bisects the X and is symmetrical. Using this graphical focusing technique is more quick and accurate than traditional focusing methods. Please follow the below procedure to use the Bahtinov focusing mask.

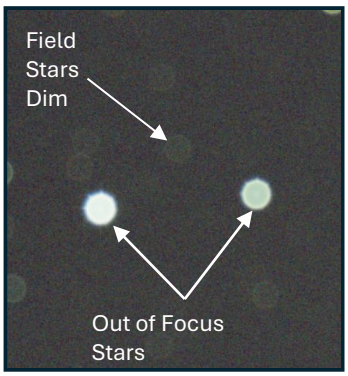
1. Start with the telescope optics in rough focus. Many refracting telescopes have a reference mark on the focuser drawtube that indicates where infinity focus is positioned. If your telescope is equipped with this reference mark, adjust the focuser to this position.

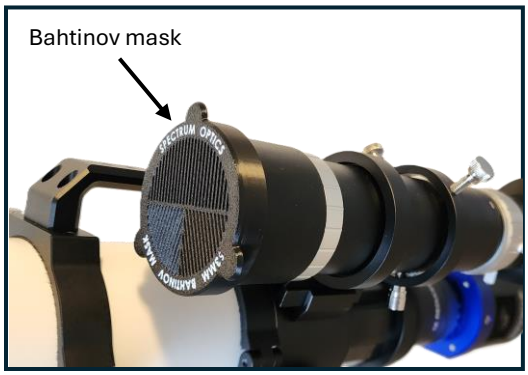
2. Point the telescope at a very bright star and center it in the field of view. Do not choose the Sun, Moon, or planets as the focusing object needs to be a distant point source. Select a bright star that is greater than 40 degrees altitude in the sky. The brighter the star, the brighter the diffraction pattern will be created by the Bahtinov mask.

3. If the telescope is not focused, stars will appear as faint disks with a concentric pattern. The size of the disk depends on how far out of focus the telescope is and, if no stars are visible, it's possible the disk size is larger than the field of view.

4. With the star centered, install the Bahtinov mask by placing it over the telescope front opening. A diffraction pattern is created by light moving through the Bahtinov mask and will appear as an "X" with a central line going through it. The "X" pattern will be stationary, but as you adjust telescope focus, the central line will move.







SOLAR WARNING

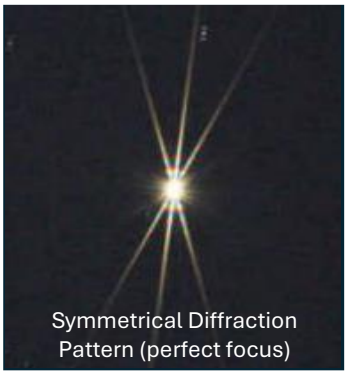
- Solar observations require **SPECIAL PRECAUTIONS** to ensure the safety of both your eyes and your equipment.
- The Sun emits intense and **POTENTIAL HARMFUL RADIATION**, including ultraviolet and infrared light.
- Observing the Sun without proper solar rated gear can lead to **IRREVERSIBLE DAMAGE** to your eyes and equipment.

