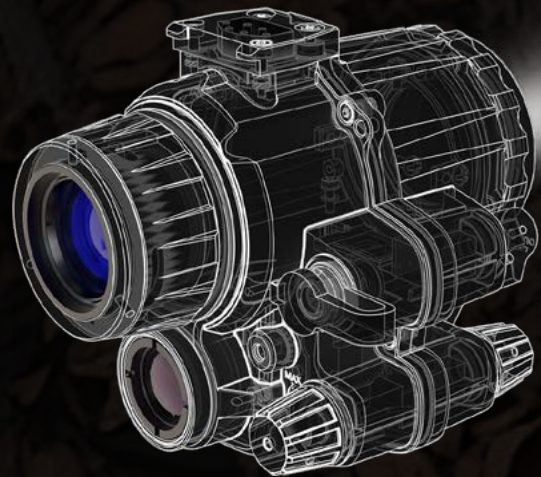


**RDX**  
ACTICAL



**RENV-M**



**RX**  
ACTICAL

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## 01 PRODUCT OVERVIEW

The RENV-M night vision system integrates cutting-edge image intensification and thermal imaging technology. This advanced system boasts minimal imaging delay, enabling real-time tracking and identification of targets. Its lightweight and compact design, along with its digital information enhancement algorithms and thermal target display functions, expedites the recognition of potential threats, even in the most challenging environments.

## 02 FEATURES

RENV-M
It can be mounted on a helmet
Gen 2+ and resolution 64-72lp/mm
Thermal Sensor Resolution: 640x512
Detection distance about 1500m/1640yd
0.6 OLED Resolution: 800x600
BSP Bright source protection
Infrared Illuminator
Azimuth Indication
Pitch/Inclination angle
18650*2 replaceable battery
Operating time: Enhanced Display ≥ 8 hours;I <sup>2</sup> up to 100 hours
Engineered with IP67 waterproof
Operating Temperature Range: -40 to 122 °F

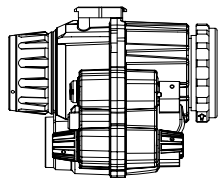
### 03 PRODUCT PARAMETERS

RENV-M		
Thermal Image	Type	VOx Uncooled
	Resolution, pixels	640×512
	Pixel pitch, μm	12
	NETD, mK	< 30
	Frame Rate, Hz	50
	Lens System, mm	f/1.1, 16
	FOV, °	25.8×19.1
	Digital Zoom	Yes
	Brightness Control	Yes
	Contrast Control	Yes
	Polarity	White hot, Black hot, Orange hot
Enhanced	Mode	Outline, Highlight, Thermal image, Breath

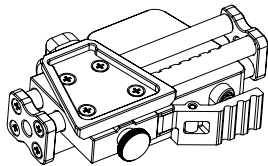
### 03 PRODUCT PARAMETERS

RENV-M		
Sensor	Azimuth Indication	Yes
	Pitch/Inclination angle	Yes
Display	Type	OLED
	Resolution, pixels	800×600
Range Performance	Detection Range, m/yd	1500m/1640yd
Environmental Characteristics	Degree of Protection, IP code	IP67
	Operating Temperature Range, °F	-40 to 122
	Battery Type	18650*2
	Operating Time on Battery Pack (at t=72°F), h	Enhanced Display ≥ 8 hours I <sup>2</sup> up to 100 hours
Weight & Size	Dimensions, inch	4.2*3.4*2.9
	Weight, lb	Main body≤0.85 Battery pack≤0.19 (without battery)

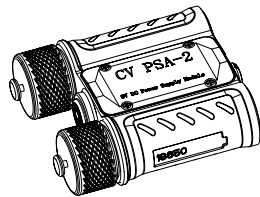
## 04 IN THE BOX



The RENV-M



Adapter Kit (between the device and the helmet mount)



Battery Pack



Cable



Portable bag

The box includes an instruction manual, a quick-to-use guide, a thank you letter, a warranty card, a lens cloth, Velcro, and stickers.

## 05 PRODUCT APPEARANCE



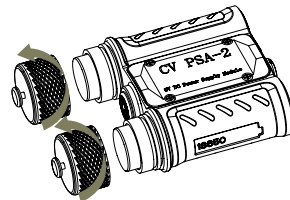
## ▼05 PRODUCT APPEARANCE



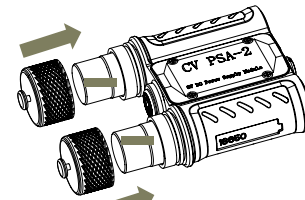
## ▼06 POWER SUPPLY

A Battery Pack powers the RENV-M.

