

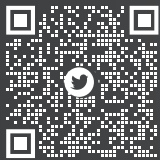
GOYOJO

THERMAL IMAGING MONOCULAR

USER'S MANUAL



FACEBOOK



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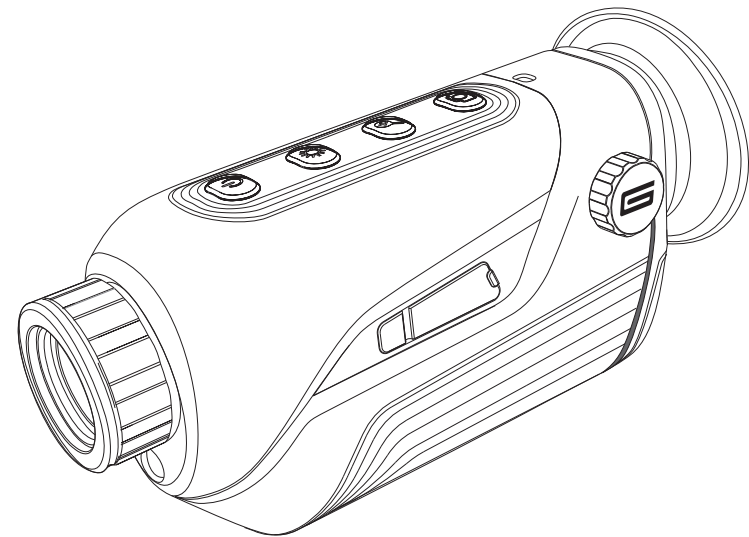
Yunzhi Science and Technology
ParkGungming District, Shenzhen 518107, China

English Manual | 取り扱い説明書

      Made in China



Thermal Imaging Monocular English Manual



Dear User,

Hello! Thank you for choosing our product. To ensure that you can use it effectively, we urge you to carefully read the instruction manual before using it. We recommend that you keep the manual safe for future reference.



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Safety Instructions

Before using this product, make sure you have read and understood the safety precautions described below for proper use. The safety precautions listed are aimed to guide the user in safely and correctly operating the product, preventing harm to oneself, others, and the equipment.

Precautions

To avoid damaging the product, please follow these guidelines:

Do not modify or disassemble the product on your own.

This is a very delicate piece of equipment. Do not attempt to dismantle or modify any part of it. Any maintenance should be performed by technicians appointed by our company. Clicking noise during operation. This product emits a slight clicking noise every few seconds when working. This is a normal phenomenon indicating that the lens is capturing images.

Warning

Do not point the device directly at the sun or other strong light sources, as this could damage the detector.

Warnings

Warnings indicate actions that may harm the user. To avoid electric shock or personal injury, follow these operational guidelines:

- If the outer casing is damaged, do not continue to use the product.
- If you encounter this situation, please contact our local distributor or agent.
- If you notice the product emitting smoke, sparks, or a burnt smell, immediately stop using it.
- Turn off the device and wait for the smoke or smell to completely stop, then contact our local distributor or agent.
- Do not modify the adapter and data cables.
- Modifying these could result in a short circuit or fire.
- Do not attempt to solder the battery yourself.
- This could damage the battery, leading to leakage and explosion.
- Do not expose the battery to impact (such as bumping or dropping).
- This could damage the battery casing, leading to leakage and explosion.
- Unplug the adapter from the power socket when not charging.
- Long periods of electrical supply to the adapter could lead to overheating, deformation, and even fire.



