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› Sky-Watcher SK-AVANT-130N Telescope Instruction Manual

## Sky-Watcher SK-AVANT-130N

# Sky-Watcher SK-AVANT-130N Telescope

## Instruction Manual

### 1. INTRODUCTION

The Sky-Watcher SK-AVANT-130N is a 130mm Newtonian reflector telescope designed for both visual observation and astrophotography. It features a 130mm diameter primary mirror and a 650mm focal length (f/5 focal ratio), providing bright and wide views of celestial objects. The telescope is mounted on the versatile AZ-EQ Avant mount, which can be configured for both altazimuth and equatorial tracking, offering flexibility for various observing needs. This manual provides essential information for setting up, operating, and maintaining your telescope.



Image: The Sky-Watcher SK-AVANT-130N Newtonian telescope mounted on its AZ-EQ Avant mount and adjustable aluminum tripod.

## 2. WHAT'S IN THE BOX

Please check the contents of your package to ensure all items are present:

- Sky-Watcher SK-AVANT-130N Optical Tube Assembly

- AZ-EQ Avant Mount
- Adjustable Aluminum Tripod with Accessory Tray
- Super 25mm Eyepiece (31.8mm barrel)
- Super 10mm Eyepiece (31.8mm barrel)
- Reddot Finder
- Instruction Manual

### 3. SETUP INSTRUCTIONS

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Follow these steps to assemble your Sky-Watcher SK-AVANT-130N telescope:

1. **Assemble the Tripod:** Extend the legs of the aluminum tripod to your desired height and secure them. Attach the accessory tray to the tripod's center brace for added stability and convenience.
2. **Attach the AZ-EQ Avant Mount:** Securely fasten the AZ-EQ Avant mount head to the top of the tripod. Ensure all locking knobs are tightened to prevent movement.
3. **Mount the Optical Tube:** Carefully attach the 130mm Newtonian optical tube to the mount's dovetail saddle. Slide the tube into place and tighten the saddle clamps firmly. Ensure the tube is balanced on the mount.
4. **Install the Reddot Finder:** Attach the Reddot finder to its designated bracket on the optical tube. Align the finder with the main telescope by pointing the telescope at a distant terrestrial object during daylight and adjusting the finder's screws until the red dot is centered on the same object.
5. **Insert an Eyepiece:** Loosen the thumbscrew on the focuser and insert the Super 25mm eyepiece. Tighten the thumbscrew to secure it. The 25mm eyepiece provides a lower magnification and wider field of view, ideal for locating objects.

### 4. OPERATING INSTRUCTIONS

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Your Sky-Watcher SK-AVANT-130N telescope offers versatile operation modes:

#### 4.1. Mount Configuration (Altazimuth vs. Equatorial)

The AZ-EQ Avant mount can quickly switch between altazimuth and equatorial modes:

- **Altazimuth Mode:** For quick, casual observations of terrestrial objects or bright celestial objects like the Moon and planets. In this mode, you simply point the telescope up/down (altitude) and left/right (azimuth).
- **Equatorial Mode:** Ideal for tracking celestial objects as they move across the night sky due to Earth's rotation. To use this mode, adjust the mount's latitude base to match your geographical latitude. Orient the mount roughly towards the celestial north pole (or south pole in the Southern Hemisphere). Once aligned, you can track objects by adjusting only the Right Ascension (AR) micrometric control.

#### 4.2. Locating and Focusing Objects

1. **Use the Reddot Finder:** Look through the Reddot finder and move the telescope until the red dot is centered on your desired object.
2. **Observe through the Eyepiece:** Look into the main telescope's eyepiece. The object should be visible within the field of view.
3. **Focus:** Use the manual focuser knob to bring the image into sharp focus. Turn the knob slowly until the image is clear and crisp.
4. **Change Magnification:** To increase magnification, replace the Super 25mm eyepiece with the Super 10mm

eyepiece. Refocus as needed.

## 5. MAINTENANCE

Proper care will ensure the longevity and performance of your telescope:

- **Cleaning Optics:** Dust on the mirrors or eyepieces should be removed with a soft brush or a can of compressed air. For smudges or fingerprints, use a specialized optical cleaning solution and a microfiber cloth designed for optics. **Never touch the optical surfaces with your fingers.**
- **Storage:** When not in use, store the telescope in a clean, dry, and dust-free environment. Keep the dust caps on the optical tube and eyepieces to protect the optics.
- **Mechanical Parts:** Periodically check all screws and bolts on the mount and tripod to ensure they are tight. Do not overtighten.
- **Avoid Extreme Temperatures:** Do not expose the telescope to rapid temperature changes or extreme heat/cold, as this can affect the optics and mechanical components.

## 6. TROUBLESHOOTING

Here are solutions to common issues you might encounter:

- **Blurry Images:**
  - Ensure the focuser is adjusted correctly.
  - Check for atmospheric turbulence (shimmering air).
  - Verify eyepieces are clean and free of condensation.
- **Difficulty Finding Objects:**
  - Make sure the Reddot finder is properly aligned with the main telescope.
  - Start with the lowest magnification eyepiece (Super 25mm) for a wider field of view.
  - Ensure the telescope is balanced on the mount.
- **Unstable View / Vibrations:**
  - Ensure the tripod legs are fully extended and locked, and placed on a stable surface.
  - Tighten all locking knobs on the mount and tripod.
  - Avoid touching the telescope during observation; use the slow-motion controls.

## 7. SPECIFICATIONS

| Feature        | Description         |
|----------------|---------------------|
| Optical Design | Newtonian Reflector |
| Aperture       | 130 mm              |
| Focal Length   | 650 mm              |
| Focal Ratio    | f/5                 |

|                            |                                                              |
|----------------------------|--------------------------------------------------------------|
| Maximum Magnification      | 260x                                                         |
| Mirror Coating             | Aluminum                                                     |
| Mount Type                 | Altazimuth - Equatorial Avant                                |
| Tripod                     | Telescopic Aluminum with Accessory Tray                      |
| Eyepieces Included         | Super 25mm (31.8mm), Super 10mm (31.8mm)                     |
| Finder Scope               | Reddot Finder                                                |
| Focuser Type               | Manual Focus                                                 |
| Power Source               | Manual Operation                                             |
| Compatible Devices         | Smartphone, Camera (with appropriate adapters, not included) |
| Product Dimensions (DxWxH) | 40P x 40l x 110H cm                                          |
| Item Weight                | 3 Kilograms                                                  |

## 8. WARRANTY AND SUPPORT

The Sky-Watcher SK-AVANT-130N Telescope comes with a **2-year manufacturer warranty**. This warranty covers defects in materials and workmanship under normal use.

For technical support, warranty claims, or service inquiries, please contact Sky-Watcher customer service through their official website or your local distributor. Please have your model number (SK-AVANT-130N) and proof of purchase ready when contacting support.

### ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

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Example: How do I reset this device or fix this error?

**Details**

Model number, symptoms, what you tried, or the section of the manual you are using.

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