

# ThermTec

## HUNT LRF Series

# Thermal Clip-On Hunt LRF User Manual



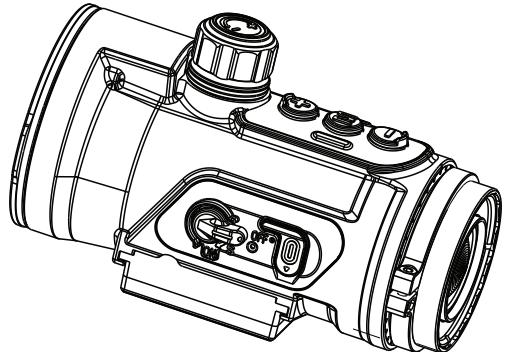
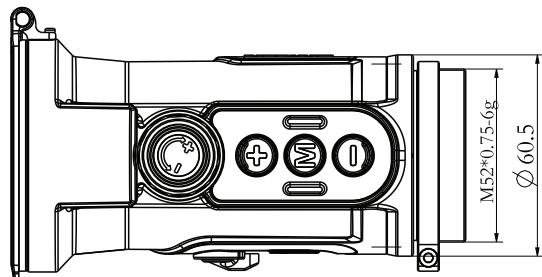
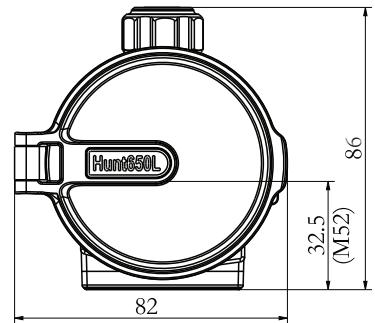
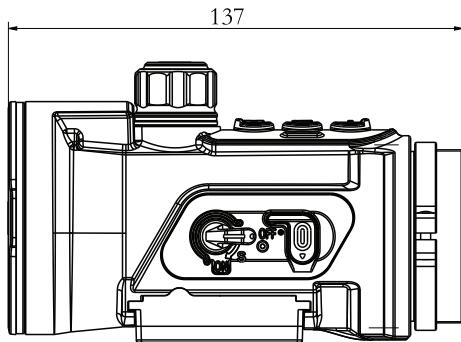
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V1.0

**PRO**  
+ LRF



# Legal Information

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The Manual includes instructions for using and managing the product, pictures, charts, images and all other information hereinafter are for explanation and description only. The information contained in the Manual is subject to change, without notice due to firmware updates or other reasons. Please find the latest version of this Manual at the ThermTec website (<https://www.thermeyetec.com>).

Please use this Manual with the guidance and assistance of professionals trained in supporting the product.

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# SAFETY INFORMATION

## Environmental influences

**Caution:** Never point the device at intense heat sources (e.g., the sun, lasers). The lenses can concentrate light and generate intense heat, causing irreversible damage to internal components.

## Risk of swallowing

**Warning:** Keep out of reach of small children. Small parts may detach due to incorrect handling and pose a choking hazard or be swallowed.

## Safety instructions for use

- Keep the device away from open flames and excessive heat.
- Battery capacity will temporarily decrease in low-temperature environments. This is normal behavior due to technical limitations, not a malfunction.
- Store the device in a dry, well-ventilated area. For long-term storage, remove the batteries.
- Do not operate or store the device in environments outside the temperature range of -20°C to +50°C.
- Use only a USB Type-C cable and power adapter to connect to the device.
- If the device is damaged or the battery is defective, please contact our after-sales service for repair. Do not attempt to repair it yourself.

## Disposal of Electrical & Electronic Equipment (EEE) (private households)

The WEEE symbol means this product must not be disposed of with household waste. Please take it to a designated collection point for free recycling. In some regions, you can return it to your retailer when buying a new one. Proper disposal protects the environment and public health. Contact your local authority for your nearest recycling point. Improper disposal may result in penalties as prescribed by law.

## **For business customers in the European Union**

For information on the disposal of this product, please contact your dealer or supplier.

## **Disposal Outside the European Union**

This symbol is valid only within the European Union. For proper disposal methods in your country, please contact your local waste disposal authority or your point of sale.

## **Intended use**

This thermal imaging device is designed for: wildlife observation and research, remote hunting scouting and game management, general civilian outdoor use (e.g., security, search & rescue, recreation). It is not intended for use by children. Use only as described in this manual. The manufacturer and dealer shall not be held liable for any damages or injuries resulting from unintended, improper, or negligent use of the device.

## **Function test**

- Before use, please ensure that your device has no visible damage.
- Test to see if the device displays a clear, undisturbed image.
- Check that the settings for the thermal imaging camera are correct. See the notes in the Operation section.

# REGULATORY INFORMATION



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Directive 2014/53/EU(RED), Directive 2014/30/EU(EMC), Directive 2014/35/EU(LVD), Directive 2011/65/EU(RoHS).



This product and - if applicable - the supplied accessories too are marked with "UKCA" and comply therefore with the following directives: Radio Equipment Regulations 2017, Electromagnetic Compatibility Regulations 2016, Electrical Equipment (Safety) Regulations 2016, the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.



This product and - if applicable - the supplied accessories too are marked with "RoHS" and comply therefore with the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("RoHS recast" or "RoHS 2").



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: [www.recyclethis.info](http://www.recyclethis.info).



Directive 2006/66/EC and its amendment 2013/56/EU (Battery Directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info).