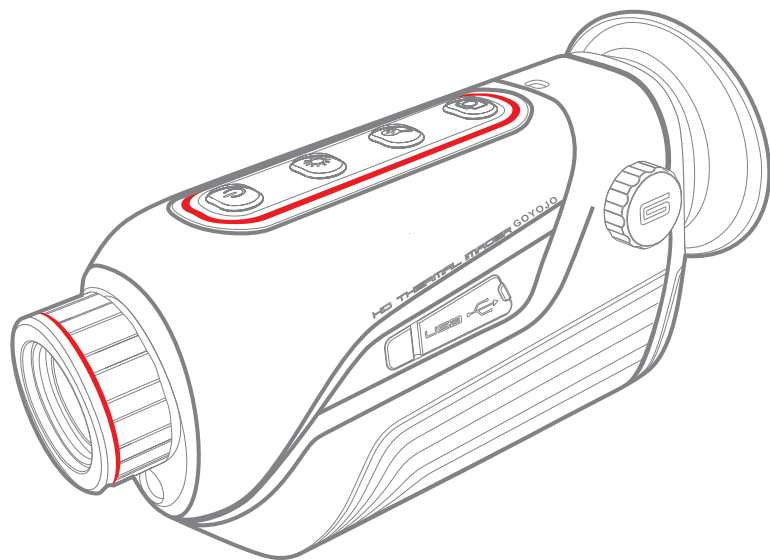
- Ensure the adapter's plug fits into the designated power socket.
- The plug might differ based on region. Confirm that the adapter specifications match those of your local area to avoid overheating, electric shock, fire, chemical leakage within the battery, and other serious consequences.
- Cease use immediately if the adapter's plug or wires are damaged.
- Only begin charging the device after ensuring that the adapter's plug is fully inserted into the socket.
- Do not touch the wires with wet hands.
- Touching wires with wet hands may lead to electric shock. Pull the wire out by gripping the plug tightly, avoid pulling the wire directly, as it may result in wire damage, electric shock, and fire.
- Do not submerge the product in water or expose it to moisture.
- If the casing comes in contact with water or other liquids, dry it off immediately. If water or other liquids enter the device, turn off the power immediately. Continued use may damage the product.
- Regularly clean the dust off the adapter's plug and data cables.
- Prolonged exposure in dusty, damp environments may lead to short circuits and fires.
- Use the original adapter provided by the company to charge the product.

- Using non-original power accessories may result in overheating, electric shock, fire, chemical leakage within the battery, and other severe consequences.
- Do not clean the product's casing with abrasives, isopropanol, or gaseous organic solvents.
- These can damage the product's casing.
- The product may become warm with extended use.
- The adapter may feel hot to the touch.
- Avoid problems caused by condensation.
- Moving the product from a hot to a cold environment, or vice-versa, can lead to condensation inside the casing. In this case, place the product in its accompanying bag until it adjusts to the ambient temperature.
- If condensation has occurred inside the product, immediately turn off the device and remove the battery, otherwise, it may damage the device. Resume operation only after the condensation has fully disappeared.
- Avoid causing any impact to the product (like bumping or dropping).
- Such actions may damage the product.
- Long-term storage and periodic charging.
- If the product is not in use for an extended period, store it in a cool and dry environment. Periodically charge the device if it contains a battery; otherwise, the battery will drain over time, reducing its lifespan.



Product Overview

This product is a lightweight, portable, easy-to-use, handheld monocular infrared telescope. It offers a comfortable viewing experience, delivering clear and delicate thermal imaging, making it the ideal equipment for outdoor activities. The device supports multiple pseudo-color modes, allowing for one-key switching to promptly identify the location of targets within a scene. Users can capture images and save thermal images directly to the device. Images can also be accessed via USB or saved to a computer for generating reports and printing.



VOX DETECTOR



4X DIGITAL ZOOM



5H-BATTERY LIFE 5H



IP65 RUGGED

Product Cleaning

To clean the exterior of this product, use a damp cloth or diluted soap water. Do not use abrasives, isopropanol, or other solvents. For cleaning the lens and the screen, use professional optical lens cleaners.

Lens Maintenance

To prevent damage to the infrared lens:

Gently clean the infrared lens, which is covered with a delicate anti-reflective coating.

Avoid vigorous cleaning to protect the anti-reflective coating.

Use cleaning solutions for lens maintenance, such as commercial lens cleaning liquids containing alcohol, along with a lint-free cloth or paper towel. Compressed air cans may also be used to remove loose particles.

Cleaning the Lens

Use a can of compressed air or a dry nitrogen ion gun (if applicable) to blow away surface particles from the lens.

Soak a lint-free cloth in alcohol.

Wring out excess liquid from the cloth or lightly place it on a dry cloth.

Gently wipe the lens surface in a circular motion and then discard the cloth.

If you need to repeat the cleaning process, use a new cloth soaked in liquid.



