Seestar

Manual Revision 1.0

Seestar S30 Pro

Contents

Intro

Thank you for purchasing the smart telescope Seestar S30 Pro. Since ZWO released its first smart telescope, the Seestar S50/S30, in 2023, this product has quickly received astronomy enthusiasts' love due to its ease of use, portability and affordable price. Based on the successful development experience of the first product, ZWO launched a new Seestar - the Seestar S30 Pro, a lighter, smarter and more cost-effective smart telescope featuring dual lenses, makes the sky accessible in many ways to more people.

Seestar S30 Pro offers an all-in-one solution for astrophotography. It combines an altazimuth mount, telescope, astronomical camera, wide-angle camera, control system, and post-processing tools into a single, sleek device. By using a mobile appp, users can quickly aim and track celestial targets, view real-time images through the telescope, and access detailed descriptions of observed targets, making it easy to engage in astronomy observation and educational outreach activities.

This manual is designed to guide users through the proper operation of the smart telescope with clear text and illustrations. It highlights potential improper operations or risky situations. Before using the telescope, please thoroughly read this manual and follow all instructions carefully. Any damage to the equipment or personal injury caused by improper use will be the sole responsibility of the user.

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Warning

This manual provides guidance for safe and efficient use of Seestar. Before using the device, please thoroughly read the following reminders and strictly adhere to the instructions during use. This manual may be updated. For the most recent instructions, please refer to the online manual available at https://www.zwoastro.com/

1. Do not observe the sun directly without using the solar filter, as this will cause irreversible damage to the device.

2. Minors must use this product under adult supervision.

3. To charge this device, only use chargers from reputable manufacturers. ZWO is not responsible for damage caused by unqualified chargers. (Charger requirements: supports USB BC1.2; supports 5V 2A in normal mode and up to 12V 3A in fast charge mode).

4. Products that have been disassembled or modified without authorization will not be covered by the warranty.

5. This product is a precision electronic instrument. Do avoid exposure to water or dust, and store it properly when not in use.

6. Do not allow the lens to come into contact with glass windows, fabric, eyeglass cloth, or liquids. Only use specialized optical lens wipes for cleaning.

7. We recommend using the product under an environmental temperature range of -10°C ~ 40°C.

8. Do not use chemical solvents (e.g., alcohol, thinner) or other stratified cleaning fluids to clean the product or its accessories.

9. Keep the product away from open flames to prevent battery explosion.

10. Battery capacity may degrade at lower temperatures due to the natural properties of lithium batteries, which is normal.

11. Store the product in a clean, dry place (recommended storage conditions: temperature below 60°C, humidity below 50%). During thunderstorms or prolonged periods of non-use, please turn off and properly store the device.

Seestar S30 Pro Specifications

Product Model	Seestar S30 Pro
Sensor	Tele: Sony IMX585, Wide: Sony IMX586
Resolution	Tele: 2160 X 3840, vertical Wide: 2160 X 3840, vertical
Field of View	Tele: 4.6°, Wide: 63°
Aperture	Tele: 30mm, Wide: 3.4mm
Focal Ratio	Tele: F/5.3, Wide: F/1.75
Focal Length	Tele: 160mm, Wide: 6mm
Optical System	4-element apochromatic (APO) lens, 4 Apochromatic
Built-in Filter	UV/IR-Cut Filter, Duo-Band Filter (OIII 30nm/Hα 20nm bandwidth), Dark Filter
External Filter	Magnetic solar filter
Working Distance	Telephoto: 6m~ ∞, Wide-angle: 0.1m~ ∞
Storage Space	128GB
Transmission Merthod	Wi-Fi, NFC, USB type-C, Bluetooth
Image Format	JPG / FITS
Video Format	MP4 / AVI
WIFI	5G / 2.4G
WIFI Distance	10 meters
BLE Transmission Distance	5 meters
BLE Transmission Distance	5 meters
Field of View	Tele: 4.6°, Wide: 63°
Working Temperature	-10 to 40 degrees Celsius
Charging Temperature	0 to 40 degrees Celsius
Storage Temperature	-10 to 60 degrees Celsius
Working Humidity	20% to 80%
Storage Humidity	20% to 50%
Mount	Alt-AZ / Equatorial Mode
Slew Rate	1X to 1440X
Zero Position	Mechanical
Base Interface	3/8-16
Battery Life	6000mAh lasts approx 6 hours on full charge
Weight	1.65 KG (without tripod)
Power Input	Type-C, Supports DC 5V/3A
WIFI Reset Button	Support
Dimensions	210mm x 140mm x 80mm

* Resolution: Telephoto and wide-angle lenses shoot at 3840*2160 resolution at (1X) magnification (resolution will decrease at 2X and 4X magnification);
The real-time streaming preview of both telephoto and wide-angle lenses is 1080P at (1X) magnification (resolution will decrease at 2X and 4X magnification).

* Storage Capacity: Due to the storage chip itself and system usage, the actual usable capacity is approximately 110GB. Subsequent system upgrades may affect capacity allocation; please refer to actual usage.

* WiFi and Bluetooth Transmission Distance: The above transmission distances are test results obtained in an open environment with no obstructions between devices. The data is for reference only; please refer to actual usage.

* Battery Capacity and Battery Life: Data from ZWO laboratory at a constant temperature of 25°C under laboratory conditions: approximately 6 hours of battery life in stargazing mode (image enhancement, celestial tracking enabled, defogging disabled); approximately 4 hours of battery life when simultaneously recording video with both cameras in landscape mode (object tracking disabled, MP4 format). The data is for reference only; please refer to actual experience.

Meet Seestar S30 Pro

1. USB Type C
2. Power Switch & Indicator
3. Battery indicator
4. WIFI / WIFI reset button
5. Tripod interface:（3/8"-16 thread）
6. Battery compartment
7. Telephoto lens
8. Wide angle lens

With its accessibility, lightweight design, and intelligent features, the Seestar S30 Pro simplifies the often complex process of outdoor astrophotography, making it an ideal choice for beginners. Compared to traditional astrophotography equipment, the Seestar series offers unique advantages in terms of cost-effectiveness and operational simplicity. It represents a highly integrated and user-friendly new-style telescope that opens the wonders of the night sky to a broader audience.

1. Lightweight Design : Integrates multiple hardware components into a single unit, including the telescope, electronic focuser, astronomical camera, wide-angle camera, ASIAIR smart controller, alt-azimuth mount, dew heater, and filter switch tool. Weighing only 1.65 kg.
2. Intelligent Functionality : Powered by ZWO's proprietary star-finding algorithm, a simple one-click operation enables the built-in telescope to automatically locate, track, plate solve, and focus on celestial objects. The entire imaging process is managed effortlessly through a mobile App.
3. Multiple modes: Stargazing mode, star field mode, solar system mode, and landscape mode. It can observe and photograph deep-sky objects such as nebulae, star clusters, and galaxies, as well as planetary targets within the solar system such as the Sun and Moon. Star field mode can be used to photograph the Milky Way, star trails, and constellation identification. Landscape mode can also be used to observe and photograph birds or other animals, as well as natural landscapes.
4. Dual-Lens System: Combines a telephoto lens and a wide-angle lens, allowing users to switch between photo and video modes, adapting to different imaging scenarios.
5. 4K Ultra-High-Resolution Imaging: Dual-camera 4K imaging with telephoto and wide-angle lenses. The wide-angle lens uses a Sony IMX586 sensor (1/2-inch, 8.3MP), and the telephoto lens uses a Sony IMX585 sensor (1/1.2-inch, 8.3MP). These sensors utilize Starvis 2 technology, which boasts ultra-high light sensitivity exceeding that of the human eye, enabling the identification of object shapes and colors even in low light, accurately obtaining essential information.
6. Wide field of view: 4.6° field of view for telephoto lens, 63° field of view for wide-angle lens; suitable for a wider range of celestial targets.

