Falcon 640+ V2

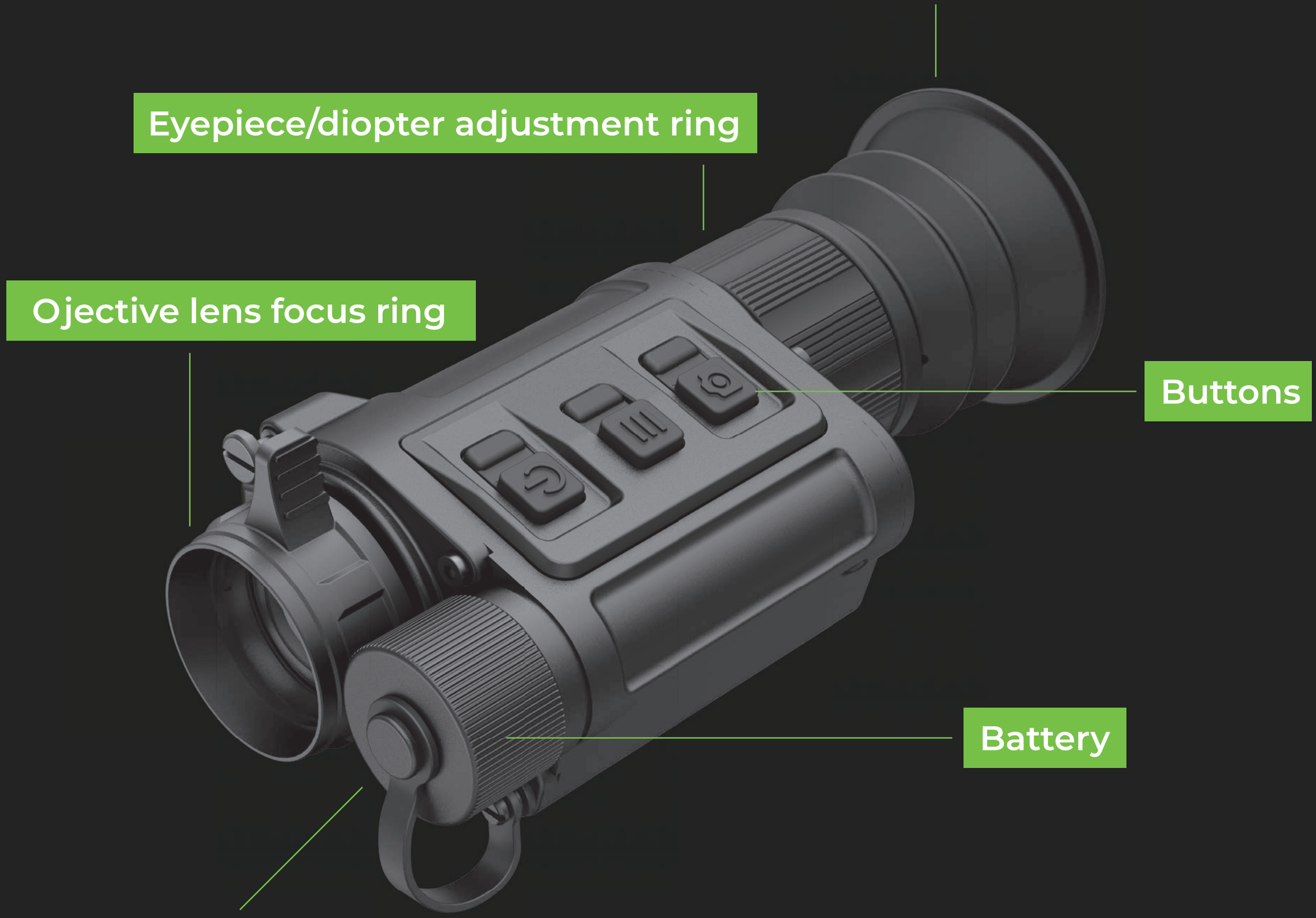
Multi-function Thermal Imager

Multi-function Thermal Imager is an advanced optoelectronic device miniaturized to deliver remarkably versatitle functionality: use on both a helmet and a weapon.
Weighing in at less than 325g, the device will fit in the palm of your hand and can be used with standard dovetail helmet mounts or rifle-mounted as a standalone or a clip-on optic.

