



ASTERRA

ASTERRA Z+

STAR TRACKER USER MANUAL



Portable Alignment. Fast Deployment. Built for the Field.

Model: ASTERRA-Z+

Revision I | Added Quick-Release Installation and Set-Screw Reference

Read this manual before operating the product.

1. Safety Precautions

IMPORTANT Failure to follow these precautions may damage the star tracker, connected camera equipment, batteries or other property, and may cause personal injury.

1.1 Power Supply Safety

- Use three new AA batteries of the same type and brand. Do not mix old and new batteries.
- Install the batteries with the polarity shown inside the battery compartment.
- For external power, use a stable 5 V DC USB Type-C power source and an undamaged cable.
- Do not use a wet connector, damaged cable or visibly damaged battery.
- Remove AA batteries before long-term storage.

1.2 Mechanical Safety

- Do not forcibly rotate the main shaft while tracking is active. Unlock the clutch before manual repositioning.
- Tighten the tripod connection and close each Click & Go latch before mounting camera equipment.
- Keep the installed payload within the confirmed load-capacity limit stated in Section 10.
- After installation, verify that all connections are secure before releasing the camera equipment.

1.3 Operating Environment

- Recommended operating temperature: -20 °C to 40 °C.
- Cold-weather operation: For improved performance at low temperatures, use lithium AA batteries or a suitable external USB power bank. Battery capacity and output may decrease significantly in cold conditions.
- Environmental protection: This product has not been assigned an ingress-protection (IP) rating. It is not waterproof or weatherproof. Protect the device from rain, snow, dew, condensation and other sources of moisture.
- Keep the product dry. Do not expose it to rain, condensation, corrosive substances or salt spray.
- Use the product on a stable tripod placed on firm ground.
- When operating at night, secure cables to prevent trips and accidental pulling.

1.4 Laser Pointer Safety

Laser classification, output power, labeling and permitted use vary by market configuration. Refer to the product label and the documentation supplied with the released market-specific configuration. Use only the laser module supplied or approved for your market.

LASER RADIATION - AVOID EXPOSURE TO THE BEAM.

Do not look directly into the beam or view the beam with optical instruments.

Use the laser pointer only where permitted by local law and only for the shortest time required for alignment.

- Never aim the laser beam at people, animals, vehicles, aircraft, buildings with occupants or optical sensors.
- Do not use a laser pointer near airports, flight paths, roads, public gatherings or locations where use is restricted.
- Deactivate the laser pointer immediately after alignment.
- Do not allow children to operate the laser pointer.
- Do not disassemble, modify or replace the laser module unless instructed by an authorized service center.
- **WARNING:** Laser use is prohibited or restricted in many jurisdictions. Verify applicable local laws before operating the laser pointer.
- Market-specific requirements: In the United States, laser products are subject to applicable FDA/CDRH requirements, including 21 CFR Parts 1010 and 1040. In the European Economic Area, applicable laser-safety classification and labeling requirements apply. Australia and New Zealand impose additional restrictions on the supply and use of laser pointers. Use only the configuration lawfully supplied for your market.

2. Package Contents

Upon receipt, verify that the package contains the items listed below. The photograph and line drawings provide a reference for the supplied components. If any item is missing or damaged, discontinue installation and contact ASTERRA support.

OPTIONAL ACCESSORY NOTICE Some photographs and illustrations may show the Foldable L-Bracket installed. The Foldable L-Bracket is sold separately and is included only when purchased.

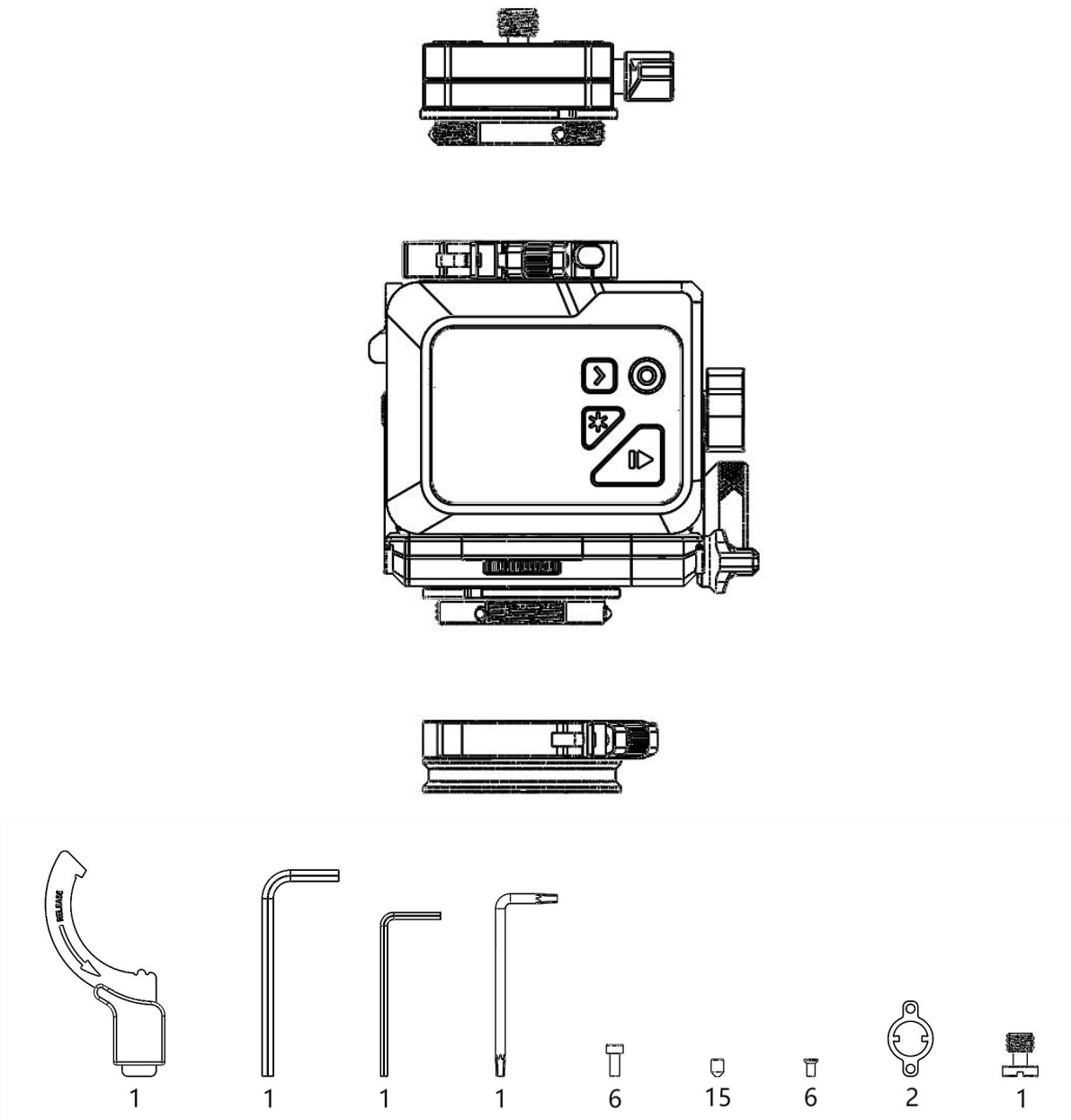


Figure 1. Package contents photo. Use the actual package photo and the line drawings below as the primary reference when checking the box contents.

