



Mini Thermal Imaging Scope Instruction Manual

VEOT-RSS08 | VEOT-RS08

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Preface

Dear Customer,

Greetings! Thank you for choosing our scope. To ensure you can use it properly, we remind you to read the instruction manual carefully before use. We also recommend keeping the manual in a safe place for future reference when using the product.

Safety Instructions

Before using this product, please ensure that you have read and understood the safety precautions stated below, so that you can use this product correctly.



Precautions

To ensure the product is not damaged, please follow the guidelines below:

Do not modify or disassemble this product without authorization.

This product is a highly precise device. Do not attempt to disassemble, assemble, or modify any part of it. Repairs to this product must be conducted by technicians designated by our company.

The product emits a clicking sound

The product emits a slight clicking sound during operation, which is a normal phenomenon during shutter calibration.

Please do not point directly at the sun or other strong light sources; otherwise, the product's detector may be damaged.



Warning

Warning statements describe actions that may cause hazardous conditions to users. To avoid electric shock or personal injury, please follow the operations below.

If the product's outer casing is damaged, do not continue using it.

In such cases, please contact the company's local distributors or agents.

If smoke, sparks, or a burnt odor is detected from the product during use, please stop using it immediately.

In such cases, please turn off the product's power supply. After the phenomenon of smoking or unusual odor has completely stopped, please contact the company's local distributors or agents.

Please unplug the adapter from the power socket when it is not charging.

After being powered on for a long time, the adapter may overheat, become deformed, or even cause a fire.

Please ensure that the adapter's plug is inserted into the designated power socket.

The plug of the adapter varies by region. Before use, please confirm that the specifications of the adapter are consistent with the electrical specifications of your region; otherwise, it may cause equipment overheating, electric shock, fire, leakage of chemicals inside the battery, explosion, and other serious consequences.

Do not touch the power cord with wet hands.

Touching the power cord with wet hands may cause electric shock. When unplugging the cord, grip the plug firmly before pulling it out. Do not pull the cord directly; otherwise, it may cause the cord to break, electric shock, or fire.

Do not clean the product's outer casing with abrasives, isopropyl alcohol, or gaseous organic solvents.

Such operations may damage the product's outer casing.

Avoid problems caused by condensation.

When the product is moved from a high-temperature environment to a low-temperature one, or vice versa, condensation (water droplets) may form

on both the product's outer casing and its interior. In such cases, it is recommended to properly store the product in its accompanying packaging box and allow it to gradually adjust to the ambient temperature before taking it out for use. If condensation has already formed inside the product, immediately turn off the device and remove the battery; otherwise, the device may be damaged. Do not operate the product until the condensation has completely dissipated.

Please avoid subjecting the product to impacts (such as knocking, dropping, etc.).

Such operations may cause damage to the product, so please be careful to avoid them.

Long-term storage and regular charging.

If the product is not used for an extended period, store it in a cool and dry environment. If storing the product with the battery installed for a long time, charge it regularly; otherwise, the battery will be fully discharged and its service life will be shortened.

Introduction

This product is a mini infrared thermal imaging scope specially designed for outdoor adventures. It uses thermal imaging technology to display clear infrared images in real time and automatically marks the highest temperature points, greatly improving target locking efficiency. The device is compact enough to fit in one hand, supporting functions such as photo taking, video recording, and real-time mobile phone preview. It enables aiming operations while conducting concealed observation, making it an efficient auxiliary tool for medium-range target aiming in wild hunting and jungle expeditions.

Function Highlights

- **Compact Design:** As light as three Zippo lighters, enabling zero burden during outdoor mobility.
- **Smart Tracking:** Marks the highest temperature in real time and tracks/locks onto the target simultaneously.
- **Auxiliary Aiming:** Detects heat sources within a mile and accurately identifies prey within 100 meters.
- **Wireless Preview:** Instantly capture wonderful moments with photos and connect directly to a smartphone for real-time preview.
- **Intuitive Interaction:** Features button and touchscreen design with simple operation logic, allowing even beginners to master it quickly.
- **Multi-Pseudo-Color Display:** Offers up to six palette switches to enhance recognition in different environments.

Product Cleaning

The product's outer casing can be cleaned with a damp cloth or diluted soapy water. For the lens and screen, use a professional optical lens cleaner.

Lens Maintenance

To Prevent Damage to the Infrared Lens:

- Clean the infrared lens carefully. The lens is equipped with a delicate anti-reflective coating, so avoid damaging this coating.
- For lens maintenance, use cleaning solutions such as commercial lens cleaners containing alcohol or rubbing alcohol, along with a lint - free cloth or lens paper. A canned air duster can be used to remove loose particles.

