TB series

Outdoor Thermal imager

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用户指南/User Guide V1.0

TB series Infrared | 热成像观察镜 Thermal Sights

Longot TB335LRF / TB635LRF / TB650LRF

DISCLAIMER

This product is prohibited for illegal use, including illegal hunting,military,chemical, biological or nuclear weapons,illegal privacy photographing,and other violations of laws and regulations.It is prohibited to transport goods prohibited by the United Nations,the European Union or the OSCE.The products are only sold in the place where the company is registered and cannot be exported.

Purchase of this machine is equivalent to accepting the constraints of this statement, equivalent to agreeing to sign the relevant liability statement.In case of any violation,the company shall not be held responsible.

LONGOT TECHNIC

Product Overview

The TB series is a multifunctional and highly adaptable thermal imaging scope. It offers multiple models to meet users' different resolution needs. The TB series features a classic waterproof and shock-resistant aluminum alloy housing, ensuring durability and reliability. With its high performance and convenience, the TB series is an ideal choice for outdoor enthusiasts.

Package Contents

·TB Thermal Imaging Scope

·18500 Batteries ×2

·Type-C USB Data Cable

·Lens Cleaning Cloth

·Warranty Card

Note: The products in this document may be updated at any time without further notice.

Model	TB335LRF	TB635LRF	TB650LRF
Detector Specifications			
Detector Type	Vox	Vox	Vox
Resolution, Pixel	384×288	640×512	640×512
Pixel Size, μm	12 μm	12 μm	12 μm
Optical Characteristics			
Objective lens, mm	35mm	35mm	50mm
Magnification, x	3.4×	2.0x	2.8×
Digital zoom, x	1x~8x（步进 1x）	1x~8x（步进 1x）	1x~8x（步进 1x）
Min Focus Distance, M/Y	10m	10m	10m
Exit pupil distance, mm	48mm	48mm	48mm
Exit pupil Diameter, mm	6mm	6mm	6mm
Field of View (H × V), degree	7.5°×5.6°	12.5°×10°	8.8°×7.0°
Diopter, D	±4D	±4D	±4D
Identify distances, m (Target size: 1.7m×0.5m)	860 m	860 m	1229 m
Rangefinder Characteristics			
Wavelength, nm	905nm	905nm	905nm
Measuring Range, M/Y	1000m	1000m	1000m
Measurement accuracy, M/Y	① 5~400，±1; ②＞400，±(d×0.3%)	① 5~400，±1; ②＞400，±(d×0.3%)	① 5~400，±1; ②＞400，±(d×0.3%)z
Electrical Characteristics			
Display Type	OLED	OLED	OLED
Resolution, pixels	1024×768	1024×768	1024×768

Model	TB335LRF	TB635LRF	TB650LRF
WiFi Frequency,GHz	2.4 GHz	2.4 GHz	2.4 GHz
Video/Photo fomat	avi/jpg	avi/jpg	avi/jpg
Built-in memory，GB	32 G	32 G	32 G
Power Supply，V	3~4.2V	3~4.2V	3~4.2V
Battery type*QTY/Capacity, mA	内置 18650 Battery x 2，外置 18500 Battery x 1		
External power supply，V	5V2A	5V2A	5V2A
Others CharacteristicsSupport			
Operating time (at t=22℃) , hours	≥18hrs	≥17hrs	≥17hrs
Storage temperature, ℃/℉	-30℃~+60℃	-30℃~+60℃	-30℃~+60℃
Body material	Aluminium alloy	Aluminium alloy	Aluminium alloy
Degree of protection, IP code (IEC60529)	IP67	IP67	IP67
Dimension（L*W*H), mm/inch	405mmX83mmX82mm/15.94inX3.26inX3.22in	420mmX83mmX90mm /16.53inX3.26inX3.54in	420mmX83mmX90mm /16.53inX3.26inX3.54in
Weight(without battery), g/oz	1020g/35.98 oz	1040g/36.68 oz	1040g/36.68oz

Button Functions Overview

Power/Menu Button	**Main Interface**	**Menu Settings Interface**
Short Pres	Opens the quick settings menu	Selects the current option or confirms
Rotate	Adjusts the E-zoom	Switches the options
Long Press (1 second)	Opens the advanced settings menu	Hides the menu bar or returns to the previous menu
Long Press (3 seconds)	Enters a 3-second shutdown countdown	Enters a 3-second shutdown countdown
Ranging Button	**Main Interface (No Menu Bar)**	
Single ranging	Short press, display raning icon; Short press again to perform a single ranging operation.	
Continuous ranging	Short press to enable continuous ranging; short press again to disable it.	
Long Press (1 second)	Shutter Calibration	
Photo/Video Button	**Main Interface (No Menu Bar)**	
Short Press	Takes a photo	
Long Press (1 second)	Turn on/off video recording	

