

ZWO SEESTAR-S50

ZWO Seestar S50 Astronomical All-in-one Smart Telescope User Manual

Model: SEESTAR-S50

1. INTRODUCTION

The ZWO Seestar S50 is an innovative all-in-one smart telescope designed for astronomy enthusiasts of all skill levels. It integrates a telescope, camera, tracking mount, and focuser into a single, compact unit. This manual provides comprehensive instructions for setting up, operating, and maintaining your Seestar S50 to ensure optimal performance and enjoyment of celestial observation.

The Seestar S50 is ideal for observing Deep Sky objects, the Moon, and the Sun (with the included solar filter). Please note that it is not primarily designed for detailed planetary viewing.



Figure 1.1: The ZWO Seestar S50, a compact and integrated smart telescope.

2. SETUP

2.1 Unboxing and Initial Inspection

Carefully remove all components from the packaging. Verify that all items listed in the packing list are present and undamaged. If any items are missing or damaged, contact ZWO customer support immediately.

2.2 Attaching the Tripod

The Seestar S50 comes with a complimentary compact tripod for convenience. To attach the telescope to the tripod:

1. Extend the tripod legs and ensure they are stable on a flat surface.
2. Locate the 3/8" screw thread on the top of the tripod.
3. Align the Seestar S50's base with the tripod screw and rotate clockwise until securely fastened. Do not overtighten.

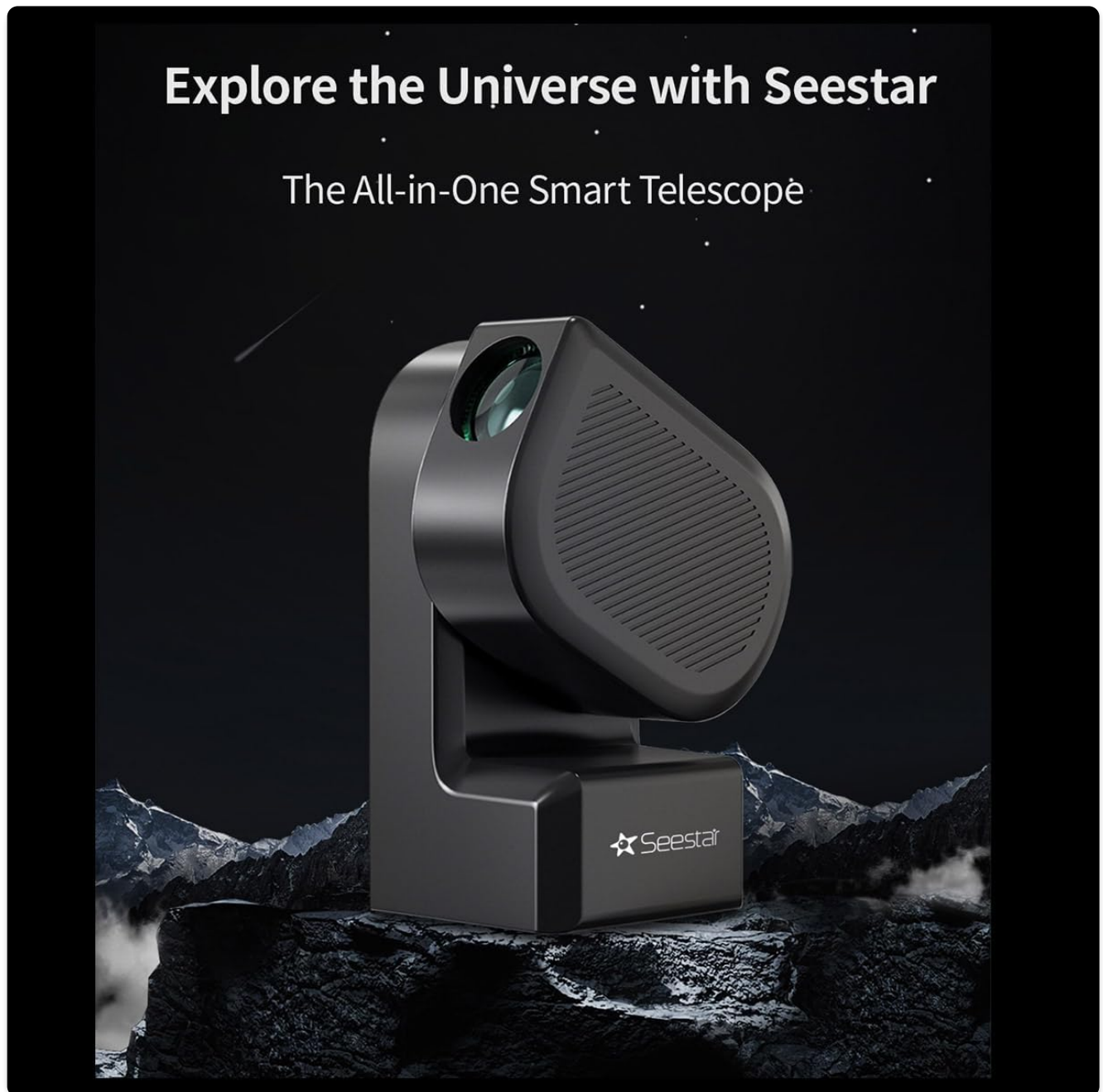


Figure 2.2.1: ZWO Seestar S50 mounted on its compact tripod, ready for use.