# 1. DESCRIPTION

The HUNT LRF Series Thermal Clip-On's high thermal sensitivity ensures exceptional detail recognition, even in the most adverse weather conditions and scenarios with minimal temperature contrast between the target and its background. Except that, using Hunt LRF series thermal clip-on includes several benefits over night hunting with traditional optics or even the night vision devices. Attaching the Hunt LRF series to a day scope delivers the same level of comforts of shooting with the day scope you are accustomed to, including your existing reticle and eye relief. The Hunt LRF series thermal clip-on even allows you to continue utilizing variable magnifications of your day scope.

# 2. FEATURES



Hunt 650L

- Quick mounting and removal of attachment;
- 12 $\mu$ m thermal imaging detector, NETD $\leqslant$ 15mK;
- 1920\*1080@4.5 $\mu$ m resolution with 0.39-inch OLED display;
- 1.1cm per click @100m, highly zeroing precision.
- Magnesium alloy housing;
- Lightweight and compact design;
- Wireless remote control;
- APP connection via Wi-Fi is supported;
- 6 pseudo colors and 8 reference reticle choices;
- Audio and recoil-activated video is supported;
- Combination of shutter correction and AI calibration technology;
- Up to 5h continuous working for replaceable and rechargeable battery;
- IP67 rated protection;

### 3. SPECIFICATIONS

Model	Hunt650L	Image calibration	Via Shutter
<b>Microbolometer</b>		Power Lever	On/Off/Standby
Type	Uncooled	LRF	1000m
Resolution	650×512	Ballistic calculation	Yes
Pixel pitch	12μm	USB interface	Type-C
NETD	≤15mK	<b>Video Recorder</b>	
Spectral range	8-14μm	Photo / video playback	Yes
Frame rate	50Hz	Inbuilt memory	64GB
Detection range	2600m	<b>Interface</b>	
<b>Optics</b>		Type C	Data transfer, battery charging
Objective lens	50mm/F1.0	Wi-Fi	Yes
Per Click	1.1cm@100m	Bluetooth	Yes, Remote control
Field of view	8.8°×7.0°	<b>Battery</b>	
m@100m	15.4×12.3	Replaceable battery	5h@25°C
Magnification of the day scope	1-16X	On-device Charging	Yes
Magnification	x1, x2, x3, x4	<b>Environment</b>	
<b>Display</b>		Body material	Magnesium Alloy
Type	AMOLED	Connection thread	M52×0.75
Resolution, pixel	1920×1080@4.5μm	Operating temperature	-20- +50°C
Display size	0.39 inch	IP rating	IP67
<b>Function</b>		Weight, g	463g
Max. recoil power on rifled weapon	6000J	Dimension, mm	137(L)×82(W)×86(H)

## 4. PACKING LIST



Hunt LRF clip-on (x1)



Battery (x2)



Charger (x1)



Remote control (x1)



Bag (x1)



User manual (x1)



USB cable (x1)



Cotton swabs (x1)



Lens cloth (x1)

## 5.COMPONENTS AND CONTROLS

### 5.1 Appearance of Hunt LRF

NO.	Comments
1	Eyepiece
2	M52*0.75 connection thread
3	Eyepiece bayonet-type ring
4	E-Zoom / Laser rangefinder / OLED brightness adjustment / Down button
5	Capture/Record/Menu button
6	Pseudo color switch / UI zooming Image correction button / Up button
7	Lens focus knob
8	Lens cover
9	Laser rangefinder module
10	Objective lens
11	Three-position switch
12	Type-C port



## 5.2 Description of Controls

### Clip-on Mode

Before entering the main menu			
Icon	Short press	Press and hold-on	Double click
	Switch pseudo colors	UI zooming	Image calibration
	Capture	Record	Main menu
	E-Zoom	Laser rangefinder function on/off	OLED brightness adjustment

### Monocular Mode

Before entering the main menu			
Icon	Short press	Press and hold-on	Double click
	Switch pseudo colors	Digital Zoom	Image calibration
	Capture	Record	Main menu
	N/A	Laser rangefinder function on/off	OLED brightness adjustment

After entering the main menu			
Icon	Short press	Press and hold-on	Double click
	Up	N/A	N/A
	Confirm	Exit	N/A
	Down	N/A	N/A

After entering the main menu			
Icon	Short press	Press and hold-on	Double click
	Up	N/A	N/A
	Confirm	Exit	N/A
	Down	N/A	N/A

## 5.3 Menu/Status Bar Icons

	Image set
	Battery power
	Zero profile
	Zeroing
	Hotspot/Bluetooth
	File
	Blind Pixel
	OLED
	Recoil-Activated Video (RAV)
	Palette
	Eyepiece Set
	Time and Date
	Language
	Correction
	System Setting
	Hotspot Indicator
	Laser Rangefinder
	Remote Control
	Image Capturing/Video Recording
	MIC
	System

# 6. OPERATION GUIDE

## WARNINGS

The HUNT LRF series has been designed for long-term use. To ensure sustainable performance, please adhere to the following:

- Before use, make sure you have mounted and adjusted the device according to the Operation Guide.
- Store with the lens cap on in the carrying case.
- Switch off the device after use.

### **Unauthorized disassembly or repair will void the warranty!**

This device is designed to operate across a wide range of temperatures. However, if moved from a cold to a warm environment, allow it to acclimatize for 2-3 hours before powering on to prevent condensation from forming on the optical lenses. For long-term reliability, we recommend periodic professional maintenance.

## 6.1 Installation

The HUNT LRF attachment is designed for use during both day and night, even in inclement weather such as fog, smog, or rain. To mount it onto your day scope, please follow the instructions below:

- Please make sure that the day scope is zeroed before installation.
- Determine the objective lens diameter of your day scope.
- Select an adapter with the M52x0.75 internal thread and a corresponding insert that matches the outer diameter of your day scope's objective lens.
- Insert the ring into the adapter until it is fully seated.
- Firmly thread the assembled adapter onto the objective lens of your day scope.
- Ensure the adapter is securely attached and does not move or wobble.



