

USER GUIDE

ENVISION

1 Discovering the ENVISION Universe

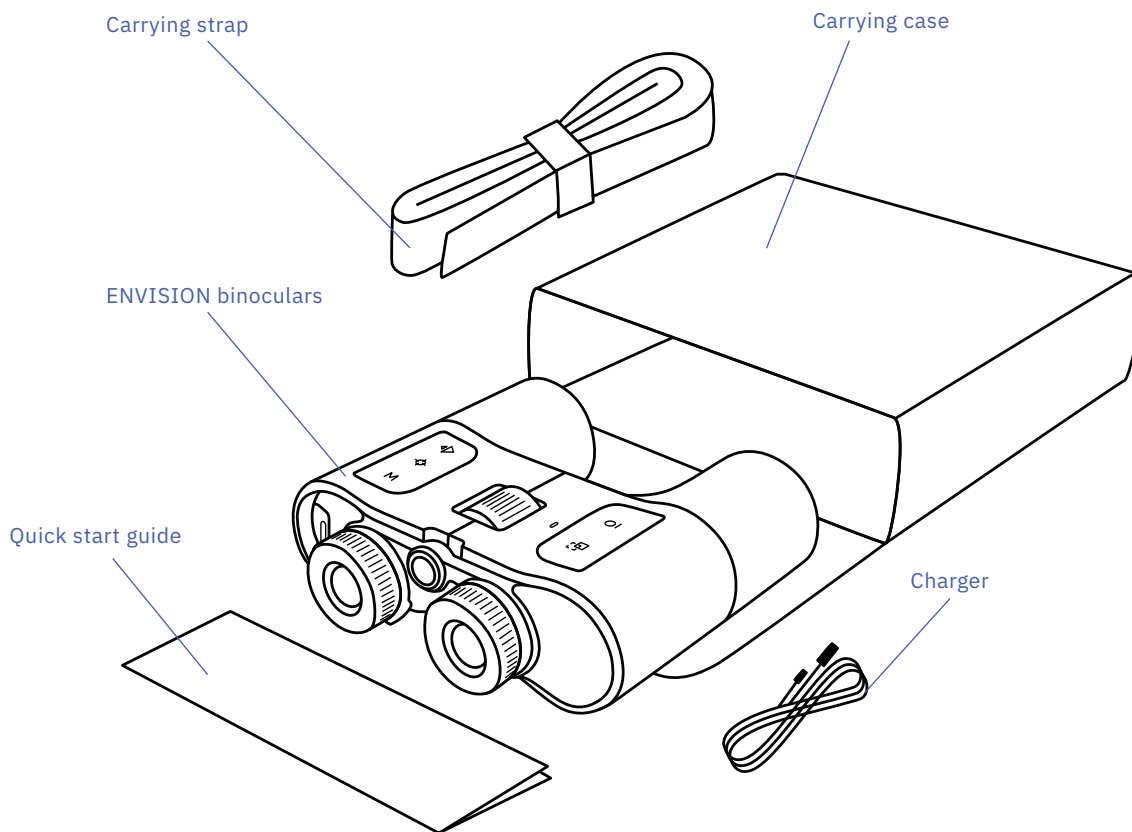
Welcome to the ENVISION user guide!

With ENVISION, discover the starry sky and the landscape around you like never before. This guide will accompany you step by step: getting started with your binoculars, adjusting settings, and discovering all the features that will make every outing a true exploration.

A • Packaging Contents

Your ENVISION box contains the following items:

- ENVISION binoculars with their protective caps inside a carrying case
- Carrying strap
- Charger: Standard USB-C / USB-C cable
- Quick start guide



B • Spécifications Techniques

Tableau des Spécifications Techniques

Category	Feature	Technical specification
Optical Performance	Magnification	10x ideal for distant objects and the sky
	Objective Lens Diameter	50 mm
	Angular Field of View	6,5°
	Eye Relief	11,8 mm
	Exit Pupil	5 mm
	Optical Design & Glass	Porro BAK4 Prisms
	Optical Coating	Fully multi-coated on all surfaces
System & Augmented Reality	Display Technology	Matrix OLED internal display 960x960 pixels
	Display Color	RED Designed to preserve night vision
	Visual Alignment Coverage	The display covers 85% of the total field of view
	Wireless Connectivity	Bluetooth BLE (Bluetooth Low Energy)
	Onboard Sensors (IMU)	Full Inertial Measurement Unit: Accelerometer, Gyroscope, Magnetometers, Ambient Light Sensor
	Tripod Mount	Yes, compatible via optional adapter
Power & Environment	Built-in Battery	Lithium-ion 1100 mAh
	Estimated Battery Life	Approximately 5 hours of continuous use
	Charging Port	USB-C
	Waterproof Rating	IP54 Certified (Protection against dust and splashing water)
	Operating Temperature	From -10°C to 55°C
	Storage Temperature	From 10°C to 20°C Recommended for the battery

