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› Sky-Watcher Star Adventurer 2i Astro Pack User Manual

Sky-Watcher S20510

Sky-Watcher Star Adventurer 2i Astro Pack User Manual

Model: S20510

1. INTRODUCTION AND OVERVIEW

The Sky-Watcher Star Adventurer 2i Astro Pack is a versatile and portable celestial tracking platform engineered for both wide-field astrophotography and conventional visual astronomy. Its compact design and robust construction make it an essential tool for photographers and enthusiasts looking to capture detailed images of the night sky, including the Milky Way, eclipses, and other celestial phenomena.

This device transforms almost any standard photographic tripod into a powerful astrophotography mount, assisting with long exposures by accurately tracking celestial objects. With a lightweight build of only 2.4 pounds and a substantial 11-pound payload capacity, it offers both portability and stability. The modular design allows for various configurations, adapting to different photographic and observational needs.



Figure 1.1: The Sky-Watcher Star Adventurer 2i Astro Pack with its primary components.

2. WHAT'S IN THE BOX

The Sky-Watcher Star Adventurer 2i Astro Pack includes the following items:

- Star Adventurer mount
- Polar scope illuminator
- DEC bracket

3. KEY FEATURES

- **Portable Nightscape Tracking Platform:** Motorized portable tracking platform ideal for capturing intricate details of the Milky Way, eclipses, and other astronomical objects.
- **Wide-Field Astrophotography:** Unique, modular design allows integration with existing photographic tripods for wide-field astrophotography, time-lapse video, and telescopic use.

- **Built-in Illuminated Polar Finderscope:** Enables easy and accurate alignment with Polaris for precise tracking.
- **Rugged Brass and Aluminum Gears:** Ensures smooth, motorized night sky tracking for consistent long exposure imaging.
- **Built-in AA Battery Compartment:** Provides reliable mobile power for up to 72 hours.
- **Additional 5V Mini-USB Input:** Allows for external power source using a cell phone charger or other compatible device.
- **Lightweight and Portable:** Weighing just 2.4 lbs, it is easy to transport in a camera bag or backpack.
- **Supports Most DSLR Cameras:** Features an 11-pound payload capacity.



Figure 3.1: Control dial with various tracking modes.



Figure 3.2: Illuminated polar finderscope for accurate alignment.

4. SETUP

Proper setup is crucial for optimal performance of your Star Adventurer 2i. Follow these steps for initial assembly and preparation:

1. **Mounting to Tripod:** Attach the Star Adventurer 2i to a stable photographic tripod. The unit includes a 3/8" to 1/4-20 adapter for broad compatibility. Ensure the tripod is level and stable, as millimeter adjustments are critical for tracking accuracy.



INCLUDED 3/8" TO
1/4-20 ADAPTER MAKES
STAR ADVENTURER
COMPATIBLE WITH
VIRTUALLY ALL
CAMERA TRIPODS

Figure 4.1: The 3/8" to 1/4-20 adapter for tripod mounting.

2. **Powering the Unit:** Insert AA batteries into the built-in compartment or connect an external 5V mini-USB power source.
3. **Attaching Camera/Telescope:** Utilize the included DEC bracket and, if necessary, an optional counterweight kit for balancing your camera or small telescope.