- Check for clearance. If any is detected, proceed as follows:
  - Loosen the locking screw with the hex-nut wrench (which depends on the adapter you used).
  - Tighten the screw with hex-nut wrench with a clamping force necessary to ensure that the adapter fits tightly the objective lens.
  - Fully tighten the locking screw.
- Mount the Hunt LRF onto the adapter and lock it by turning the eyepiece bayonet ring counter-clockwise.
- After installation, if the Hunt LRF's display reticle is not centered with your day scope's crosshair, please perform the following boresighting procedure:
  - Loosen the locking screw with the hex-nut wrench.

## 6.2 Power On/Off

Flip the three-position to the "ON" position to turn on the device, and flip it back to "OFF" to turn it off.

## 6.3 Image Correction

Simply double-click the  key for image correction. Please refer to the detailed guide in the "Correction" section of the main menu.

## 6.4 Standby Mode

Once powered on, flip the Three-position to "S" to put the device into standby mode. Flip to "On" the system will wake up again.



## 6.5 Lens Focus Adjustment

Open the lens cover and rotate the focus knob to obtain a clear image of your target.

## 6.6 Pseudo Color Switch

Short press  to change the pseudo colors. There are totally six pseudo colors (white hot, black hot, red hot, green, golden, violet) for user choice.



White



Black



Golden



Red



Green



Violet



## 6.7 Day and Night Modes

Enter the main menu and select the OLED/Mode option, then will be able to switch two brightness mode.

## 6.8 UI Zooming

Long press the  button to zoom in/out the UI icons, ensuring optimal display in perfect alignment with the magnification level of your optical lens.

## 6.9 E-zooming in PIP

The base magnification is 1×, short press  button once to activate the E-zooming and the zoomed view simultaneously displayed in a PIP window. Each click of  button can switch the digital zoom between x1, x2, x3, x4.

### Note:

- 1: This function must be used after ZEROING to ensure aiming accuracy through magnification.
- 2: Please set up the correspond reference line according to different zeroing profile after zeroing.
- 3: Please refer to the ZEROING section for detailed guidance for zeroing.



## 6.10 LRF Function

Long press the  button to activate the LRF function. The distance to the target will be displayed as well as the pitch angle. Once enable the Ballistic Calculation function, the LRF will not be able to perform automatic continuous ranging, and only supports manual ranging through long-press the  activation.



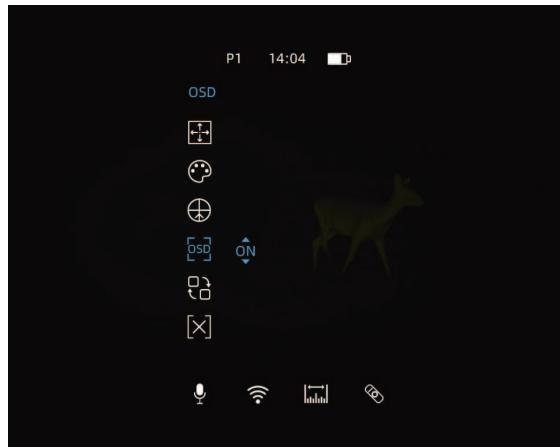
The cursor will blink for seven seconds and then disappear.

## 6.11 OLED Brightness Adjustment

Double-click the  button to adjust the OLED brightness. There are 5 brightness levels available.

## 6.12 OSD Function

Enter the main manu and select the OSD option to turn on or turn off . Video recording includes the menu on the screen after turning on the OSD function.



## 6.13 Power Supply

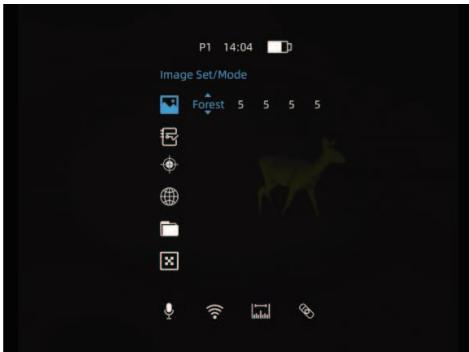
HUNT LRF can be charged either directly or by removing the battery and using the provided charger.



## 7.MAIN MENU

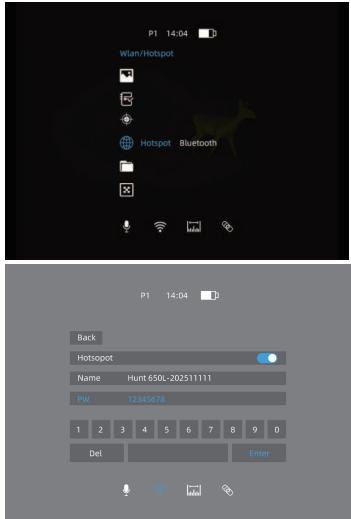
- On the home screen, double-click the "M" button to access the main menu.
- In the main menu, short press the "+" or "-" button to switch the menu options.
- Short press the "M" button to adjust the settings of the currently selected option.
- Press and hold the "M" button for 3 seconds to return to the home screen.
- Short press the "M" button to save.