2 User Interface & Touch Controls

A • The Binoculars



Next Object Button

A short press allows you to successively view nearby points of interest.



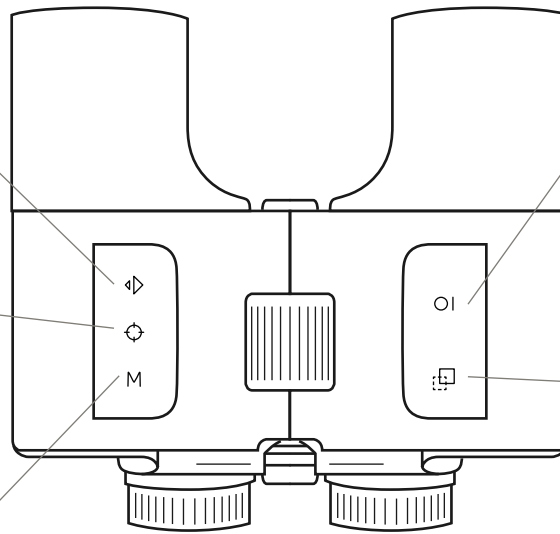
Shared Target Button

A long press saves the current target and activates the Shared Target function. A short press toggles the display of dynamic guidance arrows on the screen. A second short press immediately hides the elements again.



Mode Button

A short press allows you to cyclically switch between your three observation modes: Terrestrial Smartscouting (Day), Celestial (Night), and the Compass (which displays azimuth and elevation in real time).



ON/OFF Button

A long press completely turns the device on or off. A short press instantly turns on or puts the screen display to sleep.



Calibration

Holding the calibration button freezes the display to manually realign it with reality.

B • Observation Modes

Celestial Smartscouting Mode

ENVISION directly displays the outline and names of constellations, the positions of stars, planets, as well as deep-sky objects (galaxies, nebulae, and star clusters) in your field of view.

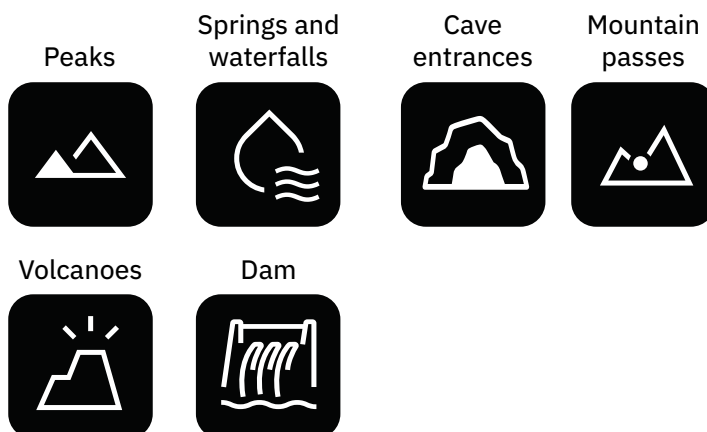
The GOTO function: Simply select a celestial body on your app, and dynamic arrows will provide step-by-step guidance to center it perfectly in the field of view.



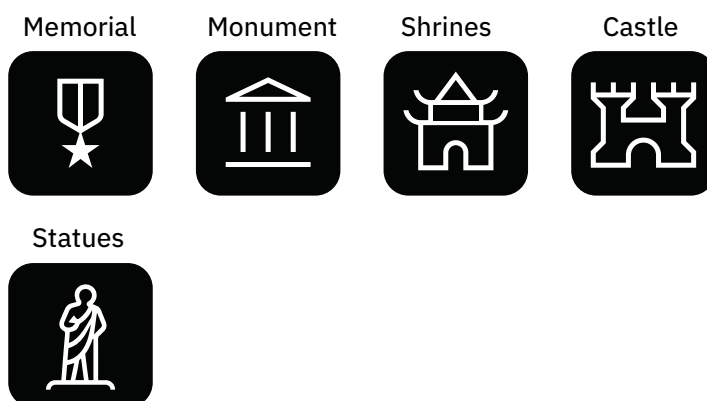
Terrestrial Mode

In day mode, the binoculars automatically overlay the names and altitudes of geographical landmarks:

• **Default Natural Elements:** Peaks, springs, mountain passes, volcanoes, waterfalls, cave entrances.