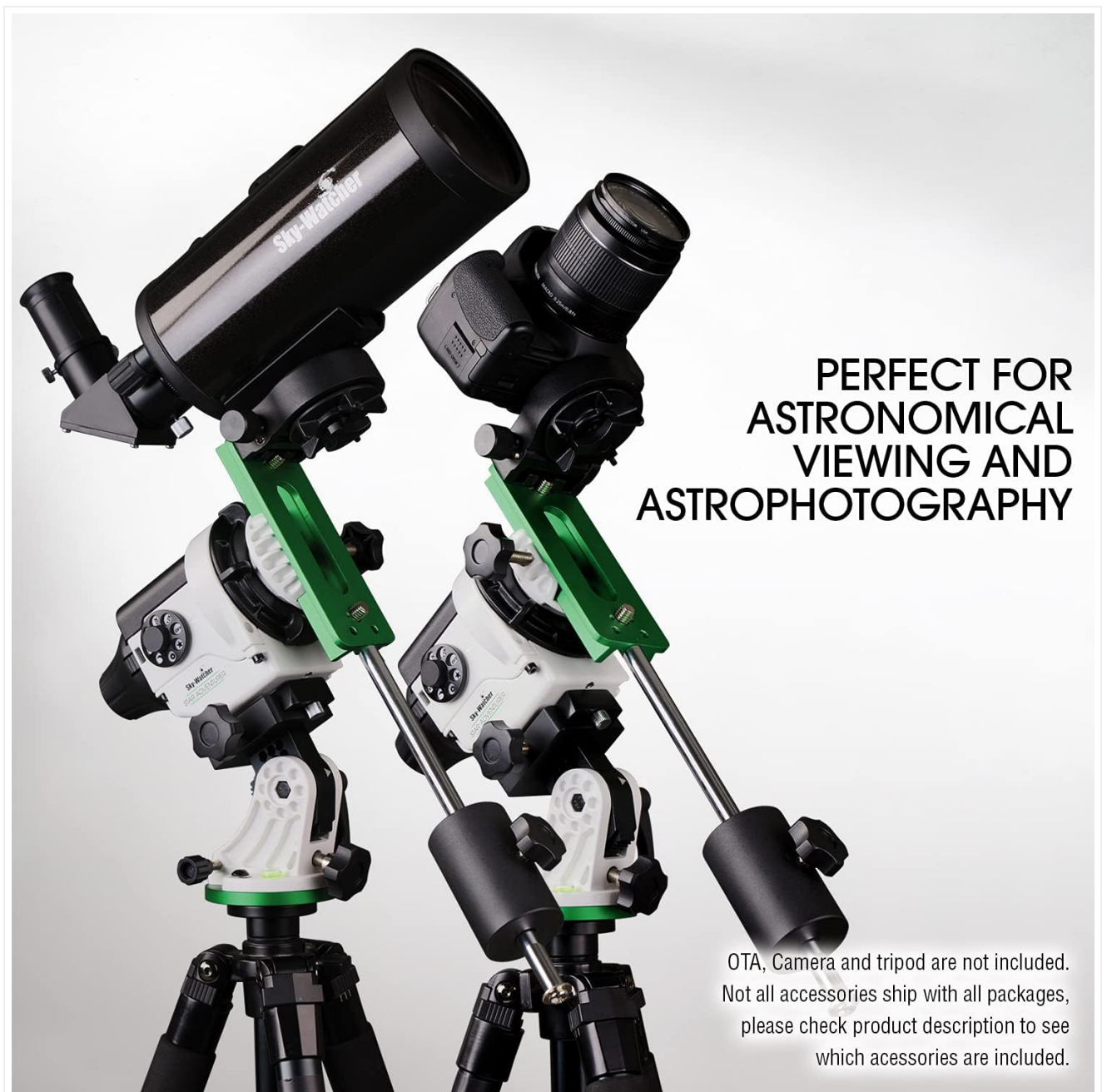


Figure 4.2: Examples of camera and telescope setups on the Star Adventurer 2i.

4. **Polar Alignment:** Use the illuminated polar finderscope to precisely align the mount with Polaris (for Northern Hemisphere) or Sigma Octantis (for Southern Hemisphere). Apps can assist in determining Polaris's position within the reticle. Ensure the crosshairs are correctly oriented.
5. **Connecting DSLR (Optional):** If using for astrophotography, connect your DSLR camera to the Star Adventurer 2i via the appropriate shutter control cable (sold separately) for automatic shutter control.

