



Model:IR640K50

IMPORTANT SAFETY INFORMATION

Environmental influences

Note: Never point the lens of the device directly at intense heat sources such as the sun or laser equipment. The objective lens and eyepiece can function as a burning glass and damage the interior components.

Risk of swallowing

Caution: Do not place this device in the hands of small children. Incorrect handling can cause small parts to come loose which may be swallowed.

Information on disposal in other countries outside of the European Union

This symbol is only applicable in the European Union. Please contact your local authority or dealer if you wish to dispose of this product and ask for a disposal option.

Safety instructions for use

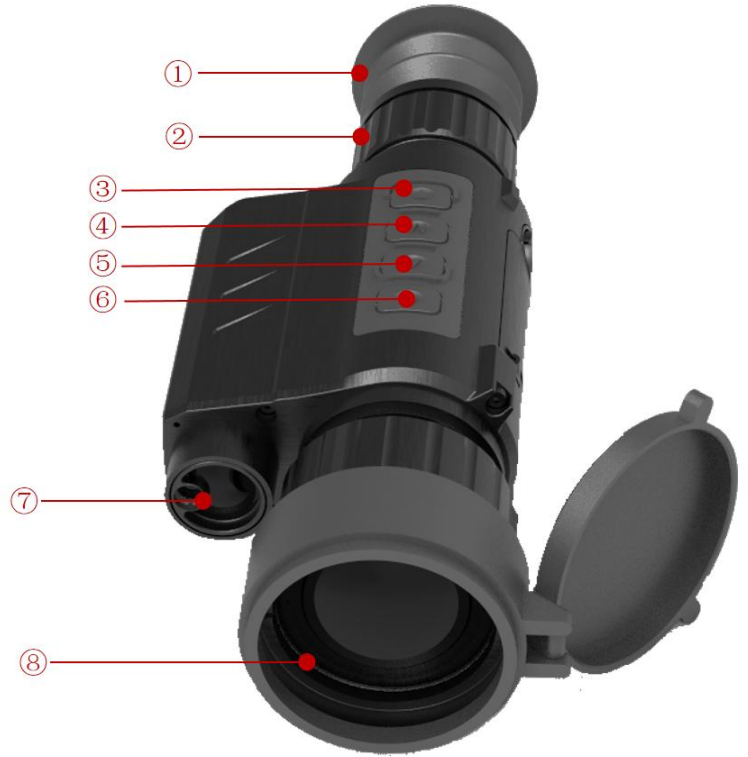
- Do not expose the device to fire or high temperatures.
- The battery capacity decreases when operated in a cold ambient temperature. This is not a fault and occurs for technical reasons.
- Always store the device in its carrying bag in a dry, well-ventilated space. For prolonged storage, remove the batteries.
- Do not expose your device to extreme temperatures lower than - 20°C and higher than + 50°C.
- The product shall only be connected to a USB Type C interface.
- If the device has been damaged or the battery is defective, send the device to our after-sales service for repair

PRODUCT DESCRIPTION

This product can observe the surrounding environment in complete darkness, all-weather use, set observation, ranging, magnification and other functions in one, efficient ergonomics, convenient rail adaptation to a variety of equipment, can identify potential hazards in complex environments in advance.

COMPONENTS AND CONTROLS

- ① Eyeshade
- ② Visibility control
- ③ UP button
- ④ M menu function button
- ⑤ DOWN button
- ⑥ Power button
- ⑦ Ranging module
- ⑧ Infrared lens



PRODUCT SPECIFICATION























| Category | R640K50 |
|--|------------------------------|
| Parameters of Infrared Detector | |
| Resolution, Pixels | 640×512 |
| Pixel Size | 12 μm |
| NETD (Noise Equivalent Temperature Difference) | ≤50mk |
| Frame Rate | 50Hz |
| Optical Parameters | |
| Objective Lens Focal Length | 50mm |
| Objective Lens Aperture | F1.0 |
| Objective Lens Field of View (FOV) | 8.7×7.0 |
| Focusing Method: Manual | Manual |
| Eyepiece Exit Pupil Distance | 55mm |
| Eyepiece Exit Pupil Diameter | 6mm |
| Eyepiece Diopter Adjustment | -5D~+5D |
| Observation Distance (Human) | 700m |
| Display | |
| Type | AMOLED |
| Resolution | 1024×768 |
| Size | 0.39 |
| Brightness adjustment | Support, up to 200nit |
| Power supply | |
| Battery type | Rechargeable lithium battery |
| Battery parameters | 18650 (3400mah) |
| Number of batteries | 2 |
| Battery voltage | Nominal 3.7V |
| External power supply | 5V /2A USB TYPE C |