Seestar Tripod

The Seestar S50 comes with a complimentary compact tripod for convenience during observations and photography.

Enhance the versatility of your astrophotography setup with Seestar S50. Connect it to various photography tripods through a 3/8" screw thread for stable and precise positioning.

* The tripod features a 363mm maximum extended height and a 274.5mm compact storage length.



Figure 2.2.2: Detailed diagram illustrating the attachment of the Seestar S50 to a tripod via the 3/8" screw thread.

2.3 Powering On and App Connection

Ensure the Seestar S50 is fully charged before first use. Download the official Seestar App from your device's app store (available for iPhone, Tablet, Smartphone, Android). Follow the in-app instructions to connect your device to the Seestar S50 via Wi-Fi/Bluetooth.

3. OPERATING YOUR SEESTAR S50

3.1 Overview of Smart Features

The Seestar S50 boasts several integrated smart features for an enhanced stargazing experience:

- **All-in-one telescope:** Combines multiple astronomy tools into one compact device.
- **Built-in Wi-Fi/Bluetooth connection:** For seamless control via the mobile app.
- **Low power consumption, long battery life:** Designed for extended observation sessions.
- **Smart control with mobile apps:** Intuitive interface for easy operation.
- **Global astro community:** Connect and share discoveries with other enthusiasts.
- **Intelligent Image post processing:** Simplifies image enhancement before sharing.



Lightweight Design

Highly integrated All-in-One Smart Telescope



clean, crisp, low noise images

Triplet apochromatic optics



Smart Control Application

Auto GoTo and Tracking



Built-in Bluetooth/WiFi

Dual-mode reliable connection



Global Astro Community

Connect with fellow astro enthusiasts around the world



Intelligent Image post processing

Just one click before sharing

Figure 3.1.1: Feature comparison highlighting the advantages of the Seestar S50 over traditional setups.