7. Milky Way/Star Trail Photography: Uses a wide-angle lens with an F1.75/6mm focal length to support Milky Way/star trail photography, and supports wide-angle stargazing overlay function.
8. Large capacity internal memory: Storage capacity of 128GB, avoiding the need to frequently export too many materials to your computer.
9. Crystal-Clear Image Quality: Featuring a professional four-element apochromatic optical design, including one ED glass element, it delivers excellent color fidelity and produces exceptionally sharp, high-clarity images. The refracted light is precisely converged, resulting in superior image sharpness and overall optical performance.
10. NFC One-Touch Connection: Connect your phone with a single touch, saving you the steps and time of manually connecting devices, and accurately and quickly connecting to your S30 Pro.
11. Equatorial Mount Mode: Equatorial mount mode can counteract the effect of Earth's rotation on tracking celestial targets, support longer exposure times, stabilize tracking, and reduce the impact of field rotation on the image, thereby obtaining better imaging results.
12. Dual-Band Anti-Light Pollution Filter : Since many users live in areas with significant light pollution, the Seestar S30 Pro includes dual-band filters (OIII 30nm/Ha 20nm). Users can manually enable the anti-light pollution filter from the App to improve image quality in challenging environments.
13. Proprietary System : Built on ZWO's independently developed motherboard, ensuring stable system performance. This proprietary system, along with ZWO's patented technologies, guarantees precision in imaging and system stability. Continuous App updates enhance functionality and user experience.
14. Comprehensive Database : Includes a robust star database, an encyclopedia of common celestial objects, and intelligent star map guidance for easy navigation.
15. Global Astronomy Community : Users can share their work, interact with online friends, and access real-time weather updates in a global astronomy community.

What's in the box?

Seestar S30 Pro

Solar Filter

Type-C Cable

Carrying Case

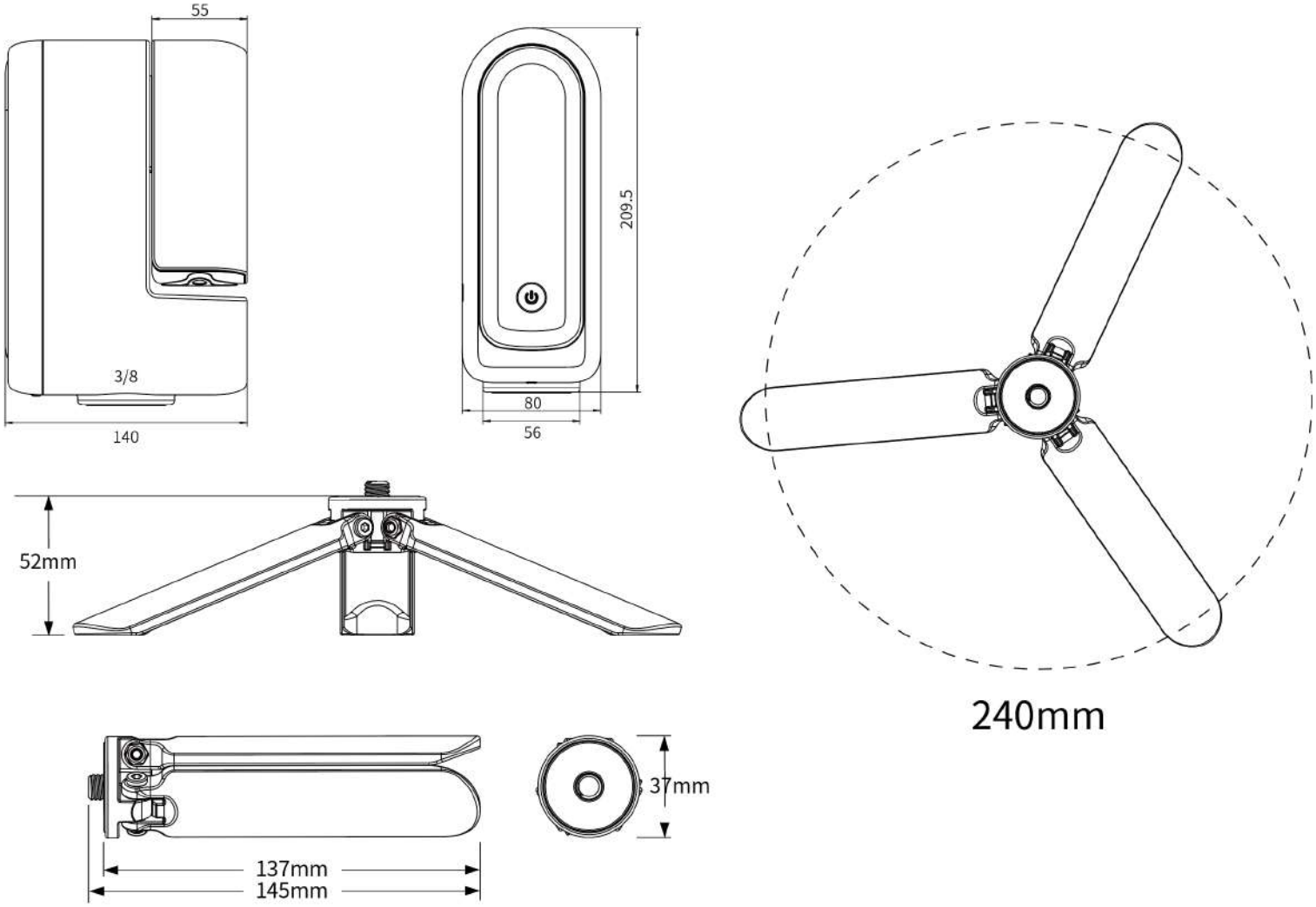
Tripod

Safety Instructions

Quick Start Guide

Astronomy-themed Sticker

Measurements



Getting Started

1. Charge your Seestar before use. Using the supplied USB-C charging cable, connect one end to the Seestar’ s USB-C port, and another end to any USB charging port. Allow to charge for at least 4 hours or until the battery indicator on the side shows full. The S30 Pro supports USB BC1.2; 5V 2A in normal mode and up to 12V 3A in fast charge mode.