• **Optional Historical Sites:** Castles, monuments, statues, memorials, shrines.



• **Hiking Infrastructures:** Shelters, campsites, panoramic viewpoints, bird observatories. Additional types of points of interest (POIs) are available provided you download them in the app by navigating to: *Catalog → Option → Terrestrial → Check the desired POI sets.*

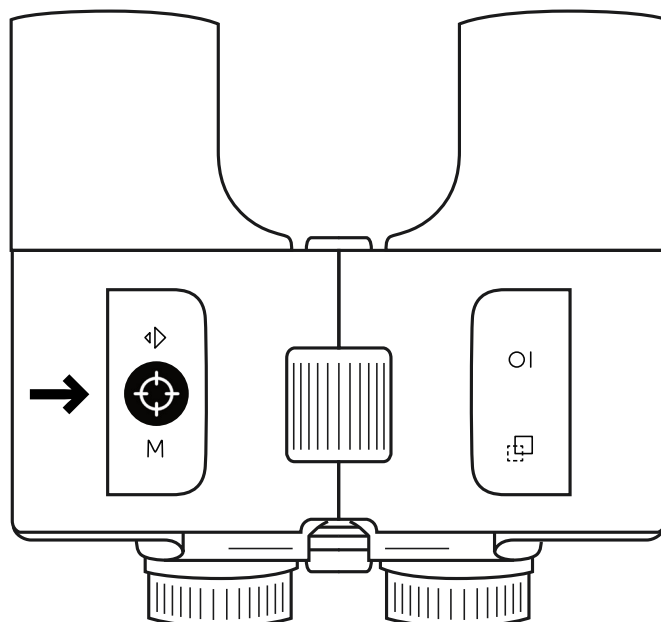
TIP: Offline preparation

If you are planning an excursion to an isolated area or high mountains without internet network coverage, open the Unistellar app from home. Go to **Settings → Terrestrial Data → Offline Data**. Check that your excursion is located in the downloaded area or add it via this menu. Then, go to **Catalog → Option → Terrestrial** and download the point of interest (POI) categories for your future area to store them locally. The binoculars will thus operate 100% autonomously in the field.



Shared Target

Are you observing a point of interest and want to show it to a friend? Press and hold the shared target button  to instantly save the point. Hand the binoculars to your partner: directional arrows will appear on the internal screen to guide them step by step until they find the exact same point of view. Saving a new target overwrites the previous one.



The IMU: The Brain Behind Augmented Reality

Behind the information displayed in your binoculars lies ENVISION's inertial measurement unit (IMU), which continuously orchestrates three types of sensors: the accelerometer (measures tilt and device movements), the gyroscope (for rotational movements), and the magnetometer (acts as a compass). This technology ensures the augmented reality display remains perfectly stable.

Connection

Your binoculars connect to your smartphone using the UNISTELLAR application.



The Connection Process:

Turn on your binoculars and open the Unistellar app: the connection is established automatically, without any manual pairing required on your part. Your binoculars will not appear in your smartphone's general Bluetooth menu—this is normal, as everything happens directly within the app. Once this initial connection is made, your binoculars will automatically reconnect at each startup.

Why is this connection necessary for each use?

This connection is essential both day and night. When establishing the link, the app synchronizes the exact time, GPS coordinates, and transfers all topographical information and points of interest surrounding you. This data allows your binoculars to precisely calibrate their positioning sensors and guide you in real time, whether you are looking towards the stars or the surrounding landscape.

Configuration & Optical Settings

To ensure optimal visual comfort and a sharp screen display, a few simple adjustments are necessary before your first observation.