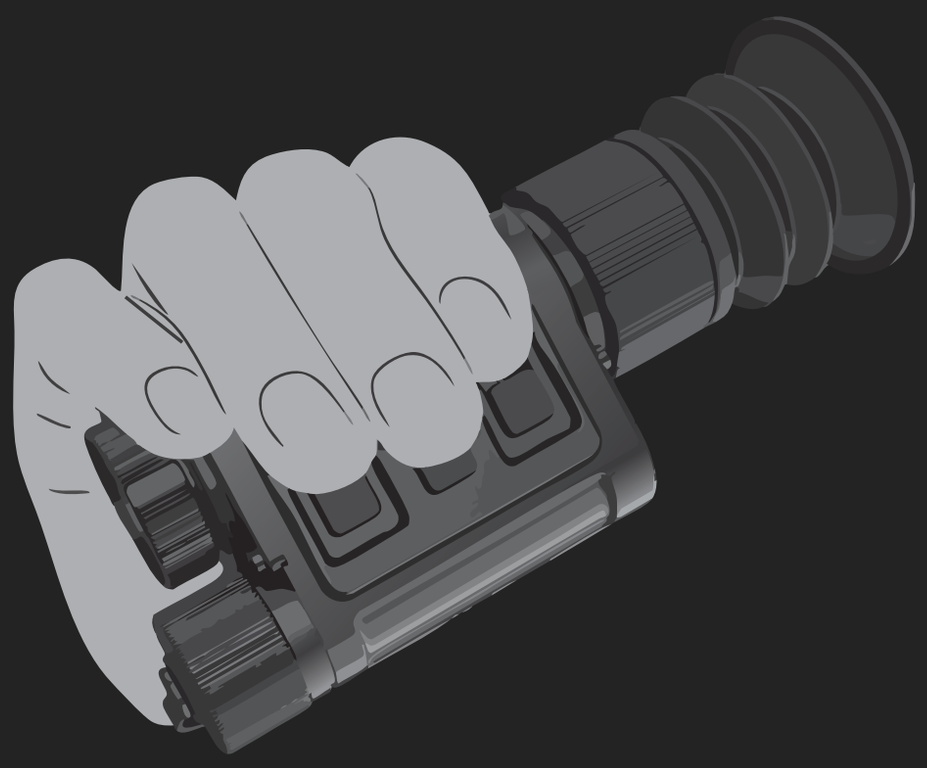
PARAMETERS

Detector	640×480/12μm
Lens	f25mm
Eyepiece	9x
Human recognition	1180 m
Vehicle recognition	1597 m
NETD	≤15mK
Frame rate	60Hz
FOV	17.2°×13.7°
Exit pupil distance	15mm~42mm
Diopter	-5~+2
Picture mode	White, Black, Red, Color(5)
E-zoom	1X, 2X, 4X
Battery life	≥6.5h
Battery type	1X18650/1X18700
Display	1440X1080, 0.71 in
Storage	64G
Interface	Picatinny rail, helmet mount
Weight	≤325g
Dimensions（mm）	115×65×48
IP rating	IP67
Operating temperature	-40℃~60℃
Storage temperature	-50℃~70℃

PARTS

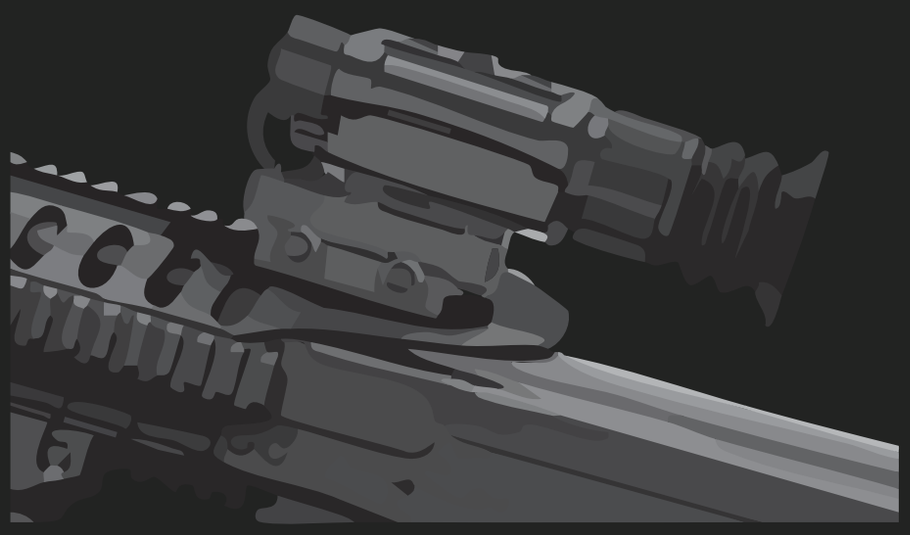

Helmet adapter
Eyepiece/diopter adjustment ring
Ojective lens focus ring
Buttons
Battery
Type-C port

WORKING MODES



Handheld

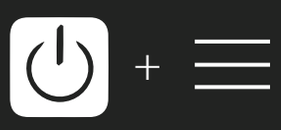
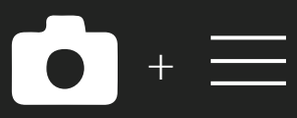
Helmet