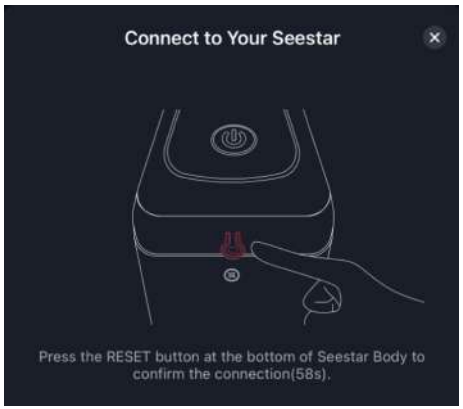
Download on the App Store

GET IT ON Google Play

Power Button Quick Guide

Show battery status:	Short press the button while power off
Power on:	Long press 2s (Short press 1s and then 2s for first-time use)
Power off:	Long press 2 seconds
Force shutdown:	Long press 6 seconds

2. Download the Seestar app. Ensure that Bluetooth, device connection, and network permissions are enabled for the Seestar app on your tablet or smartphone.
3. Set the Seestar on a flat level surface, or attach it to a tripod. It’ s not recommended for first time use to run the telescope in equatorial mode, so keep it in Alt/AZ configuration. Face the “logo” side of the Seestar towards the direction North.
4. Turn on the Seestar by pressing and releasing the power button, you will hear two short beeps. The telescope arm will remain closed during powering on. If you need to turn the power back off for any reason, press and hold the power button for two seconds. On powering up for the first time, will hear the device announce: "Powering on, ready for connection."
5. Bring your tablet or smartphone near the Seestar (within 10 feet) and connect to it’ s WIFI network by tapping “Connect”. The first time you connect to the Seestar, follow the prompts to locate and press the reset button at the bottom of the Seestar S30 Pro to confirm the connection. This only has to be done once.



Network Activation

When using the Seestar S30 Pro for the **first** time, you will need to activate it online. Ensure that your tablet or smartphone has an active Internet connection to complete the activation process smoothly.

If activation fails midway, verify that your mobile device is connected to a working network or home Wi-Fi. You can put the Seestar app in the background, manually connect your mobile device to a valid network, and then return to the Seestar app to tap the "Try Again" button and try the activation again.

Do not minimize or close the Seestar App during activation.

If activation fails, check your network connection and try again. If the issue persists, please contact customer support.

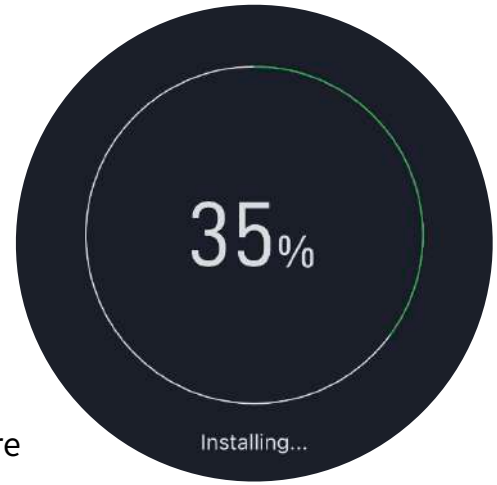
After successful activation, your mobile device will automatically connect to the Seestar S30 Pro's built-in Wi-Fi hotspot. At this point, the mobile network or home Wi-Fi is no longer required. The Wi-Fi hotspot connection will work even in remote areas without cellular service.

If the connection fails, follow the App prompts to retry or manually connect to the Seestar S30 Pro's hotspot.

Pro Tip: Due to the limits of Android operating systems, Android devices cannot automatically connect to the Seestar S30 Pro's Wi-Fi hotspot and require manual setup. To manually connect, go to your phone or tablet's system settings, select Wi-Fi, and choose the hotspot with the name of your S30 Pro's serial number (e.g., S30 Pro_xxxxxx).

The default password is **12345678** .

Note: Once your tablet or smartphone is successfully connected to the Seestar S30 Pro, if a firmware update is prompted, please follow the instructions to allow the update. Wait for the update process to complete before using the device. After the firmware update is finished, the S30 Pro will automatically reboot. If there is no firmware update prompt, you can skip this step.



NFC Connection

1. After the initial activation, subsequent connections can be made quickly using the NFC function after powering on the device.
2. Check if your phone supports NFC and enable the NFC function.
3. Locate the NFC sensing area on your phone, which is usually on the back center or top of the phone.
4. Power on the S30 Pro. After unlocking your phone, touch the NFC sensing area of your phone to the NFC sensing area of the S30 Pro.
5. After touching the NFC areas, the Seestar App will automatically open and complete the device connection. Click "Confirm Connection" to complete the connection.

Astrophotography and Observing

The Seestar S30 Pro is controlled using the **Seestar app**. Please make sure the Seestar is connected to your tablet or smartphone before attempting to control the Seestar. You can use the app without a connection to the Seestar, to look at your album, engage with the community, or see Seestar activity nearby.

There are several ways to start taking photography with the Seestar S30. Inside the app, here are the 5 different options to get started. Select any of these to start observing or taking pictures.

Stargazing is a nighttime mode that automatically activates the “tele” (telephoto) main objective lens of the telescope for photographing celestial objects with (3° degrees) field of view. This mode offers you several ways to start enjoying the Seestar right away. You can select from “Tonights Best” objects to begin photographing, or by categories (Galaxy, Nebula, Cluster, etc), planets, or comets. Pressing “skip” will take you immediately to the camera capture screen where you can use the on-screen joystick control to explore if you wish. You can select the Sky Atlas in the lower right hand corner of that screen at any time, to survey your local sky map for yourself, and select an object you want to observe. Simply tapping “GoTo” will direct the telescope to slew to that object and begin imaging.

When Milky way mode is selected, the wide-angle lens of the telescope is automatically activated and the camera will open up and begin imaging a wide part of the sky (63° degrees) field of view that you are pointed to. Here you can choose between Live mode (stacks images until you stop it), and Continuous capture. You can use Time-lapse, Photo, or Video mode in 1X, 2X, or 4X magnification.

If you want to look at any of the planets, the moon, or the sun, the Solar System mode lists all of the objects in our solar system and will automatically focus, start tracking, and imaging when selecting any object here. You can use Time-lapse, Photo, or Video mode in 1X, 2X, or 4X magnification.

You can also use the Seestar S30 Pro as a daytime terrestrial scope for viewing distant subjects, like landscapes, wildlife, and birdwatching, or anytime you want a closer look at something far away. You can use Time-lapse, Photo, or Video mode in 1X, 2X, or 4X magnification.

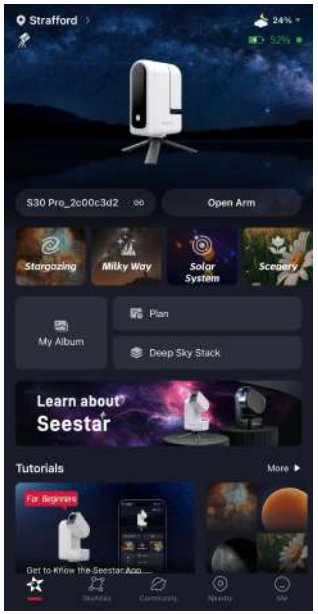
The SkyAtlas icon on the bottom menu of the app is the most flexible way to use the Seestar. If you know the night sky, you can pinch and zoom around on the map to select a region of the sky or an object you are interested in. You can also easily toggle between the “tele” lens of the “wide” lens. You can use Time-lapse, Photo, or Video mode in 1X, 2X, or 4X magnification.