Product Features

· 12μm Thermal Imaging Sensor

· High Image Quality

· Waterproof Rating: IP67

· One-Click Calibration

· Long Detection Range

· Supports Laser Ranging

· Supports Wi-Fi Transmission

· Multiple Display Modes

Environmental Impact

Note: Avoid exposing the device's sensor directly to strong sunlight or laser light, as well as intense reflections. Objects and targets may appear as abnormally bright spots or have internal component damage.

Risk Of Falling

Note: Please place the device securely in areas where it cannot fall. Improper handling may cause component misalignment or lens damage.

Intended Use

This device is designed for self-observation, long-range hunting observation, wildlife monitoring, and high-temperature object detection.This product is a precision instrument. It is intended only for the described applications. The manufacturer and its authorized distributors are not responsible for any damage caused by improper use or incorrect handling of the device

Device Components

①Lens Cover

②Laser Rangefinder

③Lens Focus Ring

④Encoder

⑤Power/Menu Button

⑥Nameplate

⑦Diopter Adjustment Ring

⑧Eyepiece

⑨Charging Indicator Light

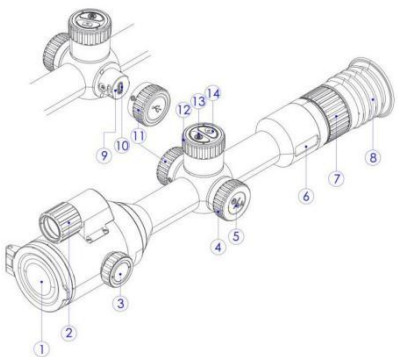
⑩TYPE-C Port

⑪ TYPE-C Port Cover

⑫Battery Compartment Cover

⑬Zoom Button

⑭Photo/Video Button



Functional Testing

Before use, ensure that the device shows no visible damage.

Test whether the device displays clear, interference-free images.Verify that the thermal imaging camera settings are correctly configured.

Safety Instructions for Use

Do not place the device in fire or high-temperature environments.

When operating in low-temperature environments, the battery capacity may decrease. This is not a malfunction but is due to the characteristics of the battery.

Store the device in a carrying bag and keep it in a dry, well-ventilated place. If storing for an extended period, please remove the battery.

Do not expose the device to extreme temperatures below -20°C or above +50°C.

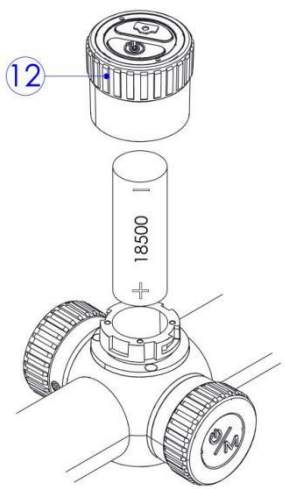
The device should only be connected to a USB Type-C interface.

Device Charging

The TB series is equipped with a built-in lithium battery. The battery comes pre-charged with a partial amount of power before leaving the factory. It is recommended to charge the device before its first use. Please use a power adapter with an input of AC 110V-240V and an output of 5V ⎓ 2A, along with a Type C-USB cable, to connect to the device's Type C interface ⑩ for charging.

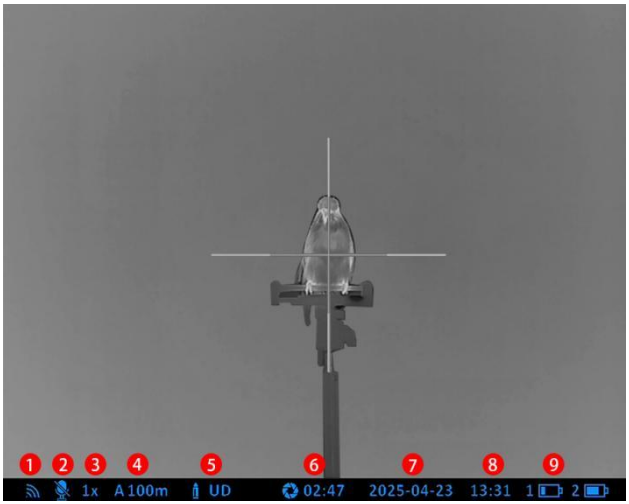
Battery Installation

To install the battery, unscrew the battery compartment cover ⑫ and insert the 18500 battery with the positive pole facing downward into the battery compartment. Then, tighten the battery compartment cover ⑫. If the device's built-in battery has sufficient charge, the external battery does not need to be installed.