| | |
|------------------------------|---------------------------------------|
| Operating time (at 25°C) | 10h |
| Peripheral devices | |
| Electronic compass | Support |
| Attitude sensor | Support |
| WIFI | 2.4G |
| Laser ranging wavelength | 905nm |
| Laser ranging accuracy | ±1m |
| Laser ranging distance | 1Km |
| Physical parameters | |
| Weight | 860g (including battery) |
| Dimension | 245mm×65mm×100mm (including lens cap) |
| Protection level | IP67 |
| Impact | 1000g/0.4ms |
| Operating temperature | -20°C~50°C |
| System Functions | |
| Recording/Photographing | Support |
| Video and Image Playback | Support |
| Electronic Zoom | 1X, 2X, 4X |
| Internal Storage | 32GByte |
| Hotspot Tracking | Support |
| Picture-in-Picture (PIP) | Support |
| Color Palette | White Hot, Black Hot, Red Hot, Fusion |
| Brightness Adjustment | Support |
| Contrast Adjustment | Support |
| Image Correction | Automatic, Manual |
| Target Trajectory Prediction | Support |
| Target Tracking | Support |
| Target Recognition | Support |
| WiFi Hotspot | Support |
| Standby Mode | Support |
| Reticle Pattern Adjustment | Support, 5 styles, 6 colors |
| Measurement Unit Settings | Metric, Imperial |
| Time Settings | Automatic, Manual |

BUTTON INSTRUCTION

| Button | Status/Current Operation Mode | Short Press | Long Press |
|------------------------|-------------------------------|---|-----------------|
| P (⏻) Button | Power off | --- | Open device |
| | Power on | --- | Shutdown device |
| | Menu or functional interface | Return to the upper-layer menu without saving | --- |
| U (▲) Button | Main menu | Up navigation | --- |
| | In intelligent aiming mode | Target locking/Relocking | --- |
| M (M) Button | Home screen | Enter main menu | --- |
| | Main menu | Enter submenu/Confirm selection | --- |
| D (▼) Button | Main menu | Down navigation | --- |
| U+M Combination | Home screen | Laser ranging | --- |
| M+D Combination | Home screen | Start recording | --- |
| D+U Combination | Home screen | Image calibration | --- |

ICON DESCRIPTION

| Icon | Function | Icon | Function |
|---|-------------------------------------|---|----------------------------|
|  | Artificial intelligence recognition |  | Hot tracking |
|  | Factory mode |  | Intelligent tracking |
|  | Digital zoom |  | Wireless network |
|  | Image calibration |  | Time setting |
|  | Compass calibration |  | System setting |
|  | Battery Indicator |  | Screenshot |
|  | Laser ranging |  | Video Recording |
|  | Color palette |  | multi-media |
|  | Image setting |  | Picture in picture display |
|  | More settings |  | system information |
|  | Crosshair correction |  | Return to main menu |



Home Screen Interface

➤ Start (the machine or engine)

When the device is turned off, press and hold the power button for 3 seconds to turn on the power of the device, and the boot screen will appear.

➤ switch an electrical device off

In the power-on state, press and hold the power button for 5 seconds to turn off the power.

➤ bide one's time

In the power-on state, press the power button briefly to enter the standby state. When in standby, press the power button briefly again to wake up the screen.

➤ focus

Open the lens protection cover, and adjust the objective lens through the focusing handwheel. Turn it counterclockwise to be far focus and clockwise to be near focus.

OPERATING INSTRUCTIONS

➤ Main Menu

After turning on the machine, press the M button briefly to enter the menu. Press the up and down buttons briefly to switch the main menu options. After selecting the main menu function, press the M button briefly to enter the submenu options. Refer to the menu icon for specific definitions.