### Main Menu function descriptions

<b>Image Set</b> 		<b>Turn Image set on/off</b> <ul style="list-style-type: none"><li>● Double click the "M" button to enter the main menu.</li><li>● Select the <b>Image Set</b> option with the "+ / -" button. Short press the "M" button to enter <b>Image Set</b>.</li><li>● The icon will be turned into blue when Image set is selected.</li><li>● Set the parameters including Sharpness, Contrast, Brightness and Denoise as needed. These parameters are ranged from 1-10.</li></ul>
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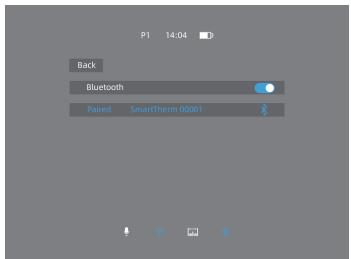
<h3>Zero Profile</h3> 		<h3>Select the Zero Profile</h3> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>Zero Profile</b> option with the "+ / -" button. Short press "M" button to enter <b>Zero Profile</b>.</li> <li>● The icon will be turned into blue when <b>Zero Profile</b> is selected.</li> <li>● There are four profile options: P1/P2/P3/P4. It will show at the top of the screen when a certain <b>Zero Profile</b> is selected.</li> <li>● Make sure you set up the correspond reference line under each zero profile, cause each profile matches its own Ref. Line settings.</li> <li>● Short press the "M" button to confirm the selection of one profile.</li> </ul>
<h3>Zeroing</h3> 		<h3>Zeroing</h3> <ul style="list-style-type: none"> <li>● Double click the "M" button to access the main menu.</li> <li>● Select the <b>Zeroing</b> option with the "+ / -" button. Short press "M" button to access <b>Zeroing</b>.</li> <li>● The icon will be turned into blue when <b>Zero profile</b> is selected.</li> <li>● Please refer to the <b>ZEROING</b> section for detailed guidance for zeroing.</li> </ul>

## Hotspot / Bluetooth



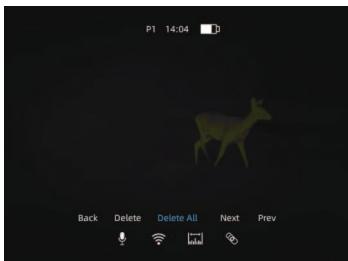
### Turn Hotspot function on/off

- Double click the "M" button to access the main menu.
- Select the **Hotspot** option with the "+ / -" button. Short press "M" button to access Hotspot Settings.
- The icon will be turned into blue when **Hotspot** is selected.
- When **Hotspot** is on, it can be connected with "ThermTec Outdoor" APP. The default password is 12345678.



### Turn the Bluetooth on/off

- Connecting the remote with Bluetooth is also available here.
- After connecting, the device could be controlled via the remote.

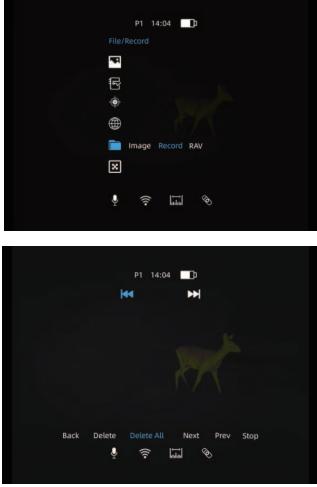
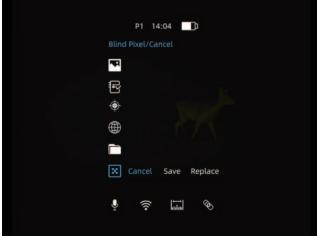


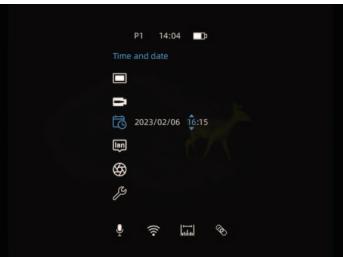
## Check the Captured Images

- Double click the "M" button to enter the main menu.
- Select the **File** option with the + / - button. Short press "M" button to enter **File**.
- The icon will be turned into blue when **File** is selected.

- Click **M** to enter image files.

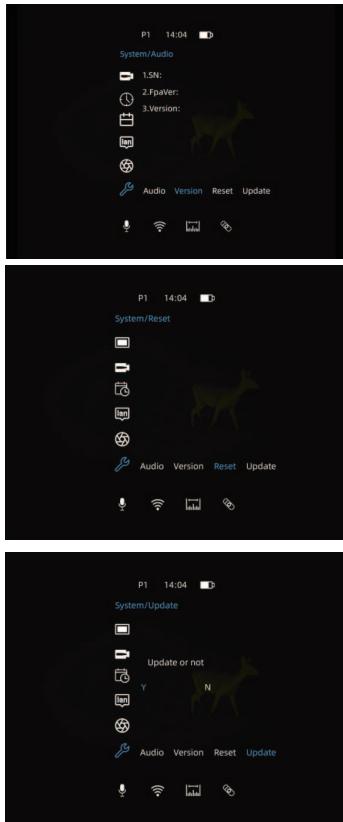
- After selecting a certain image, click **M** to access further operation of the image. You may delete it, check next one or delete all the images.

<p><b>File</b></p> 		<p><b>Check the Recorded Videos/RAV Videos</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the File option with the + / - button. Short press "M" button to enter File.</li> <li>● The icon will be turned into blue when File is selected.</li> <li>● Select <b>Record/RAV</b> and click <b>M</b> to enter <b>Video/RAV Files</b>.</li> <li>● Choose a certain video and press <b>M</b> to check the video.</li> <li>● Further operation could be accessed here. You may delete it, check next one, pause it or delete all the videos.</li> </ul>
<p><b>Blind Pixel</b></p> 		<p><b>Turn Blind Pixel function on/off</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>Blind Pixel</b> option with the "+ / -" button. Short press "M" button to enter <b>Blind Pixel</b>.</li> <li>● The icon will be turned into blue when Blind Pixel is selected.</li> <li>● Select the blind pixel and confirm the selection of Cancel, Save or Replace.</li> <li>● Please follow the steps below to remove the blind pixels. <ul style="list-style-type: none"> <li>▶ Close the lens cover.</li> <li>▶ Keep clicking the Replace.</li> <li>▶ Once there is any blind pixel removed, click save.</li> <li>▶ Repeat the above process until remove all the blind pixels.</li> </ul> </li> </ul>

