Gskyer AZ90600

Gskyer 600x90mm AZ Astronomical Refractor Telescope User Manual

Model: AZ90600

Introduction

The Gskyer 90mm Astronomical Refractor Telescope is designed for both celestial and terrestrial observation, making it ideal for viewing the Moon, planets, and distant landscapes. Its fully coated glass optical components ensure clean, crisp views. This manual provides comprehensive instructions for assembly, operation, maintenance, and troubleshooting to help you get the most out of your telescope.

Image: Gskyer telescope ready for stargazing under a clear night sky.

What's in the Box

Before beginning assembly, please verify that all components are present and in good condition. The package should include:

- Telescope Optical Tube (90mm Aperture, 600mm Focal Length)
- Adjustable Stainless Steel Tripod (1.27-inch)
- AZ Altazimuth Mount
- Finderscope (6x30)
- Eyepieces: 25mm, 10mm, 5mm
- 3X Barlow Lens
- 48° Erecting BAK7 Prism (Zenith Mirror)
- Phone Adapter
- Wireless Remote Shutter

- User Manual (this document)

Image: All included accessories and main telescope components.

Setup

Follow these steps to assemble your Gskyer telescope:

1. **Set up the Tripod:** Extend the legs of the stainless steel tripod to your desired height. Ensure the tripod is stable on a flat surface. Secure the accessory tray to the center brace of the tripod.
2. **Attach the Mount:** Place the AZ Altazimuth Mount onto the tripod head and secure it using the provided screws.
3. **Mount the Optical Tube:** Attach the telescope optical tube to the AZ mount using the dovetail plate connection. Tighten the locking screws to ensure the tube is firmly in place.
4. **Install the Finderscope:** Slide the 6x30 finderscope into its bracket on the optical tube and tighten the retaining screws.
5. **Insert the Zenith Mirror:** Insert the 48° Erecting BAK7 Prism (diagonal) into the focuser of the telescope. Secure it with the small thumbscrew.
6. **Attach an Eyepiece:** Insert your chosen eyepiece (e.g., 25mm for lower magnification) into the zenith mirror. Secure it with

the thumbscrew on the diagonal.

7. **Attach Phone Adapter (Optional):** If using the phone adapter, attach it to the eyepiece and secure your smartphone.

Image: Fully assembled Gskyer telescope indoors.

Image: The AZ Altazimuth Mount allows for easy horizontal and vertical adjustments.

Operating the Telescope

1. Aligning the Finderscope

The finderscope helps you locate objects before viewing them through the main telescope. To align it:

1. Point the main telescope at a distant, stationary object (e.g., a tree or building) during daylight hours.
2. Center the object in the main telescope's eyepiece.
3. Look through the finderscope and adjust its alignment screws until the same object is centered in the finderscope's crosshairs.

2. Choosing Eyepieces and Magnification

Your telescope comes with multiple eyepieces and a Barlow lens to achieve different magnifications. Magnification is calculated by dividing the telescope's focal length (600mm) by the eyepiece's focal length.

- **25mm Eyepiece:** Provides 24X magnification (600mm / 25mm = 24X). Ideal for wide-field views and locating objects.
- **10mm Eyepiece:** Provides 60X magnification (600mm / 10mm = 60X). Good for more detailed views of the Moon and planets.

- **5mm Eyepiece:** Provides 120X magnification (600mm / 5mm = 120X). For higher detail on celestial objects.
- **3X Barlow Lens:** Trebles the magnification of any eyepiece. For example, a 25mm eyepiece with the 3X Barlow lens provides 72X magnification (24X * 3 = 72X).

Always start with the lowest magnification (25mm eyepiece) to locate your target, then switch to higher magnifications for more detail.

Image: Visual comparison of moon views with 25mm and 10mm eyepieces.

3. Focusing

Once an object is centered in your eyepiece, slowly turn the focus knob until the image is sharp and clear. Fine-tune the focus for optimal viewing.

4. Terrestrial Viewing

The 48° Erecting BAK7 Prism provides an upright image, making the telescope suitable for terrestrial viewing (e.g., bird watching,

landscape observation). Without this prism, images would appear inverted.

Image: The 48° Erecting BAK7 Prism for upright terrestrial viewing.

Image: The Gskyer telescope with phone adapter and remote shutter for astrophotography.

Maintenance

Proper care will extend the life and performance of your telescope:

- **Cleaning Lenses:** Use a soft, lint-free cloth specifically designed for optical lenses. Never use abrasive materials or household cleaners. Gently brush away any dust before wiping.
- **Storage:** Store the telescope in a dry, dust-free environment. Keep lens caps on when not in use to protect the optics.
- **Handling:** Avoid touching optical surfaces with your fingers. Always handle the telescope by its body and mount.
- **Temperature Changes:** Allow the telescope to acclimate to outdoor temperatures before use to prevent condensation on lenses.

Troubleshooting

If you encounter issues, refer to the following common problems and solutions:

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Image is blurry or out of focus.	Incorrect focus setting.	Adjust the focus knob slowly until the image is sharp.
Cannot find objects.	Finderscope not aligned; starting with too high magnification.	Align the finderscope (see "Operating" section). Start with the 25mm eyepiece.
Image is inverted or reversed.	Erecting prism not used for terrestrial viewing.	Ensure the 48° Erecting BAK7 Prism is inserted for upright images.
Image is dim or unclear.	Light pollution; atmospheric conditions; dirty lenses.	Move to a darker location. Wait for clearer skies. Clean lenses carefully.
Tripod is unstable.	Legs not fully extended or locked; uneven surface.	Ensure all tripod leg locks are secure and the tripod is on a stable, level surface.

Specifications

Key technical specifications for your Gskyer AZ90600 Telescope:

- **Aperture:** 90mm (3.5 inches)
- **Focal Length:** 600mm (23.62 inches)
- **Focal Ratio:** F6.7
- **Eyepieces:** 25mm (24X), 10mm (60X), 5mm (120X)
- **Barlow Lens:** 3X
- **Max Magnification:** 360X
- **Finderscope:** 6x30
- **Zenith Mirror:** 48° Erecting BAK7 Prism
- **Mount:** AZ Altazimuth Mount
- **Optical Coating:** Multi Antireflection Green Film
- **Resolution:** ≤2.8
- **Angular Field of View:** 1°36"
- **Tube Connection:** Hook Dovetail Plate
- **Tripod:** 1.27-inch Stainless Steel Tripod (Adjustable height: 31.5-inch to 49-inch)
- **Product Dimensions:** 38 x 12 x 8 inches
- **Item Weight:** 18 pounds

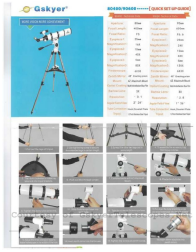
Image: Key dimensions of the Gskyer telescope.

Warranty and Support

Gskyer provides a 12-month worry-free support period for your telescope. If you encounter any issues or have questions, please contact Gskyer customer service directly via Amazon email. Our professional team and technical personnel are available to provide operation and guidance.

For returns, please contact us first. We are committed to resolving any problems and providing the best customer service.
For more information and support, you may visit the official Gskyer store on Amazon:Gskyer Store

Related Documents - AZ90600

	Gskyer Sky Explorer 130EQ Quick Set-Up Guide A comprehensive guide to quickly set up your Gskyer Sky Explorer 130EQ telescope, including parts identification and step-by-step assembly instructions for the tripod, mount, and optical tube.
	Gskyer 80400/90600 Telescopes Quick Set-Up Guide A quick set-up guide for Gskyer 80400 and 90600 telescopes, detailing assembly, component installation, and usage with optional accessories.