

**RNV-31S** 



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## PRODUCT OVERVIEW

The RNV-31S is a self-contained night vision device that enables night vision capabilities by using ambient light from the night sky. Typically, this is the moon, star, and/or sky glow.

Optically, RNV-31S is made up of two sets of objective lenses image intensifier and eyepiece lens. The objective lens collects light reflected from the moon, stars, or night sky, inverts the image, and focuses that image on the image intensifier. The image intensifier converts the captured light into a visible image and reinverts the image, which you can then view through the eyepiece lens.

The RNV-31S has an internal IR LED for operating when no ambient light is available. By switching the unit to the infrared (IR) mode, the IR LED produces an artificial light source that is invisible to the human eye but is detected by the RNV-31S. The unit uses light produced by the IR LED to reveal images hidden in the dark.

# PRODUCT PARAMETERS

Specs		
Model	RNV-31S	
Magnification	1X	
Objective Lens	27mm; F1.2	
FOV	40°±2°	
Focus Range	0.25m ~ +∞	
Eye Relief	25mm	
Diopter Adjustment	-6 ~ +2	
LED Indicator (with in FOV)	IR Illuminator Side Flip-up Off BSP Bright Source Protection Low Battery Indicator	
Tube Compatibility	NNVT、10160、11769 EGAC	
IR Illuminator	850nm	
Battery Type	1×CR123A or 1×AA	
Operating Time	20h	
Ingress Protection	20m	
Dimensions	108mm×106mm×83mm	
Operating Temperature	-40°C ~ +50°C	
Weight	520g±5%	

## PACKING LIST



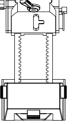




AA Battery Cap



Long eyeshade



Helmet Bracket(L4G24)
(optional)



User manual

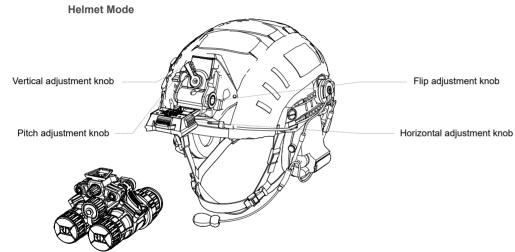


Portable bag





### **705** DEVICE MODES



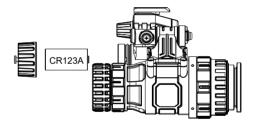
### NOTE

A clear image can be acquired only when both the objective lens and the eyepiece are correctly focused.

## **V06** POWER SUPPLY

Install the storage battery following the below procedures:

- 1.Unscrew the battery cap.
- 2.Insert the CR123A battery (please pay attention to the polarity marked on the device).
- 3. Tighten the battery cap.



#### WARNING

- >>> Please remove the battery if the device is not in use for long periods of time.
- >>> Don't power the device with a modified or damaged battery.

#### NOTE

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

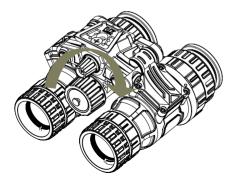
# **7** POWER ON/OFF

### POWER ON

- 1. Turn clockwise, and when you hear a "click," turn on the power.
- 2. After power is applied, rotate the potentiometer gain adjuster.

### POWER OFF

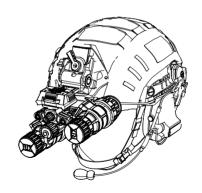
Counter-clockwise rotation, and when you hear a "click," turn off.



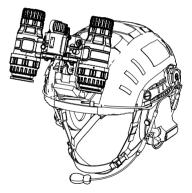
## **CONTROLS AND INDICATORS**

- Side flip-up off
- >> Side flip-up > 90° to turn off the power.

The device automatically powers on after returning to its initial state.







STOWED POSITION

### BSP bright source protection function

Press the potentiometer knob three times in a row (the interval between two times is not more than one second)

ON: Green light blinks twice (500 ms/time).

OFF: Green light blinks twice (250 ms/time)

If you continuously exceed the illumination level (IC reading of 120) for 1 minute, the CRT will power off.

If it needs to be turned on, it must be restarted.

#### >> IR Illuminator function

Press and hold the potentiometer for 2 seconds to turn the IR illuminator on/off. When the status indicator light remains continuously red, it indicates that the infrared illuminator is turned on.

### NOTE

When more than two functions are executed, there is a priority control: the latter can interrupt the former, and if the latter operation is completed, the interrupted former continues to execute.

### Battery Level Detection

When the battery voltage falls below 2.25V(AA < 1.08V), the red status indicator will blink.



#### NOTE

- ) The binocular night vision device is a precision optoelectronic instrument and must be handled with care.
- >> Do not scratch the outer surface of the lens or touch it with your fingers.
- >>> Do not wipe the shield with wet lens paper or when the shield is wet, or the coating will be damaged.

Avoid scratching the lens or leaving fingerprints on the optics when cleaning the unit; improper cleaning may damage the optics.

Follow the instructions below to clean the lens:

- 1. Do not use abrasive materials such as paper or abrasive brushes as this may scratch or damage the lens.
- 2. Wipe only when there is visible contamination on the surface.
- 3. The preferred method of cleaning lens material is optical grade cloth purified water (isopropyl alcohol).

# PRODUCT TROUBLE SHOOTING

MALFUNCTION	PROBABLE CAUSE/TEST/INSPECTION	CORRECTIVE ACTION
The device will not power on.	1.Check that batteries are installed in the correct direction and whether the battery power is sufficient or not. 2.Inspect the battery cover for damage, wear, or deformities.	1.Replace the battery or install the battery correctly.     2.Clean the battery cover threads.
The battery cap is difficult to dismount.	Check whether the battery cover is damaged.	Please contact the technical support engineer if the battery cover is damaged.
The IR illuminator will not turn on.	Turn on the IR illuminator in the dark area and see if the observed scene is illuminated.	Please contact the technical support engineer if the IR illuminator cannot be turned on.
The LED indicator will not display.	Visual check	Please contact the technical support engineer.
Poor image quality.	1.Check the focus of the objective lens or eyepiece.     2.Check whether there is fog or dirt on the lens.     3.Check whether the optical component is damaged.	1.Adjust the focus of the objective lens and eyepiece.     2.If the image quality is still poor, please contact customer support.     3.Please contact the technical support engineer. If it is damaged, contact technical support engineer.
The eyepiece ring cannot be adjusted.	Check whether the eyepiece ring is bent or broken.	If it is damaged, contact customer support.
The device does not turn off when exposed to bright light.	Perform the following test in daylight or bright indoor lighting (non-fluorescent): Place the objective cover over the objective lens and turn the unit on to see if it powers off after 60 seconds.	If it is damaged, contact customer support.

# LEGAL AND REGULATORY INFORMATION

- 1. 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.
- 2. 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 B grade

#### NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the

### following measures:

- —Reorient or relocate the receiving antenna.
- —Increase the separation between the equipment and receiver.
- —Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- —Consult the dealer or an experienced radio/TV technician for help.