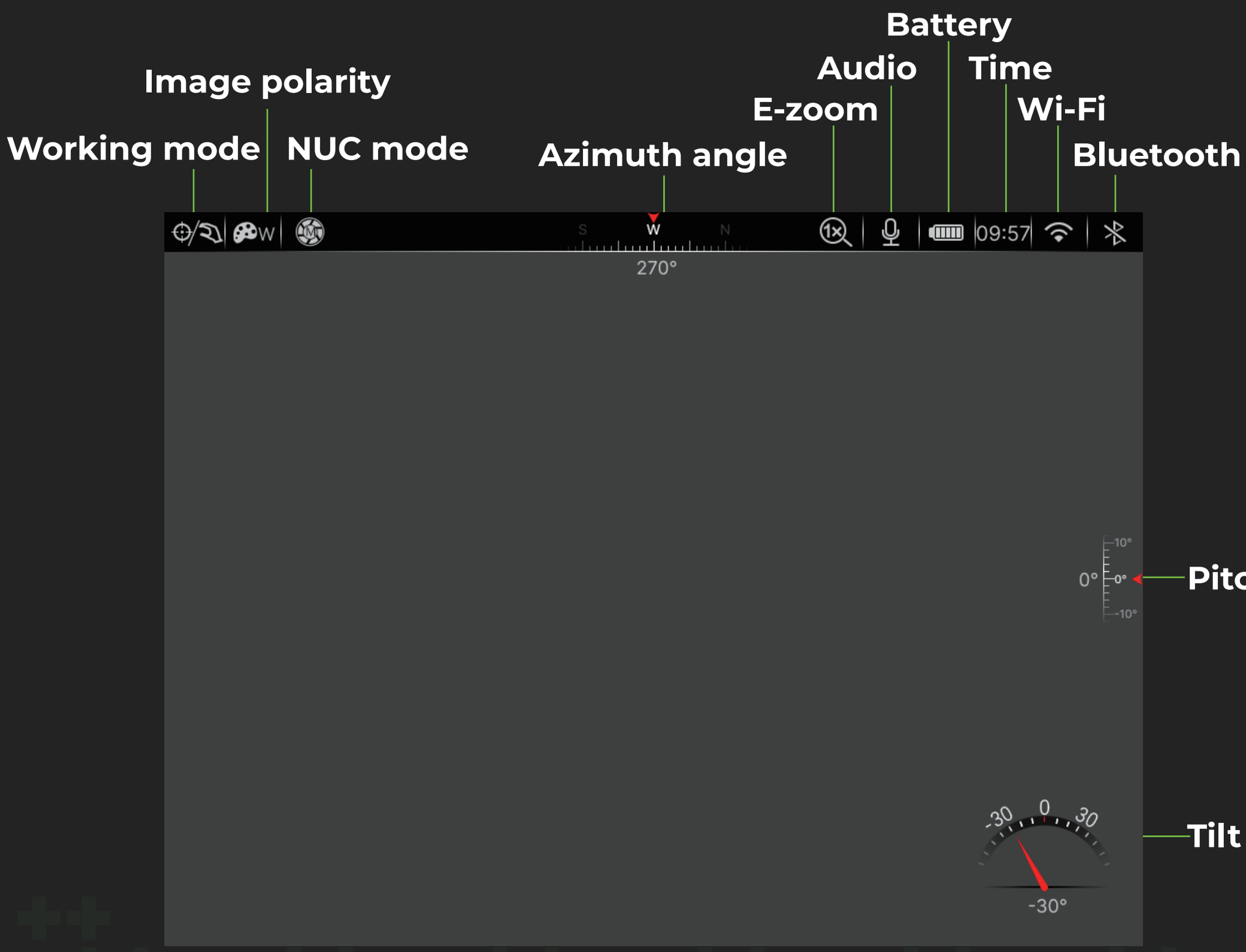
Standalone

Clip-on

BUTTONS

Button	Current Mode	Short Press	Long Press
	Device off	——	Device on
	Main interface	E-zoom	Turn off the device /enter standby mode
	Menu	Switch options	——
	Reticle zeroing/Blind pixel correction	Move 1 pixel in the negative direction	Move 10 pixel in the negative direction
	Main interface	Enter menu	Switch mode
	Menu	Select	Return
	Main interface	Take photo	Record video on/off
	Menu	Switch options	——
	Reticle zeroing/Blind pixel correction	Move 1 pixel in the positive direction	Move 10 pixel in the positive direction
	Main interface	——	Adjust X/Y position of the screen
	Main interface	Perform manual NUC	Perform background NUC