Operational Basics

1. Select an object you want to observe using any mode you prefer, and select GoTo or Go Gazing.
2. The Seestar will begin moving to that target in the night sky - this is often called “slewing”.
3. The Seestar will slew fast at first as it goes to the region of sky where the target is located, then it will slow down and begin taking photographs on it’s own to “plate-solve” the patch of sky it’s looking at, so it knows exactly where it’s pointed. It will solve the sky until your target is centered.
4. After the target is centered, the Seestar will begin “initialization” which is performed automatically, only once after startup.
5. Once initialization is complete, the camera preview screen will open on the app and you can watch in real-time as the Seestar begins photographing, and “stacking” exposures to resolve the target. By default, the Seestar S30 Pro captures 10-second exposure frames and stacks them. You can change this by stopping the capture and selecting the three dots in the upper right corner of the capture screen.
6. You can watch the image gradually getting more clear in the app. (The waiting time for clear images depends on weather conditions, light pollution, etc.) While it's imaging, you can exit the App and do other things. The Seestar S30 Pro will continue the current imaging task, even if the mobile device disconnects. You can reconnect the app later to view the latest progress.
7. You can stack as many images as you have memory and power in the Seestar. The longer you stack, generally - the more clear the image will become.
8. Once you're satisfied with the quality of the stacked image, click the "**Stop**" button to end the session. Congratulations, you've successfully captured a deep space object with your S30 Pro!
9. To export the image to your phone, open the album in the bottom left corner of the imaging page. Switch to the "Seestar" tab at the top to view the images stored on the Seestar S30 Pro device. Find the folder with the target you just captured, and open it.

10. Do this for any object in the night sky you wish to photograph or observe.

The Moon Example



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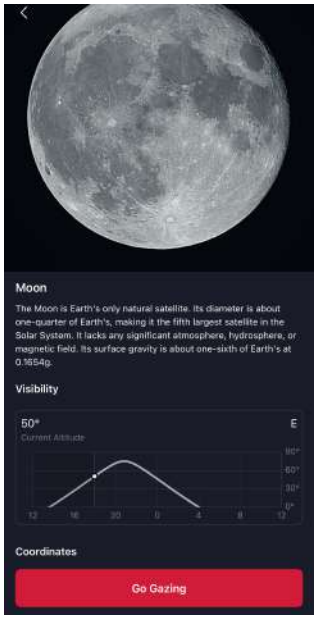

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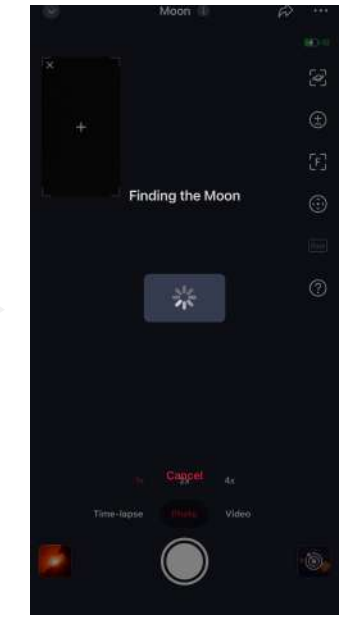

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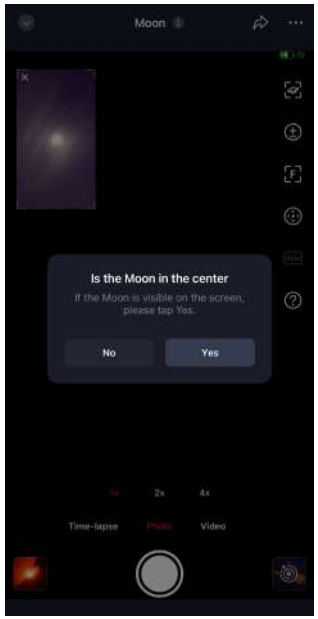

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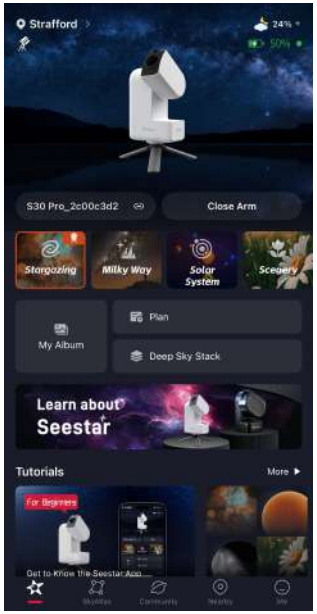
Deep Space Object Example



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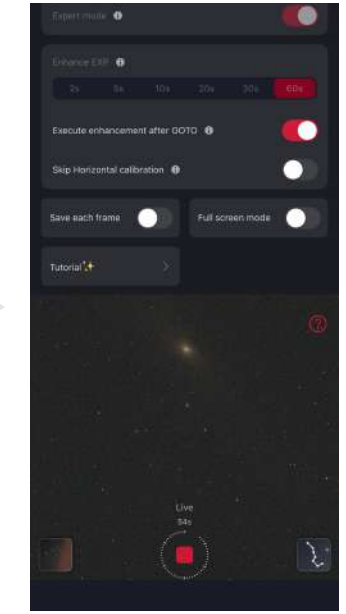

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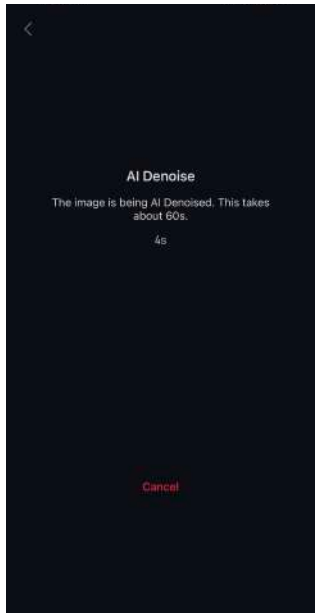