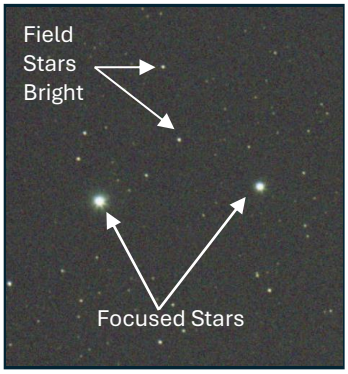


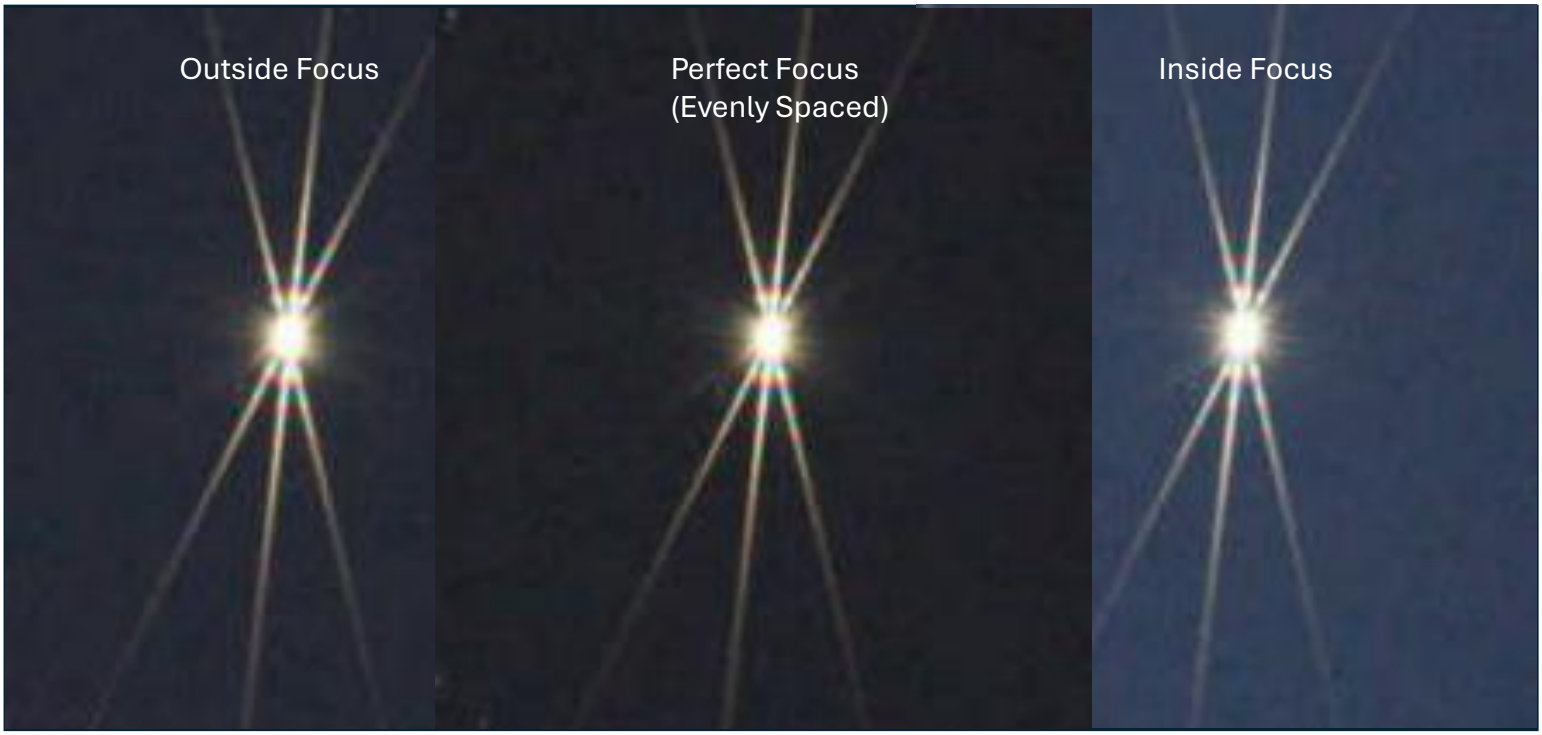
5. Adjust the telescopes focuser slowly so the central line bisects the “X” pattern evenly. It should be symmetrical. After the focuser is adjusted, it is often helpful to wait a few seconds for the image to dampen so you can more clearly see the updated diffraction pattern. If possible, zoom in on the diffraction pattern to make it easier to determine when the pattern is symmetrical.

6. With the diffraction pattern symmetrical, remove the Bahtinov mask and set it aside for later use as needed. The stars in the field of view should be sharp pinpoints of light and your newly focused telescope will provide the best images possible.

Note: As the ambient temperature changes throughout the night, so too will your telescopes focus. It is recommended to check the focus of your telescope periodically to make sure you are getting the best images possible. If you find the stars have started to get larger over time or look “soft”, check the telescope focus using the Bahtinov mask and refocus as necessary.







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Spectrum Optics reserves the right to change product specifications or to discontinue products without notice. This warranty gives specific rights. You may have other rights which vary from state to state. For warranty inquires, please contact: customer@spectrumoi.com

RETURN POLICY

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A claim is required to be filed before return of a product. A claim template can be obtained from Spectrum Optical Instruments by email. Please contact customer service at customer@spectrumoi.com in such an event. Each return product must include a written statement detailing the nature of the claimed defect. As well as the original purchaser's name, address, and contact information.

Buyers are responsible for return shipping and handling cost for warranty services after 30 days of original purchase. Our warranty covers parts and labor only.

Spectrum Optics reserves the right to replace an obsolete product with a new product of comparable price and performance. In event of a defected product shall be replaced by a new product, the defected product become the property of Spectrum Optics. Spectrum Optics does not issue refunds but only repair or replacement.

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