Status Bar Information

The status bar is an overlay displayed at the bottom of the device’ s preview screen, providing auxiliary information. When enabled, it allows you to monitor details such as device calibration memory, battery level, and function status in real time.



1.Wi-Fi Status

2.Microphone Status

3.Current Magnification Level

4.Reticle Distance & Current Shooting Distance

5.Ballistic Parameters

6.Refresh Countdown Timer

7.Date

8.Time

9.Battery Level

Operation Guide

· Long press the Power/Menu Button (⑤) for 5 seconds to turn on the device.Once the startup process is complete, open the Lens Cover (①).

· Rotate the Eyepiece Diopter Adjustment Ring (⑦) until the text on the display appears sharp.For the same user, there is no need to readjust the diopter for future use.

· Rotate the Lens Focus Ring (③) to adjust the focus for a clear view of the observed object.

· Short press the Power/Menu Button (⑤) to open the Quick Menu. Rotate the Encoder (④) to navigate through the menu options.

· Short press the Power/Menu Button (⑤) again, then rotate the Encoder (④) to cycle through settings such as Calibration Distance, Screen Brightness, Contrast, Scene Mode, Color Palette, PIP, and Wi-Fi Switch.

· Once settings are adjusted, short press the Power/Menu Button (⑤) to confirm the selection. To exit to the main interface, long press the Power/Menu Button (⑤).

· Long press the Power/Menu Button (⑤) for 3 seconds. A shutdown countdown will appear on the screen.Once the countdown reaches 0, release the button.The display will turn off, and the device will shut down.

Quick Menu

On the observation interface, short press the "Power/Menu Button" to enter the quick menu. The quick menu includes the following options: Reticle Distance Memory, Screen Brightness,Contrast,Scene Mode,Color Mode, PIP, WiFi

Button Functions in the Menu Interface

· Rotate the Encoder: Switch between menu options or adjust parameter values in submenus.

· Short Press the "Power/Menu Button": Adjust parameter values or save the current settings and exit.

· Long Press the "Power/Menu Button": Exit without saving the settings.

Brightness Adjustment

Higher brightness levels make the image brighter. When the preview scene is too dark, user can increase the brightness to improve the clarity of the displayed image.

On the preview interface, short press the "Power/Menu Button" to enter the quick menu.

Rotate the encoder to navigate to ② "Brightness."

Short press the "Power/Menu Button" to enter the brightness adjustment mode.Rotate the encoder to adjust the brightness level (1-5).

Short press the "Power/Menu Button" to save the settings and exit.

Long press the "Power/Menu Button" to return to the observation interface.

Color Mode

On the preview interface, short press the "Power/Menu Button" to enter the quick menu.

Rotate the encoder to navigate to ⑤ "Color Mode." Short press the "Power/Menu Button," then rotate the encoder to cycle through color modes: White Hot, Black Hot, Iron Red, Fluorescent, Deep Brown, Red Hot, Ghost, etc.

Short press the "Power/Menu Button" to save the selected mode and exit.

Long press the "Power/Menu Button" to return to the observation interface.

Reticle Distance Memory

Switch between reticle memory settings for different ranges.

On the preview interface, short press the "Power/Menu Button" to enter the quick menu.

Rotate the encoder to navigate to ① "Reticle Distance Memory."

Short press the "Power/Menu Button," then rotate the encoder to adjust the reticle memory (25m-500m in 25m increments).

Short press the "Menu Button" to save the settings. Long press the "Menu Button" to exit.

Note for Ranging Version:

When ranging is enabled, the device will automatically generate a ballistic point based on the measured distance. The ballistic point will be displayed as a green inverted triangle below the reticle line.

Opening the menu will automatically disable ranging and hide the reticle. The reticle distance (i.e., shooting distance) will be set to the last measured value.

When the menu is closed, the reticle will reappear, and its center will indicate the aiming point for the current distance.

Contrast Adjustment

Higher contrast enhances the difference between light and dark areas, as well as color contrast. Increase contrast in complex scenes to highlight different targets.

On the preview interface, short press the "Power/Menu Button" to enter the quick menu.