Pro Tips For Better Astrophotography

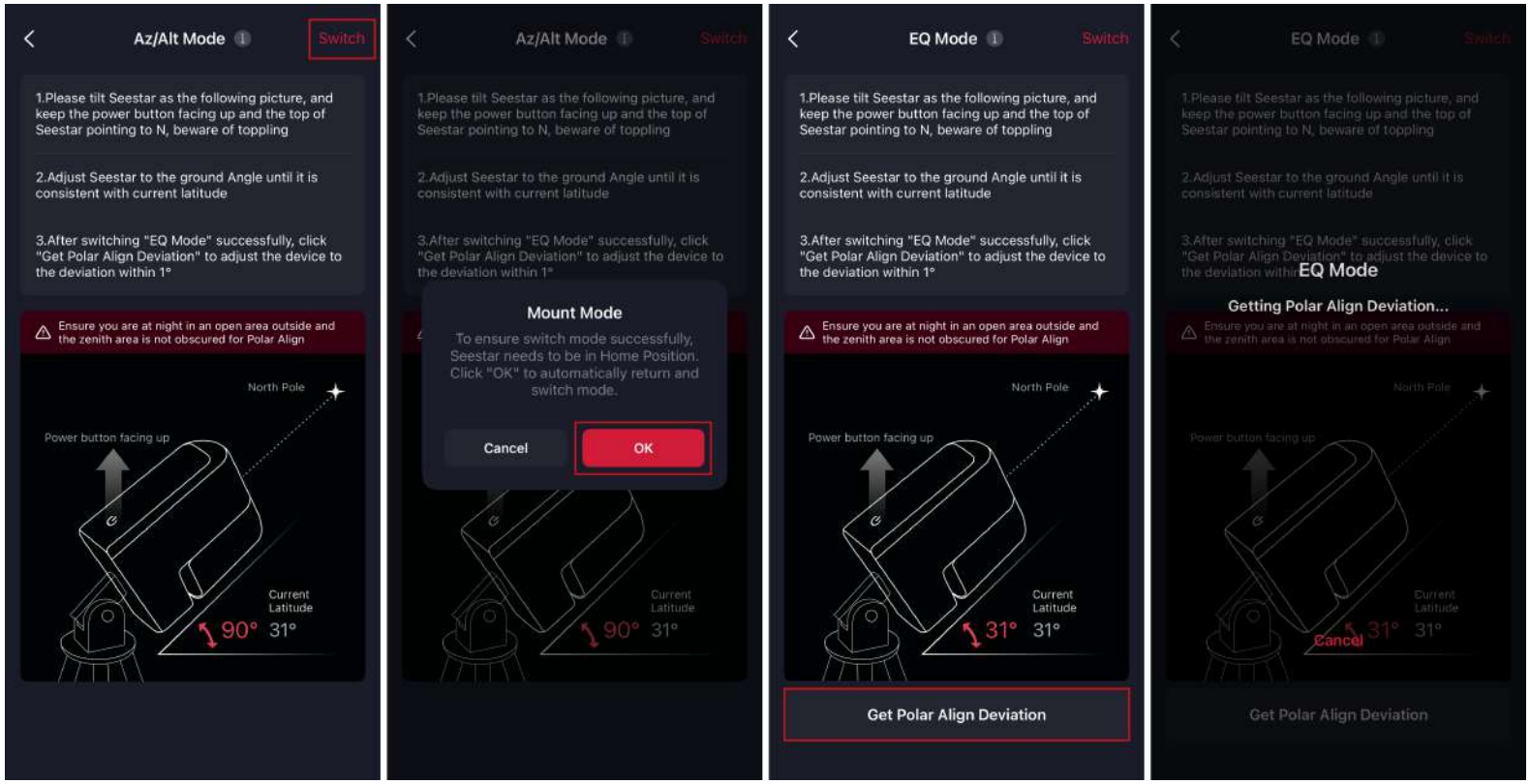
1. Weather and sky conditions are everything. The Seestar will function under most conditions, but the less wind you have, the more clear the sky, and avoiding extreme temperatures will help.
2. Avoid light pollution if you can. Although the Seestar has an integrated light pollution filter, strong light pollution can still greatly effect your images. Dark sky locations are always best, or at least positioning the Seestar where no stray light can glare on the lenses.
3. EQ mode will let you capture up to 60 second exposures of objects, which will offer more light gathering and clarity for most objects. It will require a tripod wedge, and a different mode, and a different setup of the Seestar (outlined further in this manual).
4. The runtime of the Seestar is generally around 6 hours, but if you want to run longer, you can use an external power bank such as a USB power brick by connecting the USB-C outlet on the Seestar. Just make sure to give plenty of slack to the telescope can rotate.
5. Find targets closer to directly above your head - that is where the sky is the most clear and the atmosphere can’ t artifacts in your images.
6. The moon is a beautiful target to photograph, but it works like a giant light bulb in the sky when you are trying to photography much dimmer objects. Plan your sessions around the moon phases to really see faint details come out in your photos.
7. Practice using your Seestar in the daylight, using your Solar filter to become familiar with the equipment, and the app. Knowing the brains of the app will help the learning curve and frustration of trying to learn the sky, and the equipment under the darkness of night at once.
8. Targets like the Veil Nebula can be very difficult to observe and require extremely dark skies. For beginners, it is recommended to start with brighter deep-sky objects such as M31, M42, and NGC104.
9. This product can be used on balconies, in gardens, cities, or rural areas. It is suggested to have at least 45° of unobstructed sky to avoid any surrounding obstacles blocking the view of your observation target
10. If observing from a balcony, courtyard, or another location with Wi-Fi access, you can enable the Station Mode in Seestar S30 Pro's network settings and connect it to Wi-Fi. The mobile device used for observation only needs to be on the same local network as the Seestar S30 Pro to establish a connection.

EQ Mode (advanced mode)

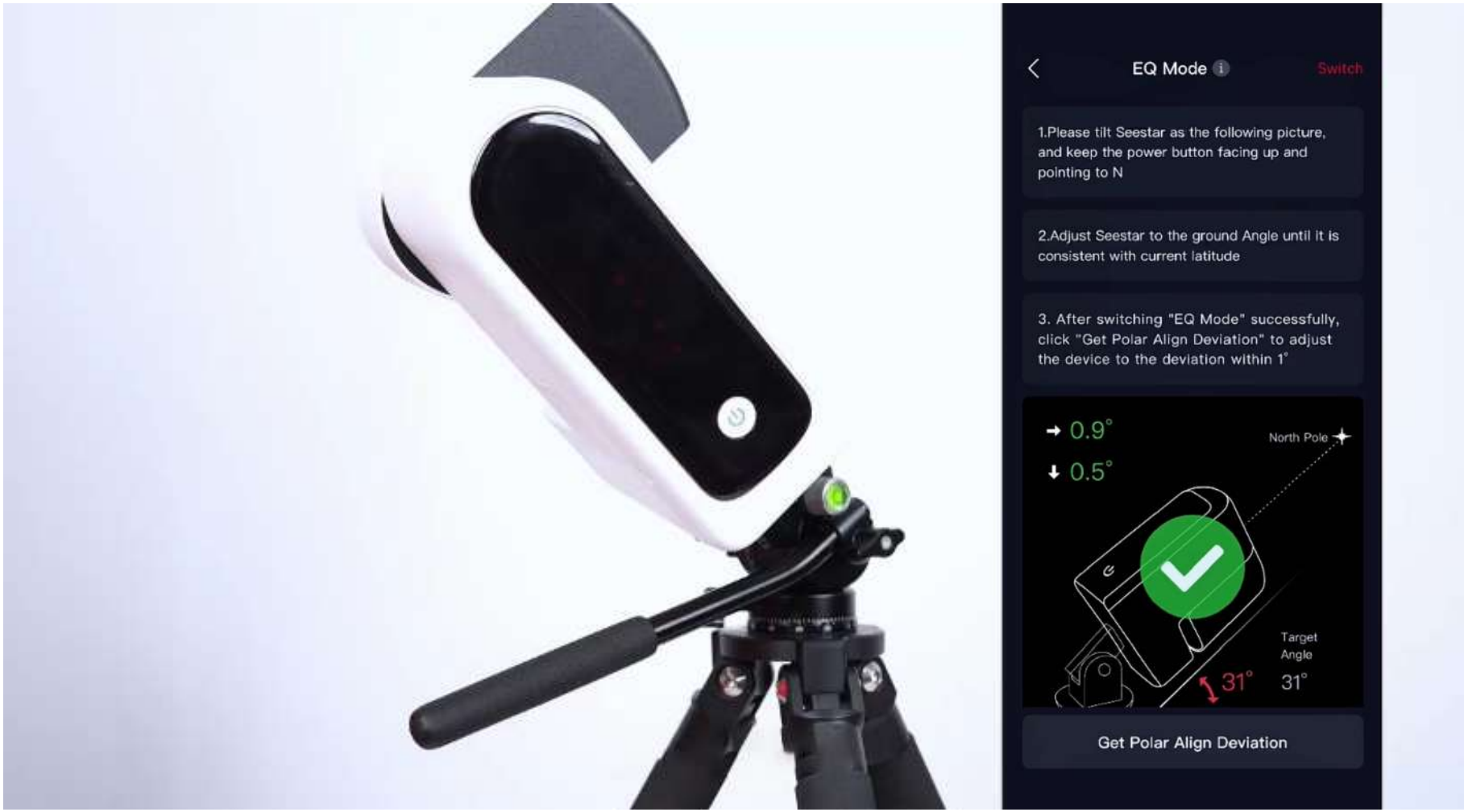
By default, the Seestar operates in Alt-Az (Altitude–Azimuth) mode. In this mode, exposure times are typically limited to about 30 seconds before field rotation and star trailing begin to soften details in your images. The upside is that Alt-Az is the fastest, easiest way to start imaging - you can be capturing targets within moments of powering on.

