BRESSER 4614505

Bresser Solarix 114/500 Telescope User Manual

Model: 4614505 | Brand: BRESSER

1. Introduction

Welcome to the Bresser Solarix 114/500 Telescope User Manual. This guide provides essential information for the safe and effective use of your new Newtonian telescope. Designed for both night sky and safe solar observation, this telescope offers a unique viewing experience for beginners and enthusiasts alike. Please read this manual thoroughly before operating the telescope.

Figure 1: The Bresser Solarix 114/500 Telescope with its tripod and accessories.

2. Safety Information

WARNING: NEVER look directly at the sun through the telescope without the certified solar filter properly installed. Permanent eye damage or blindness can result. Always ensure the solar filter is securely attached before any solar observation.

- Always supervise children when using the telescope, especially during solar observation.
- Do not use the telescope if the solar filter is damaged, scratched, or missing.
- Store the telescope in a dry, dust-free environment.
- Avoid pointing the telescope at the sun without the filter, even for a moment.

Figure 2: The certified solar filter, essential for safe solar observation.

3. Package Contents

Verify that all components are present in your package:

- Newtonian Telescope Optical Tube
- Aluminum Tripod with Accessory Tray
- Azimuthal Mount

- SR-4mm Eyepiece (31.7mm / 1.25")
- H-20mm Eyepiece (31.7mm / 1.25")
- 2x Barlow Lens
- Smartphone Adapter
- Certified Solar Filter (pre-installed or separate)
- Red Dot Finder
- Astronomical Software (Web Download)
- Lunar Map (Web Download)
- User Manual

Figure 3: The included SR-4mm and H-20mm eyepieces, along with the 2x Barlow lens.

4. Setup

The Bresser Solarix 114/500 is largely pre-assembled for quick setup. Follow these steps:

1. **Unpack Components:** Carefully remove all items from the packaging.
2. **Set up Tripod:** Extend the aluminum tripod legs to a stable height. Secure the accessory tray to the tripod's center brace.
3. **Attach Optical Tube:** Place the telescope optical tube onto the azimuthal mount. Secure it using the provided screws or clamps. Ensure it is firmly attached.
4. **Install Red Dot Finder:** Attach the red dot finder to its designated slot on the telescope tube. Tighten the screws to secure it.
5. **Insert Eyepiece:** Choose an eyepiece (start with the H-20mm for a wider field of view) and insert it into the focuser. Secure it with the thumbscrew. If using the Barlow lens, insert it first, then the eyepiece into the Barlow.

6. **Attach Solar Filter (if not pre-installed):** If your solar filter is separate, carefully place it over the front aperture of the telescope, ensuring it fits snugly and securely. Do not proceed with solar observation if it is loose.

Figure 4: The telescope fully assembled, ready for observation, with the solar filter in place.

5. Operating the Telescope

5.1. Aligning the Red Dot Finder

The red dot finder helps you quickly locate objects in the sky. To align it:

1. Point the main telescope at a distant, stationary object (e.g., a tree or building) during daylight hours.
2. Look through the main telescope's eyepiece and center the object in the field of view.
3. Turn on the red dot finder. Look through the finder and adjust its alignment screws until the red dot is centered

on the same object you see in the main telescope's eyepiece.

Figure 5: The red dot finder, used for quick targeting of celestial objects.

5.2. Solar Observation

CRITICAL: Ensure the certified solar filter is securely attached to the front of the telescope before attempting any solar observation. Never remove it while observing the sun.

1. With the solar filter securely in place, point the telescope towards the sun using the red dot finder. Do not look directly at the sun through the finder without proper solar protection.
2. Look through the eyepiece. You should see a safe, filtered image of the sun.
3. Adjust the focuser knob until the image of the sun is sharp and clear.