Item	Quantity	Notes
ASTERRA-Z+ star tracker main unit	1	Main body of the tracker.
Click & Go receiving module	1	Lower quick-release receiving module / base.
Upper quick-release plate / mounting plate	1	Used for the top Click & Go connection.

Item	Quantity	Notes
Foldable L-Bracket	Optional	Sold separately and included only when purchased. Provides an adjustable 0°-90° leveling interface between the star tracker and a compatible tripod head. Maximum bracket load: 10 kg. The lowest rated load limit of the assembled system always applies.
Main-shaft clutch lever / wrench	1	Curved gray tool shown in the package photo.
Hex-key set	3	Three supplied hex keys as shown in the package photo.
Mounting stud / adapter	1	Single metal stud supplied in the accessory pack.
Round metal plates	2	Two matching round plates shown in the package photo.
Assorted fasteners / small hardware	1	Small silver screws, black screws and other small hardware supplied as one set; verify against the package photo.
Sticker sheet	1	Decorative / brand sticker sheet.
Printed quick-start guide / manual	1	Printed user guide supplied in the box.
Accessory inner box	1	Small white accessory box.
Carrying case	1	Black carrying case with ASTERRA logo.
Outer carton and protective foam	1	Retail box and internal protective foam.
AA batteries	Not included	Not included. Requires three alkaline AA batteries (1.5V). Do not use damaged or leaking batteries.
Tripod, tripod head and camera	Not included	User-supplied equipment.

3. Product Overview

ASTERRA-Z+ is a compact, portable star tracker designed for field astrophotography. Its integrated controls and quick-release interfaces support efficient setup while retaining the adjustment range required for polar alignment.

- Magnetometer-assisted north/south finding
- Integrated altitude and azimuth adjustment controls
- Click & Go quick-release interfaces for efficient field setup
- Compatible with the optional Foldable L-Bracket for rapid 0°-90° leveling adjustment
- Laser-pointer-assisted alignment workflows, where permitted by applicable regulations
- Single-star calibration workflow supported by the companion software
- Portable design suitable for travel, hiking and high-altitude photography

CAUTION: Laser radiation may be emitted from the alignment aperture. Avoid exposure to the beam.



Front view



Side view

4. Interface and Control Guide

Use the following diagrams to identify the controls before installation. Button functions vary according to the selected menu state.

The screen reference below explains the display icons, operating states and power-status symbols used during setup and operation.

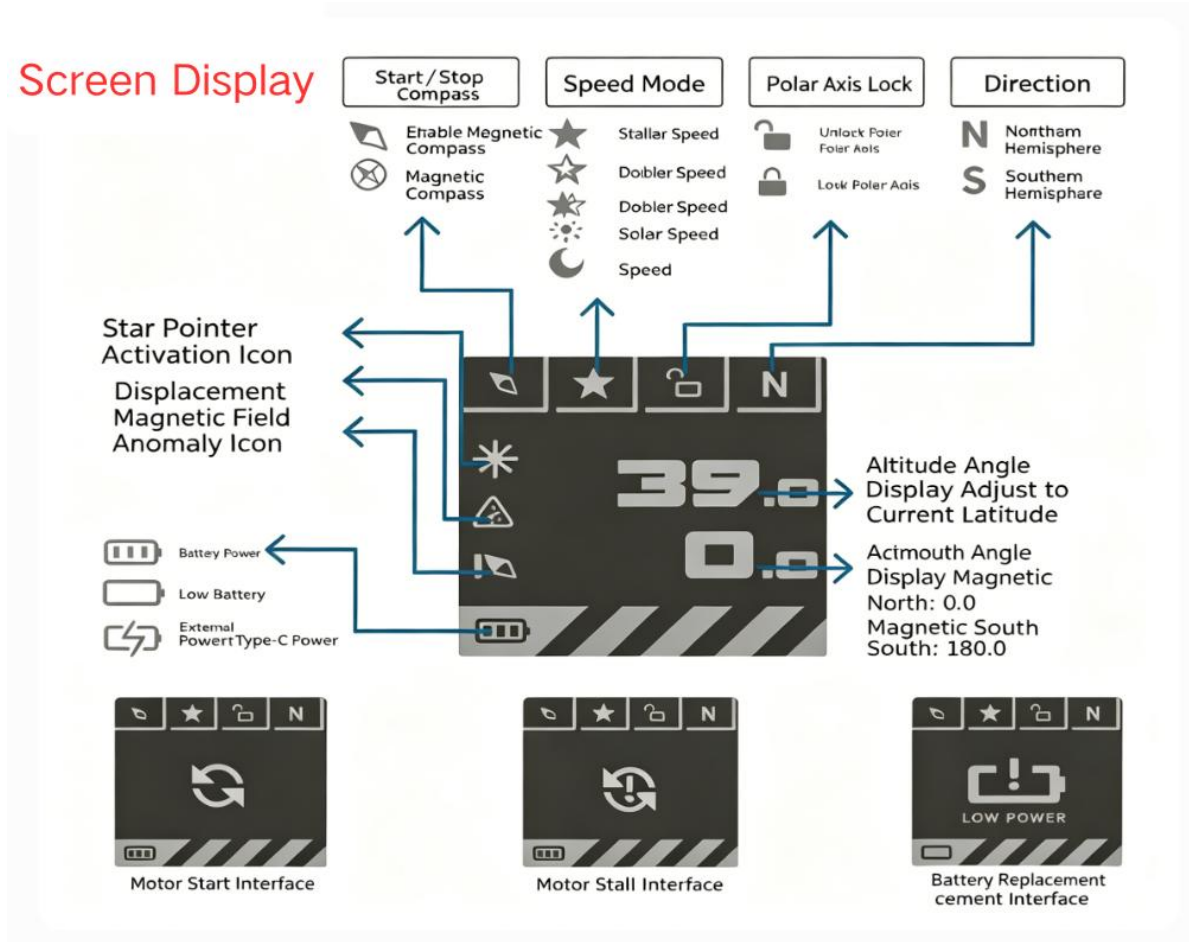


Figure 3. Screen display, status icons and example operating interfaces.