For longer, sharper exposures, experienced users can switch the Seestar into Equatorial (EQ) mode. EQ mode aligns the Seestar's tracking axis with the north celestial pole, which greatly reduces tracking errors and, most importantly - minimizes field rotation.

Important: Equatorial mode requires an equatorial wedge (sold separately). The instructions below assume you have a wedge installed and that you have basic familiarity with locating north and identifying common reference points in the night sky.



After adjustment, click "Switch" in the upper right corner to switch the Seestar unit to equatorial mount mode. After switching, click "Calculate Polar Axis Deviation". After calculation, the page will display the azimuth and pitch deviation data. Based on the data, fine-tune the Seestar gimbal again to ensure that the azimuth and pitch errors are within 1°.



After adjustments are complete, secure the equipment, enter stargazing mode, select a target, and begin observation. The observation page will indicate that Seestar is currently in equatorial mount mode.

Pro tip: Polar alignment accuracy = sharper stars

In EQ mode, the quality of your polar alignment directly controls how round your stars stay, especially as you push exposure time longer.

- A rough polar alignment might look fine at 10 - 20 seconds, but show drift at 60 seconds.
- A good polar alignment keeps stars tight, improves stacking efficiency, and reduces the number of rejected frames.
- If you have a view of Polaris (celestial North), use that during your setup, it will ultimately be more accurate of a polar alignment during setup in the app.

Practical tip: After polar alignment, take a short test sequence (say 10 - 15 frames at your intended exposure time). If stars are elongated in the same direction frame-to-frame, improve alignment and try again. Small adjustments make a big difference.

The “sweet spot” recommendation

- Start EQ mode at 20 - 30 seconds to confirm stability and star shape.
- Move to 45 - 60 seconds only after you’re seeing consistently round stars and your background isn’t over-bright.

A few more things people miss

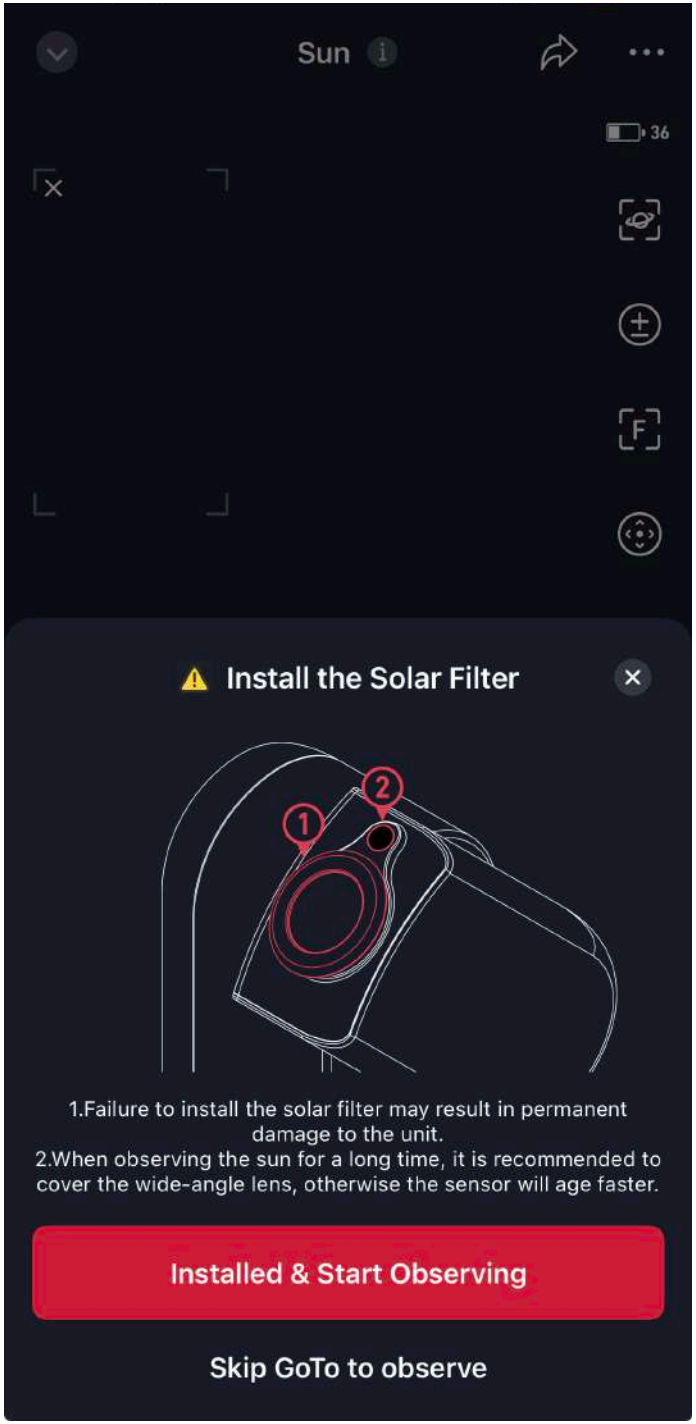
- Even with perfect alignment, you may still see slight star distortion if:
- The wedge isn’t firmly locked down,
- The tripod isn’t level/stable,
- The target is very low in the sky (more atmosphere + refraction),
- Or you’re imaging in windy conditions.

Solar Viewing

Warning: Do not allow the telescope lens to directly observe the sun!

While observing the sun, please use the standard solar filter coming with Seestar. Before entering the Solar System mode in the Seestar App for solar observation, follow the on-screen instructions to attach the magnetic solar filter to the primary mirror position. Then, operate the App to point the telescope at the sun for observation.

In the Solar System targets, select Sun, then click GOTO (ensure the Sun is visible in the sky). The lens will lift to a certain angle and stop. At this point, please follow the instructions in the App to install the solar filter onto the telescope lens. After installation, click "Installed & Shooting," and S30 Pro will continue its GOTO to the Sun.