Cleaning the Lens:

- Loose particles on the lens surface can be blown off using a canned air duster or a dry nitrogen ion gun (if applicable).
- Soak the lint-free cloth in alcohol.
- Wring out excess liquid from the cloth or gently press the lint-free cloth onto a dry cloth.
- Wipe the lens surface in a circular motion, then discard the cloth.
- If you need to repeat the above steps, use a new cloth dampened with the cleaning liquid for wiping.

Battery Charging Instructions

Charging with a USB Data Cable:

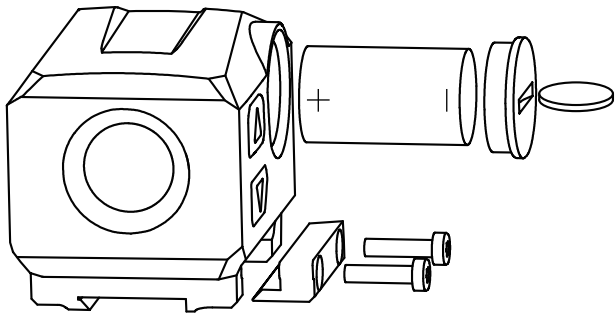
- This product uses a removable and rechargeable 16280 lithium battery.
- When the battery is low, please charge it promptly via the Type-C USB port.
- Unplug the USB cable once the battery is fully charged.

To ensure optimal performance of lithium-ion batteries:

- Do not leave the battery on the charger for more than 24 hours.
- Charge the battery for at least two hours every three months to maximize its lifespan.
- Do not attempt to charge the battery in extremely cold environments.

Battery Installation

1. Insert a coin (a 50-cent coin is recommended) into the coin slot, then rotate the battery compartment knob counterclockwise to open the battery compartment cover.
2. Install the battery strictly in accordance with the direction marked on the battery compartment cover (as shown in the figure below), with the negative terminal facing outward.
3. Close the battery compartment cover, then use a coin again to insert into the coin slot and rotate the battery compartment knob clockwise until it is locked.

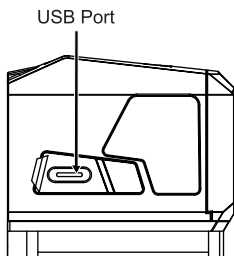
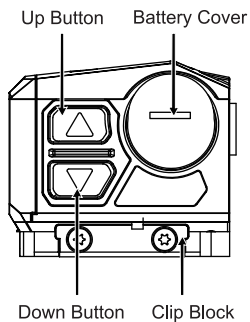
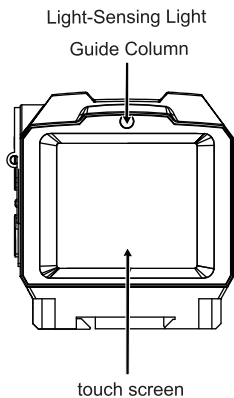
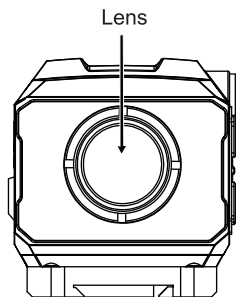


4.Note: ① Do not use batteries with damaged insulation layers; ② If the battery's positive and negative terminals are reversed, the device will not work and may damage the battery.

Performance Specifications

Infrared Resolution	256x192/12μm
Frame Rate	50Hz
Basic Magnification	0.5x
Digital Zoom	0.5x/1x
Field of View	13.5°x10.1°
Focus Range	5m~∞
Display Screen	1.4" 360x320
Pseudo-color Mode	White Hot,Black Hot,Hot Iron,Rainbow, Iron Red,Cold Color
Reticle	Multiple types: Black/White/Red/Green/Yellow
Battery	16280,900mAh
Operating Duration	3.5h
Charging Interface	USB Type-C, 5V
Operating Temperature	-20~+60°C
Ingress Protection Rating	IP67
Impact Resistance	1000G
Product Weight	≈123g
Product Dimensions	50.9x42.9x45.2mm

Introduction to Product Structure



Key Description

When the device is powered off, press and hold the Up Key to turn it on; when the screen is off, press the Up Key briefly to wake it up.