4.1 Front Controls and Screen

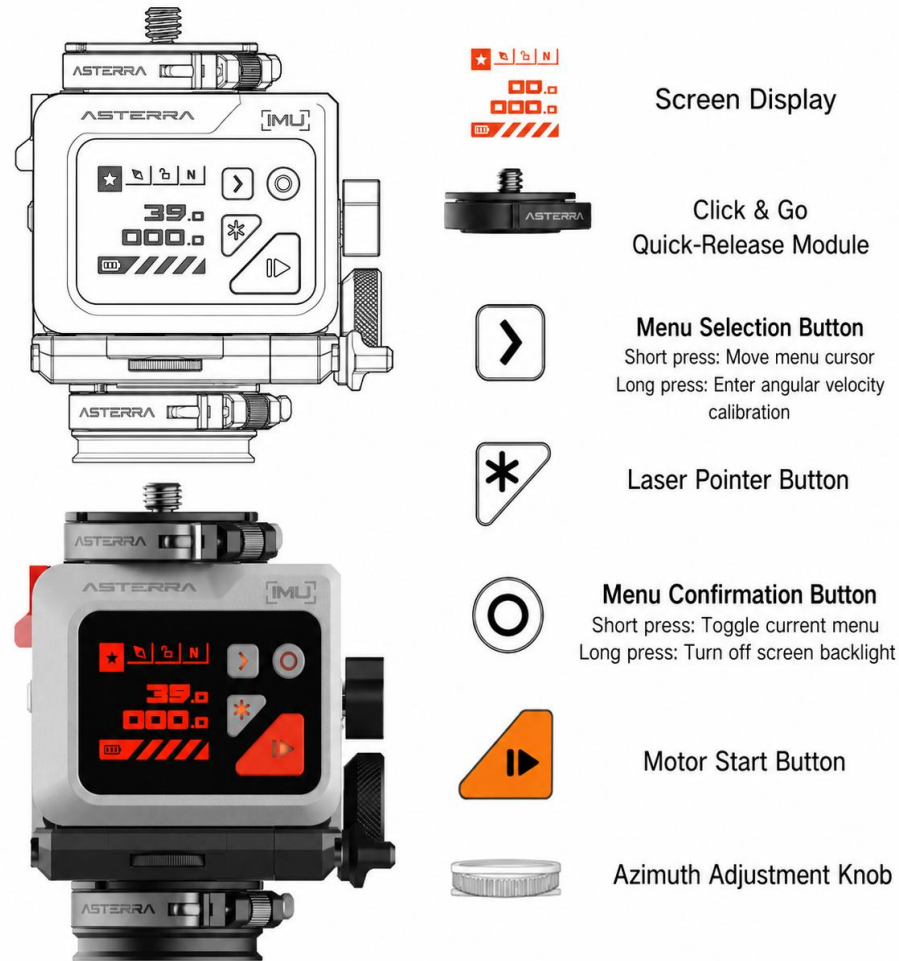


Figure 4. Front controls, display and Click & Go quick-release module.

Control	Function
Screen display	Shows alignment values, current menu status, power status and tracking-related information.
Menu selection button	Short press: move the menu cursor. Long press: enter angular-velocity calibration.
Laser pointer button	Activates or deactivates the laser pointer when the laser module is installed and operation is permitted by applicable regulations.
Menu confirmation button	Short press: confirm or toggle the current menu item. Long press: turn off the screen backlight.
Motor start button	Starts tracking after setup and speed selection.
Azimuth adjustment knob	Adjusts the horizontal alignment angle during setup.

4.2 Side View and Controls

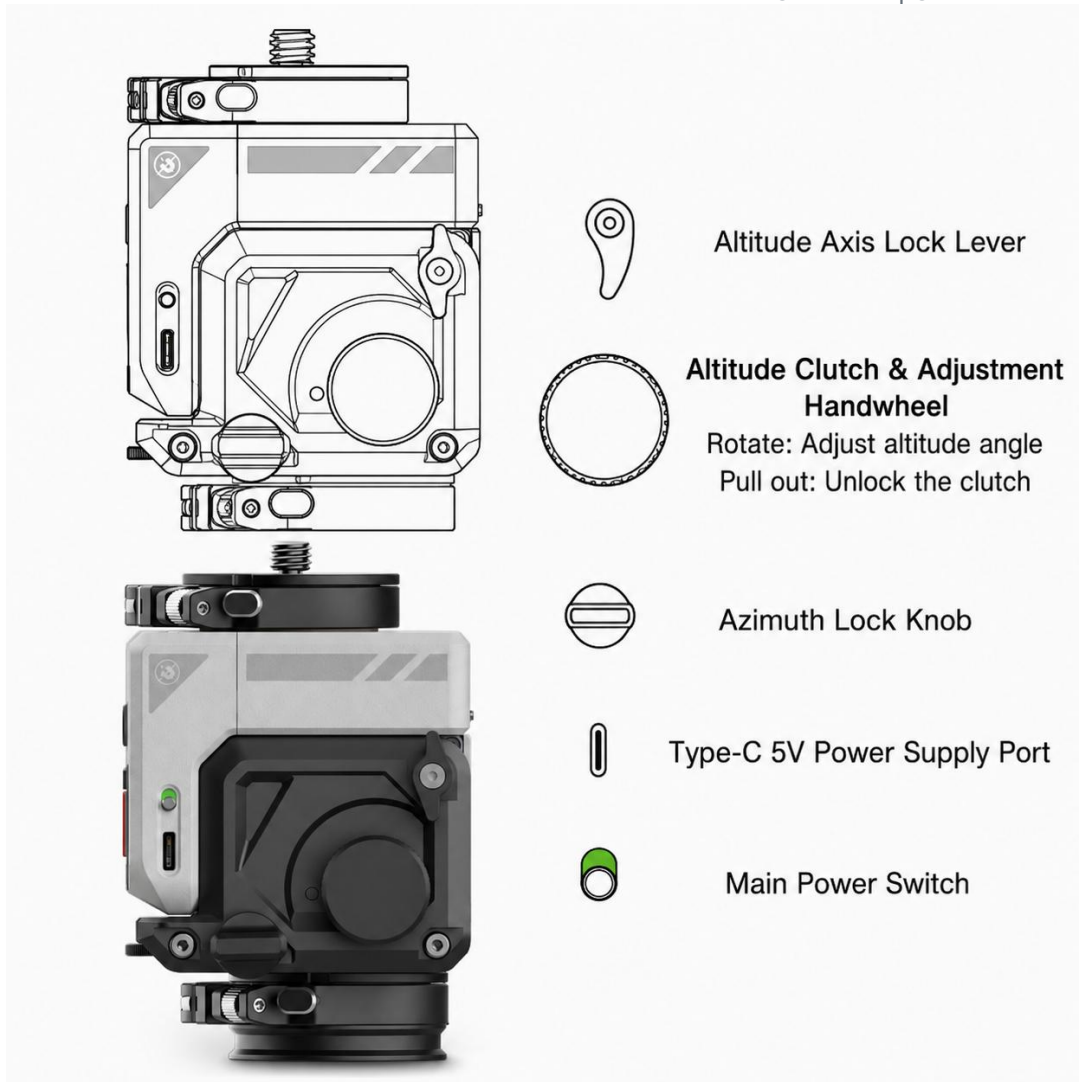


Figure 5. Side controls for altitude adjustment, power input and power switching.