Performance Specifications

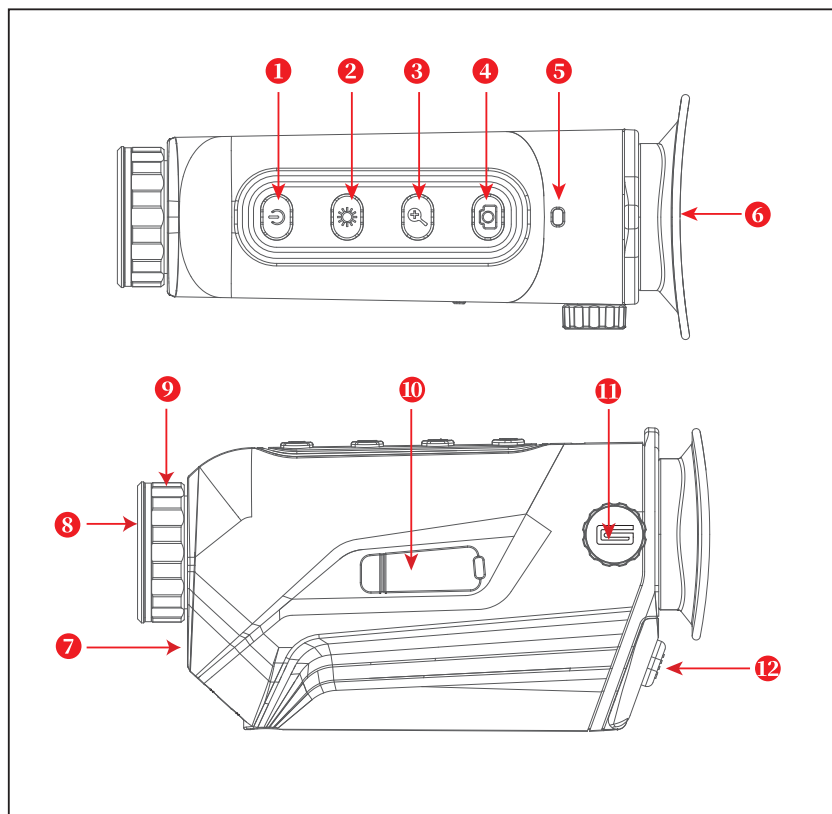
Feature/Specification	G210	G215
Infrared		
Focal Length	10mm	15mm
Field of View	17.5°×13.1°	11.7°×8.8°
Detector Type	Vanadium Oxide Uncooled Infrared Focal Plane	
Resolution	256×192	256×192
Pixel Size	12μm	12μm
Working Wavelength	8~14μm	8~14μm
NET D	<50mK @25°C, F#1.0, 25Hz	
Frame Rate	≤25Hz	≤25Hz
Focus Method	Manual Focus	
Detection Distance		
Human (1.7m x 0.5m x 0.3m)	236m	254m
Vehicle (4.5m x 2.0m x 1.5m)	625m	938m
Recognition Distance		
Human (1.7m x 0.5m x 0.3m)	944m	1417m
Vehicle (4.5m x 2.0m x 1.5m)	2500m	3750m
Display		
Display Type	OLED	
Display Resolution	800×600	
Screen Size	0.32 inches	
Digital Zoom	1×/2×/4×	
Color Modes	White Hot, Black Hot, Red Hot, Rainbow, Iron Red, Low Light	

Performance Specifications

Feature/Specification	G210	G215
Picture-in-Picture	Supported	
Language	Simplified Chinese, Traditional Chinese, English, Russian	
Storage		
Capacity	Built-in 16G EMMC (System occupies some space, actual around 13.8G)	
Image Capture	Supported	
Video Recording	Supported	
Image/Video Format	JPG/MP4	
Interface		
USB	Charging/Export Images and Videos/CVBS	
Power		
Built-in Rechargeable Li-ion Battery	3200mAh (Removable, model 18650)	
General Specs		
Power Consumption	≤1.1W	
Battery Life	≥6 hours	
Working Temperature	-20°C ~ +60°C	
Storage Temperature	-30°C ~ +70°C	
Protection Level	Ip54	
Dimensions/Weight		
Product Dimensions	155.9x75.4x60.8mm	
Product Weight	345g	

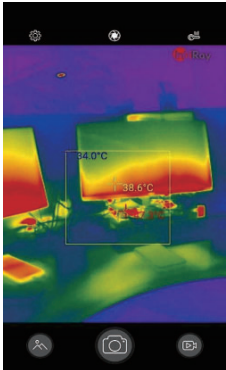


Product Structure



1. Power/Back Button	7. Laser Light
2. Menu/False Color Button	8. Infrared Thermal Image Sensor
3. Zoom/Laser Button	9. Adjustable Focus Lens
4. Record/Photograph Button	10. TYPE-C (Charging/USB Drive/CVBS)
5. Indicator Light	11. Field of View Adjustment Knob
6. Eyepiece Cover	12. Battery Compartment Lock

APP Software Download



Thermal imaging APP



Google play Search “**Thermal imaging**” APP,Select this icon to download.