Key/Operation		Home Page Interface	Menu Interface
Up Button	short press	screen off	Cancel & Return to Previous Level
	long press	Enter the menu	Return to the Home Page
	Long press for 5+	power off	power off
Down Button	short press	Photo/Video	Confirm and enter the next level menu
	long press	Manual Shutter Calibration	Confirm and return to the previous level menu
touch screen	slide up	Toggle Magnification	The menu scrolls upward
	slide down	Toggle Pseudocolor	The menu scrolls downward
	slide left	Toggle Reticle Type	Cancel and return to the previous menu level
	slide right	Enter the menu	Confirm and enter the next menu level
	Double-click	Toggle Photo/ Video Mode	/

Introduction to the Home Screen Interface

Time: Displays the year, month, day, hour and minute.

Storage Prompt Icon: It is displayed when the storage space is full or the storage space is unavailable (USB connected to a computer).

USB Connection Icon: The icon appears when the USB is connected to a computer.

Magnification: 0.5X/1X.

Status - Battery Level: 0~4 bars (Low battery status: red icon when at 0 bar and 1 bar).

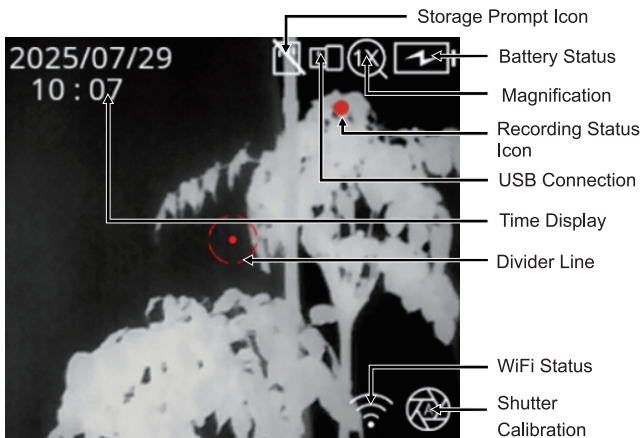
Status - Charging: While charging, a lightning bolt is displayed inside the battery icon.

Recording Status: It flashes once per second during recording.

Divider Line: Different divider line modes will all be displayed on the home screen.

Status - WIFI: Displays the WIFI on status.

Shutter Calibration: A: Auto (automatic shutter calibration), M: Manual (manual shutter calibration).

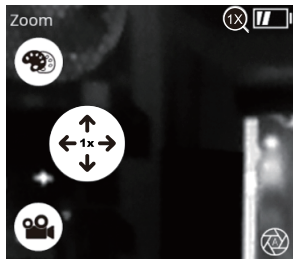


Introduction to the Menu Interface

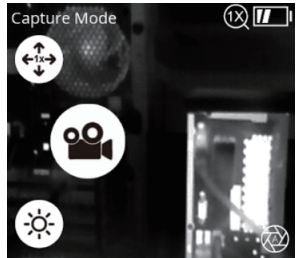
Pseudo-color:The device adopts the white-hot mode by default and also supports a total of six pseudo-color modes, including white-hot, black-hot, fire-hot, rainbow, iron-red, and cool-color. You can switch between pseudo-color modes by sliding up and down, and the effect will take effect immediately after switching. As shown in the figure below is the pseudo-color adjustment function interface in the menu.



Zoom:The device has a default zoom magnification of 0.5X (optional levels: 0.5X/1X). You can switch the zoom magnification by swiping right, and the change will take effect immediately. As shown in the figures below are the display effect comparisons of the same scene at 0.5X and 1X zoom magnifications respectively.



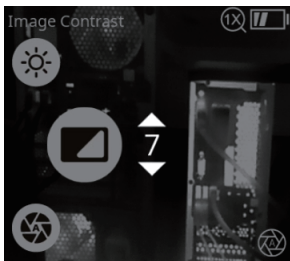
Shooting Mode: Set the specific function of the short-press operation for the down key when on the home screen; the default function is photo-taking. You can switch to video recording by swiping right, which takes effect immediately after switching. The current shooting mode can be directly confirmed through the icon in the menu.



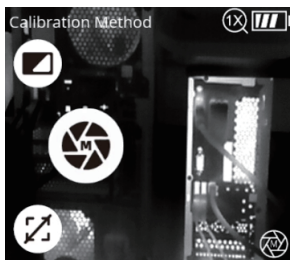
Brightness: The screen brightness can be set to Auto (automatic) or manual levels 1-5 (adjustment takes effect immediately by sliding up or down). In Auto mode, based on the light intensity detected by the light sensor above the screen, a set of algorithms for automatically adjusting screen brightness is designed to dynamically and gradually adjust the screen brightness, keeping it within a range comfortable for the eyes at all times. In manual mode, the brightness is fixed at the selected level and the automatic adjustment function is disabled.