Control	Function
Altitude axis lock lever	Locks or releases the altitude axis after adjustment.
Altitude clutch and adjustment handwheel	Rotate to fine-adjust the altitude angle. Pull outward only where indicated to release the clutch for faster repositioning.
Azimuth lock knob	Locks the horizontal adjustment mechanism after alignment.
USB Type-C power supply port (5 V DC)	Connects an external 5 V DC power source.
Main power switch	Turns the star tracker on or off.

Dual-source power management: When an external USB Type-C power source is connected while AA batteries are installed, the device automatically prioritizes the external source. The USB Type-C port does not charge the installed AA batteries. Standard alkaline AA batteries may remain installed during external-power operation.

4.3 Rear Controls

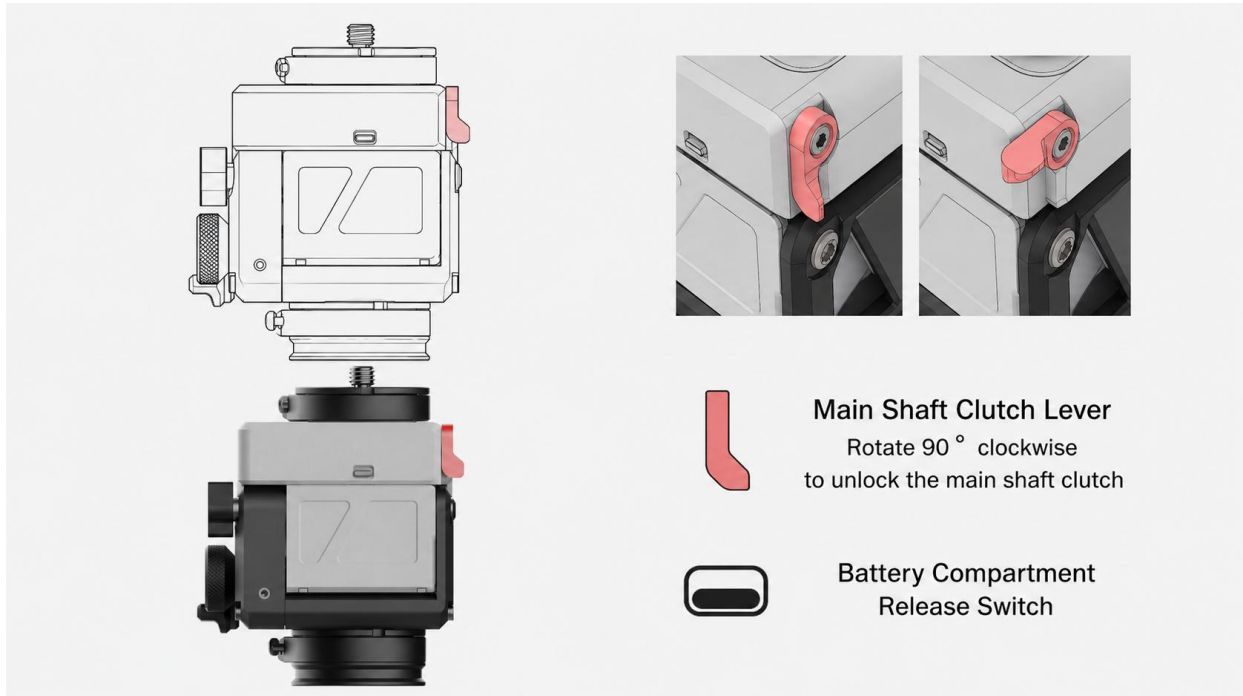


Figure 6. Rear view: main-shaft clutch lever and battery-compartment release switch.

Control	Function
Main-shaft clutch lever	Rotate 90° clockwise to unlock the main-shaft clutch. Return the lever to the locked position before tracking.
Battery-compartment release switch	Releases the battery compartment for AA-battery installation or replacement.

5. Installing the Star Tracker on a Tripod

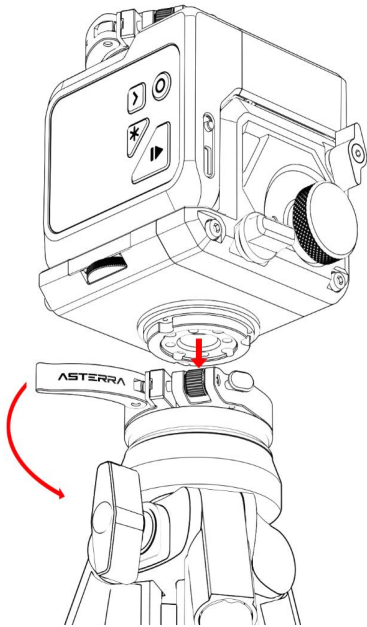
ASTERRA-Z+ must be securely connected to a stable tripod before polar alignment or payload installation. The star tracker may be installed through a direct 3/8-inch threaded connection or through a compatible Click & Go quick-release plate, depending on the supplied configuration. The Foldable L-Bracket is an optional accessory and is not required for standard installation.

BEFORE MOUNTING Remove the camera payload first. Tighten the star tracker's azimuth lock knob before attaching or removing the tracker from the tripod.

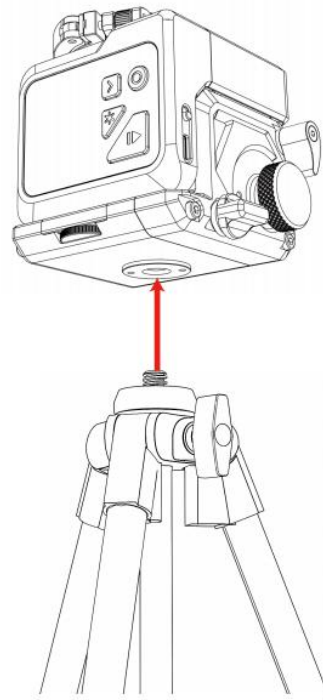
5.1 Direct 3/8-Inch Tripod Connection

The bottom of the Click & Go receiving module features a standard 3/8" threaded hole. If your tripod uses a 1/4" screw, install the supplied mounting stud adapter first.

1. Place the tripod on firm ground and fully extend or lock the tripod legs.
2. Confirm that the tripod top plate provides a compatible 3/8-inch mounting screw. Use a suitable adapter only when required by the tripod manufacturer.
3. Hold the ASTERRA-Z+ main body securely with one hand.
4. Align the lower mounting interface with the tripod screw.
5. Rotate the star tracker clockwise until it is seated firmly. Do not overtighten.
6. Ensure that the mount is securely tightened and will not rotate on the tripod before continuing.



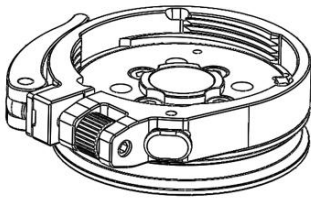
Align the lower interface with the tripod screw.



