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Sky-Watcher S20520

Sky-Watcher Star Adventurer 2i User Manual

Motorized DSLR Night Sky Tracking Mount

1. INTRODUCTION

The Sky-Watcher Star Adventurer 2i is a versatile and portable celestial tracking platform engineered for astrophotography, time-lapse photography, and panoramic imaging. This device allows photographers to capture stunning long-exposure images of the night sky by accurately tracking celestial objects. Its compact design and robust construction make it an ideal tool for both amateur and experienced astrophotographers seeking precision and portability.

This manual provides essential information for setting up, operating, and maintaining your Star Adventurer 2i to ensure optimal performance and longevity.

2. WHAT'S IN THE BOX

Upon unpacking your Sky-Watcher Star Adventurer 2i, please verify that all the following components are present:

- Star Adventurer Tracking Platform
- Ball Head Adapter



Image: The Sky-Watcher Star Adventurer 2i tracking platform, showing the main unit, the green ball head adapter, and the polar scope illuminator.

3. SETUP

3.1 Mounting the Star Adventurer 2i

The Star Adventurer 2i is designed to be mounted on a sturdy photographic tripod. It features a standard 3/8" tripod thread. An included 3/8" to 1/4-20 adapter ensures compatibility with virtually all camera tripods.

1. Attach the Star Adventurer 2i to your tripod head. Ensure it is securely fastened to prevent movement during operation.
2. Mount your camera with a ball head or a telescope using appropriate accessories onto the Star Adventurer 2i. The unit supports a payload capacity of up to 11 pounds.



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

Image: Illustrates the attachment of the 3/8" to 1/4-20 adapter, making the Star Adventurer 2i compatible with various camera tripods.

3.2 Powering the Device

The Star Adventurer 2i can be powered by either internal AA batteries or an external 5V mini-USB power source.

- **Internal Batteries:** Open the battery compartment and insert the required Lithium Metal AA batteries. The built-in AA battery compartment provides reliable mobile power for up to 72 hours.
- **External Power:** Connect a 5V mini-USB cable from a power bank or compatible adapter to the mini-USB input port on the unit.

3.3 Polar Alignment

Accurate polar alignment is crucial for precise tracking and avoiding star trails in long-exposure astrophotography. The Star Adventurer 2i features a built-in illuminated polar finderscope.

1. Locate Polaris (North Star) in the Northern Hemisphere or Sigma Octantis in the Southern Hemisphere.
2. Use the illuminated polar finderscope to align the reticle with the position of the celestial pole. Refer to a star chart or a dedicated polar alignment app for the exact position of Polaris relative to the celestial pole at your specific time

and location.

3. Adjust your tripod's altitude and azimuth until the polar scope's reticle aligns with the celestial pole.



Image: A detailed view of the built-in polar scope, highlighting its reticle for precise polar alignment.

3.4 Wi-Fi Connectivity

The Star Adventurer 2i includes Wi-Fi functionality, allowing for smartphone control via Sky-Watcher's free SAM Console app.

1. Download the SAM Console app from your smartphone's app store.
2. Turn on the Star Adventurer 2i.
3. Connect your smartphone to the Star Adventurer 2i's Wi-Fi network (SSID typically starts with 'StarAdventurer').
4. Use the app to control various functions and settings of the unit.



Image: The Star Adventurer 2i unit with a prominent Wi-Fi symbol, indicating its wireless control capability.

4. OPERATING

4.1 Tracking Modes and Rates

The Star Adventurer 2i offers multiple pre-programmed rates for various astronomical and photographic applications, selected via the main control dial.

- **Celestial Tracking:** For general astrophotography, tracking stars at sidereal rate.
- **Lunar Tracking:** Specifically for tracking the Moon.
- **Solar Tracking:** For tracking the Sun (requires appropriate solar filters on optics).
- **Deep Sky:** Optimized for deep-sky objects.
- **Nightscape:** For capturing wide-field nightscapes with foreground elements.
- **Eclipse:** Specialized mode for solar or lunar eclipse photography.
- **Time-lapse:** For creating time-lapse sequences.

- **Planetary:** For planetary imaging.



Image: The control dial of the Star Adventurer 2i, illustrating the selection of various tracking and time-lapse modes.

4.2 Directional Controls and Ports

The unit features slow-motion directional controls for precise targeting and various ports for enhanced functionality.

- **Slow-Motion Directional Controls:** Use the 'S' (South) and 'N' (North) buttons for fine adjustments in declination.
- **DSLR Interface:** A dedicated port allows for automatic shutter control of compatible DSLR cameras, enabling programmed exposures for time-lapse or astrophotography.
- **External Auto Guider Port:** Connect an optional external auto guider for even more precise tracking, especially for longer focal length imaging.
- **External 5V USB Power Port:** Provides an alternative power input for extended use.



Image: A side view of the Star Adventurer 2i, highlighting its various ports and controls for advanced operation.

4.3 Applications

The Star Adventurer 2i is suitable for a wide range of photographic applications:

- **Wide-Field Astrophotography:** Capture expansive views of the Milky Way and constellations.
- **Nightscape Photography:** Combine celestial beauty with terrestrial landscapes.
- **Time-lapse Photography:** Create dynamic sequences of celestial motion or environmental changes.
- **Telescopic Use:** Integrate with small telescopes for tracking astronomical objects.