<p><b>OLED</b></p> 	 <p><b>Set OLED</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>OLED</b> option with the "+ / -" button.</li> <li>● Short press "M" button to enter <b>OLED</b>.</li> <li>● The icon will be turned into blue when <b>OLED</b> is selected.</li> <li>● Confirm <b>OLED</b> color and brightness level.</li> <li>● There are 4 palettes optional: Grey, Blue, Purple and Red.</li> <li>● 2 brightness mode makes it more friendly to use in day time and night time.</li> <li>● Short press the "M" button to exit, or press and hold the "M" to exit.</li> </ul>
<p><b>RAV</b></p> 	 <p><b>Turn RAV function on/off</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>RAV</b> option with the "+ / -" button. Short press "M" button to enter <b>RAV</b>.</li> <li>● The icon will be turned into blue when <b>RAV</b> is selected.</li> <li>● This value was drawn under general test, if there is a silencer, it's advised to further reduce the value, of course, the lower the value is, the easier the <b>RAV</b> will be triggered. The recommended value is 180.</li> </ul>
<p><b>Date/Time</b></p> 	 <p><b>Set Date/Time</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the Time option with the "+ / -" button.</li> <li>● Short press "M" button to enter Time settings.</li> <li>● The icon will be turned into blue when Time is selected.</li> <li>● After entering the <b>Date/time</b> setting page, you can set a specific time.</li> <li>● Short press the "M" button to exit, or press and hold the "M" to exit.</li> </ul>

<p><b>Language</b></p> 		<p><b>Set Language</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>Language</b> option with the "+ / -" button.</li> <li>● Short press "M" button to enter <b>Language</b>.</li> <li>● The icon will be turned into blue when <b>Language</b> is selected.</li> <li>● Short press the "M" button to exit, or press and hold the "M" to exit.</li> </ul>
<p><b>Correction</b></p> 		<p><b>Turn Correction on/off</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>Correction</b> option with the "+ / -" button. Short press "M" button to enter <b>Correction</b>.</li> <li>● The icon will be turned into blue when <b>Correction</b> is selected.</li> <li>● Choose Auto or Manual to enter the mode of auto correction or manual correction respectively.</li> <li>● In auto-correction mode, the image is automatically calibrated based on actual conditions. A 10-second countdown is triggered with each correction, and the screen freezes during the process.</li> <li>● Short press the "M" button to exit, or press and hold the "M" to exit.</li> </ul>
<p><b>System</b></p> 		<p><b>Turn on/off the Audio</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>System</b> option with the "+ / -" button. Short press "M" button to enter <b>Correction</b>.</li> <li>● The icon will be turned into blue when <b>Correction</b> is selected.</li> <li>● Choose OFF/ON to turn off or turn on the audio.</li> </ul>

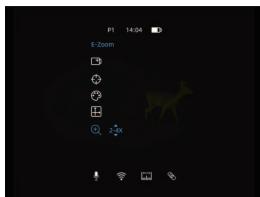
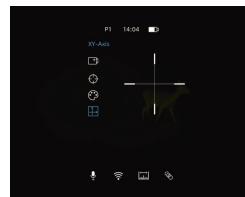
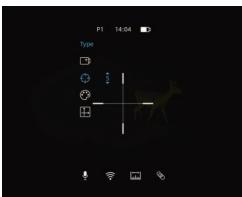
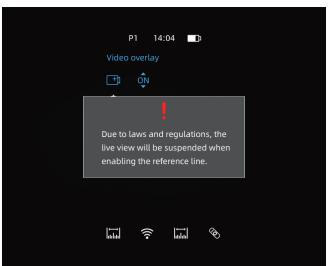
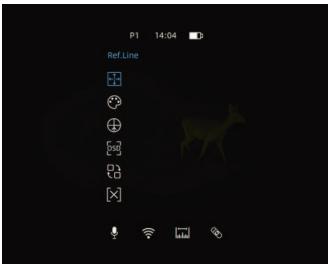
## System



## System setting

- Double click the "M" button to enter the main menu.
- Select the **System** option with the "+" / "-" button. Short press "M" button to enter **System**.
- The icon will be turned into blue when **System** is selected.
- Information like firmware version, serial number and other relevant information could be checked on the verison page.
- After entering the system settings, you can choose to reset or upgrade.The reset fuction only restores the currently system settings to the defaults.
- It only supports upgrading via PC on page.
- With the Update option you can update the system firmware. It only supports upgrading via PC on this page. Before you want to update the firmware please contact the technical support of ThermTec.
- Short press the "M" button to confirm current settings, press and hold the "M" to exit.

## Ref.Line



## Reference Line Setting

- Double click the "M" button to enter the main menu.
- Select the **Ref.Line** option with the "+" / "-" button. Short press "M" button to enter **Ref.Line**.
- The icon will be turned into blue when **Ref.Line** is selected.
- The reference line can be set here so that we can see it in the video recordings.
- Commonly, we can set the reticle type, color and coordinates.
- Each zeroing profile matches its own reference line, thus please make sure set up the every single. Set the **XY-Axis** for the reference line according to the day scope, ensure the reference line can overlay the day scope.
- The magnification range can be selected in **E-Zoom** option here. Select the appropriate range according to your day scope magnification.