Battery Charging Instructions

This product comes with a built-in rechargeable battery.

When the battery is low, please charge it in a timely manner through the Type-C interface.

After the battery is fully charged, disconnect the USB cable.

The battery compartment is located beneath the "G" symbol on the front of the product. Press the button to insert the batteries.

Indicator Light

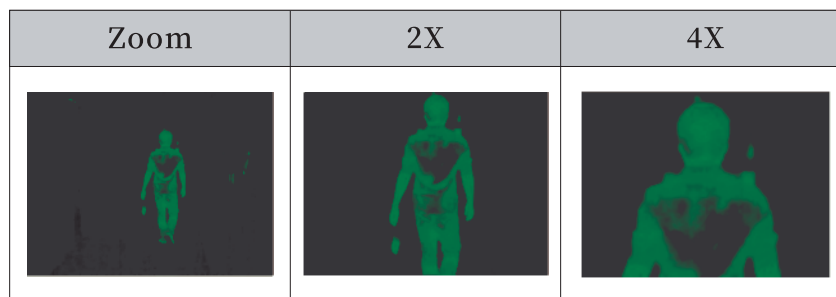
Status	Not Charging	Charging	Fully Charged
On	Blue	Red-Blue (Purple)	Blue
Off	None	Red	None



Amplification applications

Zoom Application When shooting distant targets, the zoom feature can be used for clear observation of the target.

Below are the effect images:



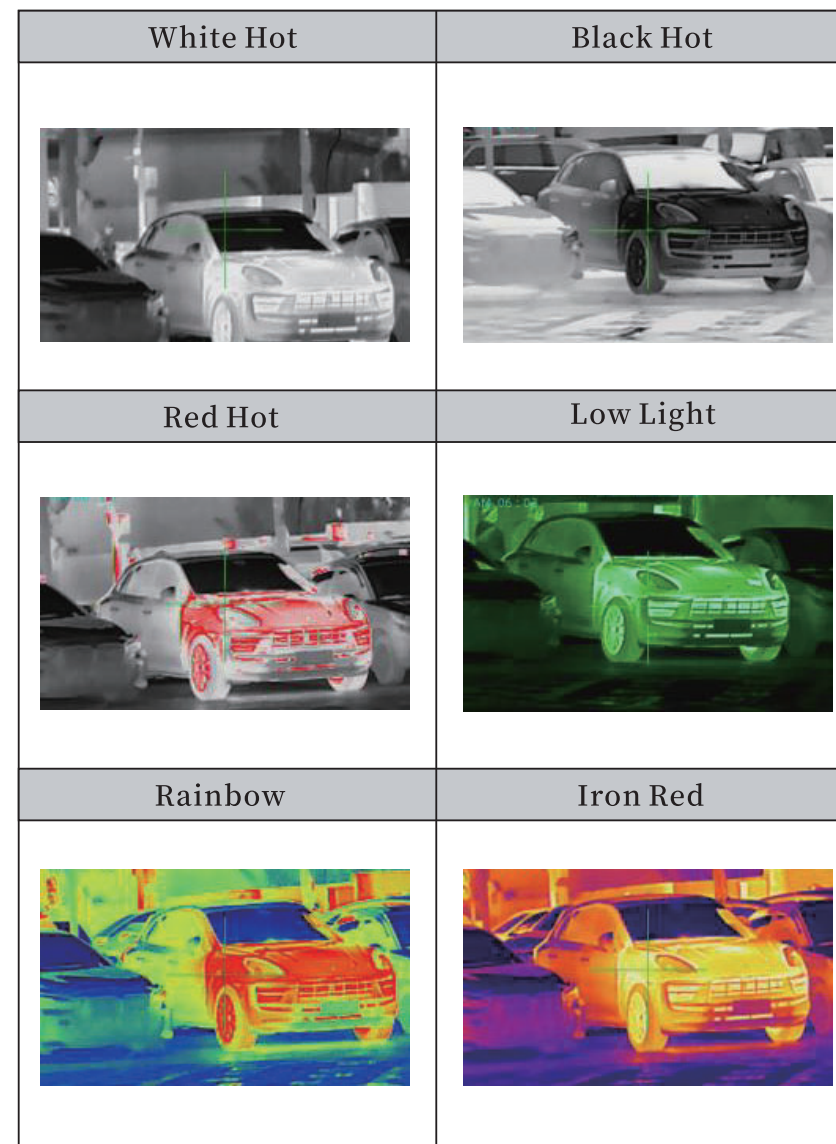
Pseudo-Color Palette Introduction

Used for altering the pseudo-color display of infrared images on the screen. Some pseudo-colors are more suitable for specific applications and can be set according to needs.

Pseudo-colors are divided into: White Hot, Black Hot, Red Hot, Rainbow, Iron Red, and Low Light six types. These pseudo-colors perform best in situations with high thermal contrast, providing additional color contrast between high and low temperatures.

For example: The White Hot palette provides uniform linear colors. Choosing the appropriate pseudo-color can better display the details of the target object.

Below are images of the same object, captured using different pseudo-color palettes:





Operating Instructions

Focal Length Adjustment: Adjust the focus for a clearer image. Type-C Interface: Used for battery charging and connecting to a computer to view device photos and video files. Diopter Adjustment: Adjust to find your optimal field of vision.

Button Explanation

Button/State		Short Press	Long Press
 Power Button	Main Screen	Turn off screen standby	Shutdown operation
	Menu Screen	Back button	Shutdown operation
 Pseudo-Color Button	Main Screen	Switch pseudo-colors	Enter menu
	Menu Screen	Confirm key	N/A
 Zoom Button	Main Screen	Zoom magnification (1x/2x/4x)	Toggle laser light
	Menu Screen	Select upward	Delete key
 Capture Button	Main Screen	Take photo	Start/Stop recording
	Menu Screen	Select downward	N/A

Main Screen Icon Explanation

The top-left corner of the screen displays the current time, while the top-right corner shows battery capacity and zoom magnification.



The following icons will appear on the screen under these conditions:



Recording Icon:
Appears when you long-press  the record button.



USB Connection Icon:
Appears when connected to a computer via a USB cable.



	Storage Full Icon: Appears when storage space is less than 100MB.
	Laser Light: Appears when the laser light is turned on.
CVB	CVBS: Appears when the CVBS screen is active.
	WIFI: Appears when WiFi is turned on or off.
	Auto Shutdown Time Settings
	Drosshair line: There are multiple division lines of different types
	Hot spot tracking icon: To track the highest point of temperature.

Menu Explanation

Press and hold the to enter the menu.

Use the / to select the up or down setting you want to adjust. Press enter to access the setting, then use the / to select the value or switch you want to set.

Once in the menu, press briefly to exit the current menu and return to the previous menu until you completely exit the menu.

Options include:

Color Palettes: White hot, black hot, red hot, rainbow, iron red, and low light. **Zoom:** Electronic zoom at 1X, 2X, 4X.

Image Brightness: Infrared image brightness adjustable from levels 1 to 10.

Image Contrast: Infrared image contrast adjustable from levels 1 to 10.

Scene Modes: Four options – Standard, Urban, Forest, and Custom. For Custom, press enter to access the menu and choose the detail intensity (3 levels) and noise reduction intensity (5 levels). A total of 15 different parameter combinations are available. Press exit to leave after setting.

Calibration: Manual or automatic. Manual calibration occurs only once at each selection, indicated by a calibration animation. Auto-calibration occurs regularly.

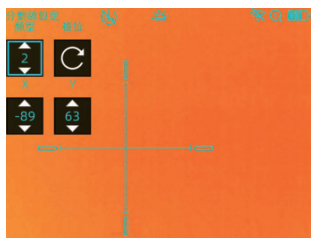
Hotspot Tracking: When turned on, the hottest temperature is within the hotspot frame. Once activated, it will automatically turn on every time the device is powered up. It won't if turned off.