5. OPERATING

Once set up, the Star Adventurer 2i offers various operational modes:

- **Tracking Modes:** Select your desired tracking rate using the control dial: Celestial, Lunar, or Solar.
- **Time-Lapse Mode:** Engage the time-lapse setting for capturing sequences of images over time.
- **Hemisphere Selection:** Ensure the correct hemisphere (N or S) is selected on the unit.
- **Slow-Motion Controls:** Utilize the slow-motion directional controls for fine-tuning your target acquisition.

- **External Auto Guider Port:** For advanced users, an external auto guider can be connected to this port for even greater tracking precision.



Figure 5.1: Side view showing various ports and controls.

6. MAINTENANCE

To ensure the longevity and optimal performance of your Sky-Watcher Star Adventurer 2i, adhere to the following maintenance guidelines:

- **Cleaning:** Regularly wipe down the exterior surfaces with a soft, dry cloth. Avoid abrasive cleaners or solvents.
- **Storage:** Store the unit in a dry, dust-free environment when not in use. Protect it from extreme temperatures and humidity.
- **Battery Care:** Remove batteries if the unit will not be used for an extended period to prevent leakage.
- **Gear Inspection:** Periodically inspect the brass and aluminum gears for any signs of wear or debris. Do not attempt

to lubricate internal gears unless specifically instructed by Sky-Watcher support.

- **Clutch Mechanism:** Ensure the clutch mechanism operates smoothly. If it feels stiff or does not engage/disengage properly, refer to the troubleshooting section or contact support.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Star Adventurer 2i:

- **Poor Tracking / Star Trails:**

- **Polar Alignment:** The most common cause. Re-check your polar alignment carefully using the illuminated polar finderscope and a reliable alignment app. Even slight misalignments can cause trails during long exposures.
- **Tripod Stability:** Ensure your tripod is extremely stable with minimal flex or play. Millimeter adjustments are critical, and an unstable tripod can introduce movement. Consider using a leveling mount between the tripod and the Star Adventurer.
- **Balance:** Verify that your camera/telescope setup is properly balanced on the DEC bracket, especially when using heavier lenses or telescopes.
- **Clutch Engagement:** Ensure the clutch is fully engaged before starting tracking. If the clutch is loose or slipping, the unit will not track correctly.
- **Focus:** Confirm your camera lens is accurately focused on the stars. Out-of-focus stars can appear as trails even with perfect tracking.

- **Clutch Not Working / Locked:**

- If the clutch feels stuck or does not release, do not force it. Refer to the detailed instructions in the official user guide for clutch operation. If the issue persists, contact Sky-Watcher customer support.

- **Motor Failure:**

- If the unit's motor is not operating, check battery levels or external power connection. If power is confirmed and the motor still does not function, contact Sky-Watcher customer support for assistance.

- **Connectivity Issues (e.g., with App/Firmware):**

- Some firmware loaders or control applications may have specific operating system requirements (e.g., Windows only). Check the official Sky-Watcher website for compatibility information and updated software.

- **Missing Components / Damaged on Arrival:**

- If any advertised components are missing or damaged upon delivery (e.g., user manual, adapters, adjustment knobs), contact your retailer or Sky-Watcher customer support immediately.

8. SPECIFICATIONS

Product Dimensions	25 x 18 x 11 inches
Item Weight	2.4 pounds
Item Model Number	S20510
Payload Capacity	11 pounds

Power Source	AA Batteries (up to 72 hours) or 5V Mini-USB
Tracking Modes	Celestial, Lunar, Solar, Time-Lapse

9. WARRANTY AND SUPPORT

For detailed warranty information and customer support, please refer to the official Sky-Watcher website or the documentation provided with your purchase. Sky-Watcher offers various protection plans to extend coverage for your product.

An official User Guide in PDF format is available for download, providing comprehensive instructions and diagrams for setup, operation, and advanced features. It is highly recommended to consult this guide for any detailed inquiries.

Official User Guide (PDF): [Click Here to Download](#)

For technical assistance or service inquiries, please contact Sky-Watcher customer support directly.

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Question

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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