<p><b>Palettes</b></p> 	 <p><b>Palettes Setting</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>Palettes</b> option with the "+ / -" button. Short press "M" button to enter Palettes.</li> <li>● The icon will be turned into blue when <b>Palettes</b> is selected.</li> <li>● You can customize the most frequent used colors from the 6 colors.</li> </ul>
<p><b>Ballistic Calculation</b></p> 	 <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>Ballistic Calculation</b> option with the "+ / -" button. Short press "M" button to enter <b>Ballistic Calculation</b>.</li> <li>● The cursor modes and the colors can be changed in <b>Ballistic Calculation</b> page.</li> <li>● The icon will be turned into blue when Mode or Color is selected.</li> <li>● Please refer to the <b>Ballistic Calculation</b> section for detailed guidance for setting up.</li> </ul>
<p><b>OSD Switch</b></p> 	 <p><b>OSD Enable/Disable</b></p> <ul style="list-style-type: none"> <li>● Double click the "M" button to enter the main menu.</li> <li>● Select the <b>OSD</b> option with the "+ / -" button and.</li> <li>● Short press the "M" button to confirm current settings, press and hold the "M" to exit.</li> </ul>

## Eyepiece Type



### Set Eyepiece Type

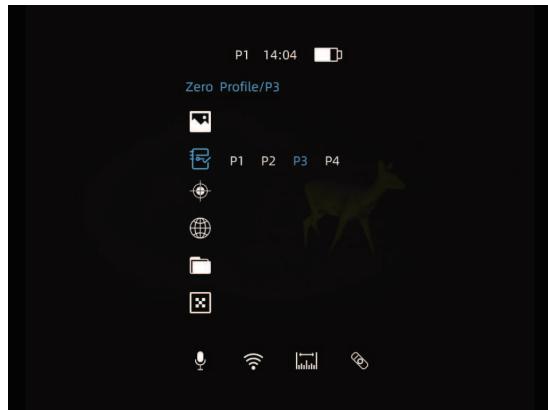
- Double click the "M" button to enter the main menu.
- Select the Eyepiece Type option with the "+ / -" button.
- Short press "M" button to enter **Eyepiece Type**.
- The icon will be turned into blue when **Eyepiece Type** is selected.
- With the eyepiece component, you can also change the Clip-on series into a Monocular.

## 8.ZEROING

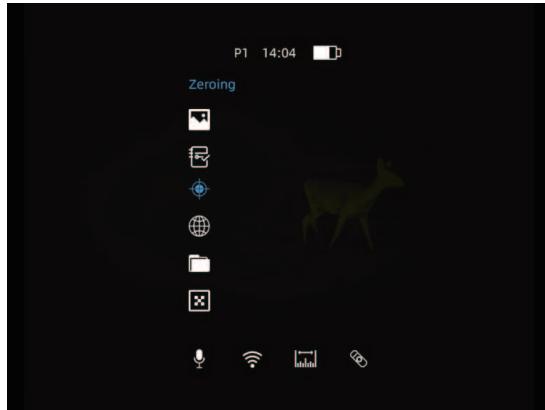
If the day scope's reticle is off-center in the infrared image after properly mounting the HUNT LRF , use the Image Zeroing function to align the infrared display with the optical view.

### Preparation:

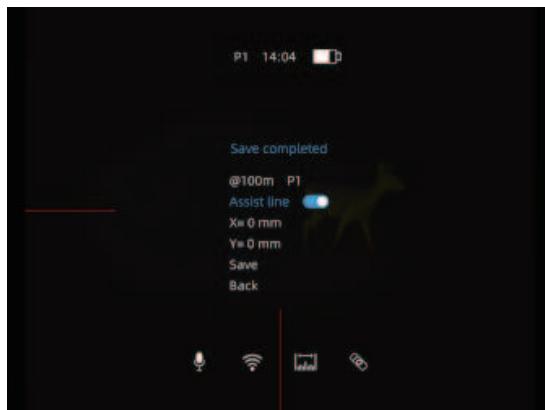
- Please finish the correction of the day scope before mounting the HUNT LRF .
- Install the Hunt LRF on the day scope referring to the Installation section.
- Aiming at the 100m target and shoot.
- On the home screen, double click "M" button to enter the main menu interface.



- Press the “+ / -” button to move the cursor up or down, and select the Zero Profile option and choose a zero profile with a short press of the "M" button.



- Select the Zeroing option and short press the "M" button to enter the zeroing interface.

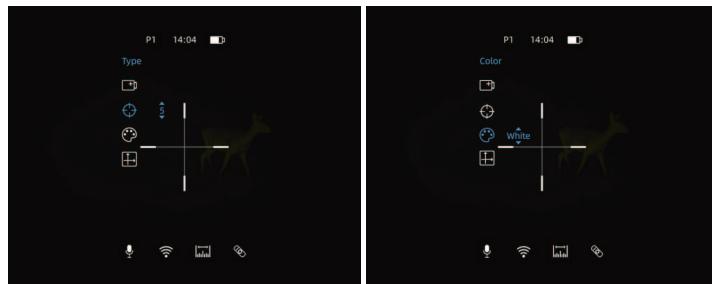


- At the zeroing interface, short press the "+ / -" button to move the position of infrared image until the target observed by the combined thermal imaging and day scope coincides with the target observed by the day scope alone, with a default zero distance of 100 meters.

Finally after finishing all the zero settings, short press the "M" button to confirm the set parameters and exit the page turning, or press and hold "M" button to exit the page and restore to the default settings.

**Note:**

The reference line will be automatically switched when you change the zero profile once you set up the configuration of correspond one for every single Zero profile.



It should be especially noted that need to set up the coordinates according to the day scope after Zeroing.



