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› Bresser Messier Dobson 6-Inch 150/750 mm Telescope - User Manual

BRESSER 4716415

BRESSER Messier Dobson 6-Inch 150/750 mm Telescope

Model: 4716415

User Instruction Manual

INTRODUCTION

This manual provides essential information for the proper setup, operation, and maintenance of your BRESSER Messier Dobson 6-Inch 150/750 mm Telescope. Please read this manual thoroughly before using your telescope to ensure optimal performance and longevity.



Figure 1: The BRESSER Messier Dobson 6-Inch 150/750 mm Telescope, showcasing its compact design and Dobsonian mount.

SETUP AND ASSEMBLY

The BRESSER Messier 6-inch Dobsonian telescope is designed for quick and easy setup, arriving almost pre-assembled. You can begin observing within minutes of unboxing.

Unpacking and Components

Carefully unpack all components and verify against the list below:

- Parabolic Newton Reflector Optical Tube
- Dobsonian Telescope Mount

- LED Illuminated Dot Viewfinder
- 25mm Kellner Eyepiece (Ø 31.7 mm / 1.25")
- 9mm Kellner Eyepiece (Ø 31.7 mm / 1.25")
- Eyepiece Adapter 2.0" to 1.25"
- Lunar Filter (Ø 31.7 mm / 1.25")
- 2 Tube Clamps with Universal Prism Rail
- Telescopic Mounting with Universal Prism Holder
- Instruction Manual
- Installation Hardware



Figure 2: Standard accessories including 25mm and 9mm Kellner eyepieces and the LED illuminated dot viewfinder.



Figure 3: Eyepiece adapters for various sizes, ensuring compatibility with different accessories.

Initial Assembly Steps

1. **Mounting the Optical Tube:** Place the optical tube into the Dobsonian mount's cradle. Secure it using the provided tube clamps and universal prism rail. Ensure the tube is balanced for smooth movement.
2. **Attaching the Viewfinder:** Slide the LED illuminated dot viewfinder into its designated slot on the optical tube. Tighten the retaining screw to secure it.
3. **Inserting an Eyepiece:** Insert either the 25mm or 9mm Kellner eyepiece into the focuser. For 1.25" eyepieces, use the 2.0" to 1.25" adapter if necessary.
4. **Solar Filter (Optional):** If observing the sun, attach the solar filter securely over the front aperture of the telescope. **Never look directly at the sun without a certified solar filter.**



Figure 4: The telescope with the solar filter in place, essential for safe solar observation.

OPERATING YOUR TELESCOPE

The Dobsonian mount allows for intuitive manual tracking of celestial objects. Its simplicity makes it ideal for quick observations.

Finding and Focusing Objects

1. **Placement:** Place the telescope on a stable, level surface. The built-in compass and circular level can assist with initial orientation.
2. **Aligning the Viewfinder:** Before observing, align the LED dot viewfinder with the main telescope. Look through the main eyepiece at a distant terrestrial object (e.g., a distant tree or building). Adjust the viewfinder's alignment screws until the red dot is centered on the same object seen in the main eyepiece.
3. **Targeting:** Use the viewfinder to locate your desired celestial object. Once the object is centered in the viewfinder, it should appear in the field of view of your main eyepiece.
4. **Focusing:** Use the focuser knobs to bring the image into sharp focus. Start with the 25mm eyepiece for a wider field of view, then switch to the 9mm eyepiece for higher magnification once the object is centered and focused.
5. **Tracking:** As celestial objects move across the sky due to Earth's rotation, gently push or pull the optical tube to keep the object within your field of view.

Observing Tips

- **Dark Adaptation:** Allow your eyes to adapt to the dark for at least 20-30 minutes for optimal night vision. Avoid bright lights during observation.
- **Eyepiece Selection:** Use lower magnification (25mm eyepiece) for wide-field views of star clusters or nebulae, and higher magnification (9mm eyepiece) for detailed views of the Moon and planets.
- **Atmospheric Conditions:** "Seeing" (atmospheric stability) greatly affects image quality. On nights with steady air, higher magnifications will yield sharper views.
- **Tube Balance:** The optical tube can be adjusted within its rings to achieve optimal balance, which improves smooth movement and stability during observation.

