



Manuals.plus /

› Sky-Watcher /

› Skywatcher Evostar-90 (EQ-2) Telescope Instruction Manual

Sky-Watcher Skywatcher Evostar-90 (EQ-2)

Skywatcher Evostar-90 (EQ-2) Telescope Instruction Manual

Model: Skywatcher Evostar-90 (EQ-2)

1. INTRODUCTION

Congratulations on your purchase of the Skywatcher Evostar-90 (EQ-2) Telescope. This achromatic refractor telescope is designed to provide clear and detailed views of celestial objects, making it an excellent choice for beginners and intermediate astronomers. With its 90mm aperture and 900mm focal length, it offers a versatile platform for observing the Moon, planets, and brighter deep-sky objects. The robust EQ-2 equatorial mount allows for precise tracking of astronomical targets as they move across the night sky.



Image: The Skywatcher Evostar-90 (EQ-2) Telescope fully assembled, showing the optical tube, equatorial mount, and adjustable aluminum tripod.

2. SAFETY INFORMATION

- **Never look directly at the Sun through the telescope or its finderscope without a professionally manufactured solar filter.** Doing so can cause immediate and irreversible eye damage, including blindness.
- Do not leave the telescope unattended, especially when children are present.
- Handle optical components with care to avoid scratches or damage.
- Ensure the tripod is stable on a level surface to prevent tipping.

3. PACKAGE CONTENTS

Verify that all components are present in your package:

- Skywatcher Evostar-90 (EQ-2) Optical Tube (90mm f/900 Refractor)
- EQ-2 Equatorial Mount
- Adjustable Aluminum Tripod with Accessory Tray
- 10mm Eyepiece (1.25")
- 25mm Eyepiece (1.25")
- 6x30 Finderscope
- 31.7mm Diagonal Mirror

4. SETUP GUIDE

Follow these steps to assemble your telescope:

1. **Assemble the Tripod:** Extend the legs of the aluminum tripod to a suitable height and secure them. Attach the accessory tray to the tripod brace for stability and convenience.
2. **Attach the EQ-2 Mount:** Place the EQ-2 equatorial mount onto the tripod head and secure it with the provided bolt. Ensure it is firmly attached.
3. **Attach the Optical Tube:** Locate the mounting rings on the optical tube. Open them and place the telescope tube into the rings, then close and tighten them securely onto the EQ-2 mount's dovetail plate.
4. **Install the Finderscope:** Slide the 6x30 finderscope into its bracket on the optical tube and tighten the retaining screws.
5. **Insert the Diagonal and Eyepiece:** Insert the 31.7mm diagonal mirror into the focuser of the telescope. Then, insert either the 25mm or 10mm eyepiece into the diagonal and secure it with the thumbscrew. Start with the 25mm eyepiece for wider views and easier object location.
6. **Balance the Telescope:** Adjust the counterweight on the counterweight shaft until the telescope is balanced in Right Ascension (RA). This prevents strain on the mount and allows for smoother tracking.
7. **Polar Alignment (Basic):** For basic observation, point the mount's polar axis roughly towards Polaris (the North Star) in the Northern Hemisphere. For more precise tracking, consult a guide on detailed polar alignment.

5. OPERATING YOUR TELESCOPE

5.1. Aligning the Finderscope

The finderscope is crucial for locating objects. During daylight, point the main telescope at a distant, stationary object (e.g., a tree top or telephone pole). Look through the 25mm eyepiece and center the object. Then, look through the finderscope and adjust its alignment screws until the same object is centered in the finderscope's crosshairs.

5.2. Focusing

Once an object is in view, turn the focuser knobs slowly until the image appears sharp and clear. You may need to make small adjustments as objects move or as your eye adapts.

5.3. Changing Magnification

The telescope comes with two eyepieces: 25mm and 10mm.

- The **25mm eyepiece** provides a lower magnification (36x) and a wider field of view, ideal for locating objects and observing larger celestial bodies like the Moon or star clusters.
- The **10mm eyepiece** provides a higher magnification (90x), suitable for more detailed views of planets or smaller lunar features.

To change magnification, simply remove the current eyepiece from the diagonal and insert the desired one, securing it with the thumbscrew.

5.4. Tracking Celestial Objects

Due to Earth's rotation, celestial objects appear to drift across the field of view. The EQ-2 mount allows you to track them by turning the slow-motion controls on the Right Ascension (RA) axis. Once polar aligned, you only need to turn the RA knob to keep an object centered.

6. MAINTENANCE AND CARE

- **Cleaning Optics:** Dust on the objective lens or eyepieces should be removed with a soft brush or compressed air. For smudges, use a specialized optical cleaning solution and a microfiber cloth designed for optics. Avoid touching optical surfaces with your fingers.
- **Storage:** When not in use, store the telescope in a dry, dust-free environment. Keep dust caps on the objective lens and focuser to protect the optics.
- **General Care:** Avoid exposing the telescope to extreme temperatures or sudden temperature changes. Do not overtighten knobs or screws.

7. TROUBLESHOOTING

| Problem | Possible Cause | Solution |
|--|---|---|
| Image is blurry or out of focus. | Incorrect focus setting. | Adjust the focuser knobs slowly until the image is sharp. |
| Cannot find objects with the main telescope. | Finderscope is not aligned with the main telescope. | Align the finderscope as described in Section 5.1. |
| Image is shaky or unstable. | Tripod not stable, mount not balanced, or windy conditions. | Ensure tripod legs are fully extended and locked. Balance the telescope properly. Observe on calm nights. |
| Objects drift out of view quickly. | Insufficient polar alignment or not using slow-motion controls. | Improve polar alignment. Use the Right Ascension (RA) slow-motion control to track objects. |

8. SPECIFICATIONS

- **Optical Design:** Achromatic Refractor
- **Aperture:** 90 mm
- **Focal Length:** 900 mm
- **Focal Ratio:** f/10

- **Mount Type:** EQ-2 Equatorial
- **Included Eyepieces:** 10 mm (90x magnification), 25 mm (36x magnification) - 1.25" barrel diameter
- **Finderscope:** 6x30
- **Diagonal:** 31.7 mm (1.25")
- **Tripod:** Adjustable Aluminum (approx. 71 cm to 121 cm height)
- **Approximate Assembled Weight:** 14 kg (based on package weight)
- **Dimensions (assembled):** 114 x 44 x 24 cm (L x W x H)

9. WARRANTY AND SUPPORT

Specific warranty information for the Skywatcher Evostar-90 (EQ-2) Telescope may vary by region and retailer. Please refer to the warranty card included with your product or contact your point of purchase for details regarding warranty coverage and service.

For technical support, additional resources, or to download the latest manuals, please visit the official Sky-Watcher website or contact their customer service department.

Visit [Sky-Watcher Official Website](#)