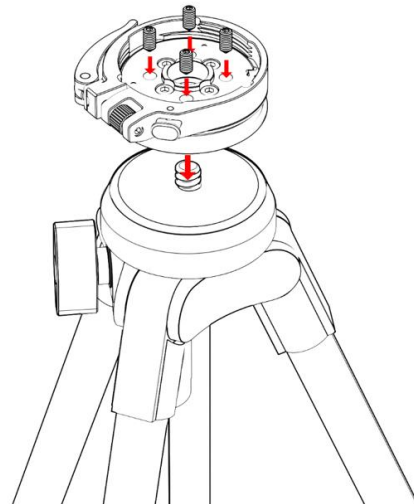
Tighten the tracker onto the tripod until secure.

5.2 Installing the Click & Go Quick-Release Module on a Tripod

For expedited tripod attachment, install the supplied Click & Go receiving module on the tripod before inserting the upper quick-release plate. Refer to the diagrams below for the installation sequence.



Click & Go receiving module.



Install the receiving module onto the tripod top plate as shown.

1. Place the tripod on stable ground and confirm that the tripod top plate provides a compatible 3/8-inch center screw.
2. Position the Click & Go receiving module on the tripod top plate.
3. Align the center hole of the receiving module with the tripod's 3/8-inch screw and tighten the center connection.
4. Where the tripod top plate and supplied hardware support it, install the four auxiliary anti-rotation screws into the surrounding holes, as shown in the diagram, to improve positioning stability.
5. Confirm that the receiving module sits flush on the tripod top plate and does not rotate or wobble.
6. Open and close the latch once to confirm that the mechanism moves freely before mounting the upper plate.

IMPORTANT If your tripod top plate does not support the auxiliary screw pattern, tighten the center 3/8-inch connection securely and verify that the receiving module cannot rotate under load before use.

TORQUE LIMIT The maximum locking torque between the tripod head and the quick-release mechanism is 10 N·m. Do not exceed this limit.

5.3 Installing the Upper Quick-Release Plate, Tripod Head and Camera

The same Click & Go principle is used on the upper side of the star tracker. First attach the upper quick-release plate to the tripod head or other compatible accessory, then insert it into the receiving module on the star tracker.

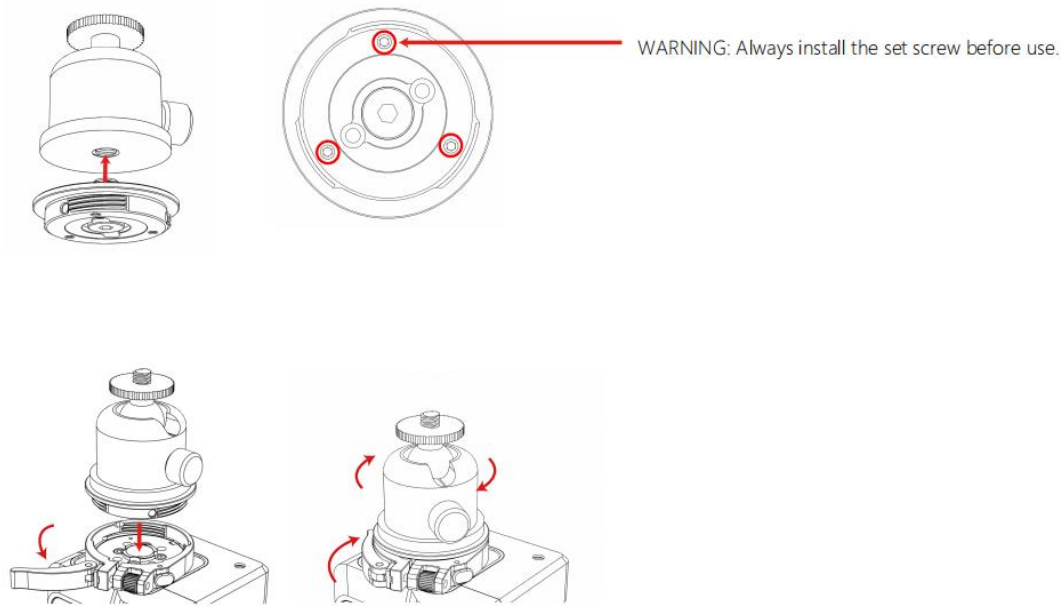


Figure 7. Installing a compatible tripod head on the upper Click & Go quick-release interface. Always install the set screws before use.

1. Confirm that the star tracker or tripod-mounted receiving module is already locked securely in place.
2. Attach the upper quick-release plate to the tripod head or accessory using the matching top screw interface.
IMPORTANT: Install and tighten the set screws shown in the diagram before use. Do not operate the quick-release interface without the set screws installed.
3. Open the Click & Go latch fully.
4. Align the upper quick-release plate with the receiving slot and lower it into position.
5. Rotate the plate clockwise until it is fully seated.
6. Close the latch completely.
7. Verify that the mounted plate is secure. The plate must not lift, rotate or exhibit lateral movement.
8. Mount the camera and lens to the tripod head and verify that all screws and locks are secure before releasing the equipment.

IMPORTANT 1. Always tighten the plate's screw connection before closing the quick-release latch. A loose plate can slip, become difficult to remove or damage mounted equipment.

2. **CAUTION:** Ensure that the tripod and tripod head can support the combined mass of the ASTERRA-Z+, camera and attached accessories. Fully deploy and lock the tripod legs, and verify system stability before unattended operation.

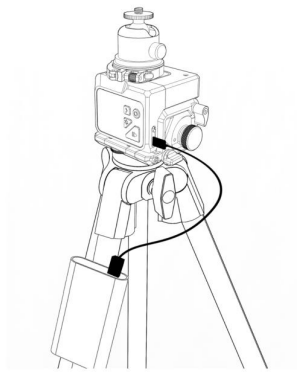


Figure 8. Typical field installation with tripod, star tracker and connected cable.

5.4 Optional Foldable L-Bracket

The Foldable L-Bracket shown below is an optional accessory. It is not included in the standard ASTERRA-Z+ package and is supplied only when purchased separately.

When installed between the star tracker and a compatible tripod head, the Foldable L-Bracket provides an adjustable 0° - 90° leveling range. The bracket is rated for a maximum load of 10 kg. This rating does not replace or increase the load limits of the ASTERRA-Z+, tripod head or tripod. Do not exceed the lowest rated load limit of any component in the assembled system.

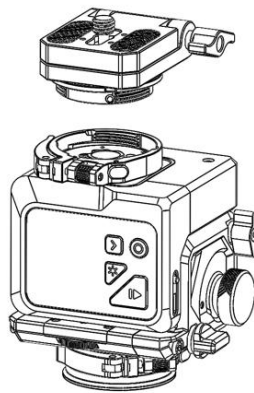


Figure 9. Upper quick-release plate aligned above the star tracker receiving module.

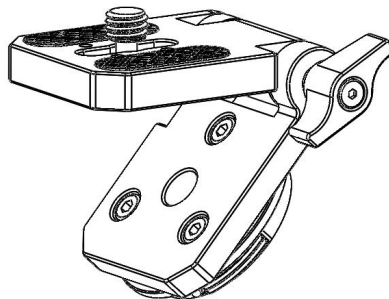


Figure 10. Optional Foldable L-Bracket in the unfolded position (sold separately).