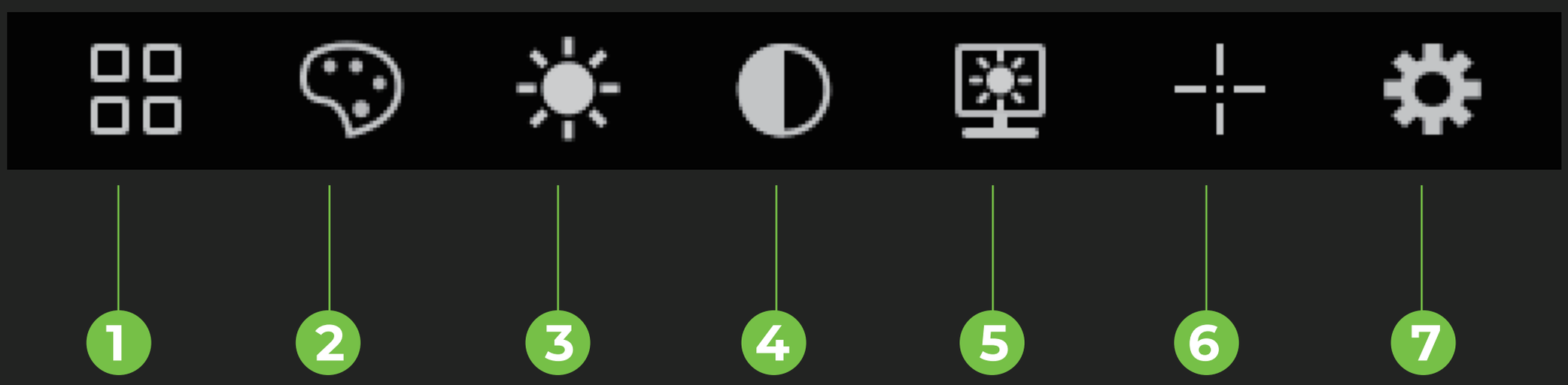
USER INTERFACE



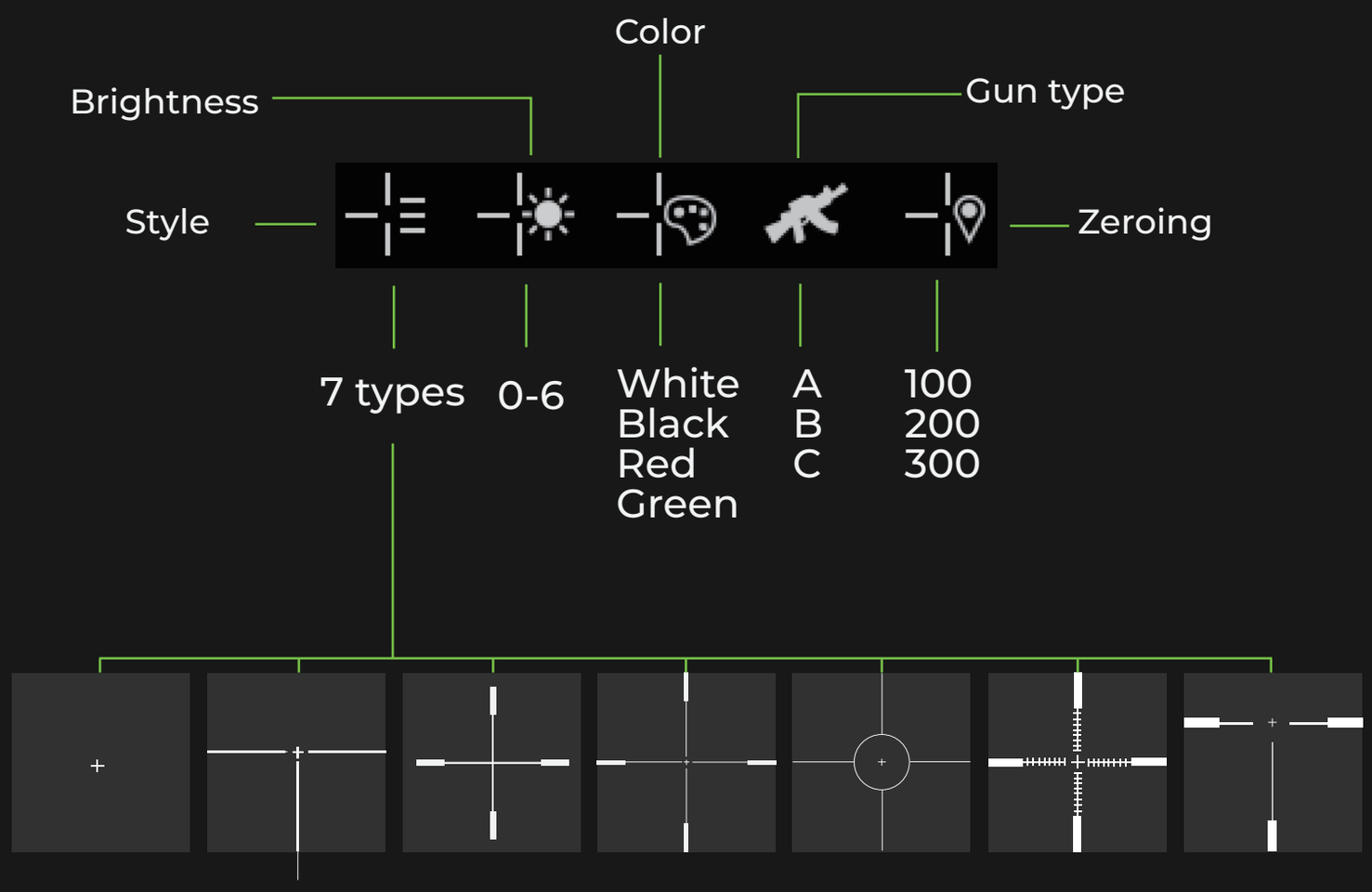
USER INTERFACE

MENU

1. Working mode：Handheld / Helmet / Standalone / Clip-On
2. Image polarity：White / Black / Red / Color / Violet / Crimson / Viridian
3. Image brightness：1-10
4. Contrast：1-10
5. Screen brightness：1-10
6. Reticle setting：Page 7
7. Advanced setting：Page 9