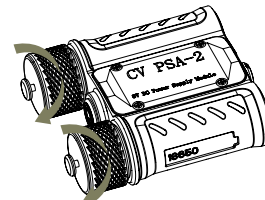
- ▲ Open the battery pack by rotating the battery pack cover.
- ▲ Install the battery into the pack, with the positive (+) pole inward and negative (-) pole outward, as indicated by the symbols outside the battery pack.
- ▲ After inserting the battery, tighten the battery pack cover.



Step 1



Step 2



Step 3

### WARNING

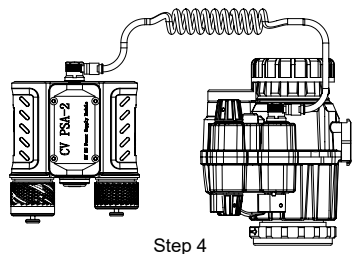
- ▲ Please remove the battery if the device will not be used for an extended length of time.
- ▲ Do NOT power the device with a modified or damaged battery.
- ▲ Do not use the battery at a temperature above 122°F as it may reduce the battery's service life.

## ▼06 POWER SUPPLY

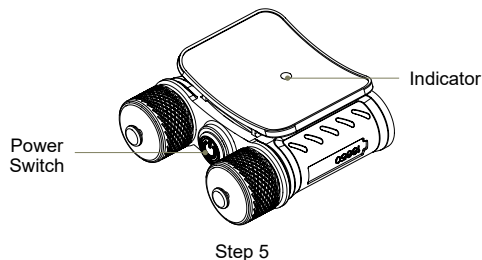
▲ Connect the battery pack and RENV-M by the cable, then power on the battery pack. A long press of 3 seconds will turn the battery pack on or off.

▲ When the battery pack is powered on, the indicator displays are green-high, blue-medium, and red-low.

▲ If you are using the battery pack and want to display the current power level, a short press of 1 second will display the available power.



Step 4



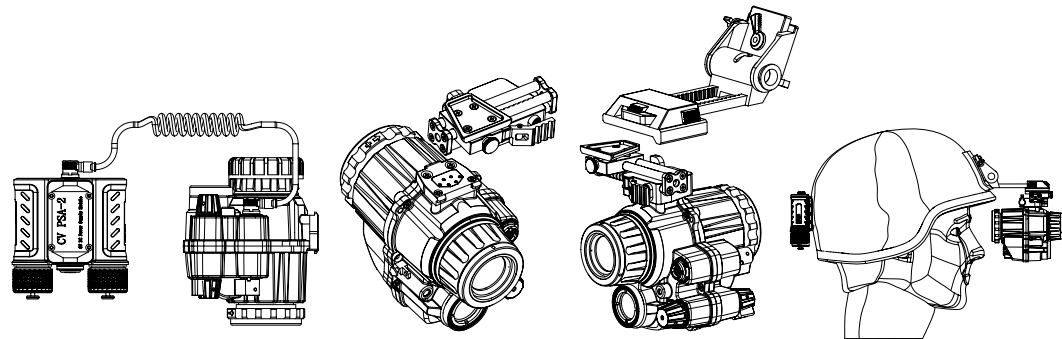
Step 5

### NOTE

▲ The red light indicates that the batteries are low and will soon need to be replaced.

▲ The decrease in battery pack capacity under sub-zero temperatures is normal, not a factory defect.

## ▼07 HELMET MODE



Step 1  
Use the cable to connect the device and the battery holder

Step 2  
Attach the adapter kit to the device

Step 3  
Attach the helmet mount to the adapter kit

Step 4  
Attach the helmet mount, the adapter kit, and the device to the helmet



## 08 BUTTONS OPERATION

SWITCH	FUNCTION
I <sup>2</sup> control knob	<ul style="list-style-type: none"> <li>▲ Switch: Enables or disables I<sup>2</sup> imaging</li> <li>▲ Knob: Adjusts the brightness of I<sup>2</sup> images</li> <li>▲ Short press: Switches integrated display mode (In Enhanced Night Vision Mode) Switches digital zoom (In Thermal Imaging Mode)</li> <li>▲ Long press: Corrects the shutter</li> </ul>
Infrared control knob	<ul style="list-style-type: none"> <li>▲ Switch: Enables or disables infrared imaging</li> <li>▲ Knob: Adjusts the brightness of infrared images</li> <li>▲ Short press: Switches between infrared thermal color palettes (white hot/ black hot/ orange hot)</li> <li>▲ Long press: Enters the menu</li> <li>▲ In the menu: Short press to switch and long press to change the option</li> </ul>
light control knob	<ul style="list-style-type: none"> <li>▲ Switch: Enables or disables infrared light fill-in</li> <li>▲ Long press: Enables or disables high-light protection</li> </ul>



## 09 POWER ON/OFF

### Power On/Start

1. Long press the battery pack button for 3 seconds, and the indicator light displays green-high, blue-medium, and red-low.
2. Open the Infrared knob (OFF→MAX) until you hear clicking and wait for 3 seconds to get the infrared image.
3. Open I<sup>2</sup> knob (OFF→MAX) until you hear clicking to get I<sup>2</sup> image immediately.