CVBS: When connected to a CVBS screen, open the CVBS menu for simultaneous display. To save battery, CVBS is off by default at each startup.

Picture-in-Picture: In infrared mode, set Picture-in-Picture to on or off. When turned on, it will automatically activate at each startup; otherwise, it won't.



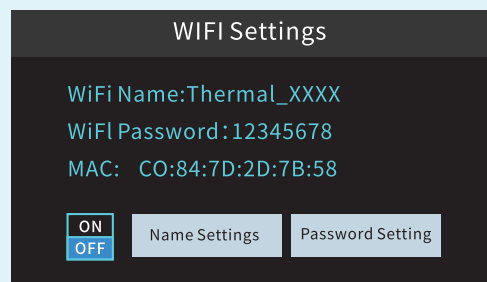
Crosshair: After turning on the crosshair, the type is 0 and the crosshair and laser lights are turned off. Other values are used to select the type of scribe line while turning on the laser light. Resetting will restore the XY coordinate position to 0. Options X and Y are used to manually modify the coordinate position of the scoring line.



By default, the scoring line and laser light are turned off every time the machine is turned on. re turned off every time the machine is turned on.

WIFI Settings

Connect to your phone's WIFI and use the app for simultaneous display and control. After entering the WIFI settings window, press the  to turn on WIFI. Then, connect your phone to WIFI. The WIFI name and password will be displayed in the WIFI settings window. Open the corresponding app to automatically connect or search for the device.



Within the app, you can control zoom, scene modes, color palettes, and save photos and videos to your phone. After connecting to the app, the device's time will automatically sync with your phone's time.

Note: After connecting to the app, the device will not be able to take photos or videos from its end.

In the app, every time you tap on the custom scene mode, the parameters will change once, with a total of 15 different parameter configurations.

To change the WIFI name and password, select the name setting and password setting buttons respectively.

Press  to generate a name or password automatically.

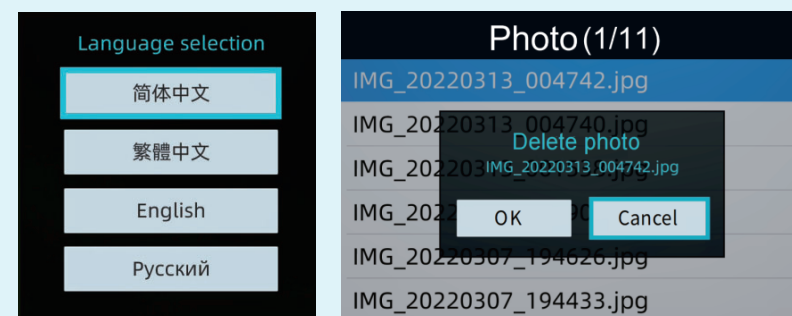
It's advisable to change your WIFI password regularly.

(Note: WIFI name and password cannot be changed while connected.)

To save battery, WIFI is off by default at each startup.

Language Settings

The language can be set to Simplified Chinese, Traditional Chinese, English, or Russian. Choose your language and press the specified key to confirm, as shown in the diagram below.





Photos: Photo list, view photos.

Videos: Video list, view videos.

As shown in the diagram below:

Photo(2/6)	Video(2/6)
IMG_20230313_004742.jpg	VID_20230313_004742.mp4
IMG_20230313_004741.jpg	VID_20230313_004741.mp4
IMG_20230313_004740.jpg	VID_20230313_004740.mp4
IMG_20230313_004739.jpg	VID_20230313_004739.mp4
IMG_20230313_004737.jpg	VID_20230313_004737.mp4
IMG_20230313_004730.jpg	VID_20230313_004730.mp4

Method of operation:

Press to enter the list, then use the / to navigate the list. Hold to delete photos or videos, press to view photo or video content.

When viewing photos, press / to view the next photo.

When viewing videos, press / to play or pause the video playback.

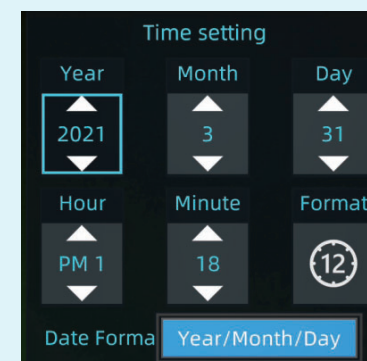
If you need to transfer the photos from the thermal imager to your computer, simply connect the USB cable to the USB port located on the front of the product.