MAINTENANCE

Proper maintenance ensures the longevity and performance of your telescope.

Cleaning Optics

- **Dust:** Use a soft camel hair brush or a can of compressed air (held upright to prevent propellant discharge) to gently remove dust from the primary mirror and eyepieces.
- **Smudges/Fingerprints:** For stubborn marks, use a specialized optical cleaning solution and a clean, soft microfiber cloth designed for optics. Apply solution to the cloth, not directly to the lens/mirror. Clean gently in a circular motion from the center outwards.
- **Avoid Touching Optics:** Minimize direct contact with optical surfaces to prevent smudges and scratches.

Collimation (Mirror Alignment)

Newtonian telescopes require occasional collimation to ensure the mirrors are perfectly aligned. Misalignment can lead to blurry or distorted images. While your telescope is pre-assembled, transport or bumps can cause slight misalignment.

- Refer to specialized guides or videos on Newtonian telescope collimation for detailed instructions. Tools like a collimation cap or laser collimator can assist in this process.
- The primary mirror has adjustment screws at the rear of the optical tube (see Figure 5) for fine-tuning alignment.



Figure 5: Rear view of the optical tube, showing the primary mirror cell and collimation adjustment screws.

Storage

- Store the telescope in a dry, dust-free environment.
- Use dust caps for the optical tube and eyepieces when not in use.
- Avoid extreme temperature fluctuations, which can affect optical components.

TROUBLESHOOTING

This section addresses common issues you might encounter.

Problem	Possible Cause	Solution
Images are blurry or distorted.	Improper focus. Misaligned mirrors (collimation needed). Poor atmospheric seeing conditions.	Adjust focuser until image is sharp. Perform mirror collimation (refer to Maintenance section). Wait for clearer, steadier atmospheric conditions.

Problem	Possible Cause	Solution
Cannot find objects with the viewfinder.	Viewfinder is not aligned with the main telescope. Viewfinder battery is low or dead.	Align the viewfinder during daylight hours on a distant object. Replace the viewfinder battery.
Telescope shakes or vibrates excessively.	Unstable observing surface. Wind or external vibrations.	Place the telescope on a sturdy, level table or ground. Observe from a sheltered location if possible.
Difficulty achieving focus for astrophotography.	Insufficient inward travel of the focuser for camera sensor.	This is a known characteristic for some Newtonian reflectors. May require specialized adapters or modifications (e.g., moving the primary mirror) for prime focus astrophotography.

SPECIFICATIONS

Feature	Detail
Brand	BRESSER
Model Name	Bresser Optics Messier 6" Dobson Mirror Telescope Newton Magnification 30 to 300x
Model Number	4716415
Optical Design	Newtonian Reflector with Parabolic Main Mirror
Aperture	152.4 mm (6 inches)
Focal Length	750 mm
Focal Ratio	F5
Mount Type	Altazimuth Dobsonian Mount
Eyepieces Included	25mm Kellner, 9mm Kellner (1.25")
Finderscope	LED Reflex Finder
Focus Type	Manual Focus
Colour	White
Product Dimensions (L x W x H)	45 x 44 x 84 cm
Item Weight	9.2 Kilograms
Package Dimensions (L x W x H)	84 x 44.8 x 44.4 cm
Package Weight	12.54 Kilograms
Country of Origin	China

WARRANTY AND SUPPORT

For detailed information regarding warranty coverage, technical support, and service, please refer to the warranty card included with your product or visit the official BRESSER website. Keep your purchase receipt as proof of purchase for any warranty claims.

BRESSER Contact Information: Please refer to the contact details provided in your product packaging or on the official BRESSER website for the most up-to-date support information.

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Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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