### Power Off/Stop

1. On the home screen, shut down the Infrared knob to close the infrared image, and shut down the I<sup>2</sup> knob to close the I<sup>2</sup> image.
2. Long press the battery button for 3 seconds, and the indicator light turns off.



## ▼10 BSP BRIGHT SOURCE PROTECTION

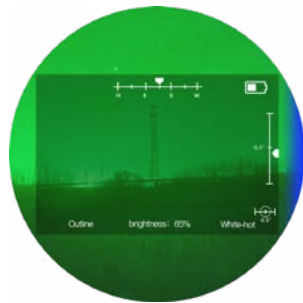
### BSP Highlight Cut-Off

When excessively bright source is detected, you will see a red indicator blinking (interval: 1s) in the right corner of the screen through the ocular lens. If the bright source persists, the I<sup>2</sup> power will be turned off after 1 minute.

### BSP Highlight Do Not Cut-Off

Long press the light knob to disable bright source protection, and then the indicator turns steady blue.

Long press the light knob again to enable bright source protection, and then the blue indicator turns off.



### NOTE

Each time you enable I<sup>2</sup>, bright source protection is enabled by default.

## ▼11 INFRARED ILLUMINATOR

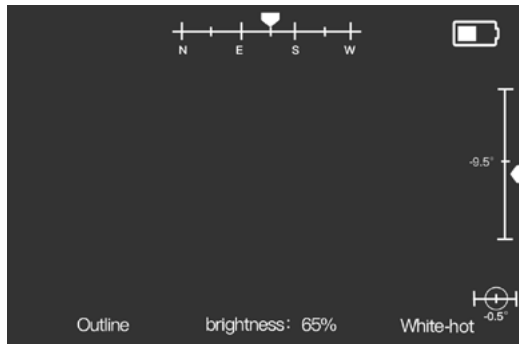
### Infrared Illuminator

Turn on the light knob from OFF to ON to open the Infrared Illuminator. Then, the red indicator is steady on, which can be seen in the ocular lens reminding you that the Infrared Illuminator has been turned on.



## ▼12 STATUS ICON

1. Enhanced display mode: Outline, Highlight, Thermal image, and Breath
2. Brightness of the infrared thermal image: Infrared brightness 0% to 100%
3. Infrared polarity: White-hot, Black-hot and Orange-hot
4. Inclination angle:  $-90^{\circ}\sim+90^{\circ}$
5. Pitch angle:  $-90^{\circ}\sim+90^{\circ}$
6. Battery levels: 0~4
7. Azimuth: The scale arrow moves to indicate the direction the ocular lens is facing.

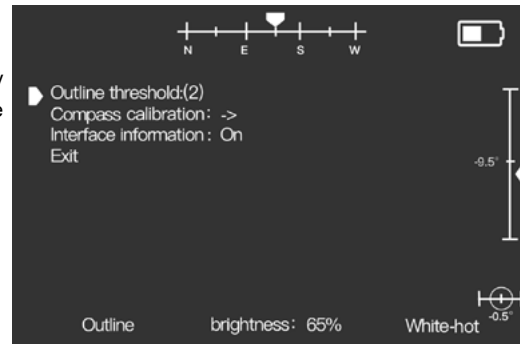


### NOTE

In the Enhance Display Mode, the brightness percentage and polarity mode information will be automatically hidden after no activity is detected for 8s.

## ▼13 PRODUCT MENU

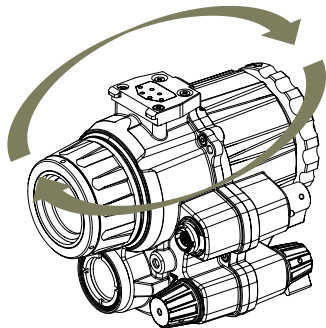
1. Outline threshold: 1~5
2. Compass calibration: Start calibrating the compass
3. Interface information: Enable/disable the display of azimuth, pitch, inclination, and battery level on the screen.



