mlabs mlabs1247

mLabs Astronomical and Terrestrial Telescope

User Instruction Manual

1. Introduction

Thank you for purchasing the mLabs Astronomical and Terrestrial Telescope. This versatile instrument is designed for both celestial observation and terrestrial viewing. With its 50 mm achromatic objective and robust construction, it provides clear and detailed images. This manual will guide you through the assembly, operation, and maintenance of your telescope to ensure optimal performance and longevity.

2. Safety Information

- **Never look directly at the sun through the telescope or its finder scope without a professionally manufactured solar filter.** Doing so can cause immediate and irreversible eye damage.
- Handle optical components with care to avoid scratches or damage.
- Ensure the telescope is securely mounted on a stable surface to prevent tipping.
- Keep the telescope away from moisture and extreme temperatures.

3. Package Contents

Your mLabs telescope package should include the following components, typically housed in a velvet-lined case:

- Telescope Main Tube (with 50 mm achromatic objective)
- Pillar Mount with Universal Motion
- Adjustable Metal Stand (approx. 4 feet high)
- Astronomical Eyepiece
- Erector Tube (for terrestrial viewing)
- Velvet Lined Carrying Case



Image 1: All components of the mLabs Astronomical and Terrestrial Telescope, including the main tube, mount, stand, eyepieces, and erector tube.

4. Assembly and Setup

1. **Unpack Components:** Carefully remove all components from the velvet-lined case.
2. **Assemble the Stand:** Extend the adjustable metal stand to your desired height (up to approximately 4 feet) and ensure it is stable on a level surface.
3. **Attach the Pillar Mount:** Securely attach the pillar mount with universal motion to the top of the adjustable stand. Ensure all locking mechanisms are tightened.
4. **Mount the Telescope Main Tube:** Attach the telescope main tube to the pillar mount. The main tube has an overall length of approximately 68 cm and houses the 50 mm achromatic objective lens.
5. **Insert Eyepiece (Astronomical):** For astronomical viewing, insert the astronomical eyepiece directly into the focuser at the end of the main tube.
6. **Attach Erector Tube (Terrestrial):** To convert for terrestrial viewing, first remove the astronomical eyepiece. Then, screw the erector tube into the main tube. After the erector tube is in place, insert an eyepiece into the erector tube. This corrects the inverted image produced by the astronomical setup.



Image 2: The mLabs telescope fully assembled on its adjustable stand, ready for observation.

5. Operating the Telescope

5.1 Astronomical Viewing

1. **Preparation:** Ensure the astronomical eyepiece is inserted directly into the main tube's focuser.
2. **Aiming:** Use the universal motion of the pillar mount to roughly point the telescope towards your desired celestial object.

3. **Focusing:** Look through the eyepiece and slowly adjust the focuser knob until the image appears sharp and clear.
4. **Tracking:** As celestial objects move across the sky, gently adjust the telescope using the mount's controls to keep the object in view.

5.2 Terrestrial Viewing

1. **Preparation:** Remove the astronomical eyepiece and screw in the erector tube. Then, insert an eyepiece into the erector tube. This will provide an upright, correctly oriented image for land observations.
2. **Aiming:** Point the telescope towards a distant terrestrial object.
3. **Focusing:** Adjust the focuser knob until the terrestrial object is sharp.

6. Maintenance

- **Cleaning Lenses:** Use a soft, lint-free cloth specifically designed for optical lenses. Gently wipe the objective and eyepiece lenses. For stubborn smudges, use a small amount of optical cleaning fluid applied to the cloth, not directly to the lens.
- **Body Cleaning:** Wipe the metal body of the telescope with a soft, dry cloth. Avoid abrasive cleaners.
- **Storage:** When not in use, store the telescope in its velvet-lined case in a cool, dry place, away from dust and direct sunlight. Replace all lens caps.
- **Avoid Disassembly:** Do not attempt to disassemble the optical components of the telescope, as this can void the warranty and damage the precision optics.

7. Troubleshooting

Problem	Possible Cause	Solution
Image is blurry or out of focus.	Focuser not adjusted correctly.	Slowly turn the focuser knob until the image is sharp.
Image is inverted (upside down).	Normal for astronomical viewing; erector tube not used for terrestrial.	For terrestrial viewing, ensure the erector tube is correctly installed before the eyepiece.
Cannot find objects.	Telescope not properly aimed.	Start with a wide field of view eyepiece (if available) or practice aiming at bright, easy-to-find objects.
Dust on lenses.	Exposure to environment.	Clean lenses gently as described in the Maintenance section.

8. Specifications

- **Brand:** mLabs
- **Model Number:** mlabs1247
- **Objective Lens Diameter:** 50 mm
- **Objective Lens Type:** Achromatic
- **Overall Length of Main Tube:** Approximately 68 cm
- **Stand Height:** Adjustable, up to approximately 4 feet
- **Material:** Metal
- **ASIN:** B01FQFZQ0M

9. Warranty and Support

For warranty information or technical support, please refer to the documentation provided at the time of purchase or contact mLabs customer service through their official website or authorized retailers. Please have your model number (mlabs1247) and purchase details ready when contacting support.

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