Rotate the encoder to navigate to ③ "Contrast." Short press the "Power/Menu Button," then rotate the encoder to adjust the contrast level (1-5).

Short press the "Power/Menu Button" to save the settings and exit.

Long press the "Power/Menu Button" to return to the observation interface.

Wi-Fi Connection

The device supports Wi-Fi connectivity, allowing user to establish a wireless connection with mobile devices such as smartphones.

On the preview interface, short press the "Power/Menu Button" to enter the quick menu.

Rotate the encoder to navigate to ⑦ "Wi-Fi." Short press the "Power/Menu Button" to turn on or off.

Connecting to Wi-Fi:

Enable Wi-Fi on the mobile device and select the device's network for connection.

Wi-Fi Name (SSID): Device model + serial number

Wi-Fi Password: 12345678

Scene Mode

The scene mode : City Mode, Forest Mode, Rock Mode,Bird Mode

The scene mode optimizes the device's performance for different environments. User can select the appropriate scene mode during preview to achieve better image quality.

On the preview interface, short press the "Power/Menu Button" to enter the quick menu.

Rotate the encoder to navigate to ④ "Scene Mode." Short press the "Power/Menu Button," then rotate the encoder to cycle through the available scene modes.

Short press the "Power/Menu Button" to save the selected scene mode and exit.

Long press the "Power/Menu Button" to return to the observation interface.

PIP

PIP refers to a locally magnified image of the scene center, overlaid on the preview interface. User can enable PIP to view details of key areas in the image.

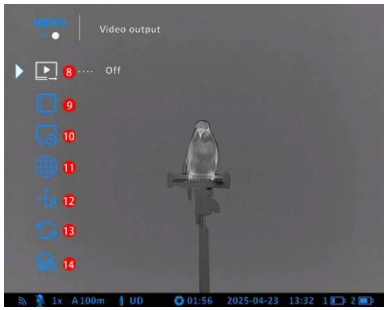
On the preview interface, short press the "Power/Menu Button" to enter the quick menu.

Rotate the encoder to navigate to ⑥ "PIP"

Short press the "Power/Menu Button" to turn on or off.

Long press the "Power/Menu Button" to return to the observation interface.

Main menu



Range Settings (Range version)

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotary encoder move to ① ranging setting, short press "Power/menu button" to switch switch the single/continuous mode of ranging function.

Long press the Power/Menu key button exit the observation screen.

Reticle Settings

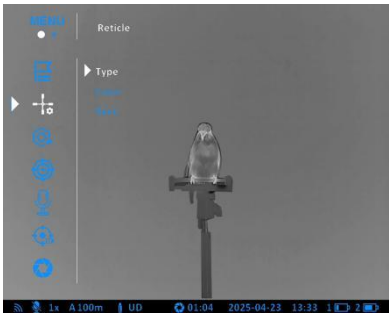
In the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to move to ② Reticle Settings, then short press the "Power/Menu Button" to enter the reticle settings.

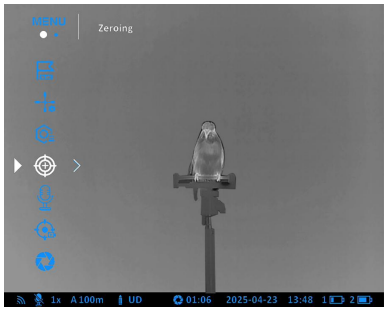
1-Reticle Type - Rotate the encoder to move to Reticle Type, short press the "Power/Menu Button," then rotate the encoder again to switch between R1-R10 types. After selection, short press the "Power/Menu Button" to save and exit the settings.

2-Reticle Color - Rotate the encoder to move to Reticle Color, short press the "Power/Menu Button," then rotate the encoder again to switch colors. After selection, short press the "Power/Menu Button" to save and exit the settings.

3-Return to Main Menu



Zeroing profile



In the preview interface, long press the "Power/Menu" button to enter the main menu.

Rotate the encoder to move to the "③ zeroing profile," then short press the "Power/Menu" button to enter.

1-Reticle Memory : A, B, C, D, E are available. After selecting, the status bar will display the current reticle memory. There are a total of 5 reticle memories.

2-Sight Height – Select the corresponding reference height, ranging from 3CM to 19.5CM, with increments/decrements of 0.5CM.

3-Ballistic Parameters – User can choose the ballistic parameters already loaded in the scope or perform custom user settings.

For custom ballistic parameters, after selecting the "User Custom" option, the scope will enter the interface as shown in the following image.