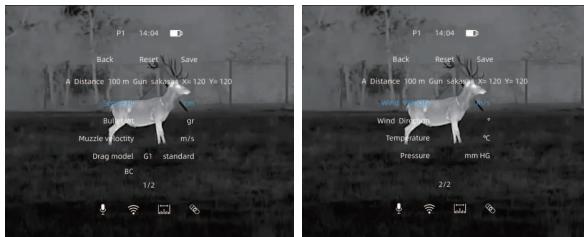
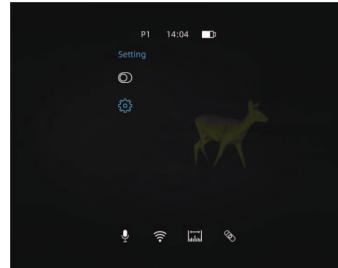
# 9. BALLISTIC CALCULATION

## Attention:

- Ballistic Calculation adjustment needs to be performed after zeroing; otherwise, it has no practical significance.

## Setup, Operation, and Theory

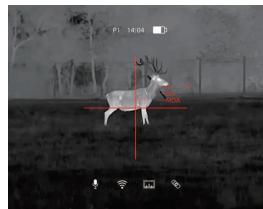
- Double press the "M" button to enter the main menu.
- Move the cursor to Ballistic Calculation option with the "+ / -" button, and short press the "M" button to confirm. Enter the Settings in the same way under Ballistic Calculation option.
- There you can configure the parameters as needed, including Scope Ht, Wind Velocity, Bullet Wt, Muzzle Velocity, BC, Wind Direction, Temperature, and Pressure.



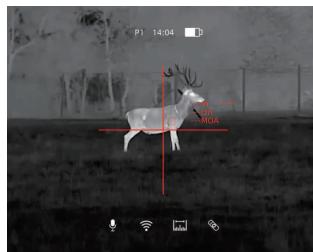
- When any parameter is selected for modification, the cursor would automatically move to the keyboard section on the right side of the screen.
- Move the cursor and click the Back icon to return to the previous interface.
- All parameter settings can be configured via the APP, and presets can be imported. Please note that the device must exit the parameter settings interface during import; otherwise, the imported preset parameters will not take effect.

**Notes:**

Users firstly need to move the cursor to “ON” to activate the Ballistic Calculation function. Then the parameter of distance, Pitch Angle, cm as well as MOA will appear near the center of the screen.



- If you are currently aiming at a target and treating the pre-aim point as the desired impact point, after enabling the ballistic calculation function, the entire image will shift according to the data obtained from the ballistic calculation. After the image is translated based on ballistic calculation, if you use the reticle of the day scope to aim at the desired point again, the impact point will then coincide with the pre-aim point. (Under ideal conditions with unchanged external factors).



Pre-aim point



Image shifting after BC

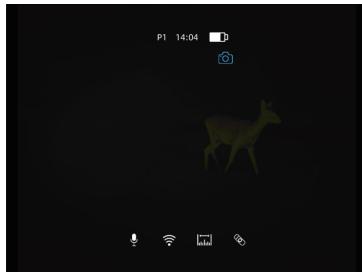
**Notes:**

- 1: The reticle displayed here is a virtual overlay for demonstration purposes. The actual reticle should be from the day scope.
- 2: The Ballistic Calculation can also be operated on the ThermTec Outdoor app. If you want to import any profiles of Ballistic Calculation, please be remembered that don't enter the settings of Ballistic Calculation. Otherwise the imported file will be invalid.
- 3: The cursor of laser rangefinder will blink for seven seconds then disappear when detecting the distance.

# 10. CAPTURING AND RECORDING

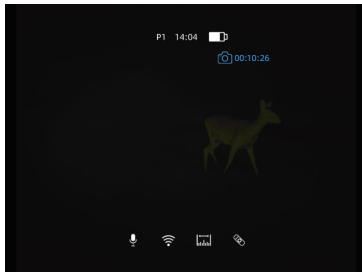
There is built-in 64GB storage space set for image capturing and video recording. The files of images and videos will be named by time, so it is recommended to set the time in the main menu or synchronize the time in the settings of “ThermTec Outdoor” APP before using the image capturing and video recording function.

## Image Capturing



- Press the camera button “M” to take a photo and a capture icon appears on the screen.
- Images are saved in the built-in storage space.

## Video Recording



- Press and hold down the camera button “M” to start a video recording.
- A recording timer displays on the top of the screen. The time format is HH:MM:SS (Hour:Minute:Second).

You may enter the menu and enable other functions during video recording. Press and hold down the camera button “M” to stop and save the recording. The videos are saved in the built-in storage space.

**Caution:**

- The number of the recorded files is limited by the capacity of the internal memory.
- Check the available space of the built-in storage card regularly and move the footage to other storage media to free up the memory card space.

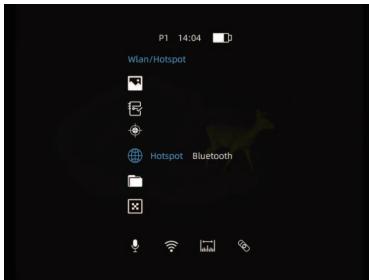
## 11. MEMORY ACCESS

When the device is turned on and connected to a computer, it is recognized by the computer as a flash memory card, which is used to access the device's memory and make copies of pictures and videos.

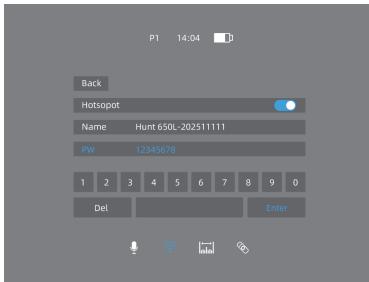
- Turn on the Hunt LRF and connect it with the computer via Type-C cable.
- Images and videos are saved separately in the folders of “Capture” and “Record”.
- RAV videos are saved in the file named RAV.
- There are different images and videos named by time in the storage.
- Select desired files or folders to copy or delete.