To ensure maximum safety for both you and the device, auto GOTO will stop once the lens roughly points at the Sun.

If you already have the solar filter installed, the Seestar will automatically slew to the Sun.

Follow the App's instructions and manually adjust the lens to point directly at the Sun if needed.

Important: Before proceeding, please confirm the solar filter is securely installed on the telescope lens.

If you cannot see the Sun's light in the telephoto view: Use the "GO" target feature in wide-angle view to bring the lens closer to the Sun, then use the virtual joystick to fine-tune the alignment.

Here's how: Switch to the wide-angle view, hit once on the brightest point of the Sun, and the "GO" icon will Appear. Hit again, and Seestar S30 Pro will slew towards the targeted point. Repeat this process until the Sun is visible in the telephoto view.

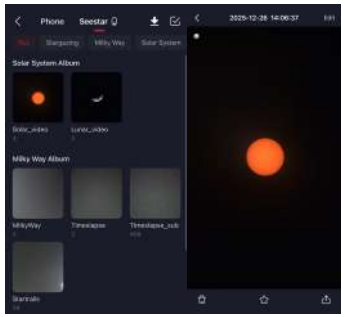
If the solar light becomes visible in the telephoto view after Auto GOTO or multiple "GO" attempts, switch to the telephoto view. Activate the virtual joystick, set it to "Slow" speed, and manually adjust the lens to align with the Sun. Once aligned, you will see the Sun clearly in the telephoto view.

Choose the suitable magnification levels (1x/2x/4x) to observe the Sun, choose the Appropriate field of view, and tap the circular button below to capture a photo.

After successfully photographing the Sun, if you wish to end the solar observation, use the virtual joystick to move the Sun out of the telephoto view. Only then should you remove the solar filter from the lens. Congratulations, you've successfully captured the Sun using the S30 Pro!

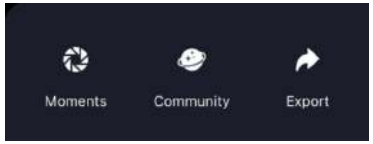
Caution: Never point the lens directly at the Sun without the solar filter installed.

Next, let's view the photos you've just captured.



Open the album at the bottom left of the imaging interface, and switch the album tab at the top to "Saved" to view images taken with the S30 Pro. (For videos, navigate to the "Seestar" tab.) Locate the folder named with the date of the current session and open it.

Tap on the photo you've just taken to view it. Then, tap the share icon on the bottom.



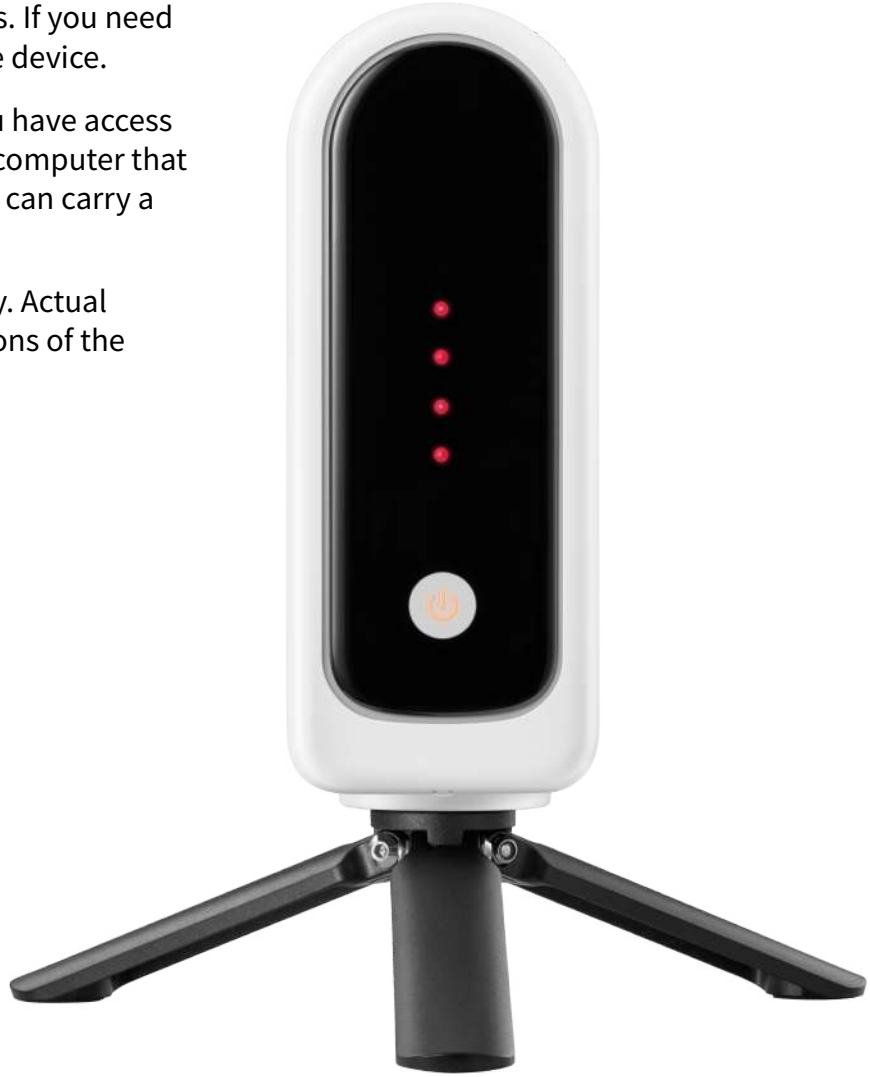
In the pop-up menu, choose to share the photo on social media or export it to other Apps, sharing this special stargazing experience with astronomy enthusiasts worldwide.

Battery Life

The Seestar S30 Pro has an internal battery that lasts Approximately 6 hours. If you need to extend the battery life, please prepare an additional power source for the device.

The Seestar S30 Pro supports working while charging. At home or when you have access to a power outlet, you can connect the Type-C cable to a power adapter or computer that meets the power input specifications. When using the device outdoors, you can carry a portable charger to charge the device as needed.

Note: The battery life is based on test results from ZWO's internal laboratory. Actual usage time may vary depending on the environment and operating conditions of the device.



Power Off and Storage

If you have completed using your Seestar, please follow the instructions below to power off the device.

Two methods for normal shutdown:

Method 1: In the App, go to the "My" page, and at the bottom, use the swipe-to-shut-down function. The Seestar S30 Pro lens will return to the zero position and then shut down smoothly.

Method 2: On the Seestar S30 Pro device, press and hold the power button for 3 seconds. The Seestar S30 Pro lens will return to the zero position and then shut down smoothly.

Forced shutdown method:
If the device cannot be powered off through the normal shutdown methods, use this forced shutdown method.

On the Seestar S30 Pro device, press and hold the power button for 6 seconds. The Seestar S30 Pro lens will not return to the zero position and will shut down directly.

Automatic shutdown mechanism:
When the battery level drops below 5%, the device will automatically return to the zero position and shut down.

After powering off, please store the device in a clean and dry place.