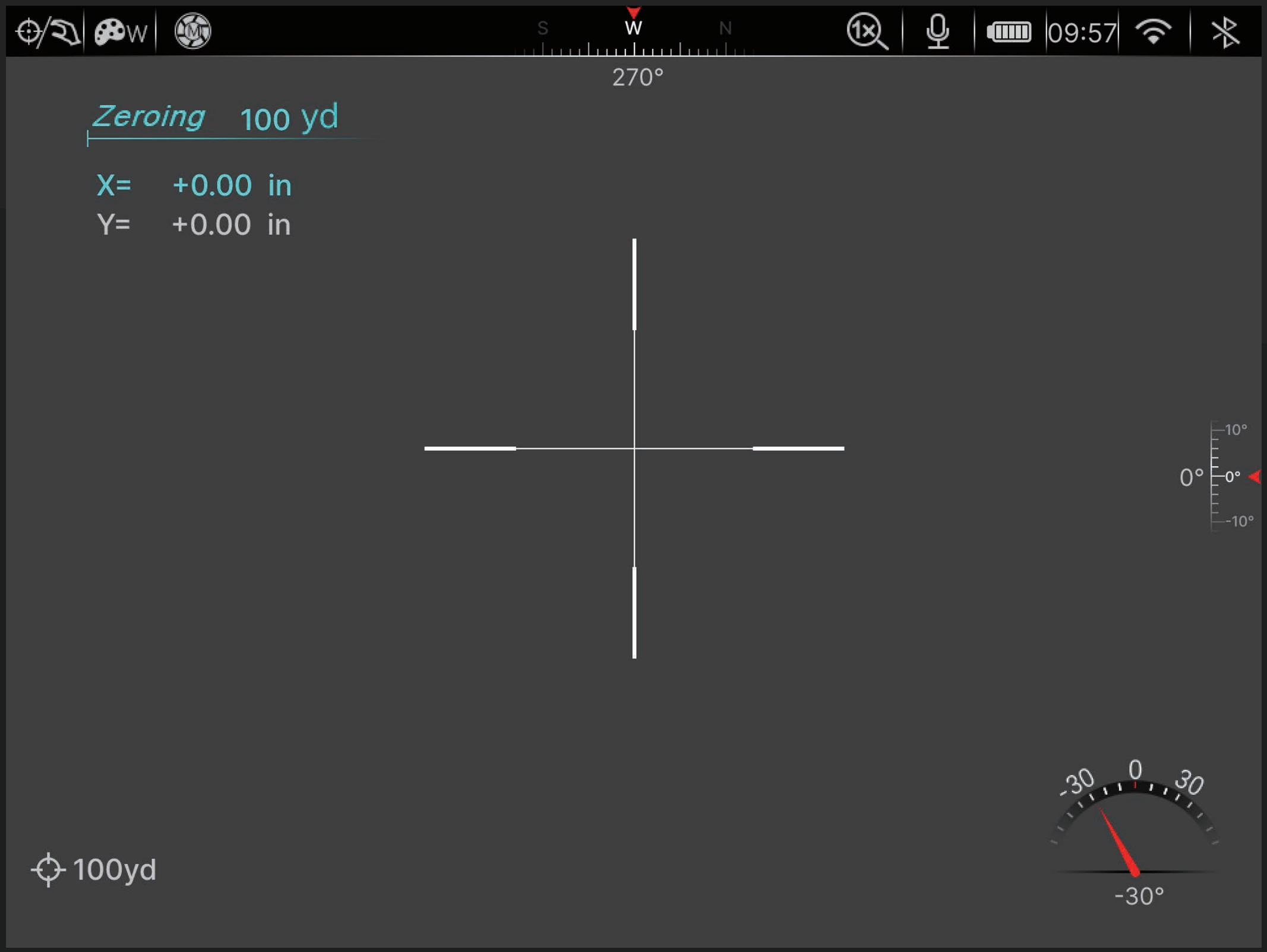


RETICLE



ZEROING

Click to move the partition in the corresponding direction by 1 pixel, and the number in the status bar changes by 2.13cm



ZEROING

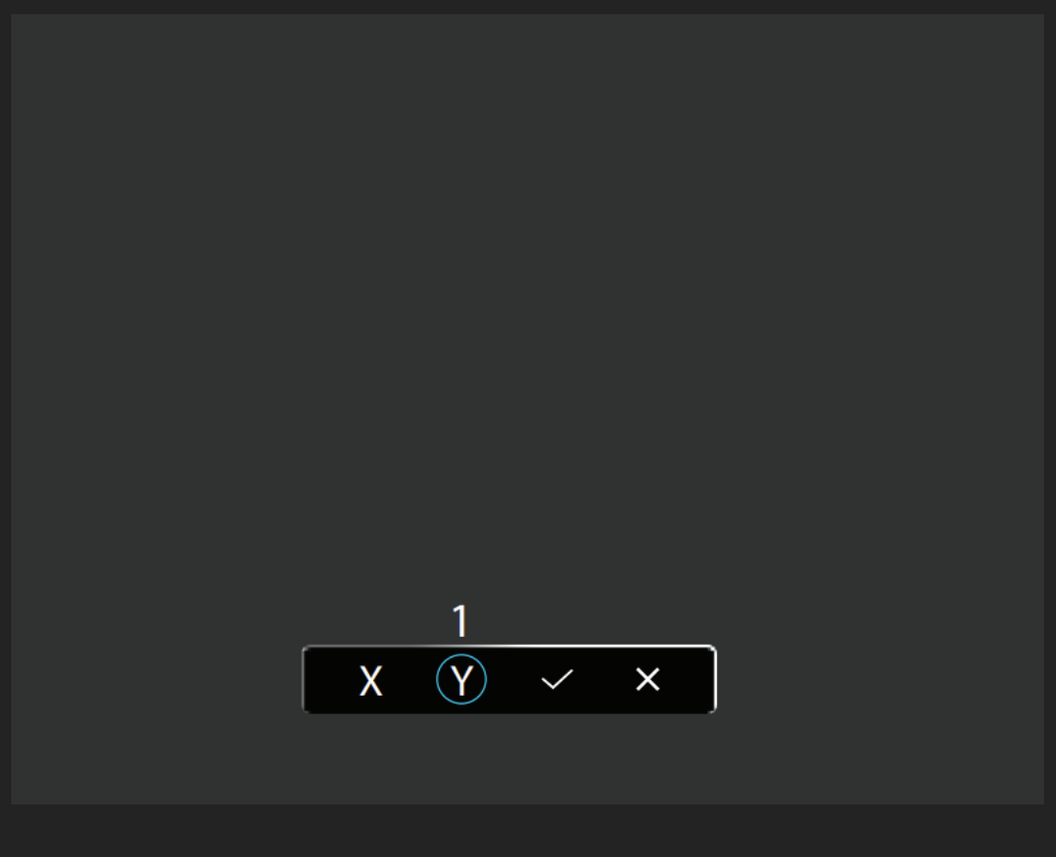
In clip-on and helmet modes, the display size is reduced to be in unity (1× for clip-on mode; 1.1× for helmet mode). On your first use, it may be necessary to adjust the X/Y of the screen to collimate the MICRO V2 to your reticle. If your POI and POA differ in clip-on mode, adjust the screen as you would adjust the reticle in the zeroing section.