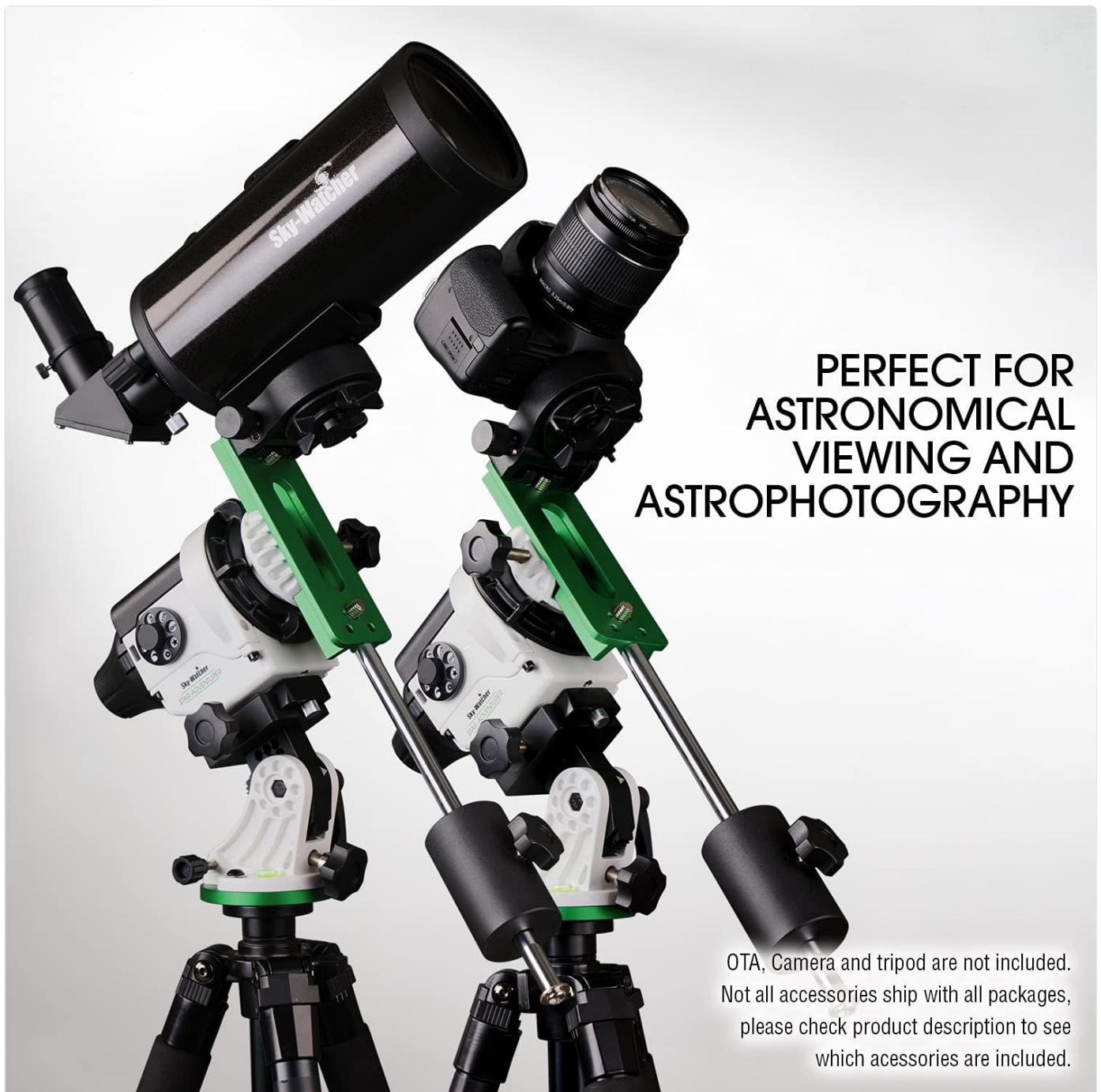


Image: Two configurations of the Star Adventurer 2i, demonstrating its use with both DSLR cameras and small telescopes for various astronomical and photographic purposes.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Star Adventurer 2i.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid abrasive cleaners or solvents. For optical surfaces like the polar scope, use a lens cleaning solution and a microfiber cloth.
- **Storage:** Store the unit in a dry, dust-free environment when not in use. Protect it from extreme temperatures and humidity.
- **Battery Replacement:** Replace AA batteries as needed. If storing for extended periods, remove the batteries to prevent leakage.
- **Gear Care:** The unit features rugged brass and aluminum gears. Avoid applying excessive force to the moving parts.

6. TROUBLESHOOTING

If you encounter issues with your Star Adventurer 2i, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Unit does not power on	Dead batteries; incorrect battery insertion; external power issue.	Check battery orientation and charge; replace batteries; verify external power source and cable.
Inaccurate tracking / Star trails	Poor polar alignment; unstable tripod; excessive payload; incorrect tracking mode.	Re-do polar alignment carefully; use a sturdier tripod; ensure payload is within 11 lbs limit; select correct tracking mode for your target.
Wi-Fi connection issues	Incorrect Wi-Fi password; app not updated; interference.	Verify Wi-Fi password; update SAM Console app; try connecting in an area with less wireless interference.
Motor noise or erratic movement	Obstruction; internal issue.	Ensure no cables or objects are obstructing movement. If problem persists, contact Sky-Watcher support.

7. SPECIFICATIONS

Key technical specifications for the Sky-Watcher Star Adventurer 2i:

- **Product Dimensions:** 24.75 x 17.75 x 10.63 inches
- **Item Weight:** 3.52 pounds
- **Model Number:** S20520
- **ASIN:** B00Z4HVR7Y
- **Batteries:** Lithium Metal batteries required (for internal power)
- **Manufacturer:** Sky-Watcher
- **Date First Available:** December 24, 2014
- **Payload Capacity:** 11 pounds

8. WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the official Sky-Watcher website or contact their customer service directly. Keep your proof of purchase for any warranty claims.

An official user manual in PDF format may also be available for download from the manufacturer's website or via the following link: [Sky-Watcher Star Adventurer 2i User Manual \(PDF\)](#)

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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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.

Submit question