Contrast:The default setting for image contrast is Level 4 (adjustable range: Level 1 to Level 10). The effect takes effect immediately after adjusting the contrast level. As shown in the figure below is the display effect when the contrast level is set to Level 7.



Shutter Calibration Method:NUC (Non-Uniformity Correction) calibration is required for infrared imaging (automatic by default) to prevent image distortion caused by long-term display. Both automatic and manual calibration are supported (switching by swiping right takes effect immediately). The clicking sound during shutter calibration is a normal phenomenon. In any mode, long-press the down key on the home screen to trigger a shutter calibration.



Hotspot Tracking:This is the switch for displaying the hotspot tracking frame. It is off by default, and you can directly toggle the switch state by swiping right; the change will take effect within a short time after the toggle operation. When the switch is on, the highest temperature point on the screen will be highlighted with a (dashed-line) frame, and the frame can track the changes and movement of the highest temperature point in real time.



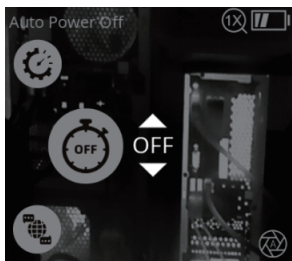
Reticle Settings:The reticle function is disabled by default. Swipe right to enter the settings interface. On the settings page, first swipe right, then swipe up to enable the reticle and use Reticle Type 1. After enabling, you can adjust parameters such as reticle type, color, screen freeze, magnification, X/Y axis coordinates, and object zero reset. The figure below shows examples of the disabled and enabled states.



Time Settings:After sliding right in the menu to confirm and enter the time settings, slide right again to access the individual setting items in sequence: Year, Month, Date, Hour, Minute, and Second. Adjust the numbers of the selected setting item by sliding up or down. Finally, slide right again on the Second setting item to activate all the previously configured settings. If you want to apply the changes immediately after adjusting the numbers of some setting items, you can directly confirm by long-pressing the down key.



Auto Power-Off Time:The device supports an auto power-off function when there is no operation (disabled by default). The available options are: disabling the auto power-off function (OFF) and setting the auto power-off time to 5/10/20/30 minutes. After selecting an option, swipe right to confirm and activate it. The figures below show examples of the "Disabled" state and the "5-minute" setting.



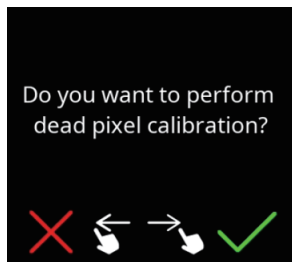
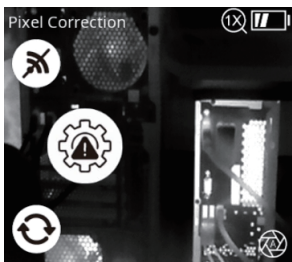
Multilingual Support: The device supports a total of 13 languages, including Chinese, English, Russian, German, French, Italian, Spanish, Japanese, Korean, Polish, Swedish, Finnish, and Czech. Swipe right to enter the settings interface, slide up or down to select a language, then swipe right again to confirm and activate the selection. The figure below shows an example of the English interface.



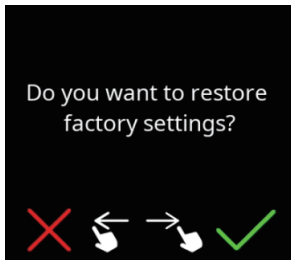
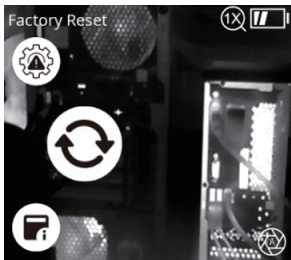
WiFi: This function is disabled by default (optional modes: Disabled/Enabled). You can switch between the modes by swiping right, and the change takes effect immediately after switching.



Bad Pixel Correction: After selecting the "Bad Pixel Correction" function, swipe right to enter the correction interface, as shown in the figure below. The system will pop up a prompt message asking whether to perform the bad pixel correction operation. At this point, you can swipe left to cancel the operation, or swipe right to confirm and execute the bad pixel correction.