From the home screen, long press the Power and Menu Buttons at the same time to enter the screen-position adjustment interface.

01. The screen-position adjustment interface has the following features:
   A. X: Move the screen along X-Axis.
   B. Y: Move the screen along Y-Axis.
   C. Save and return to the menu.
   D. Exit the screen without saving.

02. To use the interface:
   A. Short press the Photo or Power Button to move left or right through the interface. The cursor position is indicated by a white outline around the button.
   B. Short press the Menu Button to select a button. The selection is indicated by a blue outline around the button.
   C. Long press the Menu Button to deselect the button.

03. With X or Y selected, adjust the X/Y position of the screen:
   A. Use the Photo Button to move in the positive direction: X= Right and Y= Up.
   B. Use the Power Button to move in the negative direction: X= Left and Y= Down.
   C. Short press to move the reticle in the correspondingdirection by 1 pixel; long press to move 10 pixels.



04. Select the Button to save the screen position and return to the home screen; OR

Select the Button to exit without saving and return to the home screen

ADVANCED MENU

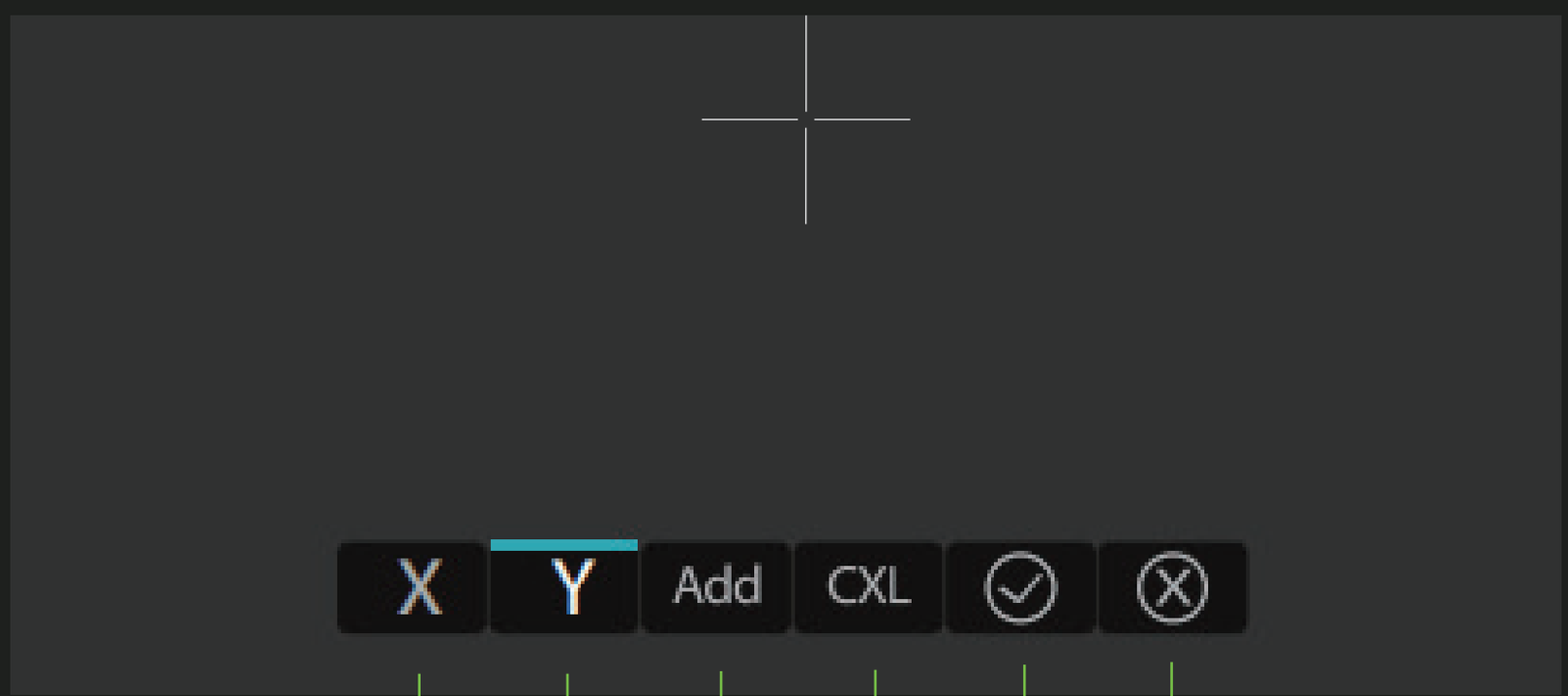
1. Wi-Fi: On/Off
2. Bluetooth: On/Off
3. Audio: On/Off
4. Unit: m/yard
5. NUC mode: A/M
6. Unit: m/yard
7. Zeroing distance: 100/200/300
8. Compass: On/Off
9. Compass calibration
10. Pixel defect correction
11. Formatting: Ok/Cancel
12. Date and time
13. Factory reset: Ok/Cancel
14. Status auto hiding: On/Off
15. Image hue: Cold/Warm
16. Info

COMPASS CALIBRATION

Enter the compass calibration interface, and rotate the product more than 360° along the arrows in X, Y and Z directions according to the icon on the screen to calibrate the compass.

