



[Manuals.plus](#) /

› [SOLOMARK](#) /

› SOLOMARK 80EQ Refractor Telescope Instruction Manual

SOLOMARK 80700EQ

SOLOMARK 80EQ Refractor Telescope Instruction Manual

Model: 80700EQ

INTRODUCTION

This manual provides detailed instructions for the assembly, operation, and maintenance of your SOLOMARK 80EQ Refractor Telescope. Designed for astronomy enthusiasts, this telescope offers a clear view of celestial objects. Please read these instructions carefully before using your telescope to ensure proper setup and optimal viewing experience.

PRODUCT OVERVIEW AND COMPONENTS

The SOLOMARK 80EQ Refractor Telescope comes with several key components designed for astronomical observation. Familiarize yourself with each part before assembly.

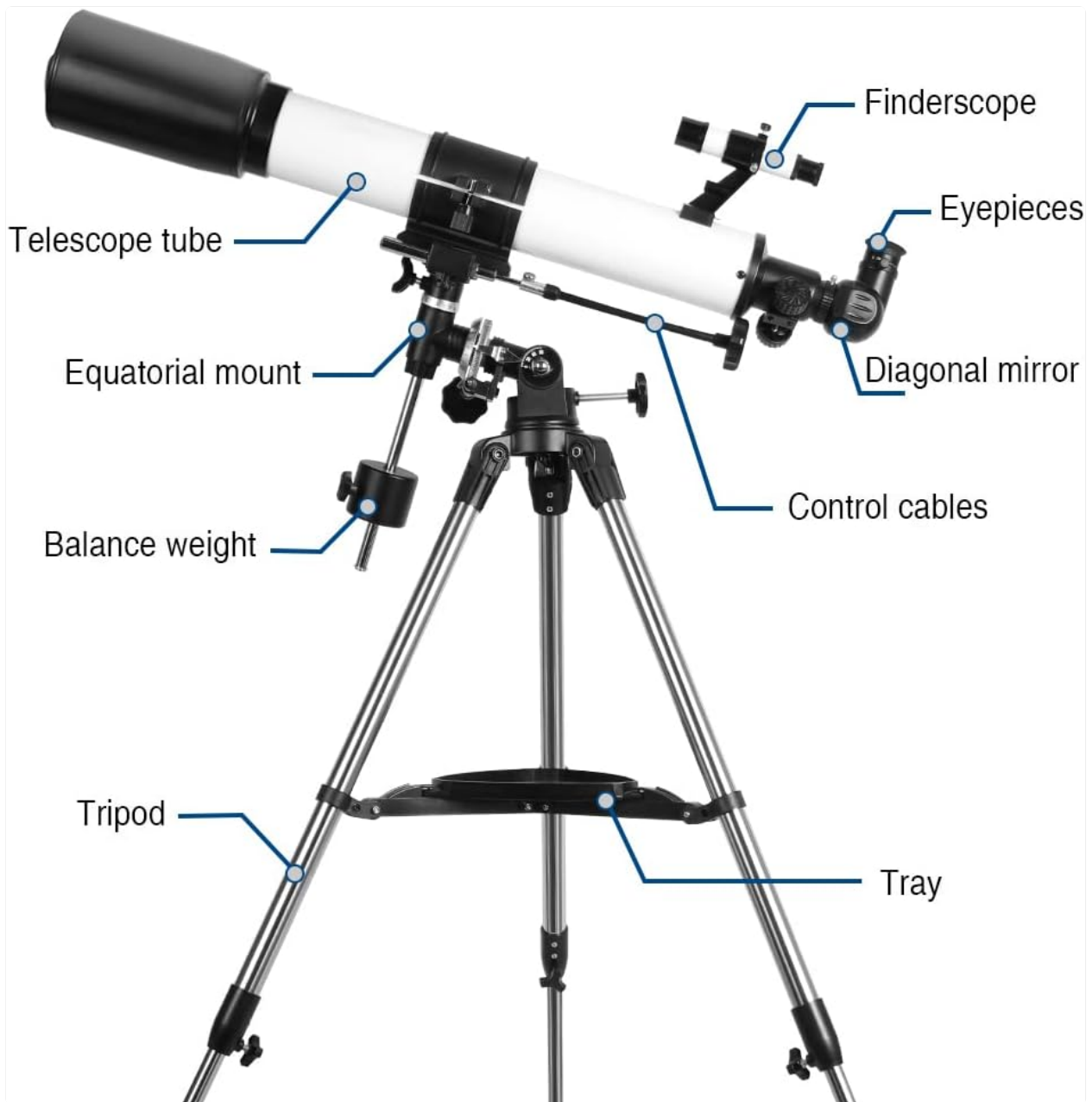


Image Description: A labeled diagram of the SOLOMARK 80EQ Refractor Telescope, highlighting its main components: Telescope tube, Finderscope, Eyepieces, Diagonal mirror, Control cables, Equatorial mount, Balance weight, Tripod, and Tray.

Key Features:

- **80mm Refractor Telescope:** Provides clear and bright images for observing the moon, planets, and brighter deep-sky objects.
- **German Equatorial Mount:** Allows for precise tracking of celestial objects as they move across the night sky. Features slow-motion controls for fine adjustments.
- **700mm Focal Length:** Offers good magnification capabilities for detailed observations.
- **Multiple Eyepieces:** Includes 10mm and 20mm eyepieces for varying magnifications.
- **1.5X Barlow Lens:** Increases the magnification of any eyepiece by 1.5 times.
- **Finderscope:** Assists in locating objects in the night sky before viewing them through the main telescope.
- **Moon Filter (13% Transmission):** Reduces the brightness of the moon for more comfortable and detailed viewing.
- **Smartphone Adapter:** Allows for attaching a smartphone to capture images through the telescope.

SETUP INSTRUCTIONS