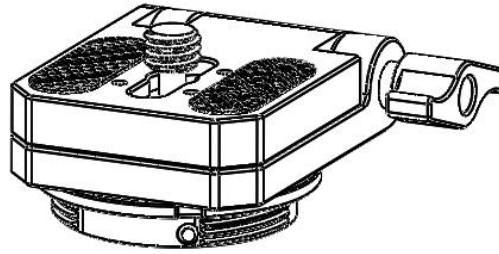


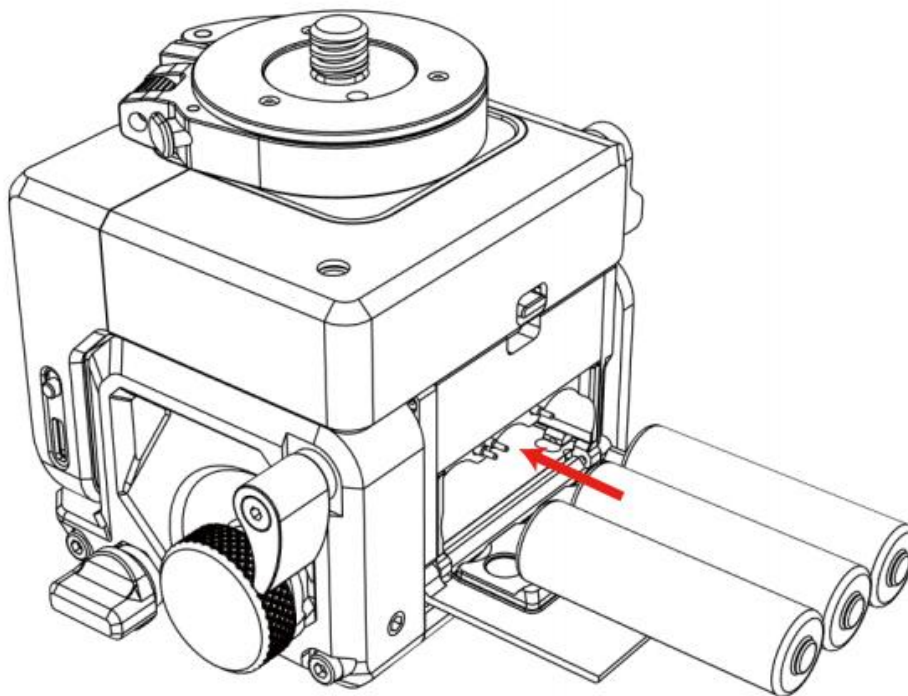
Figure 11. Optional Foldable L-Bracket in the folded position (sold separately).

OPTIONAL ACCESSORY The Foldable L-Bracket is not included with the standard ASTERRA-Z+ package.

Before use, confirm that the bracket is fully locked and that all threaded connections are securely tightened. Verify system stability before attaching or releasing camera equipment.

6. Power Supply and Startup

6.1 Installing AA Batteries



1. Turn the main power switch off.
2. Press the battery-compartment release switch and open the battery compartment.
3. Install three matching new AA batteries according to the marked polarity.
4. Close the compartment until it locks securely.
5. Turn the main power switch on and confirm that the display illuminates.

6.2 External USB Type-C Power

Connect a stable 5 V DC power source to the USB Type-C power supply port. AA batteries and external USB Type-C power may be used separately or simultaneously, subject to the released hardware configuration.

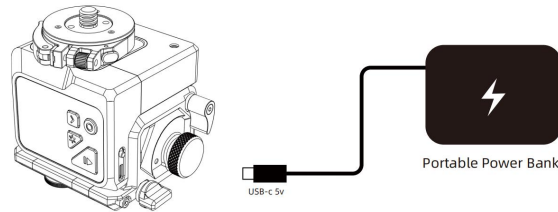


Figure 12. Example external 5 V power connection.

POWER SOURCE Do not connect a power source of unknown voltage. For external operation, connect a stable 5 V DC USB power source rated for at least 1 A using an undamaged cable.

6.3 Startup Check

To power on the star tracker, move the main power switch downward to the ON position. The display illuminates and shows the initialization menu and tracking status. To power off the device, move the main power switch upward to the OFF position.

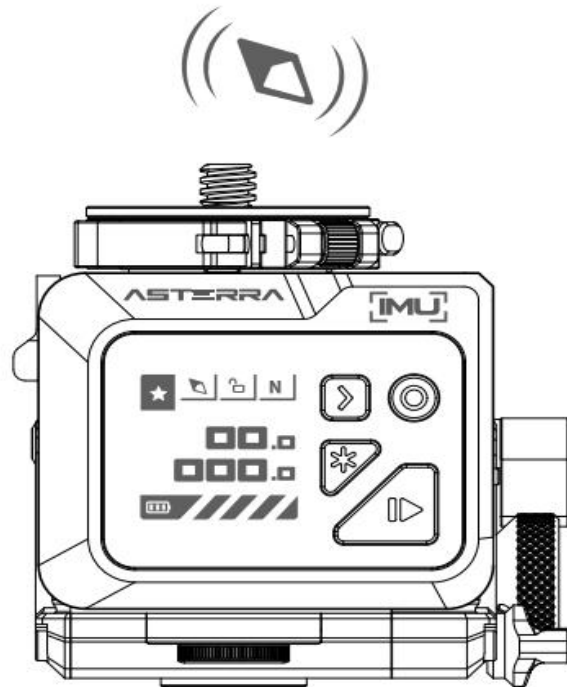
1. Turn the main power switch on.
2. Wait for the display to illuminate and for the device self-check to complete.
3. Confirm that the controls respond normally before mounting the camera payload.
4. If abnormal noise, odor, a display error or mechanical obstruction is detected, turn the device off immediately.

7. Polar Alignment Workflows

Select an alignment workflow based on observing conditions, focal length, geographic location and applicable local regulations. Longer focal lengths and exposure times require greater alignment accuracy.

Workflow	Typical use	Notes
Magnetometer-assisted north/south finding	Rapid setup for wide-angle starfield photography	Recommended for rapid deployment and shorter focal lengths.
Laser-assisted Polaris alignment	Northern Hemisphere locations where Polaris is visible	Use only where laser operation is permitted and can be conducted safely.
Laser-pointer single-star calibration	Conditions in which Polaris is not visible or an alternative workflow is required	Requires companion software and identification of a suitable bright star.

7.1 Magnetometer-Assisted North/South Finding



1. Use the display and integrated magnetometer to orient the device toward 000° for magnetic north or 180° for magnetic south.
2. Adjust the altitude angle to your local latitude. Example: at 30° N, set the altitude to approximately 30°.
3. Disable the magnetometer display after completing the initial orientation.
4. Tighten the azimuth lock knob and secure the altitude-axis lock lever.
5. Install the tripod head and imaging equipment.
6. Select the required tracking speed.
7. Press the motor start button to begin tracking.