Disclaimer

This product is not a toy. Please keep it and any parts or cables out of reach of children. Exercise caution when operating the product in environments where children are present.

Read the entire User Manual and familiarize yourself with the product's features before use. Improper operation of this product may result in damage to the device and property loss.

For more terms of service, please refer to the Service Agreement within the App. ZWO assumes no responsibility for any losses resulting from the improper use of this product against the guidelines outlined in the User Manual.

To the extent permitted by law, ZWO reserves the right of final interpretation of this document. ZWO may update, revise, or discontinue this document without prior notice.

Future product updates and changes will not be announced separately, and ZWO retains the right to make such modifications.

Troubleshooting Guide

Need to check battery while device is OFF.....

Device won’ t power on.....

Device won’ t shut down.....
Device is frozen / unresponsive.....

Power indicator is OFF (no light).....

Power indicator shows **solid yellow**.....
Power indicator shows **solid green**.....
Boot failure: **Power light blinking red** and **4 battery lights flashing rapidly**.....

Battery very low during normal operation.....

Battery level display is confusing.....

Wi-Fi not found after startup.....

Wi-Fi reset is in progress.....

Wi-Fi reset completed successfully.....

Wi-Fi reset failed.....

Switching Wi-Fi while powered on.....

Firmware update started.....

Firmware update finished.....

Charging while device is ON or OFF.....

Charging status: 0–25%.....
Charging status: 26–50%.....
Charging status: 51–75%.....
Charging status: 76–100%.....
Charging complete.....

Short-press Power once. Battery level displays once, then turns off.
Long-press Power for 2 seconds. For first-time use: **short-press ~1 second**, then **long-press 2 seconds**. If still won’ t boot, see “Boot failure” below.
Long-press Power for 2 seconds to power off.
Forced shutdown: Long-press Power for 6 seconds. Then restart normally.
Device is **powered off** (normal). If you expected it to be on, **charge battery** and try **power on** again.
Device is ON in **Alt-Az (Level) mode** (normal operation).
Device is ON in **Equatorial mode** (normal operation).
Indicates **boot failure**. **Charge fully** first, then try powering on again. If it persists, **contact after-sales support**.
If battery display shows **0–15%** (red, **1 light blinking**), **charge immediately** before imaging or updates.
Use the battery indicator mapping (below) to confirm charge level; recharge if near/under 25%.
Use **Wi-Fi Reset**: **press and hold Reset ~3 seconds** to reset Wi-Fi. Then rescan networks.
During reset: **Power light blinks yellow**. Wait until reset completes.
After reset: power light returns to **solid yellow (Alt-Az)** or **solid green (EQ)**. Re-scan for Wi-Fi.
If reset fails: **Power light blinks red**. Retry reset; if still failing, contact support.
Power indicator may **blink red** while switching. Wait for it to finish, then reconnect.
During firmware upgrade: **yellow power light blinks rapidly**. **Do not power off.**
Yellow rapid blinking stops; indicator returns to normal state (solid yellow/green).
Charging behavior follows the current power state for the power light. Battery lights show charging progress (below).
Red battery indicator: **1st light blinking**. Keep charging.
Red battery indicator: **1st light solid**, **2nd light blinking**.
Red battery indicator: **1st & 2nd solid**, **3rd blinking**.
Red battery indicator: **1st, 2nd, 3rd solid**, **4th blinking**.
Red battery indicator: **4 lights solid** (full).

Battery Level (When Device Is On)

Use this quick reference when the device shows battery level:

- 0–15%: red, 1 light blinking
- 16–25%: red, 1 light solid
- 26–50%: red, 2 lights solid
- 51–75%: red, 3 lights solid
- 76–100%: red, 4 lights solid

Battery Specification And Certificate

Charging Voltage	4.2V
Rated Voltage	3.7v
Rated Capacity	6000mAh
Rated Power	22.2Wh

Removing The Battery

If you need to replace the battery, please follow these steps:

- Locate the battery compartment on the device body.
- Use an Appropriate tool (such as a flathead screwdriver) to gently pry open the battery cover.
- Carefully disconnect the battery terminal.

Finally, remove the battery. Please ensure that you handle everything gently throughout the process to avoid damaging the equipment.

Precautions:

- Before removing the battery, make sure the device is turned off and disconnected from any power source. Also, handle with care to prevent damage to the device or the battery.
- After removing the old battery, store it safely to avoid short circuits.
- Do not remove the battery unless you intend to replace it.




After-Sales Service

To update your software, please visit the official website at:
https://www.zwoastro.com/
Navigate to Support > Guides and Manuels > Seestar to download the latest updates.

For repairs and other Services:

Chinese Users : Follow the ZWO Official WeChat account and send messages to our customer service team.

Overseas Users : Visit the https://support.zwoastro.com/ page and submit a service ticket.

Email : info@seestar.com

For products returned or replaced under warranty, customers are responsible for the shipping costs to return the product. When returning the product, you must include a note detailing the actual cause of the issue and provide relevant proof, such as photos or videos.

If ZWO confirms in writing that a replacement is necessary, the user must return the product with all accessories, manuals, and packaging to the address specified by ZWO. By returning the product, you agree to pay for any non-warranty repair fees incurred during the process. The repaired or replaced product will be sent back after payment.

For products requiring return for after-sales service, ZWO will provide an RMA (Return Merchandise Authorization) Code for reference. ZWO will not accept any returns without prior written confirmation and a valid RMA code.

If your Seestar product was purchased through a ZWO authorized dealer, please contact the dealer directly for after-sales support.

Warranty Policy

ZWO offers a 2-year free warranty for products purchased directly from the company, starting from the date of receipt (1-year warranty for the battery).

If the user encounters a Dead-on-Arrival (DOA) issue and contacts ZWO within the specified time frame, providing proof of purchase and related documentation, ZWO will arrange for a pickup service and, depending on the situation, offer the following services: replacement (or partial replacement), repair, or refund (or partial refund).

Product Quality Issues : If a quality issue is identified within 30 days of receipt and confirmed by ZWO's Customer Service Center, ZWO will provide free replacement.

Shipping Issues : If the product packaging shows clear signs of water damage, severe compression, or deformation upon receipt, and the user provides packaging photos and proof of receipt within 3 days, ZWO will verify and offer refund or replacement for items shipped directly by ZWO or its authorized distributor. If the shipment is handled directly by the dealer, the dealer will be responsible for after-sales support.

The following circumstances are not covered under the warranty, but ZWO can offer repair services:

1. The product is out of warranty.
2. The product has liquid ingress, moisture damage, or corrosion.
3. Damage caused by external forces, such as scratches, deformed casing, or broken Type-C ports.
4. Unauthorized disassembly, third-party repairs, modification, firmware flashing, or installation of incorrect firmware.
5. Alteration of the system or removal/modification of warranty seals.
6. Improper installation or use contrary to the product manual.
7. Damage due to force majeure events such as floods, fires, earthquakes, lightning, or severe impact.
8. User errors during operation or usage that result in damage.
9. Lack of valid proof of purchase or warranty certificate.
10. The product is a second-hand item.

Accessories or other components with quality issues are not grounds for returning or replacing the main device. Users can request replacement of the affected accessory separately.

Note: Any updates or modifications to this document are subject to change without prior notice.