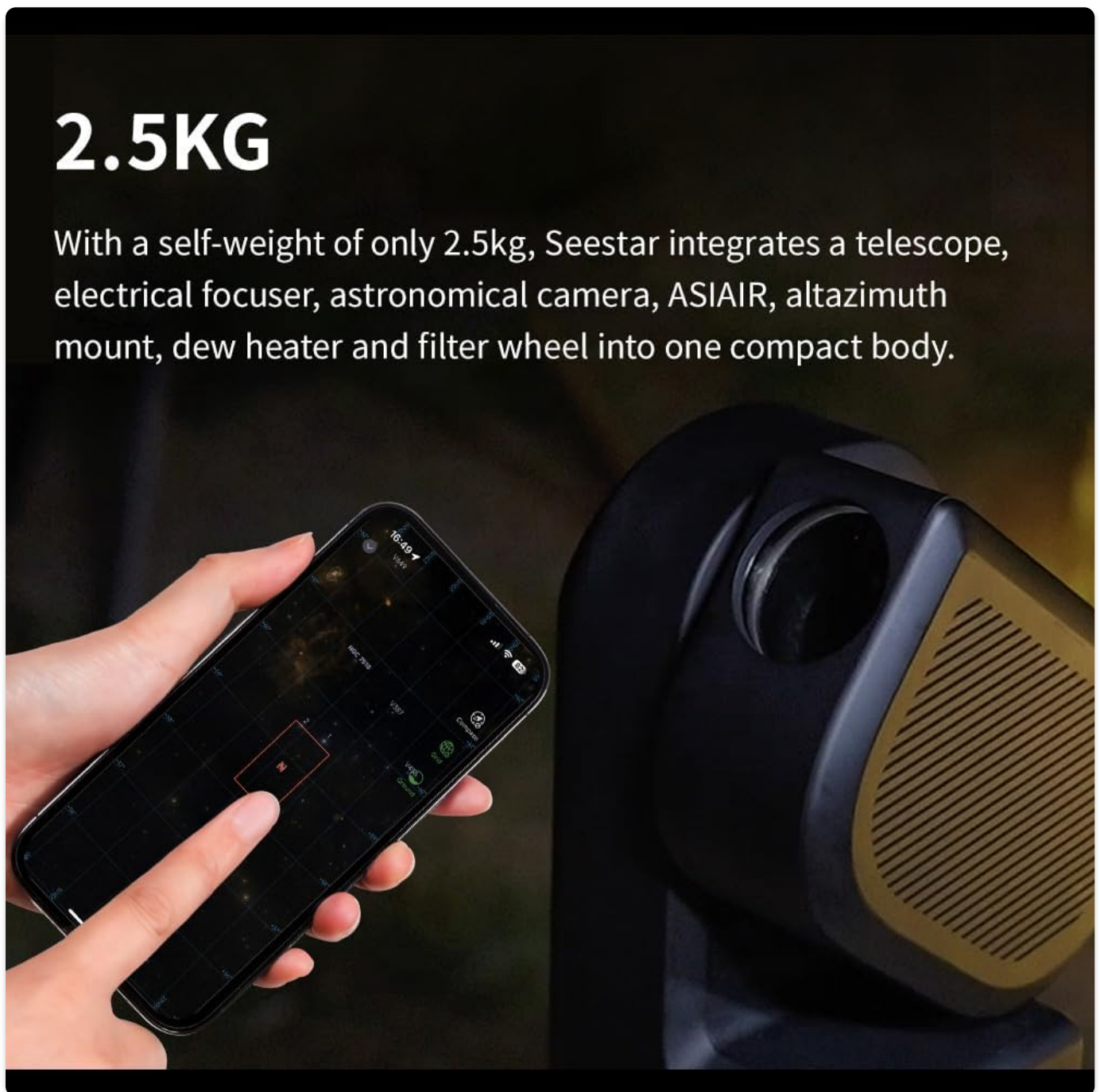


Figure 3.1.2: Key features of the Seestar S50, emphasizing its user-friendly design and advanced capabilities.

3.2 Stargazing with the Seestar App

The Seestar App provides an intuitive interface for selecting and observing celestial objects. Once connected, the app will guide you through calibration and object selection. The "GoTo" function allows the telescope to automatically point to your chosen target.



Figure 3.2.1: Controlling the Seestar S50 via the mobile application.

The app integrates features for observing galaxies, nebulae, star clusters, and even the Moon and Sun (with appropriate filters). For deep-sky objects, the app's intelligent image processing helps enhance clarity and detail.

4. MAINTENANCE

4.1 Cleaning the Optics

To maintain optimal image quality, keep the optical surfaces clean. Use a soft, lint-free cloth specifically designed for optics. Gently wipe away dust or smudges. Avoid using abrasive materials or harsh chemicals.

4.2 Battery Care

The Seestar S50 is powered by an internal battery. For best battery life, charge the device fully before each use and avoid completely draining the battery regularly. Store the device in a cool, dry place when not in use.

4.3 Storage

When not in use, store the Seestar S50 in its original packaging or a protective case to prevent dust accumulation and physical damage. Avoid exposing the device to extreme temperatures or humidity.

5. TROUBLESHOOTING

5.1 Common Issues and Solutions

- "Stack failed / The image gets star trails and is discarded."**

This error indicates that the telescope's tracking was interrupted or inaccurate, leading to star trails in the captured image. Ensure the tripod is stable and level. Check for any obstructions or strong winds that might cause vibrations. Verify that the Seestar S50's internal tracking system is functioning correctly and that the device has a clear view of the sky for accurate alignment.
- "Seestar is failed to GOTO the target, please try again."**

This message suggests the telescope could not accurately locate the selected celestial object. Ensure the device has a clear view of the sky and is not obstructed by trees, buildings, or clouds. Re-calibrate the telescope's position using the app's alignment features. Check your location settings on the app to ensure GPS is accurate.
- App Connectivity Issues:**

If the app fails to connect to the Seestar S50, try restarting both the device and the app. Ensure your mobile device's Wi-Fi and Bluetooth are enabled. Check that the Seestar S50's battery is sufficiently charged. If the issue persists, try re-pairing the device through your phone's Bluetooth settings.

6. SPECIFICATIONS

Feature	Detail
Brand	ZWO
Model Number	SEESTAR-S50
Item Weight	6.6 pounds (3 Kilograms)
Optical Tube Length	50 Millimeters

Feature	Detail
Objective Lens Diameter	50 Millimeters
Eye Piece Lens Description	Barlow
Telescope Mount Description	Built-in motorized tracking mount
Focus Type	Manual Focus
Power Source	Battery Powered
Finderscope	Straight-Through
Compatible Devices	iPhone, Tablet, Smartphone, Android
Date First Available	March 14, 2024

7. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official ZWO website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Visit the [ZWO Store on Amazon](#) for more products and information.