

Konus KONUSTART-700 B

KONUS KONUSTART-700 B Refractor Astronomical Telescope User Manual

Model: KONUSTART-700 B

1. INTRODUCTION

Thank you for choosing the KONUS KONUSTART-700 B Refractor Astronomical Telescope. This telescope is designed for observing celestial objects such as the Moon, planets, and brighter deep-sky objects, as well as for terrestrial viewing. With a 60 mm diameter objective lens and a 700 mm focal length (f/11.6), it provides clear and sharp images. This manual will guide you through the assembly, operation, and maintenance of your telescope to ensure optimal performance and enjoyment.



Image: The Konus KONUSSTART-700 B Refractor Astronomical Telescope fully assembled on its tripod.

2. SAFETY GUIDELINES

- **Never look directly at the sun through your telescope or its finder scope without a professionally made solar filter.** Permanent and irreversible eye damage, including blindness, can result.

- Do not leave the telescope unattended in direct sunlight. Sunlight concentrated through the telescope can cause damage to the instrument or ignite flammable materials.
- Handle optical components with care to avoid scratches or damage.
- Keep the telescope and its accessories away from small children to prevent accidental injury or damage to parts.

3. PACKAGE CONTENTS

Your KONUSTART-700 B telescope package includes the following items:

- Refractor Telescope Optical Tube (60 mm diameter, 700 mm focal length)
- Altazimuth Mount
- Two-section Metal Tripod (adjustable from 69 cm to 116 cm)
- Stardot Red Dot Finder
- H 8 mm Eyepiece (31.8 mm diameter)
- H 20 mm Eyepiece (31.8 mm diameter)
- 2x Barlow Lens
- Lunar Filter
- 1.5x Image Erector Prism
- Adjustable Smartphone Adapter
- Star Map
- Fabric Carrying Bag

4. ASSEMBLY INSTRUCTIONS

Follow these steps to assemble your telescope:

1. **Set up the Tripod:** Extend the legs of the metal tripod to your desired height (between 69 cm and 116 cm) and secure them using the leg locks. Ensure the tripod is stable on a flat surface.
2. **Attach the Altazimuth Mount:** Secure the altazimuth mount to the top of the tripod. Tighten any knobs or screws to ensure it is firmly attached.
3. **Mount the Telescope Tube:** Place the telescope optical tube onto the altazimuth mount. There should be a dovetail bar or mounting rings on the telescope tube that fit into the mount. Secure the tube with the provided screws or clamps.
4. **Install the Stardot Red Dot Finder:** Locate the mounting bracket for the red dot finder on the telescope tube. Slide the red dot finder into its bracket and tighten the retaining screws. Remove any protective covers from the finder's lenses.
5. **Insert the Eyepiece:** Loosen the thumbscrew on the focuser drawtube. Insert either the H 20 mm or H 8 mm eyepiece into the drawtube. Tighten the thumbscrew to hold the eyepiece securely. For higher magnification, you can insert the 2x Barlow lens into the focuser first, then insert an eyepiece into the Barlow lens.
6. **Attach the 1.5x Image Erector Prism (for terrestrial viewing):** If you plan to observe terrestrial objects, insert the 1.5x image erector prism into the focuser before inserting an eyepiece. This will correct the inverted image produced by the refractor telescope.
7. **Attach the Smartphone Adapter:** The adjustable smartphone adapter can be attached to an eyepiece for astrophotography. Secure your smartphone in the adapter and then attach the adapter

to the eyepiece.



Image: A complete view of the KONUSTART-700 B telescope, showing the optical tube, mount, and tripod.

5. OPERATING YOUR TELESCOPE

5.1. Using the Red Dot Finder

The Stardot red dot finder helps you locate objects quickly. To use it:

1. Turn on the red dot finder. A small red dot will appear on the viewing window.
2. Align the finder: During daylight, point the main telescope at a distant, easily identifiable object (e.g., a tree top or a street light). Look through the main telescope's eyepiece and center the object.
3. Adjust the red dot finder's alignment screws until the red dot in the finder's window is also centered on the same object.
4. Once aligned, you can use the red dot to quickly point your telescope at celestial objects. Simply look through the finder, move the telescope until the red dot is on your target, and then look through the main eyepiece.