The point of impact is positive if it is above, and negative if it is below.

50m Drop

For the zeroing height, please input the drop of the point of impact at 50m.

100m Drop

For the zeroing height, please input the drop of the point of impact at 100m.

150m Drop

For the zeroing height, please input the drop of the point of impact at 150m.

200m Drop

For the zeroing height, please input the drop of the point of impact at 200m.

250m Drop

For the zeroing height, please input the drop of the point of impact at 250m.

300m Drop

For the zeroing height, please input the drop of the point of impact at 300m.

4.Ballistic Drop Correction

When the user is using ballistic parameters loaded in the scope or user-customized ballistic parameters, and shooting deviations occur, this menu allows for corrections to be made for specific distances. After selecting this option, the scope will enter the interface shown in the following image.

xxxxxThe correction parameter defaults to 0, meaning no adjustment is applied to the reticle position.

When selecting a specific distance for correction, the lower-left corner will display a prompt indicating how many centimeters each unit of reticle movement represents at the current distance.

1.X-Axis Coordinate Correction – Adjust the X-coordinate correction value of the reticle.

2.Y-Axis Coordinate Correction – Adjust the Y-coordinate correction value of the reticle.

3.Magnification Calibration – Calibration is only supported at 1x, 2x, and 4x magnifications.

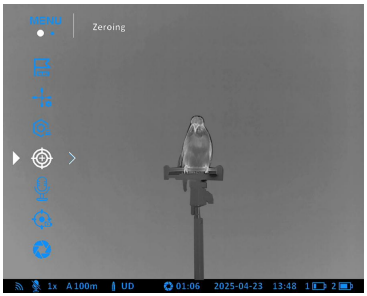
4.Image Freeze – Freeze and unfreeze the display. When adjusting the reticle position, user can aim the reticle at the shooting position, freeze the image, and then move the reticle to align with the bullet hole.

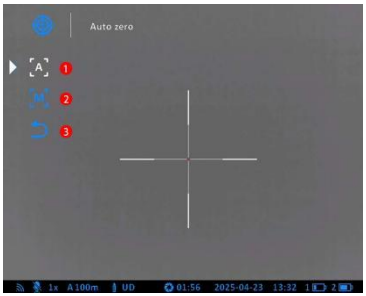
5.Return – Short press the menu button to exit the submenu and return to the previous menu.

Zeroing Calibration

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ④ "Zeroing Calibration," then short press the "Power/Menu Button" to enter the calibration settings.





When the impact point deviates significantly from the aiming point during the initial installation of the scope or during shooting, use this function.

Enter the zeroing calibration mode. User can choose between Automatic Zeroing Calibration and Manual Zeroing Calibration. Refer to the zeroing calibration operation for specific calibration procedures.

1. Automatic Zeroing Calibration:Enter the automatic zeroing calibration mode.

To perform automatic zeroing calibration, place the calibration target at a distance of 25 meters. Follow the automatic zeroing calibration steps to operate.

After completing the calibration, if users need to verify the

accuracy of the first-shot automatic zeroing, aim at a target placed at 50 meters or 100 meters and fire a shot for verification.

Automatic Zeroing Calibration Steps:

Step 1: Select "Automatic Zeroing Calibration." A rectangular frame will appear in the center of the screen. The device will automatically disable electronic zoom and image auto-correction.

A confirmation box for the calibration distance of 25 meters will appear in the center of the screen.After selecting "Confirm," a 15-second preparation countdown will appear in the upper right corner of the screen. This time is provided for the user to complete shooting preparation operations.

Step 2: After the countdown ends, the prompt in the upper right corner of the screen will change to "Aim at the target and shoot."

Step 3: Aim at the calibration object or target placed at 25 meters, ensuring the rectangular frame is positioned on the target surface. Fire one shot. The scope will automatically search for the thermal signal of the impact point on the target.

Step 4: Keep the weapon stable and ensure the target remains within the rectangular frame as much as possible. When the device displays the message "Data processing. NO OPERATION, please." user may put down the weapon and wait for the device to complete data processing.

Step 5: When the screen displays "Confirm the current options?" select "Confirm" to verify that the software has correctly identified the impact point. This completes the automatic zeroing calibration.

If the screen displays "No bullet holes detected, shoot again," it indicates that the device failed to detect the impact point, and the zeroing calibration was unsuccessful. In this case, repeat Steps 1 to 5 to perform the calibration again.