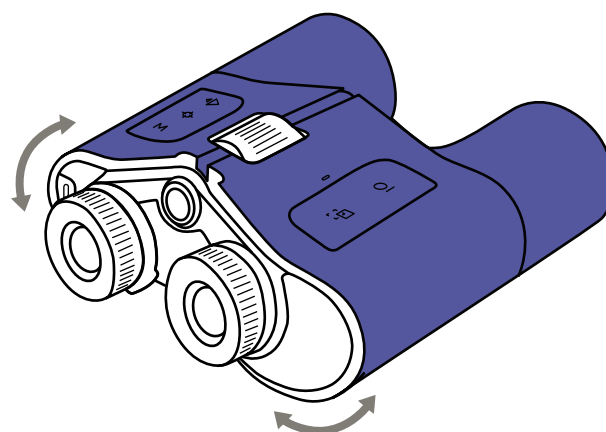
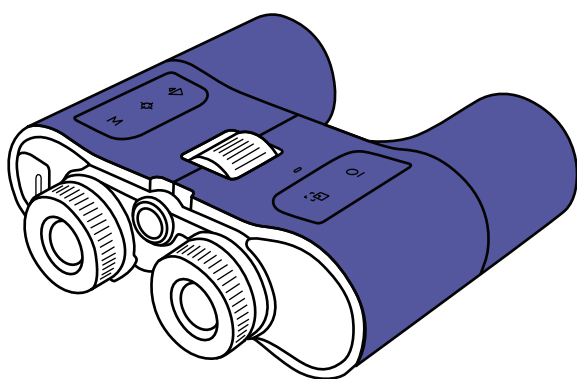
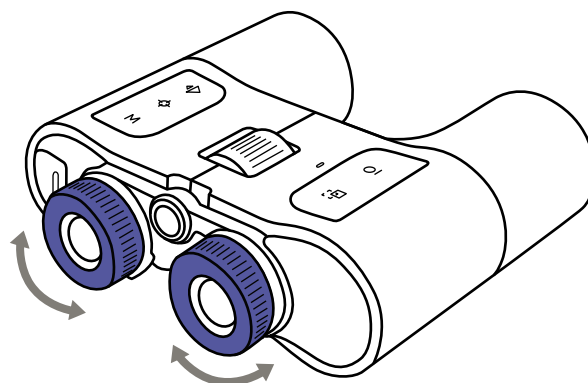
Adjustment

• Eyepiece Adjustment

If you wear glasses (myopia, hyperopia, or astigmatism do not hinder use), leave the eyecups folded down. If you observe without glasses, twist the eyecups to extend them according to your needs.

• Interpupillary Distance

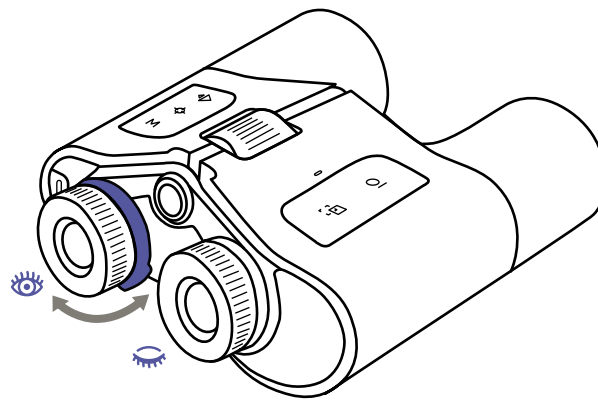
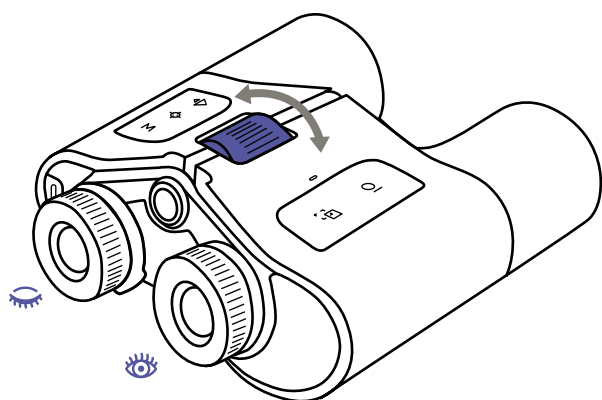
Unfold the binoculars until the view from both eyes is perfectly unified and circular.



Focusing (Focus and Diopter)

1. Aim at a distant object.
2. Close your left eye, look through your right eye, and turn the central focus wheel until the image is perfectly sharp.