Follow these steps to correctly assemble your SOLOMARK 80EQ Refractor Telescope. It is recommended to perform the initial assembly indoors in a well-lit area.

1. **Unpack Components:** Carefully remove all parts from the packaging and lay them out. Verify all components are present according to the packing list.
2. **Assemble the Tripod:** Extend the tripod legs and secure them. Ensure the accessory tray is attached to provide stability and a place for eyepieces.
3. **Attach the Equatorial Mount:** Secure the equatorial mount head to the top of the tripod. Ensure it is firmly attached.
4. **Install the Telescope Tube:** Attach the telescope tube to the equatorial mount using the provided rings or dovetail plate. Ensure it is balanced and securely fastened.
5. **Attach the Finderscope:** Mount the finderscope onto the main telescope tube. This will be used for initial targeting.
6. **Insert the Diagonal Mirror:** Place the diagonal mirror into the focuser of the telescope.
7. **Insert an Eyepiece:** Choose an eyepiece (e.g., 20mm for wider field of view) and insert it into the diagonal mirror.
8. **Attach Control Cables:** Connect the slow-motion control cables to the appropriate axes on the equatorial mount for fine adjustments.
9. **Balance the Telescope:** Adjust the counterweight on the equatorial mount to balance the telescope tube. This prevents strain on the mount and allows for smoother movement.

Your browser does not support the video tag.

Video Description: An official SOLOMARK video demonstrating the process of mounting the dovetail plate and telescope tube onto the equatorial mount, and securing the components. This video provides a visual guide for a key step in the telescope assembly.



Image Description: The SOLOMARK 80EQ Refractor Telescope fully assembled on its tripod with the equatorial mount, finderscope, and smartphone adapter attached. This image shows the complete setup ready for use.

OPERATING INSTRUCTIONS

Once assembled, follow these steps to begin observing celestial objects with your telescope.