Manual Zeroing Calibration

Users can choose manual zeroing calibration to manually zero the scope. The user needs to input the deviation distance (cm) between the impact point and the aiming point during calibration. The device automatically calculates and adjusts the reticle position based on the input distance value.

The prompt in the lower left corner indicates the centimeter value represented by each unit of reticle movement at the current distance.

Calibration Options:

1-X-Axis Coordinate Adjustment: Adjust the X-axis reticle coordinate correction value.

2-Y-Axis Coordinate Adjustment: Adjust the Y-axis reticle coordinate correction value.

3-Magnification Calibration: Calibration is only supported at 1x, 2x, and 4x magnification levels.

4-Frozen Image: Freeze or unfreeze the screen. When adjusting the reticle position, aim the reticle at the shooting position, freeze the image, and then move the reticle to the impact point position.

Return: Confirm the adjustments and exit the menu after saving the settings.

Note: Ballistic Calculation Function First, set the bullet type and sight height in the zeroing profile.After completing the zeroing calibration, tum on the rangefinder.The device will automatically profile ballistic calculations based on the current zeroing distance and the measured target distance.The corresponding ballistic point will then be displayed in the reticle.

Microphone Settings

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑤ "Microphone Settings," then briefly press the "Power/Menu Button" to turn on or off.

Long press the "Power/Menu Button" to exit.

Recoil-Activated Recording Settings

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑥ "Recoil-Activated Recording Settings," then short press the "Power/Menu Button" to turn on or off.

Long press the "Power/Menu Button" to exit.

When enabled, the device will automatically start recording and save 15 seconds of video before and after detecting an impact. The recorded videos can be exported by connecting the device to a PC.

Video Output Settings

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑧ "Video Output Settings," then short press the "Power/Menu Button" to toggle the video output function on or off.

Long press the "Power/Menu Button" to exit.

Refresh Settings

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑦ "Refresh Settings," then short press the "Power/Menu Button" to cycle through the automatic refresh time options (1 minute, 3 minutes, 5 minutes, or off).

Long press the "Power/Menu Button" to exit.

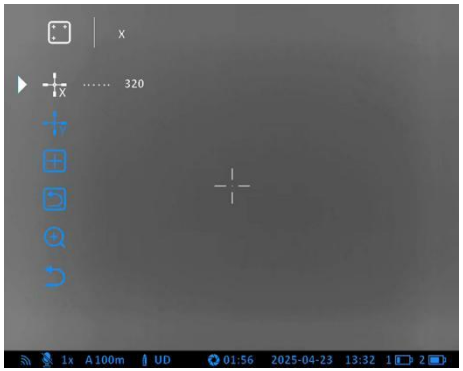
Note: Even in any refresh setting mode, user can manually refresh by long pressing the ranging button.

Blind Pixel Calibration

When using the device, defective pixels may appear on the detector, such as bright or dark spots visible on the image. The blind pixels calibration function can be used to remove these defective pixels from the detector or cancel their correction.

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑨ "Blind Pixel Calibration Settings," then short press the "Power/Menu Button" to enter the blind pixels calibration interface. A small reticle cursor will appear at the center of the screen:



X represents the horizontal axis (left-right direction).

Y represents the vertical axis (up-down direction).

Short press the "Menu Button" to confirm the selection.

When selecting the X-axis or Y-axis direction, short press the "Menu Button" to enter the adjustment settings. Use the up or down button to move the cursor:

The up button moves the cursor left or up.

The down button moves the cursor right or down.

Short press to move one pixel at a time.

Long press to enable rapid continuous movement.

After moving the cursor to the position of the defective pixel, short press the "Menu Button" to return to the previous level.

Select the option"  " and short press the "Power/Menu Button," then choose "Yes" to perform defective pixel correction.

After selecting the "Zoom Defective Pixel Correction" menu, the screen will zoom in by 2x to facilitate more precise correction.

Return to the previous level, save the settings, and exit to the main menu.

Time Settings

On the preview interface, long press the "Power/Menu Button" to bring up the main menu.

Rotate the encoder to navigate to ⑩ "Time Settings," then short press the "Power/Menu Button" to enter the time adjustment interface.

Short press the "Power/Menu Button" to switch between adjusting "Year/Month/Day" and "Hour/Minute."

Rotate the encoder to adjust the numerical values for the selected setting.

Long press the "Power/Menu Button" to save the settings and exit.

Language Settings

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑪ "Language Settings," then short press the "Power/Menu Button" to enter the submenu. Rotate the encoder to cycle through language options: Chinese, English, Russian, German, Arabic, French, Italian, and Spanish.