01. The rotation direction is not limited.
02. The rotation sequence of X, Y and Z is not limited, but the operation must be completed in all three directions.
03. The rotation axis is centered on the product itself.
04. The rotation range must be greater than 360°.

PIXEL DEFECT CORRECTION

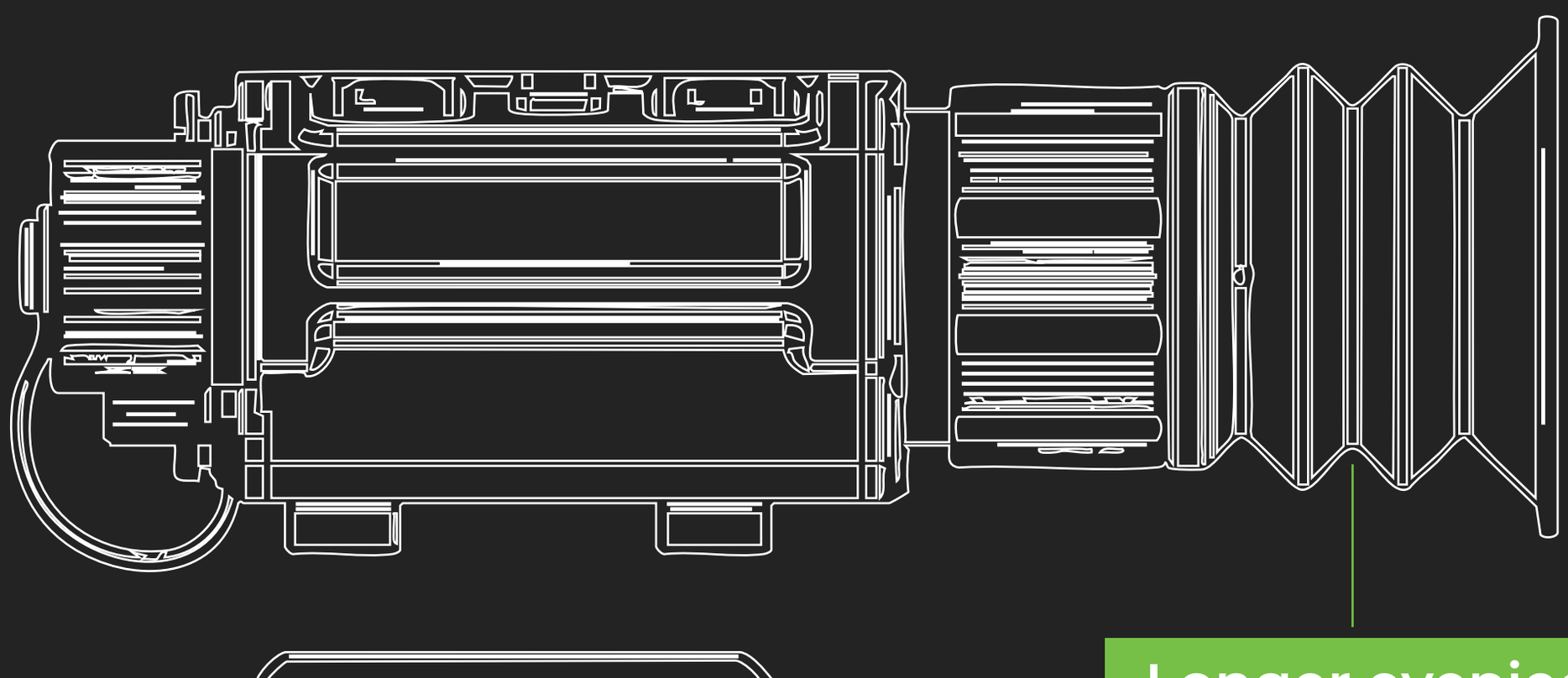


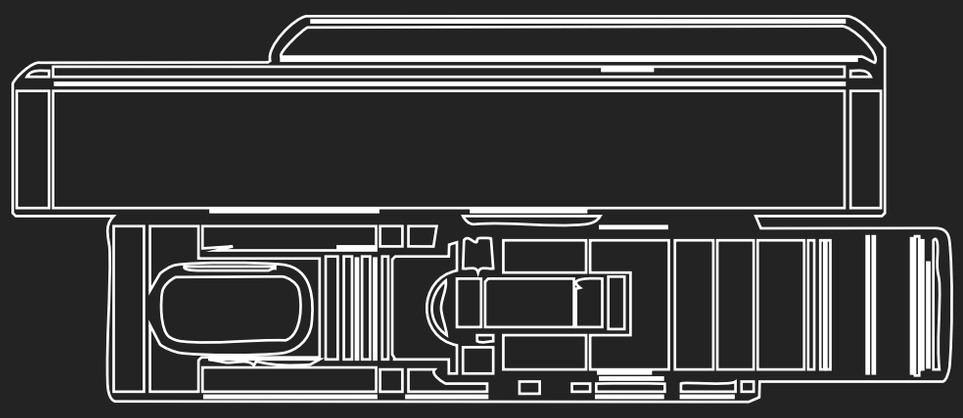
WIFI CONNECTION

When Wi-Fi is turned on, search for the Wi-Fi named "FALCON 640 V2_XXXXV2_YYYY" on the mobile device, where XXXX is a 4-digit serial code consisting of numbers and letters. Select the Wi-Fi, enter the password and connect, the initial password is “12345678”.