TYPICAL APPLICATION This workflow is intended for rapid wide-angle starfield photography. For longer focal lengths or longer exposures, use a more precise alignment method and verify the result with test exposures.

7.2 Laser-Assisted Polaris Alignment

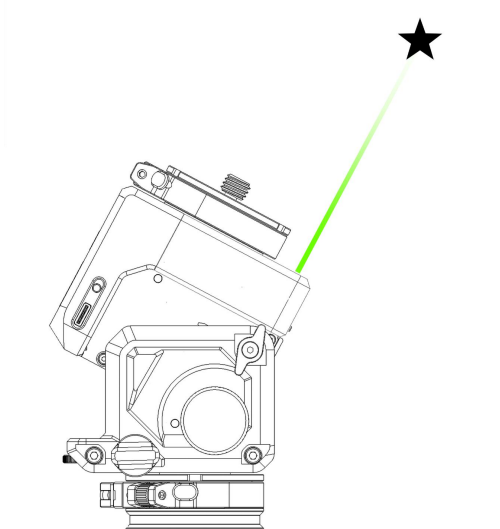


Figure 13. Laser-assisted alignment toward Polaris in the Northern Hemisphere.

1. Locate Polaris in the sky.
2. **WARNING:** Laser use is prohibited or restricted in many jurisdictions. Verify applicable local laws and confirm that operation can be conducted safely at the current location before proceeding.
3. If laser operation is legally permitted at the current location, press the laser button to activate the laser pointer. Depending on the product configuration, the laser may deactivate automatically after a specified interval.
4. Use the azimuth and altitude adjustment controls to aim the laser toward Polaris.
5. Deactivate the laser pointer immediately after alignment.
6. Lock the azimuth and altitude axes.
7. Install the tripod head and imaging equipment, select the required tracking speed and begin tracking.

7.3 Laser-Pointer Single-Star Calibration

Use this workflow when Polaris is not visible or when the magnetometer-assisted method is unsuitable. After a bright star has been identified and the displayed angles have been entered, the companion software calculates corrected true-north or true-south alignment values. Before activating the laser pointer, use Planit! Pro or another astronomy application to identify the target star and confirm its current azimuth and altitude.

STAR-POSITION REFERENCE Use Planit! Pro or another astronomy application to obtain the target star's current azimuth and altitude before beginning the single-star calibration workflow.

1. Disable the magnetometer function.
2. Use Planit! Pro or another astronomy application to identify a bright star (e.g., Vega or Betelgeuse) and verify its position.
3. Open the companion mini-program or application and select Single-Star Calibration.
4. **WARNING:** Laser use is prohibited or restricted in many jurisdictions. If laser operation is legally permitted at the current location, activate the laser pointer only after confirming that operation can be conducted safely.
5. Use the azimuth and altitude controls to aim the laser at the selected star.
6. Record the azimuth and altitude values shown on the star tracker display.
7. Enter the recorded values in the companion software.
8. Adjust the star tracker to the corrected true-north or true-south values shown by the software.
9. Deactivate the laser pointer immediately.
10. Lock the azimuth and altitude axes, install the imaging equipment and begin tracking.

8. Tracking and Shooting

8.1 Starting Tracking

1. Complete tripod installation and polar alignment.
2. Confirm that the main-shaft clutch is locked and select the appropriate tracking direction in the screen menu: N for the Northern Hemisphere or S for the Southern Hemisphere.
3. Confirm that the camera, lens and tripod head are secure.
4. Use the menu controls to select the required tracking rate.
5. Press the motor start button.
6. Monitor the display and listen for abnormal mechanical noise during the initial seconds of operation.
7. Capture a short test exposure and review stellar point profiles at high magnification before beginning an extended imaging sequence.

8.2 Tracking Rates

Rate	Typical purpose	Screen symbol / value
Sidereal rate	Most deep-sky and starfield photography	

Rate	Typical purpose	Screen symbol / value
0.5x Sidereal rate	Wide-field astrophotography combining sharp stars and detailed landscapes.	
2x Sidereal rate	Faster tracking rate for specialized shooting workflows.	
Lunar rate	Moon tracking	
Solar rate	Solar tracking with appropriate solar-imaging safety equipment	

SOLAR IMAGING SAFETY Never aim a camera, lens, telescope or optical accessory at the Sun without appropriate certified solar-imaging equipment and procedures.

8.3 Repositioning the Main Shaft

1. Stop tracking before manually rotating the main shaft.
2. Support the mounted payload with one hand.
3. Rotate the main-shaft clutch lever 90° clockwise to unlock the clutch.
4. Reposition the payload carefully.
5. Return the clutch lever to its locked position before restarting tracking.

9. Battery Compartment and Storage

9.1 Replacing Batteries

- Turn the product off before opening the compartment.
- Replace all three AA batteries at the same time.
- Inspect the compartment for moisture, corrosion or damaged contacts before closing it.
- Do not store depleted batteries inside the product.

WARNING: Remove the AA batteries if the device will not be used for more than two weeks. Damage resulting from battery leakage is excluded from warranty coverage.

9.2 Storage and Transport

- Remove batteries for long-term storage.
- Store the product in a dry, ventilated location. Recommended storage humidity: 60% RH or lower.
- Use the supplied carrying case during transport.
- Before transport, turn off the product and secure all accessories. Remove any detachable laser module where applicable.
- After moving the product from a cold environment into a warmer environment, keep it switched off and place it in a sealed bag until it has gradually reached room temperature. Do not power on the product until all condensation has evaporated and the device is completely dry.
- Store the star tracker in a cool, dry and dust-free environment, away from direct sunlight and extreme temperatures. Keep the USB Type-C port clean and protected during long-term storage.

10. Main Specifications

The following specifications apply to the released ASTERRA-Z+ configuration.

Parameter	Specification
Product name	ASTERRA-Z+ Star Tracker
Model	ASTERRA-Z+
Stored dimensions	86 mm (Height) x 84 mm (Width) x 75 mm (Length)
Net weight	850 g
Rated load capacity	8 N·m
Power source (batteries)	3 × AA batteries
External power input	5 V DC via USB Type-C port; rated input 0.18 A, 0.9 W. Use a stable USB power source rated for at least 1 A.
Recommended operating temperature	-20 °C to 40 °C
Laser pointer	Refer to the product label supplied with the applicable market configuration.
Wireless function	No

11. Troubleshooting

Issue	Possible cause	Recommended action
The display does not illuminate	Power switch is off; battery polarity is incorrect; batteries are depleted; external power is unstable	Turn the device off, verify battery installation, replace all AA batteries or connect a verified 5 V DC power source.
Tracking does not start	Tracking rate has not been selected; clutch is unlocked; mechanical obstruction is present	Stop operation, verify the menu settings, lock the clutch and inspect the mechanism for obstruction.
Mount rotates on tripod head	Tripod screw or Click & Go plate is loose	Remove the payload, tighten the threaded connection and reinstall the quick-release plate. Verify that the mount remains stationary under load before resuming operation.
The quick-release plate cannot be removed easily	The plate screw was not tightened before installation or the interface is under load	Support the payload, remove the load where practicable and release the latch carefully. Contact ASTERRA support if resistance persists.
Star trailing is visible in test exposures	Alignment accuracy is insufficient; tripod is unstable; payload is unsecured; focal length or exposure time exceeds the practical limit for the current setup	Repeat the alignment procedure, secure all interfaces, reduce the exposure time and use a higher-accuracy calibration workflow.
The laser pointer does not activate	Laser module is not installed; available power is insufficient; automatic shutoff has occurred; or operation is restricted	Verify the power supply and module installation. Do not circumvent regional safety restrictions.
Abnormal noise or odor	Mechanical obstruction, payload overload or electrical fault	Turn the device off immediately, remove the payload and contact ASTERRA support.