Long press the "Power/Menu Button" to exit.

Restore Zero Parameters

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑫ "Restore Zero Parameters," then short press the "Power/Menu Button" to enter the restore function. Rotate the encoder to switch options, and short press the "Power/Menu Button" to confirm.

After confirmation, all calibrated zeroing data will be restored to default values. Please proceed with caution.

Long press the "Power/Menu Button" to exit.

Restore Factory Settings

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑬ "Restore Factory Settings," then rotate the encoder to switch options. Short press the "Power/Menu Button" to confirm.

After confirmation, all settings will be restored to default values. Please proceed with caution.

Long press the "Power/Menu Button" to exit.

After restoring factory settings, the following settings will revert to their initial configurations:

Image Mode: White Hot

Screen Brightness: Level 2

Contrast: Level 3

Image Mode: City

Ranging: Single

Reticle Style: R1

Reticle Color: White Red

Recoil Activation: Off

Zoom : 1x

Refresh Time: 3 minutes

Video Output: Off

Device Information

You can view the current device's model, version, serial number, and other information on the device.

On the preview interface, long press the "Power/Menu Button" to enter the main menu.

Rotate the encoder to navigate to ⑭ "Device Information," then short press the "Power/Menu Button" to confirm. It will display the current device's model, serial number, and system version information.

Long press the "Power/Menu Button" to exit.

Cable connection and Accessing the internal memory

1-Open the Type-C port cover and align the Type-C port to connect the USB cable.

By connecting the USB cable to the Type-C port, user can link the device to a computer to view or export recordings and photos stored on the device. Additionally, connecting an external 5V power supply can directly power the device.

When using a cable to connect the device, avoid pulling the cable directly. Otherwise, it may damage the cable or cause circuit malfunctions, affecting normal use.

2-Use the USB cable to connect the device to a computer. After connection, rotate the encoder to navigate to "USB Storage."

3-Open the corresponding date file on the device's disk, and enter the file containing photos or videos.

Select the video files or photos you wish to export and copy them to the computer.

4-After the export is complete, disconnect the USB cable from the computer.

5-The file names are in the format of YY/MM/DD. For example, if the photo or video was taken on December 1, 2024, the corresponding folder name will be "20241201." This time is based on the device's system time.

Basic inspection

It is recommended to carry out a technical inspection before each use. Please check the following:

· The appearance: there should be no cracks in the body or visible damage.

· The condition of the objective lens and eyepiece: there should be no cracks, greasy spots, dirt, or other deposits on the lens.

· The internal rechargeable battery pack should be fully charged.

Basic Maintenance

Basic maintenance should be carried out at least twice a year and includes the following steps:

· Wipe the surface of the external metal and plastic components with a clean, dry cotton cloth.

· Clean the electric contacts and battery slots using a non-greasy organic solvent.

· Check the lens and eyepiece. If necessary, remove any dirt or sand from the optics; a non-contact cleaning method is preferred.Cleaning the exterior of the lens should only be done with the included professional wiping tools and solvent.

After service

Thank you for choosing this product. in order to fully enjoy the perfect after-sales service support, please carefully read the instructions of this product warranty card after purchase and keep it properly.

We will provide after-sales service according to the manufacturer's after-sales service policy,including:

1.The warranty period starts from the first purchase date of the product, and the purchase date is subject to the invoice date of the purchased product. if there is no valid invoice, the warranty period will be calculated from the product delivery date. if the invoice date of the product is later than the actual delivery date of the product,the warranty period starts from the actual delivery date of the product. The warranty period shall be implemented according to the after-sales service policy of the manufacturer.

2. No warranty coverage.

1. Exceeding the specified warranty period;

2.Failure or damage caused by misuse, accident, modification, improper physical or operating, environment, natural disasters, power surges and improper maintenance or storage;

3.Failure or damage caused by third.party products, software, services or behaviors;

4.Normal decolorization, wear and consumption during product use;

5.The product can run normally without interruption or error;

6.Data loss or damage;

7.Consumable parts, such as batteries or protective films, which are consumed with time, unless it is a failure due to material or process defects.

8. The valid warranty certificate and valid original purchase invoice or receipt of the product cannot be produced, the original serial number label of the product is altered, replaced or tom, the product has no serial number.or the product model or number on the warranty certificate is inconsistent with the actual product.