- 1. Align the Finderscope:** During daylight, point the main telescope at a distant, stationary object (e.g., a tree or building). Look through the finderscope and adjust its alignment screws until the object is centered in both the finderscope and the main telescope's eyepiece.
- 2. Locate an Object:** Use the finderscope to locate the desired celestial object. Once centered in the finderscope, it should be visible in the main telescope's eyepiece.
- 3. Focus the Image:** Slowly turn the focuser knob until the image appears sharp and clear.
- 4. Adjust Magnification:** Start with the lowest magnification eyepiece (20mm) for a wider field of view. Once the object is found and focused, you can switch to a higher magnification eyepiece (10mm) or use the Barlow lens for more detail.
- 5. Tracking Celestial Objects:** Due to Earth's rotation, celestial objects will appear to drift out of view. Use

the slow-motion control cables on the equatorial mount to continuously track the object and keep it centered in your eyepiece.

6. **Using the Moon Filter:** For observing the Moon, screw the 13% transmission moon filter onto the bottom of your eyepiece before inserting it into the diagonal. This will reduce glare and enhance contrast.
7. **Using the Smartphone Adapter:** Attach your smartphone to the adapter and align your phone's camera with the eyepiece. This allows you to capture photos or videos of your observations.



Image Description: A visual comparison showing the magnification difference between the 10mm eyepiece (70X) and the 20mm eyepiece (35X) when viewing the moon. This illustrates how different eyepieces provide varying levels of detail and field of view.



Image Description: A collection of accessories included with the SOLOMARK 80EQ Telescope, featuring two eyepieces (10mm and 20mm), a 1.5X Barlow lens, a moon filter, and a smartphone adapter. These accessories enhance the telescope's versatility.

MAINTENANCE

Proper care and maintenance will extend the life and performance of your telescope.

- **Cleaning Lenses:** Use a soft, lint-free cloth specifically designed for optical surfaces. Gently brush away any dust before using a cleaning solution. Avoid touching the lens surfaces with your fingers.
- **Storage:** Store the telescope in a dry, dust-free environment. Keep all caps on the lenses and focuser when not in use. If possible, store it in its original packaging or a dedicated telescope case to protect it from impacts and dust.
- **Avoid Extreme Temperatures:** Do not expose the telescope to rapid temperature changes or extreme heat/cold, as this can affect optical components.
- **Regular Checks:** Periodically check all screws and fasteners to ensure they are tight. Do not overtighten.

TROUBLESHOOTING

Here are some common issues and their solutions:

- **Fuzzy or Unclear Image:**

- Ensure the focuser is properly adjusted.
- Check if the eyepiece is fully inserted and secured.
- Verify that the finderscope is correctly aligned with the main telescope.
- Atmospheric conditions (e.g., heat haze, turbulence) can affect image clarity. Try observing on a night with stable air.

- **Cannot Locate Objects:**

- Confirm the finderscope is accurately aligned.
- Start with the lowest magnification eyepiece (20mm) to get a wider field of view.
- Ensure the telescope is balanced and the mount is moving smoothly.

- **Objects Drift Out of View Quickly:**

- This is normal due to Earth's rotation. Use the slow-motion controls on the equatorial mount to track objects.
- Ensure the equatorial mount is properly aligned to the celestial pole for easier tracking.

SPECIFICATIONS

Feature	Detail
Brand	SOLOMARK
Model Name	80EQ
Item Model Number	80700EQ
Objective Lens Diameter	80 Millimeters
Focal Length	700mm
Telescope Mount Description	Equatorial Mount
Focus Type	Manual Focus
Eyepiece Lens Description	Barlow (includes 10mm and 20mm eyepieces)
Finderscope	Reflex
Compatible Devices	Smartphone
Item Weight	16.87 pounds
Product Dimensions	35.43 x 4.72 x 59.06 inches

WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation included with your product or visit the official SOLOMARK website. Specific warranty terms and conditions may vary.