### NOTE

This PAL video feature need to purchase a dedicated cable.

## ▼14 COMPASS CALIBRATION



The digital magnetic compass is capable of indicating three critical angles: the azimuth angle, pitch angle, and inclination angle of the equipment. However, due to variations in magnetic fields across different regions and altitudes. It is essential to calibrate the compass after relocating to a new area. This calibration process ensures the compass maintains accurate angle indications, accounting for the local magnetic environment. Failure to re-calibrate the compass when changing locations could lead to inaccurate angle readings, compromising the reliability of the equipment's orientation data.

### Steps:

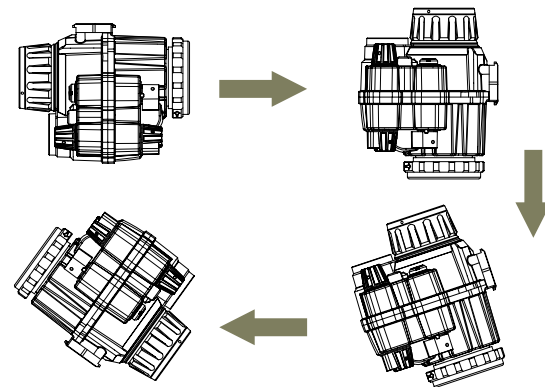
When the menu is displayed, switch to compass calibration. Long press the infrared adjusting knob to enter the calibration state and the screen displays "Please keep the equipment level and rotate at a constant speed. Press again to start.

Press again to start.

**Horizontal calibration:** Put the equipment horizontally and short press the infrared adjusting knob. Rotate around the equipment for 360° and short press the knob to end horizontal calibration.

After that, the screen displays "Please keep the equipment stable and erect downward at a constant speed. Press again to start."

## ▼14 COMPASS CALIBRATION



**Vertical calibration:** Put the equipment horizontally on a table and short press the infrared adjusting knob. Erect the equipment at a constant speed (objective lens facing downward and ocular lens upward) and short press the knob again to end the calibration. The screen displays "Calibration completed. Press again to exit." Short press the infrared adjusting knob and exit compass calibration.

### NOTE

To ensure the accuracy of compass calibration, please perform the calibration in a stable environment.

## ▼15 PRODUCT MAINTENANCE

By conducting a thorough pre-use inspection, you can identify and address any potential issues before operating the device, ensuring its optimal performance and minimizing the risk of malfunctions or safety concerns. Remove dust and dirt from the metal and plastic parts, use a cotton cloth and gently wipe the surface clean. Make sure that the 18650 battery being used is free from any bulges or deformations and that the plastic cover is not damaged.

## ▼16 PRODUCT TROUBLESHOOTING

Refer to the table below, which outlines potential issues that may arise during operation. For product issues that can not be remedied or are not listed below, please contact Rix Tactical customer support by visiting [info@rixtactical.com](mailto:info@rixtactical.com).

FAULT	POSSIBLE CAUSES	SOLUTIONS
The cover of the battery holder cannot be removed or replaced	Ensure the battery is installed in the correct direction. Inspect for and remove debris around the knob of the battery cover. Ensure the battery holder is not damaged, worn, or deformed.	Reinstall the 18650 battery. Clean the threads of the battery cover and battery holder. Contact Rix Tactical Customer Service.
The Unit Will Not Power On	The battery pack is not turned on. The battery is not installed correctly, or the battery does not have enough charge to power the unit.	Replace with a new battery. Turn on the battery pack.

## 16 PRODUCT TROUBLESHOOTING

FAULT	POSSIBLE CAUSES	SOLUTIONS
The I <sup>2</sup> image is not visible	There may not be enough ambient light. Check whether the I <sup>2</sup> objective lens hood is opened. Ensure the main power of the battery pack is switched on. Try to adjust the brightness of I <sup>2</sup> image.	Turn on the fill-in light when using the I <sup>2</sup> image in the completely dark conditions. Open or cover the objective lens hood as required. Switch on the main power of battery holder. Adjust the brightness of I <sup>2</sup> image.
The infrared image fails to display.	Ensure the infrared objective lens hood is open. Ensure the main power of the battery pack is turned on. Try to adjust the brightness of the infrared image. Ensure the infrared lens is not blocked.	Open the cover of the objective lens hood. Switch on the main power of the battery pack. Adjust the brightness of the infrared image. Remove anything blocking the lens.

## 17 LEGAL AND REGULATORY INFORMATION

### Labeling Requirements

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:


- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### Information To The User

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### EMC Class A

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



**5** YEAR  
WARRANTY  
Thermal & Fusion Devices