3. Open your left eye and close your right eye. Then turn the diopter ring (located on the left eyepiece) to adjust the sharpness specifically for your left eye.



Note 1: The diopter ring compensates for the natural difference in vision between your two eyes.
Note 2: The augmented reality screen is designed to be optimally sharp when observing distant objects.

Your binoculars are now perfectly adjusted!

If you feel any discomfort during your observation, feel free to modify these settings to find the optimal comfort level for you.

3 Display Calibration & Environment

To ensure the augmented reality accurately overlays the physical landscape, please adhere to the following guidelines:

Electromagnetic environment management

Your binoculars are equipped with a magnetometer that is highly sensitive to magnetic interactions. Metal masses or magnets in close proximity will skew the calculations of this sensor, rendering calibration ineffective. It is therefore strongly advised against observing from inside a vehicle, through a metal window frame, in close proximity to reinforced concrete building structures, or by placing your smartphone directly against the binocular housing.

Anomaly Indicator

In the event of severe magnetic interference, a "Magnetic Interference" warning logo will appear simultaneously in your binoculars and on the app. Move away from the interference source so the binoculars can adapt and automatically correct the offset, or perform a manual calibration.

Calibration Procedure

If you notice a horizontal or vertical offset between the augmented display and the actual landscape, perform this simple calibration:

1. Identify a prominent visual landmark (e.g., a well-defined sharp mountain peak during the day, or an isolated bright star at night).
2. Press and hold the Calibration button to freeze the virtual display.
3. Move the binoculars to superimpose the virtual horizon lines, constellations, or stars onto the physical reality.
4. Release the button.

Video tutorial link:

<https://www.youtube.com/watch?v=zlcCOWI8jAw&feature=youtu.be>

4 Maintenance, Care & LED Signals

LED Status Indicators

The indicator light on the body of the binoculars instantly informs you of the system status:

- **Pulsing Orange:** Binoculars are connected to a power source; the battery is currently charging.
- **Solid Green:** Charging cycle is complete; the battery is at 100% capacity.
- **Solid White (or Red):** Binoculars are powered on and in normal operation.

Storage and Care

Environmental Protection (IP54):

The binoculars are resistant to water splashes (light rain) and fine dust. They must never be submerged. In the event of heavy rain exposure, dry them thoroughly before storing.

Optical Cleaning

To avoid micro-scratches on the delicate multi-coated lens surfaces, use only a clean, dry microfiber cloth. Do not apply any harsh chemicals, solvents, or household sprays to the lenses.

Long-Term Battery Management

To preserve the longevity of the 1100 mAh battery, store the binoculars in a stable, temperate environment (recommended between 10°C and 20°C). In the event of prolonged storage (several months) without use, it is highly advisable to physically remove the battery by accessing the designated screws located under the binoculars to prevent deep discharge.

5 Frequently Asked Questions

The observed image or screen text is blurry, what should I do?

Repeat the focusing procedure: first adjust the sharpness for your right eye using the central wheel, then for your left eye using the diopter ring. Keep in mind that the AR screen is optimized to be sharp at infinity (for distant objects).

Can I easily lend my binoculars to another person during an observation?

Yes, absolutely. Thanks to the physical settings, the other person can adjust the interpupillary distance to their face and the focus to their vision. Use the "Shared Target" function before handing them the device so that the on-screen arrows guide them immediately to the precise object you were looking at.

My binoculars won't connect to my smartphone, what should I do?

Ensure that Bluetooth is enabled on your phone and that the binoculars are turned on (the white/red LED should be active). Open the Unistellar app: BLE Bluetooth pairing is completely automatic and transparent. If the connection fails, fully close the app, turn off the binoculars with a long press, and then turn everything back on to reset the communication protocol.

Can I mount the binoculars on a standard photo tripod?

Yes, the ENVISION binoculars feature a standard tripod thread making them compatible with market tripods by using a tripod adapter (available online). This is particularly recommended in Celestial mode to stabilize the image and fully appreciate the details of galaxies and nebulae.

The augmented reality horizon is misaligned with the real horizon, how can I correct this?

First, ensure you are not in close proximity to a metal mass (e.g., a car, a metal fence). Then perform the manual calibration procedure: aim at a prominent star or a sharp peak, hold the calibration button, superimpose the graphic indicator on the real point, and release. Repeat the operation two or three times if necessary to refine the incremental recalibration.