9. if the product is not used according to the attached instructions and operation manual, or the product is not used in the intended function or environment. The manufacturer determines that you violate the operation manual after confirmation;

10.The completeness and appearance of the products are not guaranteed so you should inspect the products on the spot when accepting them and raise objections to any discrepancies.

3. The manufacturer is not responsible for the extra promises made to you by the seller or any other third party, and you should ask these third parties to honor the mm.

1. With this card, you can enjoy the free warranty within the warranty period and the preferential services outside the warranty period.

2 This warranty card is only applicable to the products in this warranty card, and it is valid after being stamped by the sales unit.

3. Product warranty terms of special projects shall be subject to the specific purchase and sale contract.

Safety precautions

.Use of the product must be in strict compliance with the local electrical safety regulations.

.Use the power adapter provided by qualified manufacturer Refer to the product specification for detailed power requirements, it is recommended that equip with independent power adapter for each device.(D0 NOT connect multiple devices to one power adapter, to avoid over-heating or fire hazards caused by overload.)

· If smoke,odor, or noise arises from the device,immediately turnoff the power, unplug the power cable, and contact the service center.

·DO NOT place the battery near heating or fire source, Avoid direct sunlight.

· If the device equips with build-in removable battery, please use proper battery,improper use or replacement of the battery may result in explosion hazard, The battery compartment requires to be closed after installation or taken away.

· Do NOT place the battery in the reach of children.

·It is recommended to reboot the device every 2 hours when using it to ensure the device performance.

·D0 NOT drop the things on the device or vibrate device. DO NOT expose the device to high electromagnetic radiation.

· D0 NOT install the device in a place where surface vibrates or is vulnerable to shock(ignore it may cause the device damage)

· D0 NOT use the device in extremely hot, cold, dusty,corrosive saline-alkali or humid, Refer to the product specification for detailed requirements.

· Please close the lens cover to protect the image sensor when the device is not in use.

· The device should place in an airy and no erosive gas environment, DO NOT place it in direct sunlight,insufficient ventilation or near heat source environment (e,g.: heater, radiator), Ignore this item may cause a fire risk.

. If the device should be stored fora long time, it should be checked by connecting to power supplies every 6 months, And the electric time can not be less than 3h.

· Please clean the lens with a dry soft cotton cloth or lens wiping paper to avoid scratching the lens.

· Users acknowledge that the nature of intemet provides for inherent security risks, and our company shall not take any responsibilities for abnormal operation, privacy leakage or other damages resulting from cyber-attack, hacker attack, virus inspection,or other internet security risks;however, our company will provide timely technical support if required.

Users may face network security problems when the device connects to the Internet, please strengthen the protection of personal information and data safety, when you find your device has network security problems, please contact us in time.

*Keep all wrappers after unpacking them for future use, In case of any failure occurred, you need to return the device to the factory with the original wrapper,Transportation without the original wrapper may result in damage on the device and the company shall not take any responsibilities.

Troubleshooting

The table below lists all potential issues that may arise when operating the device. Follow the recommended checks and fixes to resolve them. If the issue is not listed or cannot be fixed, the device should be returned to the manufacturer or supplier for servicing.

Issue	Possible Cause	Solution
Thermal imager won't turn on	Battery is wearing out.	Charge the battery
External power supply is not working	USB cable is damaged.	Check the external power source if needed
	External power source has insufficient charge	Perform image calibration according to the manual
Image is unclear, abnormal, or uneven	Device needs calibration	Perform image calibration according to the manual

Image is too dark	Screen brightness is too low	Adjust screen brightness
Poor image quality or detection range is short	Adverse weather conditions (snow, rain, fog, etc.) may affect performance	
Cannot connect to a smartphone or computer	Incorrect Wi-Fi password	Enter the correct password
	Too many Wi-Fi networks in the area causing interference	Move the device to an area with fewer or no Wi-Fi networks for a more stable connection
The Wi-Fi signal disappears or is interrupted	The device is out of wi-Fi range; Or there is an obstruction (such as a concrete wall) between the device and the receiver.	Relocate your device to a place where you can see the wi-Fi signal directly.

When used the device under low temperature conditions, the image quality is worse than that under positive temperature conditions	At temperatures above zero, the object being observed (environment and background) heats up differently due to different thermal conductivity, resulting in a high-temperature contrast, so the image quality will be higher. In low temperature conditions, the object being observed (the background) will usually cool to roughly the same temperature because of the temperature The degree of contrast is greatly reduced, and the image quality (detail) is poor. There is a characteristic of thermal imaging equipment.