Issue	Possible cause	Recommended action
Optional Foldable L-Bracket does not remain level	Bracket lock is not fully engaged; threaded connection is loose; assembled load exceeds the applicable limit	Support and remove the payload, fully engage the bracket lock, tighten all threaded connections and verify that the assembled load does not exceed the lowest rated load limit of any component.

12. Warranty Terms

12.1 Warranty Coverage

This product is warranted against defects in materials and workmanship under normal operating conditions from the date of purchase. Eligible repairs will be performed without charge during the applicable warranty period.

12.2 Warranty Period

Main unit: 1 year from the date of purchase.

12.3 Warranty Documentation

- Valid purchase order or receipt
- Product serial number
- Photographs, video recordings or other information reasonably required for fault diagnosis

12.4 Exclusions from Warranty

- Damage resulting from drops, impacts, liquid ingress, misuse, improper storage or other user-related causes.
- Unauthorized modification, disassembly or repair.
- Damage caused by unauthorized accessories, incompatible power supplies or improper installation.
- Damage resulting from natural disasters, force majeure events or operation outside the specified environmental conditions.
- Normal wear and tear of consumable or cosmetic parts.
- Products outside the warranty period.

12.5 Disclaimer

Read and understand all instructions before operating the product. Improper installation, unsafe laser use, failure to follow instructions or operation outside the product specification may damage equipment or cause injury. To the extent permitted by applicable law, the manufacturer is not liable for indirect, incidental or consequential losses resulting from improper use.

13. Hazardous Substances

This product has been assessed for conformity with Directive 2011/65/EU, as amended by Directive (EU) 2015/863, on the restriction of certain hazardous substances in electrical and electronic equipment.

Part / Component	Pb	Hg	Cd	Cr(VI)	PBB	PBDE	Remarks
Main housing	O	O	O	O	O	O	
Printed circuit board assembly	O	O	O	O	O	O	
Display module	O	O	O	O	O	O	
Motor and gearbox	O	O	O	O	O	O	
Cables and connectors	O	O	O	O	O	O	

Part / Component	Pb	Hg	Cd	Cr(VI)	PBB	PBDE	Remarks
Fasteners and mechanical components	O	O	O	O	O	O	
Laser pointer module, where supplied	O	O	O	O	O	O	
Packaging materials	O	O	O	O	O	O	

Suggested legend for finalization:

- O: The hazardous substance content in all homogeneous materials of the part is below the applicable limit requirement.
- X: The hazardous substance content in at least one homogeneous material of the part exceeds the applicable limit requirement. Provide an explanatory note where required.
- Use the legend, symbols and limit standard required by the final target-market compliance plan.

The assessment covers lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr(VI)), polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), DEHP, BBP, DBP and DIBP.

California Proposition 65: Warning requirements depend on the exposure assessment for the released product configuration. Refer to the product packaging and online sales listing for any applicable California warning. Do not remove or obscure any warning supplied with the product.

14. CE Compliance Information

ASTERRA-Z+ has been assessed for electromagnetic compatibility and RoHS conformity for the European Economic Area. The EU Declaration of Conformity is available from the manufacturer upon request.

Field	Information
Product name	ASTERRA-Z+ Star Tracker
Model	ASTERRA-Z+
Manufacturer	XINGKONG YUANYE (CHONGQING) TECHNOLOGY CO., LTD.
Manufacturer address	3FB033, Building 1, No. 21 Zhuoyue Road, Longxing Town, Liangjiang New Area, Chongqing, China
Applicable EU legislation	Directive 2014/30/EU on electromagnetic compatibility; Directive 2011/65/EU, as amended by Directive (EU) 2015/863, on the restriction of hazardous substances
Applied EMC standard	EN IEC 61326-1:2021
EU Declaration of Conformity	Available from the manufacturer upon request.



The crossed-out wheeled-bin symbol indicates that the product must be collected separately from household waste.

Disposal and Recycling: Do not dispose of this product or used batteries as unsorted household waste. Use an appropriate collection point in accordance with applicable local regulations.

Laser safety note: CE EMC and RoHS assessments do not replace market-specific laser-safety classification, labeling or documentation requirements. Follow the label and documentation supplied with the released laser configuration.

15. FCC Compliance Information

This product has been evaluated under the Supplier's Declaration of Conformity procedure. The U.S. responsible party is listed below.

Field	Information
Product name	ASTERRA-Z+ Star Tracker
Model	ASTERRA-Z+
FCC ID	Not applicable
Applicable assessment routes	47 CFR FCC Part 15 Subpart B; 47 CFR FCC Part 18
U.S. responsible party	Asterra Inc.
U.S. address	1942 Broadway St Ste 314C, Boulder, CO 80302, United States
Website	www.theasterra.com
Support email	support@theasterra.com

15.1 FCC Part 15 Notice

The following notice applies to the released product configuration:

FCC NOTICE This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

15.2 Changes or Modifications

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.3 Interference Statement

This equipment generates, uses and can radiate radio-frequency energy and, if not installed and used in accordance with this manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, as determined by turning the equipment off and on, the user is encouraged to take one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

15.4 Market-Specific Laser Regulatory Note

- FCC compliance does not replace applicable laser-product requirements. For products supplied with a laser module in the United States, follow the FDA/CDRH labeling and documentation supplied with the released configuration. For Australia and New Zealand, use only the laser configuration lawfully supplied for the destination market.

Appendix A. Manufacturer and Support Information

Item	Information
Manufacturer	XINGKONG YUANYE (CHONGQING) TECHNOLOGY CO., LTD.
Address	3FB033, Building 1, No. 21 Zhuoyue Road, Longxing Town, Liangjiang New Area, Chongqing, China
Website	www.theasterra.com

Item	Information
Support email	support@theasterra.com
Country of origin	Made in China
U.S. responsible party	Asterra Inc.
U.S. address	1942 Broadway St Ste 314C, Boulder, CO 80302, United States

For current tutorials, firmware information, companion-software guidance and support materials, visit the official website or contact ASTERRA support using the email address listed above.