5.2. Focusing

After pointing your telescope at an object, turn the focusing knob slowly until the image in the eyepiece appears sharp and clear. Fine adjustments may be needed as objects move or as your eyes adjust.

5.3. Changing Magnification

The magnification of your telescope is determined by the focal length of the telescope divided by the focal length of the eyepiece. Your telescope has a 700 mm focal length.

- With the H 20 mm eyepiece: $700 \text{ mm} / 20 \text{ mm} = 35x$ magnification.
- With the H 8 mm eyepiece: $700 \text{ mm} / 8 \text{ mm} = 87.5x$ magnification.
- Using the 2x Barlow lens doubles the magnification of any eyepiece. For example, with the H 20 mm eyepiece and 2x Barlow: $35x * 2 = 70x$ magnification.

Start with the lowest magnification (H 20 mm eyepiece) to locate and center objects, then switch to higher magnifications as needed.

5.4. Terrestrial Viewing

For observing objects on Earth, insert the 1.5x image erector prism into the focuser before the eyepiece. This corrects the inverted image, making observations more natural.

5.5. Lunar Observations

The included lunar filter can be screwed onto the bottom of your eyepiece. This filter reduces the brightness of the Moon, enhancing contrast and allowing for more comfortable and detailed observation of lunar features.

5.6. Smartphone Photography

Attach your smartphone to an eyepiece using the adjustable smartphone adapter. Ensure your phone's camera lens is centered over the eyepiece. Use your phone's camera app to capture images or videos of celestial objects. Experiment with different eyepieces and phone settings for best results.



Image: The KONUSTART-700 B telescope with a smartphone attached to the eyepiece using the adapter, showing a view of the moon on the phone screen.

6. CARE AND MAINTENANCE

- **Cleaning Optics:** Use a soft, lint-free cloth specifically designed for optical lenses. For stubborn smudges, use a small amount of optical cleaning fluid. Avoid touching the lens surfaces with your fingers.
- **Cleaning the Telescope Body:** Wipe the telescope tube and mount with a soft, damp cloth. Avoid abrasive cleaners.
- **Storage:** When not in use, store the telescope in its carrying bag in a dry, dust-free environment. Replace all lens caps to protect the optics. Avoid storing in areas with extreme temperature fluctuations.
- **Moisture:** If the telescope is exposed to moisture, allow it to air dry completely before storing. Do not use heat to dry it.

7. TROUBLESHOOTING

- **Image is blurry:** Adjust the focuser knob slowly until the image is sharp. Ensure the eyepiece is fully inserted and secured. Allow the telescope to equalize to the ambient temperature if moved from a warm to a cold environment.
- **Cannot find objects:** Ensure the red dot finder is properly aligned with the main telescope. Start with the lowest magnification eyepiece (H 20 mm) for a wider field of view.
- **Image is upside down or reversed:** This is normal for astronomical telescopes. For terrestrial

viewing, use the 1.5x image erector prism to correct the image orientation.

- **No image visible:** Check that all lens caps are removed from both the main telescope and the finder scope. Ensure an eyepiece is correctly inserted into the focuser.
- **Red dot finder not working:** Check the battery and ensure it is correctly inserted. Turn on the finder.

8. SPECIFICATIONS

Feature	Specification
Brand	Konus
Model Name	KONUSTART-700 B
Optical Tube Length	700 Millimeters
Eyepiece Lens Description	Huygens
Objective Lens Diameter	60 Millimeters
Telescope Mount Description	Altazimuth Mount
Focus Type	Fixed Focus
Finder	Stardot Red Dot Finder
Item Weight	3.97 Pounds
Compatible Devices	Smartphone
Lens Coating	Multi-coated
Objective	60:700mm
Field of View	1.86 Degrees
Zoom Ratio	2x

9. WARRANTY AND SUPPORT

9.1. Product Warranty

The KONUSTART-700 B telescope comes with a **2-year warranty**. This warranty covers manufacturing defects and malfunctions not caused by third parties. Please retain your proof of purchase for warranty claims.

9.2. Customer Support

For technical assistance, warranty service, or any questions regarding your KONUSTART-700 B telescope, please contact Konus customer support. Refer to the contact information provided with your product packaging or visit the official Konus website for support details.