Time/Date: Set the date (year, month, day) and time (hour, minute), time format (12-hour, 24-hour), and date format (yyyy/mm/dd, dd/mm/yyyy, mm/dd/yyyy).

Method of operation:

Use to select year, month, day, hour, minute, then press / to set their values. To switch between time formats and date formats, press the designated key. After completing the settings, select confirm and press to save the time settings.

As shown in the diagram below:



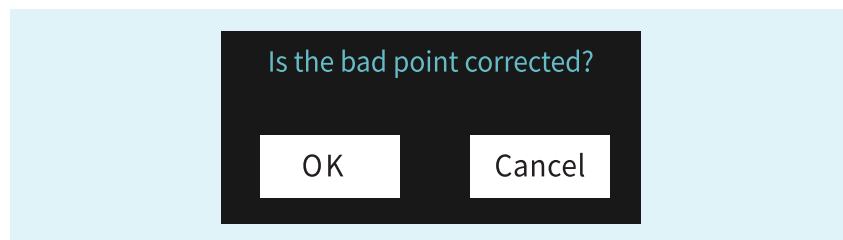


Bad Pixel Correction: For automatic bad pixel correction.

Method of operation:

Press to bring up the bad pixel correction prompt window. After selecting confirm, press to start the bad pixel correction process (follow the on-screen instructions).

As shown in the diagram below:

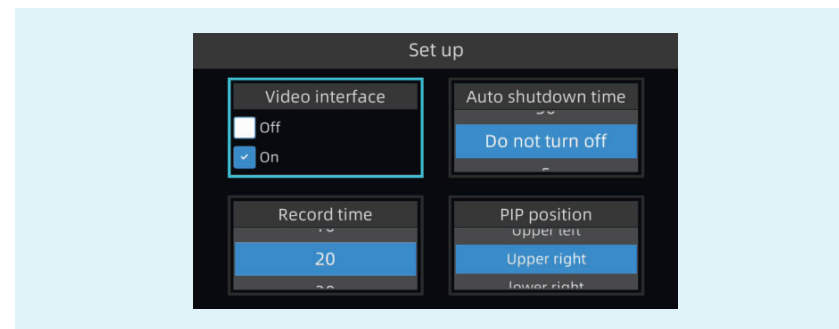


Settings: Configure settings for the video interface, auto-shutdown time, video duration, and Picture-in-Picture (PiP) position. Use / to toggle between settings, then press to adjust values.

- **Video Interface:** Set whether to display UI interface information while taking photos or recording videos.
- **Auto-Shutdown Time:** Options include no shutdown, 5 minutes, 10 minutes, 20 minutes, and 30 minutes.
- **Video Duration:** Set the length of each video file. Options include 5 minutes, 10 minutes, 20 minutes, and 30 minutes.
- **PiP Position:** Configure the location of the PiP. Options are top-right, bottom-right, bottom-left, and top-left.

Method of operation:

Use / to select between video interface, auto-shutdown time, video duration, and PiP position, then press to confirm settings, as shown in the diagram below:



Device Information: View details about the device such as model, detector pixels, detector type, screen size, screen resolution, battery capacity, hardware version, firmware version, app version, and storage space. Additionally, you can perform actions like software updates, reset to factory settings, and disk formatting.

Press / to toggle between settings, then press to access the following functions:

- **Software Update:** Updates the application.
- **Reset Parameters:** Restores to factory settings.
- **Disk Formatting:** Clears internal disk memory (mainly for storing images and videos; cannot format when USB is connected to the computer).
- Press to exit without performing these functions. Executing these actions will automatically restart the device.



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.
- (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the

user is encouraged to try to correct the interference by 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. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction

WARRANTY CARD

Product Name:
Product Model:
Purchase Date:
Organization in Use:
Contact Person:
Postal Code:
Contact Number:
Fault Description:
Production License Number:

QUALITY CERTIFICATE

This product has been inspected and complies with relevant national technical standards, and is approved for release from the factory.

Product Name: _____

Product Model: _____

Inspector: _____

Inspection Date: _____

Compliance Standard: _____ GB/T 19870-2018