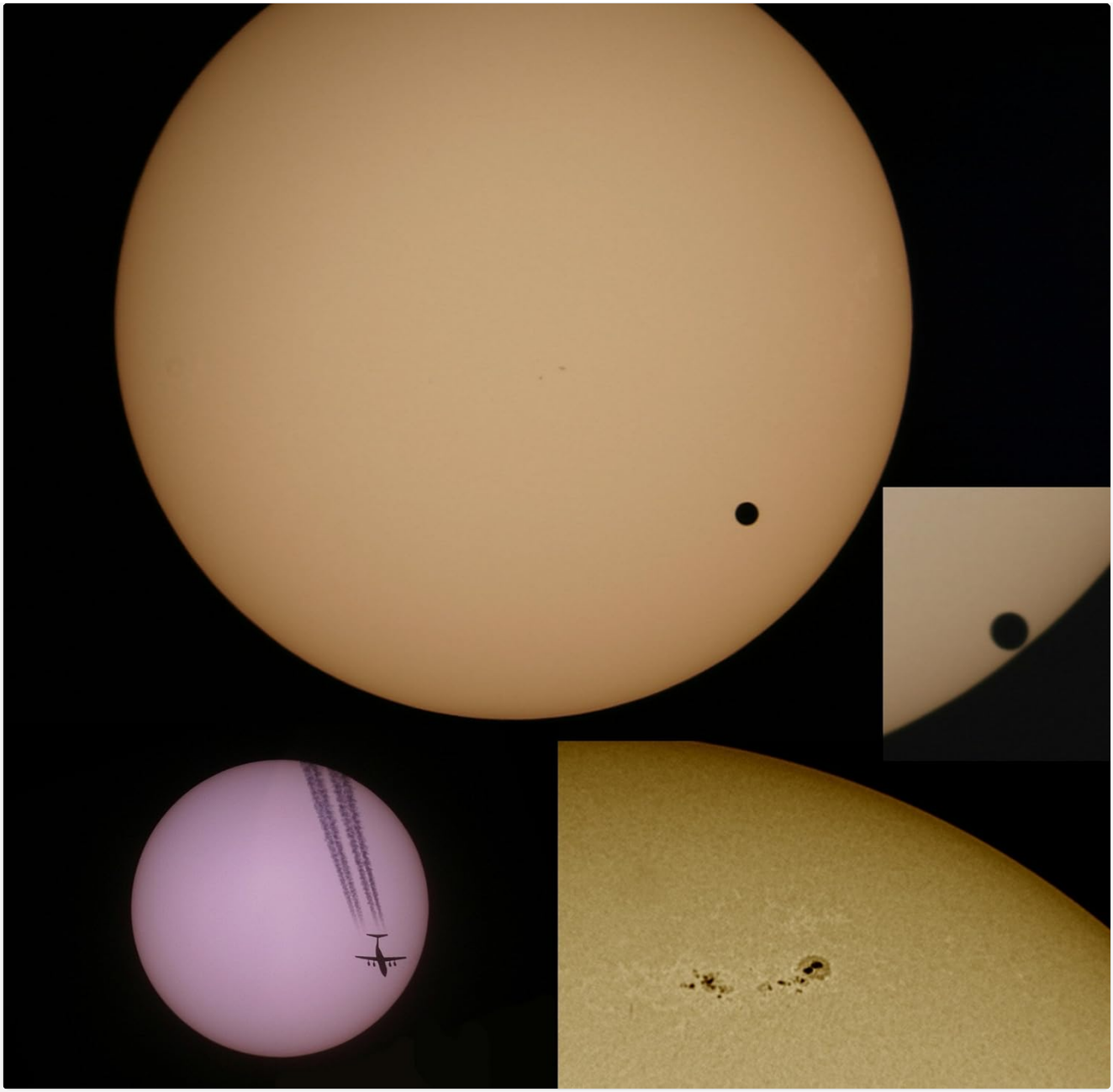

Figure 6: Example of a safe solar observation, showing sunspots or planetary transits.

5.3. Night Sky Observation

For night sky viewing, remove the solar filter. Use the red dot finder to locate celestial objects.

1. **Choose an Eyepiece:** Start with the H-20mm eyepiece for a wide field of view to easily locate objects. For higher magnification, switch to the SR-4mm eyepiece or use the 2x Barlow lens with either eyepiece.
2. **Locate Object:** Use the red dot finder to point the telescope at your desired celestial object (e.g., the Moon, a planet, or a bright star).
3. **Focus:** Look through the eyepiece and slowly turn the focuser knob until the object appears sharp.
4. **Tracking:** As the Earth rotates, objects will drift out of view. Gently move the telescope using the azimuthal mount to keep the object centered.

Figure 7: Example of a lunar observation, revealing craters and surface details.

5.4. Using the Smartphone Adapter

The included smartphone adapter allows you to capture photos of your observations.

1. Attach your smartphone to the adapter, ensuring the camera lens is aligned with the adapter's opening.
2. Carefully slide the adapter (with phone attached) over the eyepiece.
3. Open your phone's camera app. Adjust the phone's position on the adapter and the telescope's focuser until the image is clear on your phone screen.
4. Take photos or record videos.

6. Maintenance

- **Cleaning Lenses:** Use a soft, lint-free cloth specifically designed for optical lenses. Gently wipe away dust. For stubborn smudges, use a specialized optical cleaning solution sparingly. Do not touch the lens surfaces with your fingers.
- **Cleaning Telescope Body:** Wipe the telescope tube and tripod with a soft, damp cloth. Avoid abrasive cleaners.

- **Storage:** Store the telescope in a cool, dry, dust-free environment. Use the original packaging or a dedicated telescope bag for protection.
- **Solar Filter Care:** Inspect the solar filter regularly for any damage. If scratched or punctured, replace it immediately. Do not attempt to repair it.

7. Troubleshooting

Problem	Possible Cause	Solution
Image is blurry	Out of focus; atmospheric conditions; dirty lens	Adjust focuser; wait for stable air; clean lenses
Cannot find object	Red dot finder misaligned; wrong eyepiece magnification	Align red dot finder (Section 5.1); start with low power (H-20mm) eyepiece
Image is dim	High magnification eyepiece; light pollution	Use lower magnification eyepiece; observe from a darker location
Telescope shakes too much	Unstable tripod setup; loose connections	Ensure tripod legs are fully extended and stable; tighten all screws on mount and tube
Solar image is too bright/unsafe	Solar filter not installed or damaged	**IMMEDIATELY STOP OBSERVING. Install or replace solar filter. DO NOT OBSERVE WITHOUT A CERTIFIED FILTER.**

8. Specifications

Model: Bresser Solarix 114/500

Product Number: 4614505

Optical Design: Newtonian Reflector

Aperture: 114 mm (4.5 inches)

Focal Length: 500 mm

Focal Ratio: f/4.4

Mount Type: Azimuthal Mount

Eyepieces: SR-4mm, H-20mm (1.25")

Barlow Lens: 2x

Finderscope: Red Dot Finder

Included Accessories: Smartphone Adapter, Certified Solar Filter

Dimensions (L x W x H): 25 x 25 x 110 cm (assembled)

Weight: 3.5 kg

9. Warranty and Support

For warranty information and technical support, please refer to the official BRESSER website or contact your local distributor. Keep your purchase receipt as proof of purchase.
BRESSER Website: www.bresser.de