INSTALL ACCESORIES

- Install eyepiece cup: it is recommended to use a longer eyepiece cup for handheld mode and direct aim mode.
- Install scope mounts: the direct aim mode and Clip-on mode need to install the scope mounts.





Longer eyepiece cup

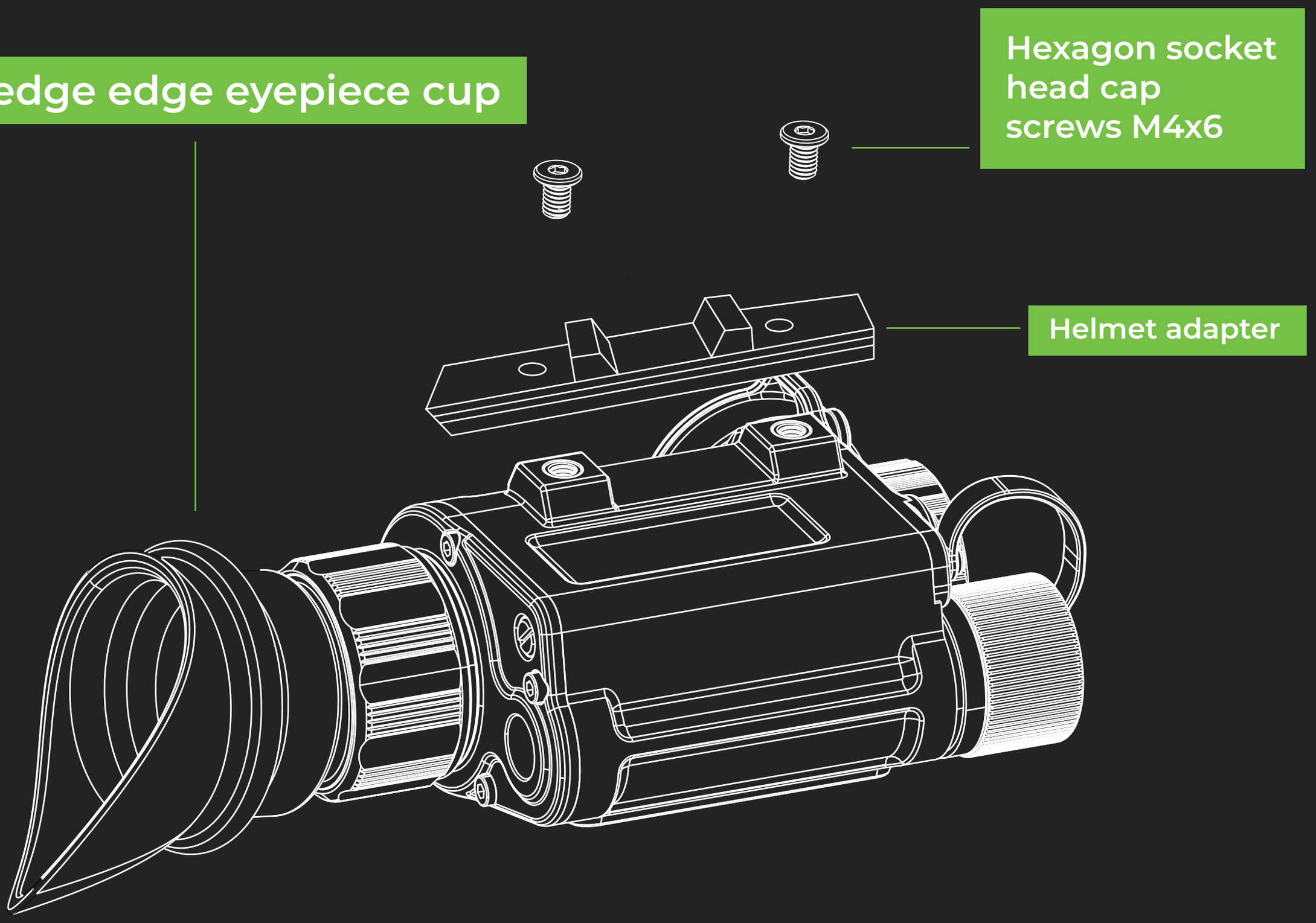
ATTENTION! Installation direction.

Thermal mount

Hexagon socket countersunk head screws M4x8

INSTALL ACCESORIES

- Install eyepiece cup: wedge edge eyepiece cup for helmet mode.
- Install helmet adapter: the helmet adapter needs to be installed in helmet mode.



MAINTENANCE

- After the observation is completed or the target is not observed for a long time after starting the machine, the machine should be shut down in time to extend the effective use time of the product.
- Lens is an important optical component. During installation and use, avoid oil stains and various chemical substances to contaminate and damage the lens surface. After use, please cover the lens cap.
- When the product is not in use and in transit, please remove the battery and place the product in the equipment case.
- When long-term storage or not working, it should be stored in a cool and dry environment as far as possible.
- Do not use chemical solvents, diluents, etc. to scrub the machine case, you can use a clean, soft, dry flannelette to wipe.
- The lens should only be cleaned when it is obviously soiled. Please avoid touching the surface of the lens. The acid on the skin left by fingerprints will damage the coating and the surface of the lens.
- If not used for a long time, it should be electrified to check and calibrate once every six months.