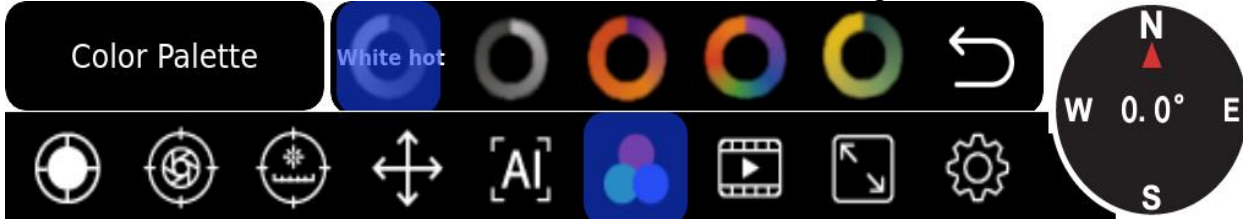
➤ Electron zoom

In the power-on state, electronic zoom is selected in the main menu, and short press the M button to select zoom factors, which are 1x, 2x and 4x respectively.



➤ palette

Select the pseudo-color mode in the main menu, and short press the M button to switch the pseudo-color mode. False color mode: white heat, black heat, iron red, rainbow, tea red, blue orange.



➤ Taking photos/videos

Select the photo/video function in the main menu, and press the M button +D button to take photos or video at the same time. After that, the saved prompt will be displayed in the interface.



➤ Artificial intelligence recognition

Select the artificial intelligence identification function in the main menu, and press the M button briefly to turn on intelligent identification, which can automatically identify people, cars, animals and other targets and make box selection.

➤ Hot spot tracking

Select the hotspot tracking function in the main menu, and press the M button briefly to turn it on. After turning it on, it will automatically identify the brightest spot on the screen and mark it.



➤ Intelligent aiming

Select the intelligent aiming function in the main menu, press the M button briefly to turn it on, automatically box and select the target tracking at the cross target, and predict the motion trajectory.

➤ Alignment calibration

Select the alignment function in the main menu, press the M button to enter the submenu, press the M button to select the horizontal/vertical movement function, and move the alignment position by pressing the up and down buttons.

➤ laser ranging

Select the laser ranging function in the main menu, press the M button briefly to start ranging, and the ranging distance will be displayed in the upper left corner of the screen.

➤ multi-media

Select the multimedia function in the main menu, and press the M button briefly to enter the sub-menu, where you can take photos, record videos and view pictures.

➤ time calibration

Select the alignment calibration function under the system setup menu, press the M button briefly to set the time, adjust the digital size by pressing the up and down buttons, and finally select OK to exit.



➤ **laser ranging**

Select the laser ranging function in the main menu, press the M button briefly to start ranging, and the ranging distance will be displayed in the upper left corner of the screen.

➤ **Visibility adjustment**

Adjust the eyepiece visibility by adjusting the visibility handwheel to adapt to users with different curvature requirements.

➤ **Baffle correction**

When the image is unclear, select the baffle correction function in the main menu, and press the M button briefly to correct the image baffle.

➤ **system setup**

Select the system setting function in the main menu, and press the M button briefly to enter the submenu, where you can perform operations such as picture-in-picture, WIFI, hotspot tracking, image setting, time calibration, compass correction, icon setting, system information, and factory recovery.

TECHNICAL INSPECTION

A technical inspection of the device is recommended before use.

- Check the external appearance of the device (there should be no cracks in the casing).
- Check the condition of the lens and eyepiece (there should be no cracks, greasy spots, dirt or other deposits)
- Check the condition of the rechargeable battery (this should be charged) and the electrical contacts (there should be no presence of salts or oxidation).

MAINTENANCE

Maintenance should be carried out at least twice a year and consist of the following actions:

- Wipe the external surfaces of metal and plastic parts free of dust and dirt with a cotton cloth. Silicone grease may be used for this.
- Clean the electrical contacts of the battery and battery slot on the unit using a non-greasy organic solvent.
- Check the glass surfaces of the eyepiece and the lens. If necessary, remove dust and sand from the lenses (preferably using a non-contact method). Cleaning of the external surfaces of the optics should be done with substances designed especially for this purpose.