## 12. HOTSPOT FUNCTION

A built-in hotspot module is integrated in the Hunt LRF, which enables the device to connect wirelessly to external devices such as smart phones.



- Double click "M" button to enter the main menu.



- Turn Hotspot function on /off with a short press of "M" button.

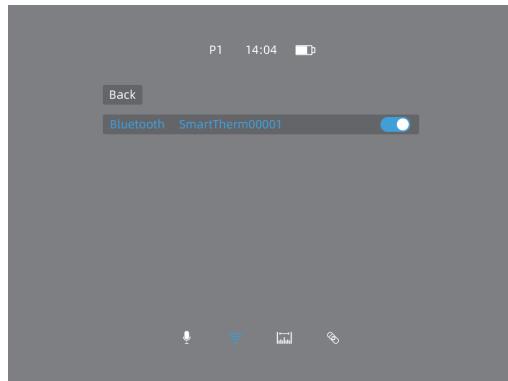
- Turn on “ThermTec Outdoor” APP, select Wi-Fi, and type in the password on the mobile device to finish the connection. The initial password is 12345678.
- When Wi-Fi is successfully connected, you can control the device via “ThermTec Outdoor” APP.

### Set the Hotspot password

The Hunt LRF series allows users to change the password of device hotspot in the Hotspot settings.

## 13. REMOTE CONTROL

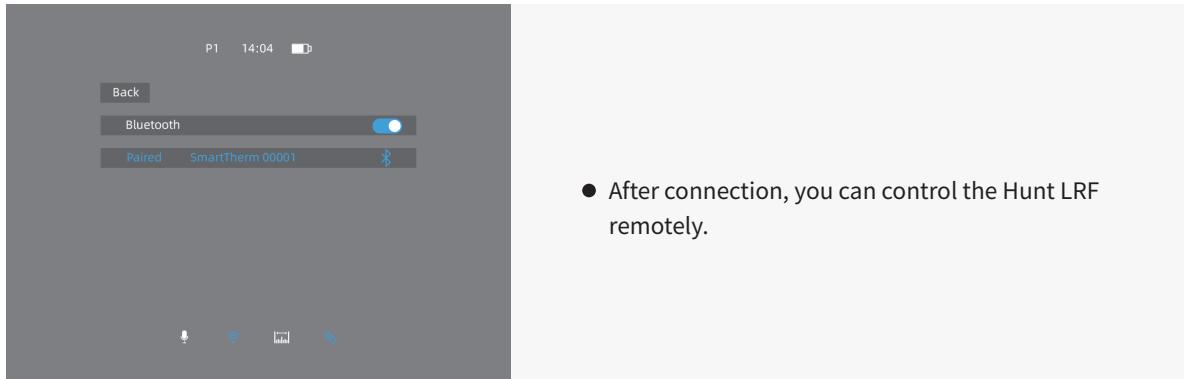
Hunt LRF series, which takes no attachment over device's surface, boasts of eminent ring-control design to better operate the device itself. It could connect the device via Bluetooth.



- Turn on the Bluetooth of your device.



- Open the battery case of the remote and await it detecting around to check the Bluetooth of your device.



- After connection, you can control the Hunt LRF remotely.

- The remote control can be used continuously for more than 10 hours in one time and it could reach almost 48 hours with the charging case.
- If the battery runs out, it will flash between red and blue, you may charge it directly through the charging case now, or charge the battery case and put the remote control into it to charge them at the same time.
- Once the device connects with one remote control, it wouldn't display or connect with other remote controls. Please unlock the pairing by pressing the M button for 10s before connecting with another remote control.

## 14.DOWNLOAD “ThermTec Outdoor” APP

You may download the “ThermTec Outdoor” APP through the QR code shown on the packing box, user manual or below.



## 15.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 image, no dead pixels, no lines on the screen or please contact where you bought for replacement.

Attention: artificial reasons lead to burnt sensor will not be covered in the warranty.

## 16.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 maybe used for this.
- 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.

## 17. FIRMWARE UPGRADE

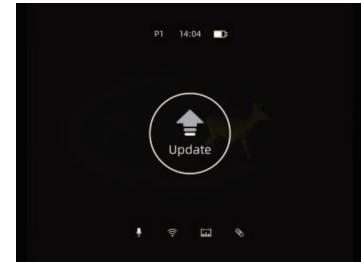
Hunt LRF series thermal clip-on is supported by the “ThermTec Outdoor” APP, which allows you to transmit the images and videos from the device to the smartphone or tablet via Hotspot in real time. The electronic version of this User Manual and the latest firmware can be downloaded from the ThermTec website: [www.thermeyetec.com](http://www.thermeyetec.com). Firmware upgrade can also be finished via the “ThermTec Outdoor” APP.

### Upgrading via APP

- Enter the ThermTec Outdoor APP.
- After connection, the APP will show if there is available firmware update.
- Before downloading the firmware, please turn on your mobile data.
- After downloading the firmware and prepare for upgradation, please turn off the mobile data for stable upgradation.
- After finishing the update, the device will reboot.

### Upgrading via PC

- Please download corresponding upgrading package from official website. [www.thermeyetec.com](http://www.thermeyetec.com).
- Connect the device to PC via Type-C data cable.



- Copy the related updating firmware to the file folder named storage of the Hunt LRF. Press “M” to select Update icon, and the system will prompt “Update”.
- Enter Version menu to check firmware version.
- Detailed instruction video can be found from the official channel.





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