Factory Reset: Performing the "Factory Reset" function will reset all parameters to their initial state. To start the process, swipe right to enter the procedure, as shown in the figure below. The system will pop up a confirmation prompt; at this point, you can swipe left to cancel the operation, or swipe right to confirm and execute the factory reset. It is important to note that after confirmation, the device will automatically shut down and restart.



Device Information: You can swipe right to enter the Device Information interface, as shown in the figure below. Here, you can view device-related information including product model, hardware version, application version, serial number, MAC address, and storage space.



Pseudo-color

The device provides six pseudo-color modes: White-hot, Black-hot, Fire-hot, Rainbow, Iron-red, and Cool-color. It clearly presents temperature difference details by enhancing color contrast. The Rainbow, Iron-red, and Cool-color modes have rich colors, making them suitable for high-contrast environments; the White-hot and Black-hot modes feature stable linear transitions, which are applicable to regular reference scenarios.

Below are images of the same object captured with different pseudo-color modes selected:



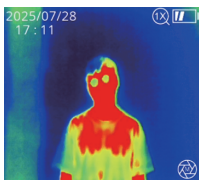
White Hot



Black Hot



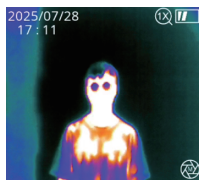
Hot Iron



Rainbow



Iron Red

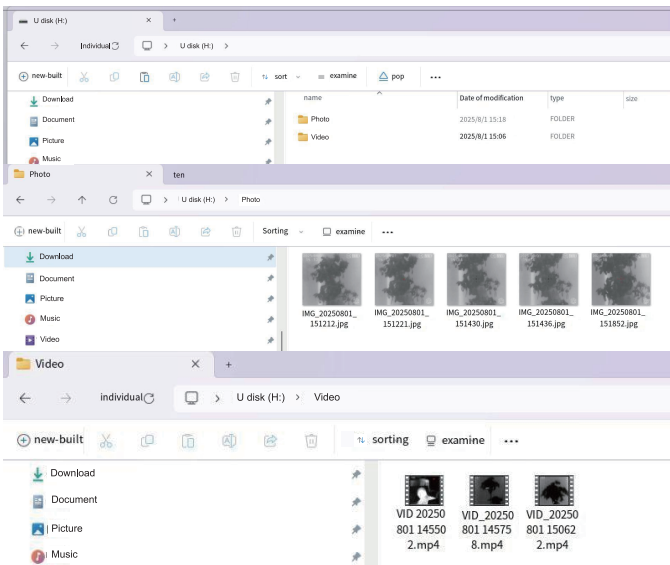


Cold Color

Photos and Videos

- Short-press the Down key on the Home screen to take a photo or record a video.
- File Management: When the device is connected to a computer via a USB interface, the system will display the "Photo" and "Video" folders based on the existing captured files (images or videos) on the device. You can view the captured files (photos or videos) stored in the device by clicking the corresponding folder.

Below are the demonstration images of viewing the captured files on the device when the device is connected to a computer via USB:



Wi-Fi (If applicable)

- **Enable Wi-Fi Hotspot:** Enter the menu, select the "Wi-Fi Hotspot" function, then swipe right to enable the Wi-Fi hotspot within a short time. Once enabled, the Wi-Fi name and password will be displayed (Wi-Fi cannot be turned on when the battery level shows less than two bars).
- **Disable Wi-Fi Hotspot:** Enter the menu, select the "Wi-Fi Hotspot" function, then swipe right—the Wi-Fi hotspot will be disabled within a short time.
- **Wi-Fi Hotspot Information:** The hotspot SSID name is "Owlset_XXXX", and the default connection password is "12345678". See the Wi-Fi hotspot information example in the figure below.

(Note: The product model "VEOT-RSS08" is equipped with WiFi functionality, while the model "VEOT-RS08" does not have WiFi functionality.)



APP Operation Guide

Software Installation

1. Scan the QR code → Download and install
2. After completing the installation, follow these steps: First, enable the Wi-Fi function on the device side. Then, open the Wi-Fi settings on the mobile phone and connect to the hotspot created by the device. Once the connection is successful, launch the application on the mobile phone and access the "mini Thermal Scope" software interface. After the device and the mobile APP complete the connection, you can use it normally.



Accessories List

Bill of Materials	Quantity
Host	1
Battery	3
Battery Charging Dock	1
USB-C Charging Cable	1
Torx L-Shaped Screwdriver	1
Mounting Base	1
Device-wide Protective Cover	1
User Manual	1
Plastic Wrench	1